

AI as a Catalyst for Change in Creative Workflows

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Abstract

The objective of this writing is to provide a comprehensive overview of how artificial intelligence is integrated across various creative workflows and to examine how collaboration between the human creator and AI systems can be strengthened. Authors have attempted and investigated examples of AI-driven innovation in creative workflows, and they have also analyzed the ways in which human skill sets and workflows are evolving as a result of AI-driven innovation. Taking a technical and analytical approach, the authors of this paper seek to demonstrate the synergistic relationship between human creativity and algorithmic intelligence, as well as the implications of this relationship for the future of creativity in industrial applications. The purpose of the paper is to highlight the fundamental shift from traditional creative processes towards hybrid human-computer systems which have the potential to expand the boundaries of artistic expression. This study presents insights from a focus group of 228 creative professionals in Singapore, examining generative AI's transformative impact on creative workflows. Findings highlight improvements in strategic planning, idea generation, and production efficiency.

Keywords: AI and creative workflows, hybrid creativity, creative skill transformation, human AI collaboration

1. Introduction

The development of machine learning and computational creativity has led to the introduction of new technology and tools that can assist or even generate creative content autonomously based on their own intelligence. Advances in artificial intelligence and machine learning are transforming the way designers interact with computational tools, enabling

new modes of hybrid creativity and productivity (Adeleye, 2023). Creative workflows resulting from the use of Generation Adversarial Networks (GANs) are profoundly impactful. GAN's are a type of deep learning architecture that is used to train two neural networks to compete against each other to generate new data instances that resemble the training data by training them to compete with each other. Using artificial intelligence-powered design tools has revolutionized conventional design practices, increased efficiency and enhancing creative outcomes across a range of innovation processes (Ghorbani, 2023). The choice is either to accept the notion that artificial intelligence is creative or to distinguish the creative activities of humans from those of AI (Runco, 2023). AI-assisted artists who are able to exploit its potential demonstrate a new synthesis between technology and human imagination (Zhou & Lee, 2024). With the help of transformer-based models, and other deep learning techniques, it is now possible to produce images, music, and design concepts that were once the exclusive domain of humans like artists and designers. AI research has focused on designing tools that facilitate human creativity and enable users to interact with the creative process fully and authentically (O'Toole & Horvát, 2024). Computer scientists and new media artists approach AI differently in the context of creative processes when exploring AI. While scientists and researchers tend to view AI in technical terms, artists often recognize it as a co-creative, playful tool (Wingström, Hautala, & Lundman, 2024). Using artificial intelligence for creativity research can accelerate progress by building on the historical advancements of automated creativity and giving insights into possible next steps in the science of creativity (Acar, 2025).

The issue of whether human creativity is more algorithmic and rule-driven than we normally acknowledge and accommodate is at the center of current explorations into the potential and the limits of artificial intelligence in the creative field (Du Sautoy, 2019). Throughout the creative process, AI is transforming methodologies and workflows by integrating into various phases, from ideation to

implementation (Patel, Beeram, Ramamurthy, Garg, & Kumar, 2024). Research into the creative process has been extensive, but it has proven stubbornly difficult to explain the foundations of creative capabilities, especially at the critical intersection of creativity and artificial intelligence (Hageback, 2021). Due to the context dependent nature of creativity, there is an argument in favor of moving toward artificial creativity. In the process, attempts to purely mimic human creative processes may overlook the potential of AI-driven innovation (Esling & Devis, 2020). Studies have shown that creativity ratings ascribed to generative AI are often affected by human bias, which has important implications for how organizations perceive and integrate AI into creative and innovative processes (Magni, Park, & Chao, 2024). A current conception and assessment of creativity suggests that AI exhibits creativity when it generates novel and unexpected outcomes (Soroush, Sourav, & Zeng, 2025). As artificial intelligence has been infused into creative workflows, there has been a lot of excitement and debate about authorship, aesthetic value, and the future role of human creators in the future.

Creative output is defined by four essential elements, including domain-relevant skills, creativity-relevant processes, intrinsic task motivation, and social context (Amabile, 2013). A number of contexts and individual factors can influence the impact of artificial intelligence on creativity (Jia et al., 2024). Psychology and social dynamics play an important role in the development of creativity (Amabile, 1983). As AI is integrated into creative processes, it offers new directions and possibilities for human innovation (Amabile, 2020).

Artificial intelligence has revolutionized creative workflows in a variety of fields by extending the capabilities of human creators in the areas of art, music, design, and media. A significant shift in design methodologies is anticipated by the integration of artificial intelligence into design workflows, which has the potential to be transformative, although it requires careful planning and change management on the part of the designer (Yeong, 2025). When integrated with innovation management, artificial intelligence has emerged as a powerful force for enhancing organizational creativity and supporting competitiveness in rapidly evolving markets (Mirzani, 2024). While current scholarly discourse remains unclear regarding the full consequences of generative AI in creative industries, the adoption of generative AI in these industries presents both opportunities and challenges (Amankwah-Amoah, Abdalla, Mogaji, Elbanna, & Dwivedi, 2024). Innovative approaches to content creation, design, and problem-solving are becoming increasingly important as industries undergo digital transformations, with artificial

intelligence playing a pivotal role in shaping long standing methods and systems (Kiruthika et al., 2025). The incorporation of generative AI into advertising workflows requires careful consideration in order to preserve strategic relevance, and co-creative process models are emerging as a means of promoting effective communication between humans and AI (Cui, Liu, & Yuan, 2025).

Research on the intersection of marketing and AI is being advanced, with a focus on how these technologies may enhance creative outcomes in marketing contexts (Ameen et al., 2022). Computers and artificial intelligence (AI) have resulted in systems that, when trained with enough data, can mimic the output of a creative writer, artist, or musician (Kirkpatrick, 2023). As a result of AI being incorporated early into the design process, numerous advantages have been demonstrated, such as an increase in design quality, increased workflow efficiency, and streamlined tasks (Chandrasekera, Hosseini, & Perera, 2025). A common thread that runs throughout all creative workflows is the fact that humans and artificial intelligence work together in a collaborative manner. A more comprehensive approach would be to consider AI systems as partners in accelerating exploration and facilitating innovation while human experts guide and refine the outcomes in order to achieve meaningful results. The new developments in workflows have changed the skills required, resulting in the development of new hybrid skill sets, which has led to the development of interdisciplinary practices. As AI-driven innovation intersects with human cultural vision in the coming years, the creative landscape is likely to become even more complex and dynamic, making it one of the most diverse and dynamic in history. A partnership between human and artificial intelligence allows creative workflows to unlock richer forms of creativity and meet emerging artistic challenges in an effort to ensure that creativity remains a vibrant and inclusive part of our future.

2. The Methodology

As part of the authors' research, a comprehensive focus group discussion was organized in Singapore for 228 professionals from a variety of creative and strategic disciplines to examine AI's potential disruptive impact on creative workflows and how it transforms the creative process as part of the research. Data collection and session structure was that each half-day session began with an explanation of the study's objectives and ground rules, followed by guided breakout sessions. Based on four thematic prompt areas ideation, automation, personalization, and insight generation, the authors developed a semi-

structured focus group guide. Participants were encouraged to explore how generative AI could disrupt or enhance creative work in these domains e.g. brainstorming new ideas, automating workflow tasks, tailoring content to users, and gaining insights from data sets. Participants were facilitated by moderators (the authors) who posed open-ended questions and probed for clarification, ensuring balanced participation among the 12 members in each group. Focus groups were used in this format because of their interactive nature. During the discussion, participants were encouraged not only to respond to the questions, but also to react to each other's ideas, which resulted in a rich, collaborative dialogue. Recordings of all discussions were made and the transcripts were later transcribed verbatim for analysis. This study maintained a close connection between data collection and analysis by having the authors serve as moderators and observers, which allowed them to note nonverbal cues and group dynamics in real time in addition to the transcripts. With the authors being involved in every session, subtleties were not lost during translation, and subsequent analyses were based on an intimate understanding of the context.

A rigorous qualitative analysis based on transcripts was conducted following the focus group sessions. The two authors independently reviewed and coded the entire transcript set in accordance with standard qualitative procedures in order to identify salient concepts and recurring themes. An inductive, data-driven coding approach was adopted rather than preconceived categories being imposed, and codes were derived from the participants' own words and phrases. Hundreds of raw data excerpts were labeled with conceptual codes as a result of this open-coding process. The authors then met to compare and discuss their coding outcomes, resolving any discrepancies by consensus. The authors then examined patterns and clusters of codes among the breakout groups and sessions. Candidate themes representing higher-level insights were derived through iterative collation of related codes. To assess the consistency and saturation of findings, cross-session comparisons were conducted to determine whether certain themes occurred in all three sessions or if they were specific to certain groups. The strength of the focus group method in capturing shared understandings and diverse opinions was evident in the rich qualitative data obtained from the interactive discussions that were then categorized according to their themes. The authors (who were also the session facilitators) remained deeply involved with the raw data throughout the analysis, ensuring that the themes remained grounded in the experiences of the participants. The process resulted in the identification of a set of core themes and subthemes that summarize

how professionals anticipate AI's disruptive impact on creative processes. For accurate representation of the focus group insights, these themes have been reviewed and refined jointly by the authors. Upon completion of the analysis, a robust thematic framework was derived entirely from the qualitative data. This framework served as the empirical basis for the conceptual model presented in Figure 1.

Due to the large number of 228 creative professionals involved in the study, the event was organized into three half-day sessions divided into smaller breakout groups of approximately 12 participants each. This format ensured that every participant had the opportunity to contribute, which is consistent with best practices that recommend a maximum of twelve participants in a focus group for an effective discussion. A broad range of creative and strategic disciplines were represented by the 228 participants, including CXOs, designers, content strategists, creative directors, brand managers, UX researchers, and others. The breakout sessions followed a structured agenda but allowed for open discussion. The authors moderated all sessions in person, as well as developed the discussion protocol and guiding questions. There was no involvement of external facilitators or analysts at any stage of the process, which ensured consistency in moderation and a deep first-hand engagement with the data on the part of the researchers.

Chief experience officers (CXOs) of creative agencies, creative directors, designers, brand managers, content optimization specialists, creative maximizers, UX researchers, creative campaign leaders, and project managers participated in a focus group discussion to examine how generative artificial intelligence (GenAI) is transforming current creative processes. What follows in the paper represents the key points and observations from the focus group discussion. It also includes collective reflections, insights, and practical feedback provided by all participants. There was a clear indication from the focus group that GenAI has enhanced strategic planning, improved idea generation, enhanced consumer insight analysis, streamlined the production process, and improved the relevance and impact of creative work.

3. AI as a Catalyst for Change in Creative Workflows

The use of artificial intelligence systems has become an integral part of the creative workflow, the creation of content, as well as the development of concepts. Generative neural networks play an important role in the production of novel images, the

reinterpretation of styles, and the exploration of creative variations that would be very difficult to generate manually for artists and designers.

As illustrated in figure 1 the use of AI tools enables creators to iterate quickly through conceptual ideas, utilizing AI outputs to inspire them or to create drafts that can then be refined by humans based on their judgment about them. With this symbiotic process, the creative palette is broadened by allowing artists to concentrate on higher-level composition and thematic decisions while letting the algorithm handle routine tasks such as rendering or stylistic transformations, thereby increasing the creative freedom.

The applications of artificial intelligence (AI) are not only limited to artistic applications, but they are also transforming practical fields of design such as industrial design, architecture, and product engineering. Using generative design algorithms, it is possible to optimize shapes and structures by balancing multiple constraints, effectively automating a large part of the design process. The use of AI-driven

design platforms enables architects and engineers to input goals and parameters, and then receive designs that are both aesthetically pleasing and perform in accordance with the requirements. The use of automated suggestion tools and template generation in graphic design and user interface design is able to speed up workflows by offering a variety of layout options at the same time. As AI is increasingly incorporated into visual domains, the potential for experimentation and the range of design possibilities is broadened, while the final creative control remains with the developers and creators.

As AI-driven generative tools become more widespread, their impact is being felt in a wide variety of fields, such as game design and animation, where the tools are used to provide detailed concept art and character designs based on high-level descriptions of the content. During the development process of video games, designers and illustrators often use outputs such as rough drafts or mood boards as part of their visual development process to speed up the design

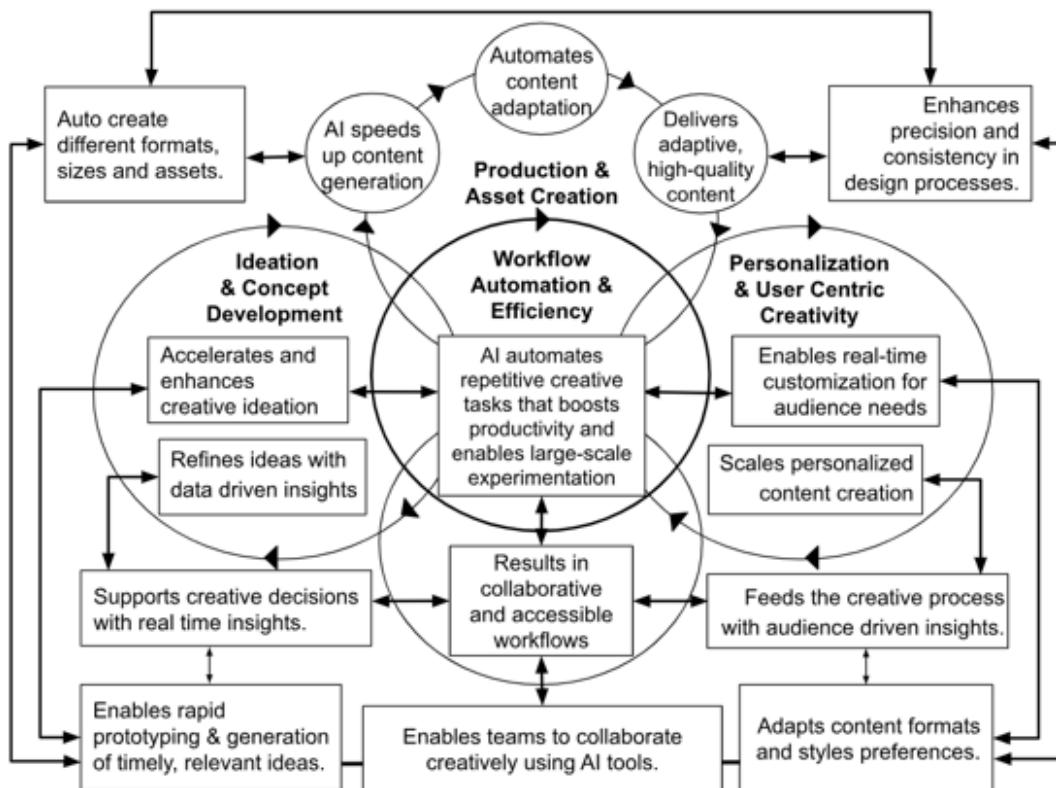


Figure 1: Catalyzing Change in Creative Workflows Using Artificial Intelligence

phase. This artificial intelligence-assistant enables creative workflows to experiment more freely with complex arrangements and to focus on the interpretational aspects of performance as they speed up tedious production tasks and offer creative suggestions.

Using interactive installations and adaptive instruments, artificial intelligence plays a major role in influencing creative workflows. A growing number of advertising and media production companies are using artificial intelligence for the generation of visual and multimedia content. There are a number of AI analytics tools that can be used to quickly generate campaign assets, such as customized images, video snippets, and written copy that are tailored for different audience segments. Based on real-time feedback from consumers, these systems can analyze consumer data to personalize creative messages at scale, allowing marketers to test variations that are generated by AI in real-time and refine campaigns based on the responses they receive. The integration of artificial intelligence in media has the potential to accelerate content production cycles and create highly targeted creative strategies while maintaining a human-led approach to campaign messaging and design at the same time.

In the film and media industries, artificial intelligence has been used in the creative workflows to help with a range of tasks from pre-production to post-production. The use of automated scripts and storyboarding tools allows writers to have fresh ideas and plot alternatives generated by large language models, which in turn allow them to generate more narrative structures and dialogue. Besides visual effects, one of the key factors in rotoscoping, color grading, and even the creation of realistic backgrounds and enhanced images within the creative workflows, involves machine learning. It can facilitate the work in rotoscoping, color grading, and the creation of realistic backgrounds and image enhancement. The capabilities of these technologies are being harnessed by media companies in order to enhance visual storytelling, reduce production costs, and explore innovative formats, such as procedurally generated or interactive content, among others. Creating new forms of media that blend algorithmic creativity with human vision is made possible by the collaboration between human editors, directors, and AI systems.

4. The benefits of human-machine collaboration

Collaboration between humans and artificial intelligence systems is characterized by an interactive loop of ideation and refinement that takes place in

creative workflows between humans and AI systems. As human-AI collaboration accelerates, new methods of content production, distribution, and engagement will emerge (Santoso and Wijayanti, 2024). In a creative workflow, the human might define the creative brief, or a set of initial inputs, such as a sketch, song theme, or textual prompt, and then the AI will produce the content that the human interprets and evaluates according to the brief. Feedback drives this process, in which the human guides the AI's direction and the AI provides novel suggestions to the human, which continues iteratively through the next phase. The advantage of such co-creative systems is that they allow both parties to contribute in a synergistic way. While the human is responsible for contextual understanding, aesthetic judgment, and intentionality, the artificial intelligence is responsible for computational speed, pattern discovery, and the ability to explore larger areas of possibilities. Artificial intelligence is not an independent creator, but rather a collaborator in the creative process, shaping AI's potential impact on human creativity from productive AI collaboration to a new form of co-creation (Vinchon et al., 2023).

Rather than being a rival to human creativity, artificial intelligence stands at the threshold as a collaborator to which human creativity can turn for inspiration. The early fears were that algorithms would overwhelm imagination in the near future. It is now evident that a more open-minded and collaborative approach is taking hold. Machine intelligence as well as human judgment broaden the creative field when combined with machine intelligence. The result is not replacement, but resonance, a partnership that allows people to gain a sense of what some refer to as superagency, a sense that they can accomplish things that they were not able to do before. Both practical and profound ramifications can be drawn from this study. The prevailing trajectory of technological evolution emphasizes the sustainable development of human-AI collaboration (Sun & Song, 2025). When human insight and computational power are combined thoughtfully, they are capable of accomplishing outcomes that either of them could not achieve if they were used alone.

The creative industry consists of individuals who are capable of providing vision, context, and emotional acuity, whereas machines supply scale, memory, and the ability to generate as well. Understanding the catalyst that drives individuals willingness to seamlessly collaborate with AI is overall crucial for deep diving into the dynamics of human AI collaboration (Chen & Zhao, 2025). An advertiser who dreams of an advertisement with maximum impact while a generative system explores thousands of structures and stresses in a matter of

minutes is an example of a creative maximizer. When inspiration is combined with augmentation, a hybrid creativity results, which is a fusion of inspiration and augmentation. Several studies have shown that companies can benefit most from the use of artificial intelligence as a collaborator rather than merely as a tool for editing. The cultural challenge is to protect human creativity and emotional inputs while simultaneously inviting machines to assist, so that the creative potential of a human mind does not diminish, but rather is enhanced through the use of automation.

Creative industries are the most affected by this shift than any other industry. With the help of artificial intelligence, programs can create copy, storyboard videos, and tailor messages across segments in seconds. Human strategists shape raw material into stories by defining voice and nuance, adding ethical contours, and adding voice. Data helps sort patterns from noise, and designers and creative technologists use those patterns from the data to craft narratives that feel genuine and alive. The best work in this industry results from the combination of targeted insight with a human tone and a strong sense of the brand.

There is a parallel evolution between design and product development. With the aid of generative tools, designers can now consider many options rather than limiting themselves to a few sketches in a pond. A creative search space expands, not only does it loosen its grip on biases, but it also begins to take on unfamiliar forms. Creative technologists with years of experience choose which ideas serve users, which ideas honor constraints, and which ideas push the frontier. Many settings are experiencing a dramatic reduction in development cycles. The pace of iteration is accelerating, and more attention is being given to what truly matters as a result.

As a result of artificial intelligence, creative discovery is now changing at a faster pace. There are no longer linear drafts of ideas, but instead a continuous cycle of generate and evaluate that moves the thought process forward. There are now a hundred avenues that can be explored for using language and image models, when once there were just five. Through creative simulation, synthetic creative testing, and rapid experimentation, hunches can be converted to evidence with a speed that is unusual in the scientific world. Using prototypes, creative teams can begin experimenting with headlines, interfaces, packaging, or even features of a product before it leaves the screen. Creative feedback arrives within a few hours of the delivery of a project, not within a few weeks. The process of learning compounds over time. Creators feel freer to take risks because failure becomes information rather than a totally failed project. During the ongoing creative process using emerging technologies, hypotheses are formulated,

experiments are run, insights accumulate, and imagination is once again able to climb to new heights without losing its spark.

Leadership in the creative industry is based on a simple theme that is central to their success. As a result of artificial intelligence, the path to enhancing human creativity is cleared of routine work and an intelligent scaffolding is offered to facilitate the process. As long as the suggestion of an idea by a creative model does not subtract from the capability of people, it can stimulate, refine, or elevate that capacity.

There is a need for creative organizations to cultivate a culture that treats AI as a potential ally. Training people how to work with systems, rewarding experimentation and iteration, and inviting cross disciplinary teams to work together shoulder to shoulder are all ways of doing this. There are already visible effects where this fabric is woven with care, a faster cycle for innovation and more personal and resonant experiences are the result, as well as solutions to problems that once seemed insurmountable.

A strategic blend of these two approaches can lead to superior results, so long as the systems serve human judgment and are not supplanted by it. This balance allows creativity to become both broader and deeper, opening the possibilities, allowing experimentation to speed up and allowing human makers to reach new heights on a more solid foundation.

Several key benefits can be gained from the collaboration of humans with artificial intelligence during the creative process. The ability to use algorithms to explore concepts can significantly speed up the discovery process, allowing creators to quickly survey a large design space and to come up with interesting ideas that might otherwise remain undiscovered. Artists can also find inspiration in AI-generated content, using it as a kind of "creative prompt" that sparks new ideas and leads them in a new direction that enhances their final products. As a result of AI assistance, repetitive or technical tasks can be reduced. This enables humans to devote more time to their creative visions, storytelling, and nuanced expressions. It is through the combination of computational suggestions and human oversight that creators are able to strike a balance where performance gains are not at the expense of artistic intent and creativity. A hybrid approach to creativity also democratizes the creative process in a sense in terms of how art and design are handled. There is an increasing number of generalists who can leverage user-friendly AI platforms to produce impressive content without extensive training in traditional techniques, thereby increasing participation in creative fields. In the case of artists and designers, the experience is often described as a dialogue with the machine. They instruct the AI, monitor its results,

make adjustments, iterating until they are satisfied with the result. The role of AI in the creative workflow process is one of a partner rather than being a substitute, as the ultimate creative agency remains in the hands of the human collaborator.

5. Integrating Focus Group Findings and Literature to Develop Figure 1

Based on the results of the focus groups, figure 1 summarizes generative AI's impact on the creative workflow and supports its development with relevant literature. From participant responses, three major domains were identified (1) Ideation and Concept Development, (2) Workflow Automation and Efficiency, and (3) Personalization and User-Centric Creativity. Focus group participants independently highlighted similar points in our thematic analysis: participants discussed using artificial intelligence tools for brainstorming and concept generation as creative partners. Several respondents noted that AI could automate routine or labor-intensive steps in the creative production process, as well as the capability of AI to tailor content and experiences based upon the preferences of individual users. A number of recurring clusters of ideas were identified and became the structural pillars of Figure 1. As described by participants, we named each domain to capture succinctly the essence of the cluster, e.g. "Ideation and Concept Development" encapsulates AI's role in early-stage creative brainstorming and idea generation. The figure includes key components or sub-elements for each domain which were also derived from specific examples and use-cases that were discussed during the focus groups. Figure 1 is essentially a visual summary of how 228 professionals collectively envisioned AI transforming their creative work across three broad categories.

Figure 1 is a synthesized representation of empirical insights, as interpreted and designed by the authors. A conceptual diagram was created by translating qualitative themes into a visual representation. After distilling the three overarching domains from the focus group data (and validating them through literature), the authors independently designed the figure to convey these ideas. In Figure 1, each component and connection reflects a relationship or concept that was repeatedly discussed in focus groups. As an example, if participants commonly linked AI-driven ideation to improving creative concept development, this relationship is displayed in the figure under the domain Ideation. A feedback loop between user data and creative content (a facets of user-centric creativity) is incorporated into the Personalization domain of the figure. A synthesis of

what practitioners reported and how these reports align with established knowledge was used to develop the structure and interaction of the figure (the three domains and their subcomponents). In arranging elements in a coherent manner, the authors exercised interpretive judgment but remained faithful to the participants' core content. Figure 1 provides a visual framework that unifies the results of focus groups with the relevant findings from the literature. The article illustrates how generative AI can disrupt creative workflows in three major ways, each supported by both qualitative evidence and scholarly discussion. An analysis and integration process has resulted in Figure 1, which conveys the consensus and conceptual integration resulting from the analysis. Based on field data, it provides a concise, academically grounded description of the research outcomes, which have been refined through the lens of existing theory. In Figure 1, the connections and components reflect both the recurring feedback from creative professionals in our focus groups and the themes and concepts identified in the broader literature on AI-driven creativity. Taking this approach ensures that the diagram is both empirically valid and contextually well-substantiated, which addresses the reviewer's request for clarification on how the diagram was derived from our focus group analysis and literature review.

Research suggests that generative AI systems can produce content tailored to specific audiences, thereby increasing personalization at scale and generating more user-centric content (Grewal et al., 2025). Integration of literature for triangulation To ensure the robustness and generalizability of the focus group-derived framework, these themes were triangulated with findings from the literature on artificial intelligence in the creative industries. After identifying the candidate domains and subthemes from the qualitative data, the authors conducted a literature review to determine whether other scholars and industry experts have discussed the same concepts. Through this process, we validated that the patterns we observed are not isolated to our sample but rather reflect wider industry trends. The focus group insights and the published work were highly aligned. Personalized generation replaces traditional content generation, in which output is tailored to meet the preferences and needs of each individual (Matz et al., 2024). Our study found that participants often used generative AI when brainstorming ideas or overcoming creative blocks; similarly, recent research and commentary indicate that generative AI can act as a collaborative creative tool that sparks new avenues for creativity while also streamlining workflows in creative outputs. Several industry reports indicate that artificial intelligence can deliver high-speed, low-cost content production and workflow automation in

creative processes as well as the automation of repetitive design tasks based on our focus group's expectations. As a result of the focus groups, a theme of personalization emerged, whereby AI is capable of enabling hyper-customized creative content or user experiences. There is evidence that generative artificial intelligence systems can create content tailored to specific audiences, thereby enhancing personalization and increasing user-centeredness. Cross-referencing these sources ensures that each component of Figure 1 is not only grounded in our qualitative analysis but also consistent with broader expert observations and empirical findings in the field of artificial intelligence and creativity. Our interpretation of the focus group data was strengthened by the integration of literature and helped us to refine the scope of the figure. We incorporated concepts or terminology that were offered in the literature to sharpen our themes. This figure does not contain elements imposed solely by theory; rather, external sources were used to reinforce and clarify patterns that participants themselves articulated. Using a methodological triangulation of focus group results and scholarly and industry sources, this figure's contents are strengthened and demonstrate that the three domains we identified as key areas in which AI will disrupt creative processes are ideation support, workflow efficiency, and personalization.

6. Conclusion

With artificial intelligence becoming more integrated into creative workflows, artistic expression will likely be redefined as we look forward to the future. With AI technology progressing at an exponential rate, one can anticipate entirely new creative mediums emerging in the coming years, such as immersive art experiences that adapt in real time to the feedback of the audience or collaboratively created works that blend input from humans with that of machines. Artificial intelligence-assisted production could lead to an unprecedented proliferation of creative content, thus raising concerns about curatorial overload and the importance of maintaining quality through the use of AI. It also provides a catalyst for revaluing the concept of authorship and intellectual property, because the line between a human contribution and a machine contribution becomes increasingly blurred as time goes on.

Creative workflows continue to be based on traditional techniques, particularly in design and art, but many routine or technical operations have been automated. Technology is becoming a more integral part of the toolkit of creative professionals. Creative professionals should be able to formulate precise

prompts, select appropriate models, and perform prompt engineering in order to guide AI outputs. Editors and designers should learn to evaluate and integrate AI suggestions effectively and develop a critical eye for AI content. Due to these changes, educational programs and on-the-job training are expanding to include computational methods, data analysis, and interdisciplinary collaboration between artists and technologists.

A concrete example is the emergence of new hybrid roles, such as creative technologists and AI art directors, who bridge the gap between artistic vision and technical implementation. As the skillset emphasis shifts, manual craftsmanship is being replaced by conceptual abstraction and tooling proficiency. The creative workflow of many artists includes the use of AI-based software for creating forms and generating soundscapes, therefore a basic understanding of the technology is required.

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