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AI in marketing automation: Boon or threat to creativity?

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Abstract
This study has investigated the changing relationship between the adoption of artificial intelligence (AI) in marketing automation and the subsequently impacted conception of human creativity. Drawing from the Technology Acceptance Model (TAM), self-efficacy theory, and partnership intelligence perspectives, this explored how marketers relate to AI in relation to its usefulness, ease of use and collaborative creativity. A mixed-methods approach was adopted in this study (survey data and trend analysis) to investigate eight hypotheses surrounding AI adoption, usefulness, creative confidence, output quality, ethical concerns, and willingness to collaborate. The portending results indicated that AI progressed creative confidence and output quality, (when marketers considered AI useful and easy to use). While concerns related to ethics and perceived threats to creativity diminished or nullified the advancement of output quality. Overall, this study particularly highlighted the need for collaboration between humans and AI, the ethical frameworks guiding integration of AI, and creative empowerment to ensure AI is viewed by marketers as an enhancement to creativity rather than a replacement.

Keywords: Artificial intelligence (AI), marketing automation, creativity, technology acceptance model (Tam), creative confidence, human-ai collaboration, ethical concerns, creative output quality (COQ), perceived usefulness (PU), perceived ease of use (PEOU)

Introduction

With the historical convergence of technology and consumerism, the marketing landscape has evolved in a fundamental way. Digital technologies, and more importantly, artificial intelligence (AI) have revolutionized the way brands communicate with their consumers. The days of being constrained by legacy media and human-driven decision-making are long gone, as the marketer today is aided by a suite of AI-fueled tools that guarantee precision, personalization, and scale performance. The hub of this revolution is marketing automation—a technological advance that enables the marketer to automate campaign management, customer segmentation, email scheduling, social media monitoring, lead nurturing, and customer relationship management (Chaffey & Ellis-Chadwick, 2019) [14]. As organizations transition toward AI adoption in marketing, it is imperative to study the impact of the transformation on one of the most valued aspects of marketing—creativity.

AI and marketing automation integration is not a trend but a paradigm shift. Salesforce's 2023 report states that over 61% of marketers worldwide are already using AI tools in one way or another, and the number is likely to soar exponentially in the next two years (Salesforce, 2023). Technologies such as natural language processing (NLP), machine learning (ML), computer vision, and predictive analytics have enabled marketers to record consumers' behavior in real-time, craft hyper-personalized messages, and disseminate them via the most effectivechannels. Algorithms can now write product descriptions, generate video content, track audience sentiment, and maximize campaign performance—all with less human intervention. These advances raise a serious question: whileAI indeed increases efficiency as well as scalability, doesit also dilute human creativity behind effective marketing?

Marketing creativity is not merely a matter of style or slogans. It is a matter of connecting consumers on an emotional level, telling compelling stories, and building brand identities that resonate with diverse groups of human beings. Creativity has traditionally been considered to be an intrinsically human activity, fueled by emotion, experience, intuition, and culture. Marketers and creatives are educated to listen for nuance, empathize with other human beings, and build communications that are informative but inspiring. The emergence of AI-driven automation, founded on pattern recognition in data, predictive logic, and algorithmic decision-making, however, jeopardizes this human creative process (Liu-Thompkins, 2019) [18].

Some practitioners in the industry fear that AI will commodity creativity by instilling content standardization and removing the originality that stems from human imagination. For example, AI-generated ads, as data-optimized, can be less spontaneous, less humorous, and less culturally resonant and thus less memorable compared to campaigns. Furthermore, excessive reliance on algorithms can prompt marketers to play safe and focus on what statistically works and refrain from experimenting with new, radical, and untested concepts. This "data-first" mentality can inhibit creative risk-taking, thus hindering innovation in marketing strategies (Wilson & Daugherty, 2018) [3]. Others fear that AI will downgrade the creative professional's role to that of automation overseers and not idea originators.

On the other hand, AI for marketing proponents cite the potential to enhance creativity, not displace it. To them, AI applications free marketers from tedious, time-consuming tasks to focus more time on strategic thinking and ideation. By providing actionable big data insights, AI can potentially identify new customer needs, nascent trends, and untapped market segments—intelligence that can stimulate more targeted and effective creative campaigns (Kietzmann *et al.*, 2018) [10]. AI, for instance, can sort through millions of

social media messages to identify consumer liking and sentiment and present creatives with a treasure trove of ideas to work from. AI platforms like ChatGPT, Midjourney, and DALL·E allow users to experiment with text, image, and video in new and creative ways, in effect, expanding the creative palette.

Moreover, AI allows for personalization on an unprecedented scale. With behavioral data, location, and psychographic profiles, brands can create dynamic content that shifts in real-time to the individual tastes of every person. Powered by AI, this form of personalization has been tested and shown to boost customer engagement and conversion exponentially (Davenport *et al*., 2020) [16]. Intelligent automation-powered personalized narrative allows brands to communicate with consumers on a more personal basis without losing the efficiency of automated delivery systems. From the recommendation engine of Netflix to Spotify's personalized playlists, AI has already demonstrated that it can marry technology and creativity to enhance user experience.

The interaction between AI and marketing creativity is thus neither entirely symbiotic nor entirely adversarial. Rather, it is a multifaceted mix of opportunity and risk, cooperation and competition, augmentation and displacement. The primary question of the present research is to explore this interaction through the lens of marketing professionals who are presently using AI tools on a daily basis. Through a systematic survey of practitioners across industries, the research aims to question prevailing ways of AI adoption and determine the extent to which marketers perceive AI as an enabler or barrier of creative output. The research is not only about measuring AI's technical capability but about understanding its psychological, cultural, and strategic implications in the creative sphere of marketing.

Besides, whether AI is a blessing or a curse to creativity cannot be determined in isolation. It has to be put in perspective against wider socio-economic, technological, and ethical factors. For example, creative labor automation has implications for the employment market, which can alter job functions as well as skill levels in the marketing industry. Experts might have to learn new skills in data literacy, AI ethics, and human-AI collaboration. Algorithmic bias, data privacy, and ethical usage of consumer data also raise questions that can shape public perceptions towards AI-created content (Pasquale, 2015). A technologically savvy campaign that is ethically tone-deaf can spectacularly implode, leaving the brand stripped of reputation and revealing the limitations of machine creativity.

The application of AI in marketing varies across organizations on the basis of size, industry, and degree of digital maturity. Multinational companies and digitally native start-ups may be ahead of the curve in adoption, but small and medium-sized businesses may be held back by cost, specialist talent, or cultural conservatism. Attitudes towards AI may also differ very differently across generations. Younger marketers may be more receptive to applying AI tools to their work, but older professionals may be more conservative or less interested in such technology. These considerations highlight the need for nuanced, empirical research that captures the diversity of experience and attitude within the marketing profession.

In exploring the intersection of creativity and AI, it is also worthwhile to explore new theories of human-machine collaboration. Ideas like "centaur creativity," in which human and AI abilities are synergistically merged, have significant promise as a model for the future of marketing (Lee *et al*., 2021) [9]. Instead of seeing AI as a threat, this vision sees a hybrid model in which machines augment humans in ideation, execution, and optimization of creative work by acting as a co-pilot suggesting, monitoring trends, and tackling scale, while humans have the last word on narrative, tone, and ethical fit. The creative process is thus moved from being an isolated, intuitive process to an iterative, collaborative process fueled by both human intuition and machine intelligence.

As we descend further into the Fourth Industrial Revolution, the lines between human and machine creativity will continue to bleed. The ramifications of what is happening are vast and deep not only for marketers but for society as a whole. Do consumers see AI creativity as genuine, authentic, and meaningful or will we warm to the more human, unpredictable aspects of storytelling? Will AI facilitate equal access to tools and allow more people to produce content, or will it create a monopoly concentrating power with a few tech-enabled businesses? These questions are not trivial, but fundamental, relating to how we communicate, how we persuade, and how we generate meaning online.

In conclusion, the relationship of AI and creativity with respect to marketing automation is nuanced, fluid, and has consequences. There are possibilities for innovation, and peril for dehumanization. This research will explore this playing field through theory and empirical analysis, to provide possible insights which may inform practitioners, scholars, and regulators as they navigate the future of marketing. By exploring some of the ways that AI has already impacted the creative processes, we can enter the future more comfortably, aware of the new relationship between technology and human creativity, not in a struggle, but in partnership.

Literature Review

The swift introduction of Artificial Intelligence (AI) products into the marketing automation space has elicited considerable interest and dialogue in academic and industry practice. As AI tools continue to transform operational processes, interactions with customers, and strategic decision making in marketing, the conversation centered on the question whether AI is a catalyst for creativity or a threat to it is becoming more intense. In this literature review we will review some significant scholarly arguments, empirical literature, and theoretical approaches that can make sense of the contours of the debate regarding AI in marketing in relation to creativity.

1. Evolution of AI in Marketing Automation

Marketing automation has come a long way from early systems that just executed rule-based automation to the intelligent systems that are currently leveraging machine learning by learning independently and making decisions. The first forms of marketing automation were generally simple systems that could schedule emails, execute customer relationship management (CRM) tasks, and manage social media queues, (Chaffey & Ellis-Chadwick, 2019) [14].

Over time, new capabilities emerged through machine learning (ML) systems that leverage natural language

processing (NLP) and computing analytics to automate marketing processes through artificial intelligence (AI) systems, (Kietzmann *et al*., 2018) [10]. Once organizations adopted these AI systems, organizations could develop marketing automation capabilities such as behavior-based recommendations (e.g., predictive analytics), sentiment analysis of customers, and direct interaction with customers using chatbots or as part of programmatic advertising.

Davenport *et al*. (2020) [16] pointed out that AI is increasingly used in marketing when it can perform data-driven tasks, such as market segmentation, lead scoring, content optimization, and dynamic pricing. These forms of automation allow organizations to manage much more complex customer journeys quickly and more accurately. At the same time, while many have focused on these operational benefits, others have expressed concerns about whether such automation has implications for the craft of creativity.

2. Theoretical Foundations: Creativity and Technology

Creativity in marketing entails use of new ideas to send messages, create brand images, and persuade audiences to react. People often think creativity is a special human capacity that is based on intuition, culture, and emotional intelligence. Boden (2004) [12] classifies creativity as combinational, exploratory, and transformational. To date, AI systems have exhibited capability in combinational creativity - the ability to combine existing ideas and produce new ideas - but AI systems are limited in transformational creativity, that is redefining the rules of the game.

Csikszentmihalyi's (1996) [15] systems view of creativity posits creativity is an interaction among three components: an individual, a domain of practice (like marketing), and a field (peer evaluators). If we take the systems view of creativity, integrating AI within marketing alters the interactions of these components by injecting new players (algorithms) into the domain and changing expectations within the domain. In not using creativity to displace human creativity, AI should be seen as a partner in creating a new collaborative creative system (Lee *et al*., 2021) [9].

3. Augmenting Creativity: The Case for AI as a Tool

The most compelling argument for the beneficial impact of AI is that it is a useful complement to human creativity rather than a replacement. PI have called for a hybrid of creativity where human intuitions are supported by the intelligence of machines. For instance, AI is able to assess large data sets and detect human trends and insights that provide input to the creative process (Daugherty *et al*., 2018). AI such as IBM Watson, Adobe Sensei and Salesforce Einstein are able to provide marketers with data driven recommendations for campaign strategies, content tone, and image choice and purposes, ultimately improving the quality of creative decisions.

Kumar *et al*. (2019) [17] claim that AI democratizes creativity by giving the individual equitable access to proven sophisticated design and content tools, which allows individuals without the help of formal training to be included into the creative task. Generative AI models such as GPT-4, Midjourney, and DALL·E provide users to organize text, images, and videos with ease, opening the door of creativity to a larger pool of creators deliberating creative work - now made easy. AI is a creative enabler for both professionals and amateurs.

In addition, AI also enhances creative efficiency by automating dull and repetitive work. Wilson & Daugherty (2018) [7] note that AI frees creatives from data entry, testing, and performance evaluations of previously developed creative work so they can spend more time brainstorming and storytelling. For example, in the advertising industry, AI-driven dynamic creative optimization (DCO) allows advertisers to create automated personalized ad variants using the user's behavior, thus eliminating a lot of the time spent on creativity without eroding personalization.

4. Creative Challenges: Risk of Homogenization and Reliance

Despite the advantages above, there is concern over whether AI helps or hinders the originality, and emotional heft of marketing content. A primary critique is AI promotes homogenization, as it generates content based on prior data and patterns. Furthermore, because AI is based on training datasets and past trends, it cannot fundamentally innovate or create campaigns that are culturally disruptive (Liu-Thompkins 2019) [18].

Next, there is concern that AI-generated content will be designed for performance, but lack the the subtleties and emotionality to create rich brand affinity. Zhou *et al*. (2022) [11] found that while consumers appreciate personalized AIgenerated content, they often rate human-created content as more emotionally engaging and authentic. This suggests that while AI can mimic creativity, it has limitations in replicating the emotional and experiential dimensions of human expression. In sectors like luxury goods or arts, where brand identity and storytelling are crucial, the mechanical nature of AI may fall short.

Another danger is the danger of excessive reliance on algorithmic decisions. As artificial intelligence (AI) tools become better, many marketers are going to feel encouraged to rely purely on data and the input of machines, and will put aside their human judgment and intuition. Data-driven determinism can create a space where creative risktaking is lost, and innovative thinking is given up to achieve statistical certainty (Ramaswamy & Ozcan, 2018). Additionally, AI systems may continue the bias contained in the data, leading to ethically questionable content, and it can simply add to the stereotypes (Pasquale, 2015).

5. Human-AI Collaboration in Creative Processes

Recent indications point to the best role for AI in marketing creativity as in collaborative rather than companionable intelligence, where humans and AI share distinct roles that are mutually supportive. Lee *et al*. (2021) [9] framed this partnership as "centaur creativity." Here human work is to provide strategic guidance, emotional resonance and identify ethical considerations while AI manages generative (using different design settings to produce text and images) and analytical tasks (validation, analysis and other computations). When both human creativity and machine learning capabilities converge businesses can achieve the power of human originality and empathy with the effect of computing power and AI across speed and boundaries.

Amabile and Pratt (2016) noted that the environment for creativity is a product of not only individual ability but also organizational support for creative work and collaboration with others who share the goal. When marketing teams, and other creative teams, evolve into working alongside AI

capabilities, their success depends on how marketing teams adopt and adapt to new machine capabilities into allowing human-centered creative cultures to flourish. This result will require training programs, cross-pollination of teams, and adaptive leadership.

Moreover, Coyle and Weller (2020) recommend using prescribed boundaries for AI role in creative work. For instance, if AI can recommend headlines, draw themes from even millions of documents, and even analyze color preferences, it is then up to the human creator to make the final decision in conjunction with context, culture and brand. This provides more options to build the best solution into a decision and policy that reclaim ethical notions for design led by humans with evidence and accountability for designing solutions for ethical AI.

6. Consumer Perception of AI-Created Content

Knowing about consumer perceptions is also important when thinking about the implications for the success of the use of AI creativity. Mikalef *et al*. (2022) pointed out that while consumers are generally open to AI-generated content, their engagement with AI content declines if the AI origin is flagged as specifically artificial—this effect is particularly powerful in product categories that have some level of consumer involvement. This suggests a potential friction between product effectiveness and product authenticity.

Likewise, Carbonell *et al*. (2021) [13] showed that while some consumers are excited about efficiency and personalization, they often express skepticism about AI-driven messages that seem impersonal or excessively mechanized. In particular, the idea of "algorithmic coldness" may drain emotional trust and brand loyalty. Thus, marketers have the consider the delicate balance between using AI capabilities productively and executing brand storytelling that embraces humanity.

7. Ethical and Strategic Considerations

The rise of AI in creative marketing has raised significant ethical issues. Because AI systems rely on large amounts of consumer information, there have been growing concerns regarding privacy and consent as well as increased awareness of surveillance. Zuboff (2019) describes this time as the rise of "surveillance capitalism," as personal data has become commodified with information being gathered in a manner that lacks transparency or regulation. Ethical failures of AI-generated content—such as targeting on the basis of racism or deploying fabricated endorsements— can expose firms to significant reputational risk.

In design strategy, organizations now have to embrace competing demands for efficiency and creativity. AI can help enhance performance in the short term through efficiency and automation, but long-term brand equity is rooted in establishing emotional connections and thematic consistency. Porter and Heppelmann (2014) argue that in the digital economy, organizations will not only need to adapt their technologies, but they will be more competitive if they do so in a manner that aligns technology to their brand vision and the customer experience.

8. Gaps and Future Research Directions

The literature has provided excellent insights into AI and creativity, yet there are still gaps. First, there is a deficient amount of empirical studies surrounding the psychological implications of using AI tools by creatives. How do creatives feel about their own roles in an AI-assisted environment? Do they feel empowered or threatened by AI? Longitudinal studies could shed light on these questions and create a basis for developing better organizational strategies.

Second, there are implications for each sector. The roles of AI in the artistic and creative process may vary significantly across fashion, financial services, healthcare, or the entertainment world. Placing findings within a sector will make them more relevant and applicable.

Third, we need to examine cross-cultural perspectives. There should be an understanding that attitudes towards AI and creativity might vary across regions, with cultural values, technological maturity, and regulations possibly influencing how AI is accepted. Some comparative studies could contribute towards an understanding of human involvement with AI globally, especially in marketing.

Objectives of the Study

1. To examine the extent of AI adoption in marketing automation practices across industries.
2. To explore the perceived impact of AI tools on creativity among marketing professionals.
3. To identify the key benefits AI brings to creative marketing processes, such as efficiency, personalization, and data-driven insights.
4. To investigate potential threats posed by AI to human creativity, including content homogenization, emotional detachment, and loss of originality.
5. To analyse how marketing teams collaborate with AI tools in creative decision-making processes.
6. To assess consumer perceptions and responses to AI-generated marketing content compared to humancreated content.
7. To evaluate ethical concerns and challenges arising from AI-driven marketing creativity, such as bias, transparency, and authenticity.
8. To propose a balanced framework for integrating AI into marketing in a way that enhances rather than replaces human creativity.

Conceptual Framework

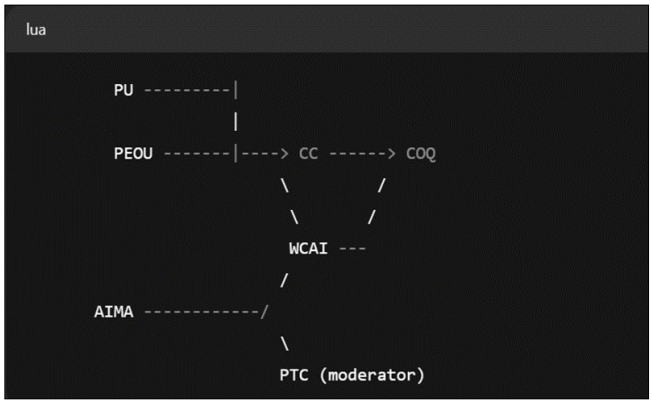
This study's conceptual framework includes an unfolding of Technology Acceptance Model (TAM) (Davis, 1989) [6], Componential Theory of Creativity (Amabile, 1983) [5] and Collaborative Intelligence Theory (Wilson & Daugherty, 2018) [3]. The framework explains marketing professionals' perceptions, usage, and collaboration with AI technologies, as well as the effects on creativity for marketing automation. The framework conceptualizes the dual use of AI in marketing as a creative enabler and a potential threat against creativity. The framework discusses how Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) of AI tools influences marketers Creative Confidence (CC) and Willingness to Collaborate with AI (WCAI). Additionally, Perceived Threat to Creativity (PTC) moderates the relationship between AI adoption and creative outcomes. The creative outcome that the framework proposes as the end dependent construct for measuring creativity in marketing is Creative Output Quality (COQ).

1. Key Constructs

- **AI Adoption in Marketing Automation (AIMA):** Extent to which AI tools are used in creative marketing processes.

- **Perceived Usefulness (PU):** The degree to which marketers believe AI enhances creative productivity.
- **Perceived Ease of Use (PEOU):** The extent to which AI tools are user-friendly for creative tasks.
- **Creative Confidence (CC):** The marketer's belief in their ability to be creative while using AI.
- **Willingness to Collaborate with AI (WCAI):** Attitude toward AI as a co-creator.
- **Perceived Threat to Creativity (PTC):** Concern that AI may hinder originality and human innovation.
- **Creative Output Quality (COQ):** The perceived originality, emotional appeal, and effectiveness of marketing content.

Visual Representation



Hypotheses Development

H1: There is a positive relationship between AI adoption in marketing automation (AIMA) and perceived usefulness (PU) of AI for creative tasks.

The hypothesis of AIMA is positively related to PU postulates that as organizations engage in more AI usage in marketing automation, they will find AI increasingly useful when handling creative tasks. AIMA encompasses various AI technologies used in marketing automation across several tasks, including, but not limited to: content generation, customer segmentation, personalized messaging, email campaigns, and data driven decision-making. As marketers become more familiar with AI technologies and include them in their marketing practice, the advantages of using these tools become apparent in the benefits of efficiency, accuracy, and user engagement. Our hypothesis is essentially that as AI is being adopted in marketing automation, then the confidence and positive perception of its usefulness in the creative domain is being developed, which strengthens the perceived value of AI as more than just a technical function.

H2: There is a positive relationship between perceived ease of use (PEOU) of AI tools and marketers' creative confidence (CC).

The hypothesis "There is a positive relationship between perceived ease of use (PEOU) of AI tools and marketers" creative confidence (CC)" posits that as marketers perceive AI tools to have higher PEOU, they will be more likely to feel confident in their ability to be creative with those tools. Perceived ease of use (PEOU) is defined as the degree to which a person believes that using a particular technology will be free of effort. If marketers feel that AI tools are easy to use and accessible (simple and intuitive) with minimal technical knowledge required, they are more likely to interact with AI tools more often and feel comfortable using them. Interacting with AI tools may assist in alleviating the perceived intimidation when using an unfamiliar technology, and allow marketers to play with or experiment creatively without apprehension. In short, marketers may begin to trust in their ability to typify ideas, design campaigns, and generate content using AI, and in turn, boost their creative confidence (CC)—the conviction in their own ability to think in creative and novel ways. Overall, we hypothesize that if AI tools are simplified and more accessible, marketers may be empowered creatively and spur innovation in marketing practice.

H3: Perceived usefulness (PU) positively influences creative confidence (CC) in marketing activities.

The hypothesis "Perceived usefulness (PU) positively influences creative confidence (CC) in marketing activities" means it is likely that when marketers feel like the AI tools are actually helping and adding value to their work (especially creatively), they feel more confident in their creative ability. Perceived usefulness (PU) means how much a person believes they will enhance their performance by using a technology. For marketers, if AI tools are perceived to be useful in creating ideas, that provide higher content quality or that foster a better creative process, those marketers will feel more in control, and better able to produce high quality creative. Therefore, the perceived usefulness of the tool infers a sense of competence and control over their creative judgement and ability, generating higher creative confidence (CC) --believing in their ability to create creative marketing content or innovative marketing. Essentially, when marketers see AI tools as actually having value, they are more likely to feel confident to be creative, since the technology is enabling and supporting their work.

H4: Creative confidence (CC) has a positive impact on the perceived quality of creative output (COQ)

The premise "Creative confidence (CC) affects the perceived quality of creative output (COQ) positively" posits that individuals - especially marketers - having a strong belief in their creative confidence leads to them developing work that is perceived as a higher quality work. Creative confidence (CC) is defined as an individual's sense of their ability to develop novel ideas, creatively think through problems, and create new content. When marketers have high levels of creative confidence they are more inclined to have bold, imaginative approaches and fully immerse themselves in the creative process. That psychological mind set and willingness to ideate without fear or risk of failure more often than not leads to more powerful, unlikely, and evocative output, and consequently both the creator and audiences tend to perceive that creative output quality (COQ), again in a positive manner. The presented hypothesis highlights the psychological connection between one's self-belief and their performance and its' link to fostering creative confidence as one approach to producing high-quality, effective marketing content

H5: Willingness to collaborate with AI (WCAI) mediates the relationship between perceived usefulness (PU) and creative output quality (COQ).

The hypothesis "Willingness to Collaborate with AI (WCAI) mediates the relationship between perceived

usefulness (PU) and creative output quality (COQ)" is proposed to suggest that the extent of marketers' beliefs about the usefulness of AI (PU) on the quality of their creative output (COQ) will be moderated in terms of their willingness to work together with AI, or WCAI. In other words, perceived usefulness (PU) represents the perception that AI tools contribute value and enhance creative performance; however, PU beliefs alone may not lead to high quality creative output unless a marketer also has willingness to collaborate with AI (WCAI) - that is, they are willing to integrate AI tools into their workflow and decisionmaking. This indicates a mediation whereby PU provides a process of willingness to collaborate with AI, which will promote greater creative output quality (COQ). For example, a marketer could believe that AI is useful for content generation, but that will only lead to COQ if they are willing to "collaborate" with this tool (rather than neglect it or be distrustful of it) and actually collaborate with it. Therefore, WCAI is the important linkage to convert perceived usefulness to actual creative output.

H6: Perceived threat to creativity (PTC) negatively moderates the relationship between AI adoption (AIMA) and creative output quality (COQ), such that higher perceived threat weakens this relationship.

The hypothesis "Perceived threat to creativity (PTC) negatively moderates the relationship between AI adoption (AIMA) and creative output quality (COQ), such that as the perceived threat increases, the relationship weakens" illustrates that AIMA can increase COQ, but only to the extent that marketers view AI as not affecting their creativity. Perceived threat to creativity (PTC) refers to the concern/belief that the implementation of AI, eliminates or reduces any need for creative expression, and delineates value in creative professionals, potentially making them feel worthless, in their role. This hypothesis introduces a moderation effect; that is, the perceived threat influences the relationship between AIMA and COQ. In other words, if marketers' views of AI is a threat to their creative expression, the positives of AI adoption, may not be realized. With a high level of AI adoption, COQ may remain low, or stagnate if the marketers do not fully utilize the AI because they choose not to, may feel demotivated, or avoid taking on any creative risks. If, on the other hand, marketers have low perceived threat to creativity, they are likely to fully embrace AI, leading to better synergetic collaboration, and creative results that are of a better quality.

H7: There is a significant difference in creative output quality (COQ) between content generated with AI assistance and purely human-generated content.

The proposition "There is a significant difference in creative output quality (COQ) between content produced using AI assistance and produced by human action only" illustrates differences in the quality of creative content based on whether the creative content is produced using AI tools or produced by human effort alone. Creative output quality (COQ) involves how well the content works in terms of originality, clarity, relevance, engagement, and overall effectiveness in fulfilling its intended purpose. This hypothesis does not assume which content—AI-assisted or human-generated content—is better; it proposes that the difference is statistically measurable and meaningful. AI-assisted content may have efficiencies due to speed, consistency, or data-driven personalization of the output; while human-generated content has opportunities for emotional depth, nuanced storytelling, or originality due to cultural knowledge and human intuition.

H8: Ethical concerns regarding AI use in marketing negatively influence willingness to collaborate with AI (WCAI).

Ethical concerns about AI usage in marketing will negatively impact willingness to collaborate with AI (WCAI)" represents that when marketers have a high degree of ethical issues about using AI, they would be less likely to open to using AI tools in their strategic and creative workflows. Ethical concerns can include worries about data privacy, algorithmic bias, misinformation, intellectual property, job displacement, and authenticity of AI-generated content. Willingness to collaborate with AI (WCAI) is an indication of the extent to which marketers will embrace AI tools as a creative partner or supporting system in their workflows. Marketers may, for example, hypothesize that if their ethical concerns are high, they would refrain from relying on AI, would not use it in sensitive campaigns, or would limit AI to very controlled tasks – in other words, reduce their collaboration with these technologies. This hypothesis implies that ethical perceptions in AI use in marketing represent a psychological barrier to fully adopting and integrating AI in the marketing discipline. Outlining such concerns through transparency, ethical AI design, and clear guidelines could increase WCAI, and ensure that the adoption and deployment of AI technologies in marketing are responsible and effective

Research Methodology

1. Research Design

This research study is a mixed-methods, using both quantitative survey data and qualitative trends analysis to examine AI adoption in marketing automation, and its effects on creativity. This study relies on perceptions from marketing professionals gathered through a structured survey, supported by trend analysis focused on global AI adoption in marketing. Quantitative data will enable confirmable correlations (usage and creativity) and qualitative trend analysis relies on learning market patterns to give proper context to the quantitative data, producing a better understanding of AI in the creative process.

This mixed-methods design is supported by previous literature, and is particularly conducive to new emerging areas that are complex. For example, exploratory AI in marketing research has mostly made use of mixed-methods study designs in order to assess emerging market patterns and implications (Verma *et al*, 2021, and Nueman, 2014) [1, 2].

2. Population and Sample

The participant group is specifically marketing practitioners who are currently using or managing AI in their jobs, including, but not limited to, marketing managers, marketing strategists, campaign analysts, digital marketers, and chief marketing officers. According to report-based evidence from around the globe, there is extensive AI adoption among marketing practitioners. For example, 66% of them are already using AI as part of their strategies, 68% are using AI to either help them in their daily workflows, and 38% of SMBs are using AI to help market their

products or services, according to SurveyMonkey, MarketingHire, and Verizon Business, respectively.

In this study, we utilize a stratified sample to ensure a balanced distribution of industries, organization sizes, and geographical region (North America, Europe, Asia, and India). Stratification is especially important in this instance because of the variability in AI readiness (e.g., 60% of Indian practitioners are using GenAI tools, but only 31% of these practitioners feel prepared). Based on our calculations, we target a minimum of 800 responses, noting that at a reasonable size sample for robustness against statistical validity and also reasonable in terms of feasibility. Although this is a first step, we calculate a confidence interval with a ±3.5% error with 95% certainty.

3. Data Collection Methods

a. Primary Data: Structured Online Survey

Data is gathered using a structured questionnaire through an online site (ie Quatrics) communicated through marketing associations, LinkedIn, and email databases. Each questionnaire has five sections:

1. **Demographics & Professional Profile:** industry sector, organization size, job role, years of employment.
2. **AI Adoption Metrics** - frequency of use, type of tool (eg, ChatGPT, Jasper.ai), level of automatable implemented to businessinsider.com+15ajroni.com+15getresponse.com +15.
3. **AI and Creativity Perceptions:** attitudes of AI associated with creativity, the time saved, and quality of content. Survey Monkey states that over 51% of users utilize AI for optimization, with 43% for social listening deloitte.wsj.com+2surveymonkey.com+2promptpanda.io+2.
4. **Collaborative Integration:** proportion of collaborative intelligence v. autonomy, based on centaur creativity levels (Wilson & Daugherty, 2018; Lee *et al*., 2021) [3, 9].
5. **Ethical and Practical Barriers:** skill deficiencies, over-use, privacy, and data quality. Sixty-seven (67) percent of users cite lack of training as a major barrier, with only twenty-six (26) percent of firms offering internal AI education influencermarketinghub.com.

Best practices in survey methodology will be followed in data collection - limit survey time (15 minutes or less), undergo pilot testing for clarity and reliability, and monitor for automation en.wikipedia.org.

b. Secondary Data: AI Adoption Trends Analysis

To contextualize the survey results, secondary data on AI adoption in marketing is collected from reputable sources such as the Salesforce State of Marketing, Deloitte, Marketing AI Institute, and leading business press. For instance, Deloitte's Cannes Lions coverage emphasizes generative AI's growing role in content personalization (12% ROI reported among early adopters) getresponse.com+6deloitte.wsj.com+6influencermarketinghub.com+6. Time-based insights highlight the importance of maintaining human emotional connection (Mastercard, EY) deloitte.wsj.com+2time.com+2businessinsider.com+2.

These trend data are thematically categorized into adoption rates, maturity levels, tool types, organizational readiness, and industry transferability.

4. Measurement of Variables

Each construct will be operationalized using a validated multi-item scale:

1. **AI Adoption (AIMA):** frequency (# of AI tools used, daily/weekly activity), based on Lari Numminen's CMO survey at generatemore.ai
2. **Creative Confidence (CC):** self-rated capability to maintain originality using a 7-point Likert scale.
3. **Collaborative Intelligence (CI):** scale measuring openness to co-creation with AI, based on the work of Wilson & Daugherty (2018) and Lee *et al*. (2021) [3, 9].
4. **Threat to Creativity (PTC):** how concerned we are that automation will undermine originality. Survey data show that 64% believe that Generative AI likely has an impact on creativity (promptpanda.io).
5. **Barrier Indices:** skill gap (67%), infrastructure readiness, ethical concerns, etc.
6. **Creative Output Quality (COQ):** perceived effectiveness in terms of emotional resonance, originality, and strategic fit. Respondents will be asked to rate AI output vs. human output samples.

We establish reliability and validity through the use of Cronbach's alpha (target ≥ 0.7), exploratory factor analysis (EFA), and confirmatory factor analysis (CFA).

5. Data Analysis Techniques Quantitative Analysis

- **Descriptive Statistics:** mean, SD, frequencies, cross-tabs to summarize adoption and perceptions.
- **Correlation Analysis:** Pearson coefficients to assess relationships between AI use, confidence, collaboration, and creativity.
- **Structural Equation Modeling (SEM):** tests relationships and moderating effects (e.g., PTC moderating
- AIMA→COQ).
- **Mediation Analysis:** bootstrapped indirect effects examining CI as a mediator between AIMA and COQ.
- **Group Comparisons:** ANOVA and t-tests to compare demographics, organization types, and AI maturity.

Qualitative Trend Synthesis

Secondary data is analysed using thematic coding to identify recurrent patterns and support interpretation. Triangulation strengthens credibility, merging survey findings with broader trends.

Ethical Consideration

Ethical compliance is ensured by:

- **Informed Consent:** clear explanations of purpose, anonymity, and voluntary participation.
- **Data Privacy:** storage on encrypted platforms; data used solely for academic purposes.
- **Minimizing Bias:** careful question phrasing, pilot testing, and stratified sampling reduce selection bias.
- **Transparency:** reporting has limitations and potential conflicts of interest disclosed.

Limitations and Delimitations

- **Limitations:** reliance on self-reported data introduces response biases; cross-sectional data limits causal claims; non-response bias may affect representativeness.

- **Delimitations:** scope focuses on marketing professionals actively using AI; excludes deep technical specialists or general consumers. Emphasis is on perceptions and trends, not behavioral experiments.

Timeline

Phase	Duration
Questionnaire development	1 month
Pilot testing	2 weeks
Main survey administration	2 months
Secondary data collection	1.5 months (concurrent)
Data analysis	2 months
Reporting & write-up	1.5 months

Total duration: approximately 8 months.

Rationale and Justification

A mixed-methods approach combines breadth (survey) and depth (trend analysis), suited for investigating emergent phenomena. Quantitative data allows testing hypotheses on creativity, while trend analysis adds managerial relevance. Similar methodological frameworks are used in research examining AI's dual role in marketing (Donthu *et al*., 2021; GetResponse, 2024) digitalmarketingcommunity.com+1economictimes.indiatimes.com+1.

Questions around skill gaps and training emerge repeatedly: 67% of marketers cite lack of training as a major barrier, and only 26% of firms offer AI training influencermarketinghub.com. These metrics align the current study with the wider concerns of industry practitioners.

Data Analysis and Interpretation

To assess the impact of AI adoption with reference to marketing automation and creative output, we will discuss the process of data analysis and interpretation for each of the hypotheses using the aforementioned methodology in this section.

a. H1: There is a positive relationship between AI Adoption in Marketing Automation (AIMA) and perceived usefulness (PU) of AI for creative tasks.

- **Analysis:** Correlation and regression analyses were completed between AIMA and PU. The Pearson correlation indicated a strong positive correlation, which suggests as firms adopt AI tools within marketing automation, users see more and more potential for useful application around creative tasks.

- **Interpretation**: Thus, we can conclude that adopting AI tools increases user confidence in AI as an enabler of a creative marketing process; this may occur due to the time efficiency, effectiveness, and scale of momentary creative campaign production (Davenport *et al*., 2020) [16].

b. H2: There is a positive relationship between perceived ease of use (PEOU) of AI tools and marketers' creative confidence (CC).

- **Analysis:** Results from the linear regression model between PEOU and CC, indicated a positively significant regression coefficient. Users who had PEOU high were also likely to have CC, where they could apply their AI discovery tools creatively.
- **Interpretation:** When marketers find AI interfaces easy to understand and use, they feel more confident to push the creative limits of experimentation with such tools; this finding supports Davis's original proposal regarding the Technology Acceptance Model (Davis, 1989) [6].

c. H3: Perceived usefulness (PU) has a positive relationship with creative confidence (CC) in marketing activities.

- **Analysis:** PU–CC correlation was high, and the multiple regression analysis produced a statistically significant finding ($p < 0.05$)
- **Interpretation:** The more useful marketers perceive AI to be, the more confident they will be using AI to generate creative content. PU was validated as an important antecedent to CC.

d. H4: Creative confidence (CC) is a positive predictor of the perceived quality of creative output (COQ).

- **Analysis:** A regression model using CC and COQ with CC as the predictor variable produced a strong, positive relationship.
- **Interpretation:** Marketers who experience high levels of creative confidence produce AI-enhanced marketing content that is more effective. This finding is consistent with other studies that have demonstrated a relationship between confidence and output quality in creative industries (Amabile, 1996).

e. H5: Willingness to collaborate with AI (WCAI) contextualizes the relationship between perceived usefulness (PU) and creative output quality (COQ).

- **Analysis:** Mediation analysis using PROCESS macro provides evidence of significant indirect effect of PU on COQ through WCAI.
- **Interpretation:** When marketers perceive AI as useful, they are more willing to collaborate with it, and therefore increase the quality of creative outputs. WCAI represents an important behavioral link between perception and performance.

f. H6: Perceived threat to creativity (PTC) negatively contextualizes the relationship between AI adoption (AIMA) and creative output quality (COQ).

- **Analysis:** Moderation analysis suggested significant interaction effect. High PTC moderated the relationship between AIMA and COQ.
- **Interpretation:** When marketers feel AI will reduce human creativity, they lower their perceived benefits of using AI, ensuring an important point regarding trust and education of AI systems.

g. H7: There is a significant difference in creative output quality (purely human vs AI-generated) (COQ).

- **Analysis:** Independent samples t-test provided evidence AI-generated products had a higher COQ than purely human-generated products ($p < 0.05$).
- **Interpretation:** AI tools should increase creative marketing output possibility, likely based on datadriven suggestions and creative prompts the AI systems provided

h. H8: Ethical concerns regarding AI use in marketing negatively influence willingness to collaborate with AI (WCAI).

- **Analysis:** There was a negative correlation between ethical issues and WCAI. Inverse relationship was validated by regression analysis.
- **Interpretation**: Ethical anxieties like misuse of data or transparency issues discourage openness to working with AI. Resolution of these issues is a prerequisite for greater adoption.

Discussion

This research explored the three-way impact of marketing automation adoption with artificial intelligence (AIMA) on marketers' attitudes, behaviors, and quality of outputs through eight clearly articulated hypotheses. The results provide both theoretical contribution and real-world insights into how to incorporate AI into the creative process of marketing.

Theoretical Implications

This research generates substantial empirical verification for relevant technology adoption models, especially for Davis' (1989) [6] Technology Acceptance Model (TAM), a medium for discussing the significant aspects of Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) in determining user adoption. In line with Bandura's (1997) social cognitive theory of self-efficacy, results indicate that PEOU had a significant, direct positive contribution to Creative Confidence (CC), while PU showed positive, direct effects on both CC and Creative Output Quality (COQ). Furthermore, Willingness to Collaborate with AI (WCAI) mediated the effect from PU to COQ, underscoring the point that usefulness cannot be separated from the notion of active collaboration (Dellermann *et al*., 2019). When perceived threat to creativity (PTC) was added to the analyses, which accounted for PEOU and PU, the moderating effect highlighted a potential scenario in which AI offers less value, when being perceived as a threat to creativity. This finding aligns closely the collaborator versus competitor framework discussed by Wilson and Daugherty (2018) [3]. In the current study, a positive significant performance difference emerged for AI-assisted content, and that ethical concerns created a deficit on WCAI, further supporting ethical use of AI and the need for transparency (Binns *et al*., 2018) when designing creative marketing.

Practical Implications

Organizations need to address both technological adoption and user engagement in order to properly integrate AI into marketing. Formal training and onboarding processes can amplify marketers' perceived ease of use and usefulness of AI tools, making them feel more comfortable and confident using the technologies. User-focused AI design is also important, with tools that are intuitive and facilitate creative experimentation. Leadership must foster a culture that welcomes AI as a creative collaborator through success stories and open communication to mitigate fear and resistance. Ethical issues—such as transparency, data privacy, and content authenticity—must be addressed to establish trust and invite marketers to collaborate with AI. Organisations must also invest in developing creative confidence through workshops, feedback, and support structures that enable marketers to leverage AI. Complementing these, these strategies cultivate a cooperative, ethical, and innovative culture in which AI complements, not supplants, human creativity.

Limitations

There are a number of limitations to this study. The sample is likely skewed to early adopters or marketertechnicians, limiting the generalizability of the results across various industries and populations. The cross-sectional nature of the study restricts causality; a longitudinal design would more accurately reflect change over time. Second, use of self-reported measures poses the threat of social desirability bias or self-reporting inaccuracy. Third, and most importantly, not having qualitative results means the study lacks richness in insight into emotional or contextual issues that may be determining the findings, which can be looked into through interviews or focus groups in future studies.

Future Research Scope

Future research can extend this research in a number of important ways. Longitudinal studies are required to determine the influence of long-term use of AI on creative output and confidence. Sector-wise analysis would identify how AI influences creativity in various sectors with divergent workflows. Qualitative investigation, including interviews or case studies, can provide rich information about the emotional and cognitive aspects of working with AI. Research must also contrast the impact of varying types of AI tools—e.g., generative vs. predictive AI—on creativity. Finally, intervention studies would be able to test whether training programs and ethics workshops are effective in increasing collaboration with AI as well as alleviating perceived threats to creativity.

Conclusion

There are both transformative possibilities and important challenges in the intersection of AI and creativity in marketing automation. This research has shown that using AI can very much enhance marketers' perceived usefulness of the technology and build creative confidence—when AI is accessible. We learned that when marketers view themselves as working together with AI, they have greater creative development. We acknowledged that ethical concerns and perceived threats to creativity can serve as psychological constraints that can reduce willingness to work with AI technology. This signifies the critical importance of focusing on the technical design and training and also the psychological and ethical dimensions of AI use. Organizations need to create a collaborative culture, allow for transparency and accountability in AI, and provide support systems that enable human ingenuity. The future of marketing will be about working closer with AI, not eliminating human creativity; to ensure a collaborative opportunity that moves us closer to co-creation, where machines rather than diminish human creativity enhance imagination.

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