Contemporary Visual Culture and Art
https://journals.zycentre.com/cvca

ARTICLE

# Generative Visions: AI, Human Imagination, and the Future of Art

***Zarif Bin Akhtar***

*Department of Computing, Institute of Electrical and Electronics Engineers (IEEE), Piscataway, NJ 08854, USA*

## ABSTRACT

This study critically examines the evolving relationship between Artificial Intelligence (AI) and contemporary art, exploring how computational systems are reshaping concepts of creativity, authorship, and aesthetic production. Tracing key historical developments—from Harold Cohen's pioneering AARON program in the 1970s to contemporary practices employing deep learning and Generative Adversarial Networks (GANs)—the research provides a structured and contextualized overview of AI's integration into artistic processes. Through case studies including Google's DeepDream, works by the collective Obvious, and artists such as Mario Klingemann and Anna Ridler, the paper analyzes AI's role as both a tool and a co-creator. Drawing on interdisciplinary insights from art theory, philosophy, and cognitive science—especially the work of Margaret Boden—the study interrogates long-standing assumptions about originality, intention, and human imagination in the context of machine-generated art. Ethical concerns such as dataset bias and algorithmic opacity are examined alongside curatorial and institutional responses to AI art. This research argues that AI-generated art emerges not from autonomous systems alone, but through complex human-machine collaborations that challenge traditional artistic paradigms. Ultimately, the investigation contributes to a broader understanding of creativity in the digital age and offers a critical framework for navigating the cultural, philosophical, and technological implications of AI in art.

***Keywords:*** Artificial Intelligence (AI); Art; Computer Vision; Computational Image Processing; Deep Learning; Generative Artificial Intelligence (GAI); Machine Learning; Technology

*CORRESPONDING AUTHOR:
Zarif Bin Akhtar, Department of Computing, Institute of Electrical and Electronics Engineers (IEEE), Piscataway, NJ 08854, USA; Email: zarifbinakhtarg@gmail.com

ARTICLE INFO
Received: 7 February 2025 | Revised: 28 March 2025| Accepted: 3 April 2025 | Published Online: 10 April 2025
DOI: https://doi.org/10.63385/cvca.v1i1.23

CITATION
Akhtar, Z.B., 2025. Generative Visions: AI, Human Imagination, and the Future of Art. Contemporary Visual Culture and Art. 1(1): 37–53. DOI: https://doi.org/10.63385/cvca.v1i1.23

# 1. Introduction

In the 21st century, the boundary between technology and the arts is undergoing a profound transformation. Artificial Intelligence (AI), once primarily associated with science and engineering, has increasingly permeated creative domains, raising foundational questions about the nature of art, creativity, and authorship [1–3]. As intelligent systems acquire the ability to generate images, compose music, and mimic cognitive functions, their presence in artistic production compels us to rethink long-standing aesthetic and philosophical assumptions.

The historical roots of AI-generated art can be traced to early computational aesthetics, notably Harold Cohen's AARON in the 1970s—a program that autonomously produced drawings based on coded rules. These early explorations emerged during a period of broader artistic experimentation with systems and procedural methods [4–6]. However, the current wave of AI art, driven by advances in deep learning and Generative Adversarial Networks (GANs), marks a distinct shift: machines are no longer just imitating style—they are generating new aesthetic content that challenges traditional notions of originality and intent.

Projects such as Google's DeepDream, the algorithmically produced *Edmond de Belamy* by the French collective Obvious, and the works of contemporary artists like Mario Klingemann and Anna Ridler exemplify this shift. Yet, their significance lies not only in technical innovation, but in the philosophical inquiries they provoke [7–9]. Can creativity be decoupled from consciousness? Is authorship still meaningful when the output emerges from collaborative networks of humans and machines? And how do aesthetic judgments evolve when the creator may not be sentient?

These are not entirely new concerns. Since the late 19th century, art theorists and philosophers—from Friedrich Nietzsche to Walter Benjamin, and later Margaret Boden and Arthur Danto—have interrogated the evolving role of the artist, the artwork, and the systems that mediate cultural production [10–12]. What distinguishes today's moment is the computational opacity and scale at which AI operates, raising new challenges around bias, agency, and ethical responsibility.

This research situates contemporary AI art within a broader historical and theoretical context, drawing on insights from art history, digital aesthetics, and cognitive science. By analyzing landmark projects, artist interviews, and critical scholarship, the study explores the shifting dynamics of human-machine collaboration [13–15]. It argues that AI-generated art is neither entirely autonomous nor wholly directed, but rather the result of a hybrid process that reshapes our understanding of creativity, interpretation, and cultural authorship in the digital age.

# 2. Methods and Experimental Analysis

This research adopts a qualitative, interdisciplinary methodology that synthesizes art historical inquiry, critical theory, and digital humanities techniques to explore the integration of Artificial Intelligence (AI) into contemporary art. The objective is to understand how AI reshapes traditional artistic paradigms, particularly around creativity, authorship, aesthetics, and curatorial practice. The methodological framework is structured into four interrelated components:

**Case Study Selection and Analytical Framework**

A purposive sampling strategy was used to select five seminal AI art projects based on their technical innovation, critical reception, and discursive impact within both the art and technology communities.

The selected case studies include:

- **Harold Cohen's AARON**—a pioneering rule-based generative system from the 1970s
- **Google's DeepDream**—a neural visualization project using convolutional networks
- **Obvious Collective's *Edmond de Belamy***—a GAN-generated portrait auctioned at Christie's
- **Mario Klingemann's neural art**—experiments with GANs and style transfer in digital aesthetics
- **Anna Ridler's *Mosaic Virus***— a commentary on data bias through AI-generated botanical visuals

Each case was examined across four analytical dimensions:

1. Creative intent and authorship structure
2. Technical architecture and algorithmic design (e.g., GANs, CNNs, transformers)
3. Public and critical reception, including exhibitions and reviews

4. Philosophical and ethical implications, drawn from artist statements and critical theory

This framework facilitated a comparative understanding of how different artists and collectives negotiate AI's creative potential and limitations.

**Thematic Content Analysis**

To uncover recurring patterns across the selected projects, a thematic content analysis was conducted using qualitative analysis software (NVivo 15). Primary sources included:

- Artist interviews, statements, and public lectures
- Exhibition catalogues and curatorial essays
- Technical notes and documentation

The coding process identified the following cross-cutting themes:

- Human-machine co-creation and the shifting locus of creativity
- Redefinitions of authorship, agency, and originality
- Algorithmic aesthetics and visual perception
- Ethical tensions, particularly around dataset bias, transparency, and creative labor

Themes were triangulated with theoretical literature on computational creativity and aesthetic philosophy to ground findings in established critical discourse.

**Algorithmic Technique Mapping**

This component involved a systematic examination of the AI models used in each artwork. Technical mappings included:

- Identification of algorithmic structures (e.g., GANs, autoencoders, transformers)
- Cross-referencing open-source codebases and technical papers where available
- Analyzing artist talks, workshops, and published technical documentation

A comparative matrix was developed to correlate AI methodologies with:

- Aesthetic outcomes (e.g., abstraction, stylization, realism)
- Conceptual narratives (e.g., authorship, bias, perception)

This mapping revealed how algorithmic design decisions directly shape both form and meaning in AI-generated artworks.

**Critical Discourse Analysis**

To contextualize the cultural and philosophical implications of AI in art, a critical discourse analysis was performed on:

- Scholarly publications in art history, digital aesthetics, and AI ethics
- Curatorial texts and institutional commentaries
- Public discourses from blogs, op-eds, and forums reflecting broader societal sentiment

This layer of analysis uncovered the dominant narratives and ideological tensions surrounding AI art, including:

- The myth of machine autonomy
- Anxiety over dehumanization of creativity
- Shifting evaluative criteria for aesthetic value

**Summary of Experimental Findings**

The integrated methodological approach produced the following insights:

- AI functions as both tool and collaborator, with varying degrees of agency depending on the artist's intervention.
- While GANs and transformer models dominate the current landscape, the most critically and conceptually impactful works arise from deliberate human-AI co-authorship.
- AI-generated artworks often challenge traditional evaluative frameworks of originality, intention, and authorship.
- Ethical issues—particularly surrounding bias in training datasets, algorithmic opacity, and creative labor—are central to the evolving discourse on AI and art.

These findings underscore that AI-generated art is neither wholly machine-driven nor purely human-directed, but rather represents a new paradigm of hybrid creativity situated at the intersection of computation, culture, and critical inquiry.

## 2.1. Artificial Intelligence (AI) Art: How It Actually Works, Its Impact, and Its Evolution

AI art refers to creative outputs—ranging from visual images to music, literature, and performance—that are either autonomously generated or collaboratively co-produced

with the aid of artificial intelligence technologies [1–11]. Though primarily associated with visual media, the scope of AI art spans multiple artistic disciplines, increasingly shaping how we conceptualize authorship, creativity, and aesthetics in the digital age.

**How AI Art Works**

AI art is primarily produced through machine learning models that learn patterns, styles, and content structures from large datasets of existing artworks. Once trained, these models can generate novel content based on user inputs such as text prompts or images.

The core technologies include:

- **Generative Adversarial Networks (GANs)**: Use a two-part model—a generator and a discriminator—to produce high-fidelity, human-like images through iterative competition.
- **Convolutional Neural Networks (CNNs)**: Analyze and recognize visual patterns, enabling detailed image interpretation and generation.
- **Neural Style Transfer (NST)**: Applies the stylistic attributes of one image onto the content structure of another, blending artistic features algorithmically.
- **Recurrent Neural Networks (RNNs)**: Commonly applied in music or text-based art, capable of generating sequences based on previously learned data patterns.
- **Natural Language Processing (NLP)**: Decodes user language and refines image or text generation based on prompt interpretation.

These models are trained on datasets comprising millions of labeled artworks, ranging from classic paintings to contemporary media. While some models are open-source and customizable, others are embedded within proprietary platforms.

**Accessibility and Creative Empowerment**

AI art platforms have significantly democratized creative production, enabling both novice users and expert artists to explore new aesthetic possibilities:

- **Pre-trained Tools**: Platforms like *DALL·E*, Midjourney, Stable Diffusion, and Adobe Firefly allow users to create art via intuitive text-to-image interfaces.
- **Customization**: Advanced users can fine-tune AI models using personal datasets to create highly personalized outputs.
- **Cross-disciplinary Utility**: From conceptual art to game design and advertising, AI tools are embedded into diverse creative workflows.

By lowering technical barriers, AI tools empower individuals with limited artistic training to engage in expressive visual storytelling and artistic experimentation.

**Common Use Cases and Cultural Applications**

AI art is being actively applied in multiple sectors:

- **Art Therapy**: Supports emotional exploration and stress relief through guided creativity.
- **Education**: Enhances visual learning and facilitates art history, design, and computational thinking in classrooms.
- **Professional Art Practice**: Serves as an ideation tool or generative collaborator for artists and designers.
- **Cultural Preservation & Restoration**: AI tools assist in reconstructing damaged artworks and modeling lost styles.
- **Commercial Media**: Used in advertising, branding, music videos, and interactive media to create compelling content efficiently.

**Popular AI Art Tools and Platforms**

Several platforms have emerged as industry leaders:

- ***DALL·E*** (OpenAI): Advanced text-to-image generation with inpainting capabilities.
- **Midjourney**: Known for stylistic nuance and high-resolution outputs.
- **Stable Diffusion** (Stability AI): Open-source model offering broad customization.
- **Adobe Firefly**: Integrates AI into mainstream creative tools like Photoshop and Illustrator.
- **Artbreeder**: Allows users to blend and evolve images collaboratively.
- **Deep Dream Generator** and **DreamStudio**: Known for their surreal and psychedelic aesthetics.
- **Playform**: Enables hybrid workflows combining AI and traditional digital art practices.

These tools offer tiered access models, with free trials and advanced features for professionals.

**Controversies and Ethical Considerations**

Despite its transformative potential, AI art presents

complex ethical, legal, and philosophical challenges:

- **Authorship and Ownership**: Ambiguity exists over who owns AI-generated works—the model developer, the prompt author, or the original data contributors.
- **Bias and Representation**: AI systems often inherit biases embedded in training data, potentially reinforcing stereotypes or excluding marginalized aesthetics.
- **Copyright Infringement**: Many AI models are trained on copyrighted works without explicit consent, raising legal concerns. Notable cases include Getty Images vs. Stability AI.
- **Originality and Derivativeness**: Critics argue AI lacks intentionality, raising questions about whether its outputs can truly be considered "art."

These controversies underscore the need for regulatory frameworks, transparent data sourcing, and collaborative dialogue between technologists, artists, and policymakers.

**Historical Evolution of AI Art**

AI art has evolved from rule-based systems to deep learning models, marking several milestones:

- **1973**: *Harold Cohen* created AARON, an early symbolic AI system that autonomously painted.
- **2014**: Introduction of GANs by Ian Goodfellow transformed generative image creation.
- **2015**: Google's DeepDream project popularized CNN-based generative visuals.
- **2018**: The Obvious Collective's "Edmond de Belamy", created using a GAN, sold at Christie's for $432,500, igniting mainstream interest.
- **2019–2021**: Launch of Artbreeder, RunwayML, and *DALL·E* expanded public access to text-to-image synthesis.
- **2022–2023**: Widespread adoption of tools like Stable Diffusion, Midjourney, and Adobe Firefly brought AI art into commercial and cultural mainstreams.

These developments reflect a shift from early symbolic AI to contemporary data-driven creativity, highlighting increasing sophistication, accessibility, and cultural resonance.

AI art is reshaping the boundaries of human creativity by blurring the line between artist and machine, enabling new collaborative practices, and challenging conventional definitions of originality and expression. However, its rapid growth necessitates critical reflection on intellectual property, ethical design, and cultural inclusivity.

To support this perspective, **Figures 1, 2, 3** provides comparative visualizations of AI-generated artworks, algorithmic processes, and their conceptual implications.

**Figure 1.** Generative AI (GAI) Models in Action.

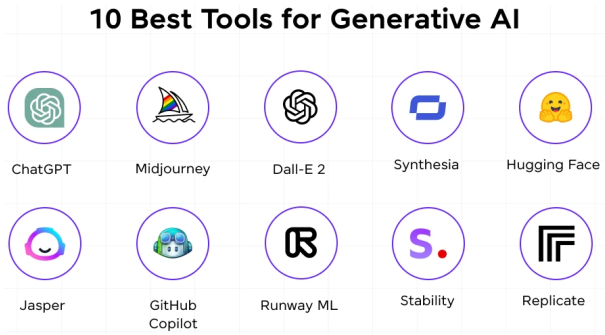


**Figure 2.** Generative AI (GAI) Tools in Action.

**Figure 3.** Generative AI (GAI) Art illustrations.

## 2.2. Case Studies Analysis: AI Changing the Creative Landscape

The rise of Artificial Intelligence (AI) in the creative

domain has significantly transformed the boundaries of artistic expression, authorship, and audience interaction [11–22]. Through detailed case studies, this section explores how AI is no longer merely a tool, but a co-creator that challenges and redefines the very nature of art.

**Case Study 1: Human-Machine Collaboration in Contemporary Art**

Elena Fontaine's article (2024) captures a pivotal moment in the evolution of AI art, highlighting the shift from experimentation to meaningful collaboration. The study showcases AICAN, an AI model trained on over 100,000 pieces of classical and modern art, capable of generating stylistically original works. These artworks have been exhibited in professional galleries and sold at auctions, suggesting growing market legitimacy.

Fontaine also explores the role of human artists like Mario Klingemann, who leverages neural networks not to replace his creativity but to amplify it. This introduces a paradigm of AI as a co-creative agent, where human intent is augmented by algorithmic possibility. Immersive AI-powered installations, responding in real-time to viewers' movements and emotions, further exemplify how AI transforms static works into dynamic, participatory experiences.

The ethical questions raised—concerning authorship, originality, and the presence (or absence) of a human "soul"—form a recurring motif across all case studies. Fontaine's analysis aligns with historical precedents, such as the emergence of photography, suggesting that AI is not an anomaly but a continuation of technology reshaping art.

**Novel Contribution**: This case highlights the emergence of hybrid creativity—where AI augments, rather than replaces human agency—and introduces immersive, emotionally responsive installations as a new genre of interactive art.

**Case Study 2: Philosophical Boundaries and Legal Tensions**

The second article centers on Ai-Da, the world's first humanoid robot artist, as a focal point for philosophical and legal discourse. Ai-Da's ability to produce paintings and sculptures raises essential questions: *Can entities lacking consciousness generate meaningful art?* Thought leaders such as Alice Helliwell and Marcus du Sautoy debate whether intent and self-awareness are prerequisites for creativity, or whether the *output's originality and value* suffice.

This case reflects the growing complexity of copyright and data ownership in AI-generated art. As AI models are trained on vast image datasets—often without explicit consent—platforms like Spawning AI are emerging to offer artists more control over their contributions to training data. This introduces the notion of ethical sourcing of training materials, similar to ethical debates in journalism or science regarding consent and attribution.

Comparative Insight: In contrast to Fontaine's collaborative view, this case study emphasizes AI as a disruptor, provoking fundamental debates around authorship and creative legitimacy. It also introduces legal frameworks as an essential, yet underdeveloped, component of the AI art discourse.

Novel Contribution: The study presents Ai-Da not merely as an artistic novelty, but as a legal and philosophical flashpoint for broader discussions around the definition of creativity, ownership, and authorship in algorithmic art.

**Case Study 3: AI Art's Institutional and Market Legitimization**

The third study takes a macro-perspective, examining the legitimization of AI art through formal channels such as Christie's AI art auction (2025). Featuring renowned artists like Refik Anadol, Claire Silver, and Sasha Stiles, the event underscores that AI-generated art has transitioned from experimental galleries to mainstream, high-value platforms.

These artists utilize AI not merely as a tool but as a creative medium. For instance, Claire Silver blends anime-inspired imagery with AI outputs, emphasizing the inseparability of human and machine input. Sasha Stiles trains an AI on her poetry, suggesting that memory and language, once deeply human domains, can now be extended through machine collaboration.

Importantly, this case highlights a converging trajectory: from coders, engineers, and artists to poets and designers—indicating that AI art is no longer domain-specific but interdisciplinary in scope.

**Comparative Insight**: Unlike the speculative tone of philosophical debates or the collaborative model presented by Fontaine, this case demonstrates market acceptance and institutional validation as key drivers of AI art's evolution.

**Novel Contribution**: The formal inclusion of AI

art in auction houses like Christie's reflects a milestone in cultural legitimization, elevating algorithmic outputs to the status of fine art and reinforcing AI's long-term integration into the creative industry.

**Synthesis and Critical Reflection**

Across these three case studies, recurring themes emerge:

- **Redefining Creativity**: AI challenges human-centric definitions of creativity, raising questions about intent, emotion, and originality.
- **Legal and Ethical Concerns**: The use of AI models trained on copyrighted materials remains a central controversy.
- **Human-AI Synergy vs. Replacement**: While some artists use AI as a collaborative tool, concerns persist about automation and the potential displacement of human labor.

Each case study represents a different phase in AI art's journey:

1. Experimental and co-creative (Fontaine)
2. Philosophical and ethical disruption (Ai-Da)
3. Institutional legitimization and market impact (Christie's auction)

Together, they illustrate a creative landscape in flux—not diminished by AI but redefined by it. The evolving relationship between humans and machines suggests a future where collaboration, not competition, will shape the art world.

## 2.3. Generative AI (GAI)-Art: A Deep Dive

**Understanding AI-Generated Art**

AI-generated art refers to creative outputs—visual, auditory, or textual—produced with the assistance of artificial intelligence systems. These systems are trained on extensive datasets of existing artworks, enabling them to learn patterns, styles, and structures that inform the generation of novel creations [22–33]. The outputs span a wide array of media, including digital paintings, sculptures, soundscapes, poetry, and interactive installations. This emergent art form challenges long-standing notions of creativity as an exclusively human trait and reframes AI not as a replacement for human artists, but as a co-creative partner.

**The Evolution: From Tool to Co-Creator**

Initially, artificial intelligence served as a functional assistant to artists—offering enhancements, stylistic suggestions, or automation of repetitive tasks. However, with the advent of advanced generative models such as Generative Adversarial Networks (GANs) and Variational Autoencoders (VAEs), AI has taken on a more autonomous creative role. These technologies enable machines to produce original artistic content with minimal human guidance, marking a paradigm shift in the history of art. The result is a redefinition of authorship and a blurring of boundaries between human inspiration and machine computation.

**Mechanics of AI-Driven Creativity**

The process of creating art through AI involves a combination of data, algorithmic structures, and human interaction. A typical pipeline includes:

**(1) Training with Large Datasets:**

AI models are trained using massive datasets of existing art. These datasets inform the system about visual compositions, textures, musical patterns, poetic structures, and more.

**(2) Generative Algorithms:**

- GANs function through a two-network system: a *generator* that creates images and a *discriminator* that evaluates them. The adversarial loop refines the generator's outputs to achieve greater realism and creativity.
- VAEs compress input data into latent representations and reconstruct variations from these spaces, promoting creative and diverse outputs through probabilistic modeling.

**(3) Human-AI Collaboration:**

Artists often guide the generation process by setting aesthetic parameters, filtering outputs, or integrating AI elements into broader conceptual frameworks. Works such as *Unsupervised* by Refik Anadol at MoMA exemplify this collaboration, highlighting how artists use AI not merely as a tool, but as a medium.

**(4) Iterative Refinement:**

AI systems leverage feedback loops—either through human curation or algorithmic evaluation—to improve the quality, coherence, and conceptual depth of the output over time.

**Human-AI Synergy in Art Practice**

Rather than replacing human creativity, AI augments it. Human artists offer intent, emotion, cultural context,

and narrative, while AI contributes speed, scale, and computational innovation. This synergy enables the exploration of aesthetic territories that might remain inaccessible to unaided human effort. The resulting artworks reflect a hybrid intelligence—emotional and intuitive on one hand, algorithmic and procedural on the other.

**Creativity, Originality, and Authorship**

AI lacks self-awareness, emotional experience, and cultural grounding, making it incapable of genuine creativity in the human sense. It can recombine learned features and generate novel outputs, but the meaning and intention behind these works remain human-driven.

Originality in AI-generated art requires conscious curation to avoid mimicry of training data. Ethical authorship involves acknowledging the human-AI collaboration, particularly in regard to intellectual property, originality, and creative ownership. The authorship model in GAI-art becomes shared, inviting reevaluation of conventional notions of the artist.

**Figures 4**, **5** provides visual context to illustrate the conceptual dynamics between AI-generated output and human interpretation.

**Figure 4.** An Original Drawing and Design by "Akira Toriyama" (1).

**Figure 5.** An Original Drawing and Design by "Akira Toriyama" (2).

**Limitations and Ethical Considerations**

Despite its capabilities, AI-generated art has clear limitations:

- **Absence of Intentionality:** AI mimics rather than originates purpose-driven content.
- **Cultural and Stylistic Bias:** Training data often reflects historical and cultural biases, which AI may unknowingly reproduce.
- **Contextual Insensitivity:** AI cannot interpret symbolic or historical meaning with human depth.
- **Innovation Ceiling:** AI can extrapolate from data but struggles with true conceptual innovation.
- **Intellectual Property Risks:** Questions around plagiarism and data provenance remain unresolved.
- **Ethical Challenges:** Issues related to cultural appropriation, misuse of identity (e.g., deepfakes), and artist displacement must be actively addressed.

## Leading Tools for AI Art Creation

Several AI tools empower artists and creators to explore new artistic dimensions:

- **Artbreeder:** Combines GANs with user-directed input for evolving visual compositions.
- **RunwayML:** A user-friendly platform that enables real-time creative experimentation with machine learning.
- ***DALL·E* (OpenAI):** Translates text prompts into highly detailed, imaginative visuals using multimodal models.
- **NVIDIA GauGAN:** Converts sketches into photorealistic scenes using deep learning techniques.
- **Midjourney:** Provides stylized, prompt-driven image generation through iterative refinement and community collaboration.

These platforms exemplify the democratization of creative potential, allowing even non-coders to participate in AI-driven artistic processes.

**The Future of AI-Generated Art**

Looking forward, several key trends are shaping the evolution of GAI-art:

- **Hyper-Realism and Detail:** Enhanced model training is leading to near-photographic outputs.
- **Multimodal Expression:** Fusion of visual, auditory, textual, and kinetic elements in unified artistic experiences.
- **Interactive and Adaptive Artworks:** AI-driven installations may respond dynamically to user input or environmental stimuli.
- **Cross-Disciplinary Integration:** AI-generated aesthetics will increasingly influence architecture, fashion, performance, and industrial design.
- **Exploration of Novel Aesthetics:** As AI evolves, so will the visual languages it helps uncover—beyond the boundaries of human tradition.

Generative AI represents both a toolset and a conceptual leap in how art is created, experienced, and understood. It challenges traditional creative hierarchies while expanding the expressive range of both artists and audiences. As the field matures, critical engagement with the ethical, cultural, and philosophical implications of AI art will be essential for guiding its responsible integration into the broader creative ecosystem.

## 2.4. From Paintbrush to Prompt: The Rise and Reckoning of AI-Generated Art

When concept artist RJ Palmer first encountered the photorealistic outputs of *DALL·E 2*, his reaction wasn't admiration—it was apprehension. OpenAI's image generator transformed surreal prompts like "Kermit the Frog in the style of Edvard Munch" into astonishing digital renderings within seconds. This marked not only a significant leap in technological capability over its predecessors but also a cultural shift reverberating across the creative industries. Soon, other platforms like *Midjourney* and *Stable Diffusion* entered the scene, pushing the limits of generative image technology and catalyzing a new creative paradigm popularly dubbed "generative AI."

At its core, Generative AI (GAI) leverages large-scale datasets and deep learning models to autonomously produce content—images, music, text—by identifying and mimicking complex patterns learned during training. Most of these models rely on techniques such as *diffusion* or *transformers*, enabling them to deconstruct and reconstruct artistic patterns in ways that seem both novel and familiar. This uncanny ability to replicate the look and feel of human-created works has sparked excitement—and unease—in equal measure.

**The Ethical Collision: Consent, Credit, and Control**

Cosmopolitan's June 2022 AI-generated magazine cover—created in just 20 seconds through a collaboration between artist Karen X. Cheng and OpenAI—symbolized the dawn of a new era. Yet beneath the surface of this speed and efficiency lie a series of unresolved ethical dilemmas. Artists like Greg Rutkowski, known for his ethereal fantasy illustrations, discovered his name used in hundreds of thousands of AI prompts—despite never consenting to such use. The capability of platforms to imitate an artist's style without permission or compensation raises fundamental questions about intellectual property, consent, and the erosion of artistic identity.

While *OpenAI* has kept *DALL·E 2*'s training dataset opaque, *Stability AI* has gone the opposite route, open-sourcing *Stable Diffusion* and its dataset. This transparency has uncovered problematic inclusions: copyrighted art, pri-

vate medical data, and explicit images. Artist-led initiatives like *Have I Been Trained?* offer some recourse, allowing creators to discover and opt out of future data crawls. However, as Karla Ortiz of the Concept Art Association (CAA) points out, "It's like being asked if you want to opt out after the robbery has already happened."

**Democratization or Dilution?**

Proponents of AI image generators, such as Stability AI's Emad Mostaque, argue that these tools *democratize creativity*—empowering individuals without formal artistic training to produce high-quality visuals. This democratization, however, comes with trade-offs. If powerful visuals can be generated with a short text prompt, where do we draw the line between democratized expression and artistic dilution? For artists like Anna Ridler—who works directly with Generative Adversarial Networks (GANs)—AI tools remain flawed collaborators. Ridler observes that while AI can replicate form and style, it lacks deeper cognitive and emotional nuance.

A prompt like "astronaut riding a horse" might yield a striking image; reverse the roles—"horse riding an astronaut"—and the AI's limitations quickly become apparent. "AI can't handle abstract ideas or collapsing moments in time," she argues. "It lacks memory, intention, and the emotive underpinning that defines true artistic thought."

**Redefining Creativity: From Combination to Transformation**

Oxford mathematician Marcus du Sautoy distinguishes between combinational creativity (AI remixing known styles, as in *DALL·E 2*) and transformational creativity (where AI generates fundamentally novel artistic concepts, as with advanced GANs). However, even this framework is debated. Ridler critiques this perspective, arguing that it reduces creativity to aesthetic novelty—flattening the richness of human artistic experience into visual ornamentation.

Moreover, the cultural implications are far-reaching. As AI-generated images saturate online platforms, the line between human and machine authorship becomes blurred. Artists are increasingly concerned about discoverability, credit, and livelihood in a world where their stylistic DNA can be reassembled, repurposed, and redistributed at scale.

**Looking Ahead: A Fork in the Creative Road**

As AI-generated art becomes more prevalent, its role in society continues to evolve. Some envision a future where humans and machines co-create, each contributing unique strengths: AI's vast computational creativity and humans' emotional, cultural, and philosophical insights. Others fear a commodification of creativity—where originality is lost in favor of efficiency and mass production. The road ahead for generative AI art lies in ethical innovation, responsible development, and an ongoing re-examination of what it means to be an artist. Whether AI is seen as collaborator, imitator, or disruptor, its presence forces us to confront new creative frontiers- and deeper cultural and ethical reckonings.

## 2.5. Is It Still Art If It Wasn't Created by a Human Artist?

As artificial intelligence technologies like *DALL·E 2*, Midjourney, and Stable Diffusion reshape the creative landscape, a fundamental question emerges: If a work isn't created by a human, can it still be considered art? Across writing, animation, architecture, music, and mixed media, artists and scholars are grappling with the cultural and philosophical implications of AI-driven creativity.

**"Most at risk are commercial genres with easily recognizable styles and tropes."**

Novelist and Harvard instructor Daphne Kalotay argues that the core of artistic value lies in human originality, emotional depth, and lived experience—qualities that AI lacks. While generative models can convincingly replicate autofiction or genre conventions, they do so by reproducing statistical patterns, not through insight or intentionality. To Kalotay, true art is not just imitation—it is an expression of a personal vision rooted in real-world consciousness.

**"That sense of interplay... is something that artificial intelligence can't reproduce."**

For jazz musician and Harvard senior lecturer Yosvany Terry, AI cannot emulate the live spontaneity of jazz performance. The essence of jazz lies in its improvisational dialogue—a form of creativity forged in the moment, between human minds and bodies. While AI-generated compositions may suffice in commercial settings, they lack the emotional richness and dynamic surprise that define meaningful musical expression. Still, Terry sees AI's potential to democratize access to music and elevate underrepresented

musical traditions, especially from the Global South.

**"AI is acting like a sort of collective unconscious."**

Animator Ruth Lingford takes a more ambivalent stance. Though she acknowledges that AI may pose a threat to animation industry jobs, she also recognizes the surreal and often uncanny remixing capabilities of image generators. For her personal practice, however, the tactile, meditative nature of drawing remains essential—a gateway to unconscious thought and emotional complexity that AI cannot reach. She speculates that the eventual saturation of AI aesthetics might even provoke a renewed appreciation for hand-crafted, analog artistry.

**"We should be grateful to be challenged and knocked out of our habits and assumptions!"**

Mixed-media artist and Harvard professor Matt Saunders cautions against dismissing AI's creative potential outright. For Saunders, the artistic process is fundamentally dialogic—meaning emerges through engagement, context, and critical interpretation. While AI can generate compelling visual outputs, it is ultimately the human artist who frames, critiques, and assigns meaning to these images. In his view, AI is less an autonomous creator and more a tool for disrupting convention and inviting deeper inquiry.

**"If we ask the right questions, AI is going to give us significant answers."**

Architect Moshe Safdie sees AI as a powerful analytical assistant but not a creator in the true sense. Though AI can optimize spatial forms and produce visually striking architectural renderings, it lacks the emotional resonance, symbolic depth, and narrative cohesion of visionary architecture.

Iconic projects like the Jewel Changi Airport, with its integration of nature and spatial poetry, emerge from imaginative intention and human empathy—qualities AI has yet to possess. Taken together, these perspectives converge on a nuanced consensus: AI may reshape creative workflows, challenge long-standing definitions of authorship, and even augment aesthetic production. However, the essence of art—consciousness, emotion, and meaning—remains intrinsically human. While AI can mimic the *form* of art, it cannot yet replicate the *soul* of artistic expression. Whether used as a tool, a collaborator, or even a provocateur, artificial intelligence is not displacing the artist—it is redefining the creative terrain in which artists work. The question isn't whether AI can create art, but whether we, as humans, choose to imbue its outputs with meaning, value, and vision.

# 3. Results and Findings

**Evolving Perceptions of AI and Art**

The discourse surrounding AI-generated art has significantly expanded beyond academic circles, entering mainstream cultural institutions through exhibitions, symposia, and public forums. This increasing visibility reflects not only a rising curiosity but also a need for critical engagement with the epistemological, aesthetic, and ethical implications of AI in creative domains.

A consistent theme across studies and public reactions is the tension between technological mediation and human authorship. As AI systems like *DALL·E 2* and Midjourney gain prominence in visual art, questions arise about originality, creative agency, and the ontology of art when human presence is indirect or minimal.

**Historical Milestones and Paradigm Shifts**

From Harold Cohen's pioneering work with AARON in the 1970s to contemporary applications of Generative Adversarial Networks (GANs), the relationship between AI and art has shifted from experimental novelty to serious cultural production. Cohen's framing of AARON as a "co-creator" presaged current debates about authorship, agency, and collaboration. This trajectory continued with milestones such as Google's DeepDream (2015), Obvious' Portrait of Edmond de Belamy (2018), and Mario Klingemann's Memories of Passersby I (2019), each contributing to the normalization of AI in art markets and institutions.

Notably, these developments represent a progression from static algorithmic outputs to dynamic, iterative installations—suggesting an increasing complexity in how AI systems interact with both creators and audiences. The introduction of real-time generative processes, such as Klingemann's use of neural networks to produce endless fictional portraits, signals a new phase in AI-assisted aesthetics, where unpredictability and feedback loops become intrinsic to the artwork.

**AI Creativity: Between Automation and Authorship**

Findings from multiple perspectives—including

cognitive science, digital humanities, and computational aesthetics—indicate that while AI can demonstrate *exploratory* creativity (Boden, 1994), its capacity for *transformational* or *combinatorial* creativity remains contested. AI systems operate primarily through statistical pattern recognition and are unable to replicate conceptual understanding, emotional intentionality, or lived experience—dimensions foundational to human artistic practice.

Practitioners such as Anna Ridler and Mario Klingemann reinforce this limitation through their methodological approaches, which emphasize human intervention in dataset curation, algorithmic tuning, and iterative control. For instance, Ridler's use of small, handcrafted datasets contrasts with the mass training of models like GANs, underscoring how the dataset itself can serve as an extension of the artist's conceptual vision. These practices reveal a crucial insight: the creative potential of AI often emerges from the dialogue between human intention and algorithmic process, rather than from the machine's autonomy.

**Aesthetic Legitimization and Institutional Embrace**

Institutional recognition of AI-generated art—via auction houses such as Christie's and Sotheby's, and curated exhibitions like *DeepDream: The Art of Neural Networks* and *The Rights from Future Generations*—demonstrates a legitimization of AI as both medium and method. These platforms foreground not only technical innovation but also challenge canonical assumptions about authorship, originality, and artistic value.

This shift aligns with broader curatorial and philosophical trends that frame AI as a tool for augmenting human imagination rather than replacing it. Artists like Ruth Lingford and Matt Saunders stress the continued importance of physical, emotional, and processual dimensions in art, viewing AI not as a substitute for the artist but as a collaborator in a new form of authorship—one marked by negotiation, friction, and reflection.

**Limitations and the Human Condition**

Despite growing interest, AI-generated works often provoke skepticism when evaluated through traditional aesthetic criteria. Critics like Hito Steyerl argue that AI's creative outputs are constrained by their dependence on biased, opaque datasets and a lack of cultural context. Furthermore, AI lacks the capacity for lived experience, empathy, and symbolic nuance—qualities essential to art's communicative and emotional power.

Architect Moshe Safdie's assertion that AI remains a computational rather than imaginative force resonates with this critique. While AI can assist in optimizing design or simulating spatial arrangements, it cannot imbue structures with the poetic or spiritual resonance often required in architectural masterpieces. In this sense, the findings reaffirm a central thesis: AI may participate in the creative process, but it cannot originate meaning independently of human intentionality. For a better retrospect in terms of the matter of perspectives with associated understandings **Tables 1, 2** provides further information relating to the aspects of information.

**Table 1.** Summary of Key Findings.

| Aspect | Findings |
|---|---|
| Human–AI Collaboration | Creativity emerges through guided prompts, curation, and dataset design |
| Limitations of AI | AI lacks consciousness, emotional depth, and contextual understanding |
| Historical Evolution | From AARON to GANs, AI's role evolved from assistant to co-creator |
| Institutional Recognition | Major exhibitions and sales legitimize AI-generated art |
| Ethical and Aesthetic Concerns | Bias, authorship ambiguity, and artistic intent remain contested topics |

**Table 2.** AI and Art: Historical, Conceptual, and Contemporary Perspectives.

| Theme | Details/Examples | Significance |
|---|---|---|
| **Early AI Art Pioneers** | Harold Cohen's AARON (1970s) – First AI art program simulating human-like decision making. | Positioned AI as a co-creator; questioned authorship and machine autonomy. |
| **Deep Learning Revolution** | Google's DeepDream (2015), Artists and Machine Intelligence (AMI), neural hallucinations. | Introduced machine pattern recognition into artistic aesthetics; sparked public fascination. |
| **Commercial Recognition** | Portrait of Edmond de Belamy (Obvious, 2018), auctioned at Christie's; Memories of Passersby I (Klingemann, 2019), auctioned at Sotheby's. | AI-generated art entered the high-art market; challenged value and authorship in digital contexts. |

**Table 2.** *Cont.*

| Theme | Details/Examples | Significance |
|---|---|---|
| **Creativity Typology** | Margaret Boden's model: Combinatorial, Exploratory, Transformational creativity. | Framework used to assess the type and depth of AI creativity. |
| **Creative AI Tools & Frameworks** | GANs, AICAN (Rutgers Art & AI Lab), Neural Glitch (Klingemann), curated datasets (Ridler). | Highlighted varying degrees of human input and conceptual design in AI-generated art. |
| **Critical Voices & Philosophical Views** | Hito Steyerl: AI as "artificial stupidity"; Ridler: authorship via data curation; D'Isa: creativity via fine-tuned TTI models (e.g., *DALL·E*, Midjourney). | Exposed limitations of AI in conceptual understanding; emphasized human-machine co-creation as a new artistic paradigm. |
| **Collaborative Frameworks** | Iterative dialogue between human artist and machine; AI seen as a tool or collaborator (not autonomous creator). | Reframes creativity as process-driven rather than outcome-focused; introduces new models of distributed authorship. |
| **Institutional Legitimization** | Exhibitions such as The Rights from Future Generations – A Perspective on (A)rt and (I)nnovation; AMI showcases. | Validated AI art within cultural institutions; promoted dialogue on ethics, innovation, and aesthetics. |

# 4. Discussions and Future Directions

The intersection of Artificial Intelligence (AI) and contemporary art marks a profound transformation in how creativity, authorship, and aesthetics are conceptualized and enacted. Our study reveals that AI is no longer a passive tool but is increasingly regarded as a creative collaborator, challenging long-standing assumptions about artistic production and originality.

**Redefining Authorship and Creativity**

A central finding of this investigation is the emergence of co-creative agency. While technologies like Generative Adversarial Networks (GANs) and large-scale Transformer models simulate autonomous creative behavior, they do so under substantial human guidance. Human intervention remains pivotal—through data selection, model tuning, and output curation—highlighting a symbiotic relationship rather than true autonomy. This hybridization of human and machine creativity gives rise to what might be termed distributed authorship, demanding new ontologies for evaluating creative intent and ownership.

**Democratization and Disruption**

AI-based tools such as *DALL·E*, *Midjourney*, and *RunwayML* have significantly democratized access to creative production, enabling non-specialists to generate aesthetically compelling content. While this broadens the creative landscape, it simultaneously disrupts traditional paradigms of artistic legitimacy, technical mastery, and institutional gatekeeping. The cultural authority of artists and art institutions is being renegotiated in real time, prompting a reevaluation of how expertise and innovation are recognized.

**Post-Medium Practice and Data as Material**

Contemporary AI art often embodies a post-medium condition, where artistic focus shifts from material output to the process of algorithmic creation. Artists increasingly treat datasets, neural network parameters, and algorithmic rules as expressive materials, embedding conceptual significance into data-driven structures. This new artistic language fosters a convergence of aesthetics, computational theory, and epistemology.

**Ethical and Philosophical Challenges**

However, the proliferation of AI-generated art brings to the fore pressing ethical concerns. The opacity of training datasets, susceptibility to bias, and issues of copyright infringement highlight the non-neutrality of AI systems. Furthermore, questions surrounding the intentionality and sentience of AI prompt philosophical debate: Can systems that lack consciousness or emotional depth truly produce meaningful art? Or are they merely mirroring patterns in data devoid of experiential grounding? These questions underscore the need for critical AI literacy in both artistic and public domains.

**Cultural Reception and Societal Implications**

The reception of AI-generated art reflects broader cultural tensions around automation and human value. While celebrated by some as a breakthrough in creative expression, AI art is also met with skepticism, regarded as gimmickry or a threat to authentic human creativity.

This ambivalence reveals a societal liminality—a space of transition and contestation, where technological innovation challenges deeply held cultural values. Inclu-

sive to the new AI multimodal models being released we have to proceed with these steps in an ethical manner.

**Future Directions**

In light of these findings, we propose the following future directions to support the responsible and innovative development of AI in art:

**(1) Establishing Ethical Frameworks for AI Art Practice**

- Transparent Dataset Disclosure: Artists and developers should adopt practices that openly disclose data sources, licensing status, and curation logic.
- Fair Attribution and Authorship Models: Institutions must formulate frameworks that recognize the layered authorship in AI-generated works, including the roles of dataset curators, model designers, and prompt engineers.

**(2) Implementing Explainable AI (XAI) in Creative Contexts**

- Incorporating interpretable models can demystify the generative process, empowering both creators and audiences to engage critically with AI outputs.
- XAI integration also enhances the educational value of AI art, making it a powerful tool for teaching computational thinking, ethics, and digital literacy.

**(3) Rethinking Curation, Archiving, and Preservation**

- Traditional conservation models are insufficient for dynamic, algorithmic, or generative artworks. Innovative strategies—such as version control systems, modular storage, and blockchain verification—are needed to preserve process-based art.
- Curatorial practices should evolve to prioritize process transparency, interactivity, and context over static object display.

**(4) Expanding Interdisciplinary Collaboration**

- AI art must move beyond siloed development. Cross-sector partnerships—between artists, AI researchers, ethicists, sociologists, and cultural theorists—can foster more rigorous and inclusive practices.
- Institutional support for artist residencies within AI labs, and vice versa, can promote mutual learning and more socially conscious design.

**(5) Promoting Global and Culturally Diverse Perspectives**

- Much of the discourse in AI art remains anchored in Euro-American technological paradigms. To foster global inclusivity:
  - Underrepresented cultures and regions must be empowered through access to resources, research funding, and international exhibitions.
  - Culturally localized datasets and multilingual models can help avoid epistemic injustice and broaden the range of aesthetic expressions.

**(6) Exploring Human-Machine Symbiosis**

- The future of AI art lies not in machine autonomy, but in augmented creativity—a collaborative space where human intuition and computational intelligence co-evolve.
- Research into real-time co-creative interfaces, adaptive learning systems, and hybrid intelligence models could redefine what it means to create in the digital age.

The convergence of AI and art does not signify the end of human creativity but rather its transformation. As machines become creative partners, the challenge is not only technological but also cultural, ethical, and philosophical. Future trajectories must ensure that AI augments rather than alienates the human imagination. The ultimate goal should be to foster a reflective and inclusive creative ecosystem, where both machines and humans contribute to richer, more diverse, and more meaningful expressions of art.

# 5. Conclusions

The convergence of Artificial Intelligence (AI) and contemporary art signals a pivotal transformation in the cultural, conceptual, and technological dimensions of creative practice. This research demonstrates that AI systems—from rule-based processes to advanced deep generative models—are not merely tools for automation but integral collaborators in the redefinition of artistic production, aesthetics, and authorship.

The interdisciplinary inquiry affirms that AI does not function as an autonomous creator in the traditional sense, but rather as a co-creative agent. It expands the human im-

aginative horizon by introducing computational patterns, procedural logic, and probabilistic experimentation into the creative workflow.

In doing so, AI catalyzes a paradigm shift toward distributed creativity, where the boundaries between human intention and algorithmic generation are increasingly fluid. This shift necessitates the development of new critical vocabularies, ethical guidelines, and evaluative criteria to meaningfully interpret the value, authorship, and legitimacy of AI-mediated art. At the same time, the integration of AI into the arts is not without significant challenges. Concerns over data provenance, algorithmic bias, intellectual property rights, and the potential commodification or dehumanization of creativity demand sustained attention. These issues highlight the urgent need for responsible innovation, transparent design practices, and inclusive discourse involving not just technologists and artists, but also ethicists, legal scholars, and marginalized communities affected by algorithmic systems.

Rather than replacing human artists, AI reframes what it means to be an artist in the 21st century. The value of AI in art lies not in its capacity to replicate human creativity but in its ability to provoke alternative modes of perception, expression, and critical engagement. It invites artists and audiences alike to reconsider the nature of creativity, the politics of representation, and the role of technology in shaping cultural meaning.

In this light, the future of art is not "post-human" but hyper-human—amplified through code, enriched by interdisciplinary collaboration, and grounded in a collective, ethically conscious vision of creativity. As AI continues to evolve, its role in artistic practice must be shaped by principles of equity, reflexivity, and cultural plurality, ensuring that the dialogue between art and machine deepens our shared understanding of what it means to create.

## Funding

No Funding was provided for the conduction of this research.

## Institutional Review Board Statement

Not Applicable.

## Informed Consent Statement

Not Applicable.

## Data Availability Statement

The various original data sources some of which are not all publicly available, because they contain various types of private information. The available platform provided data sources that support the exploration findings and information of the research investigations are referenced where appropriate.

## Acknowledgments

The author would like to acknowledge and thank the GOOGLE Deep Mind Research with its associated preprints access platforms. This research exploration was investigated under the platform provided by GOOGLE Deep Mind which is under the support of the GOOGLE Research and the GOOGLE Research Publications within the GOOGLE Gemini platform. Using their provided platform of datasets and database associated files with digital software layouts consisting of free web access to a large collection of recorded models that are found within research access and its related open-source software distributions which is the implementation for the proposed research exploration that was undergone and set in motion. There are many data sources some of which are resourced and retrieved from a wide variety of GOOGLE service domains as well. All the data sources which have been included and retrieved for this research are identified, mentioned and referenced where appropriate.

## Conflicts of Interest

There are no Conflict of Interest or any type of Competing Interests for this research.

## References

[1] Todorovic, M., 2024. AI and heritage: A discussion on rethinking heritage in a digital world. International Journal of Cultural and Social Studies. 10(1), 1–11. DOI: https://doi.org/10.46442/intjcss.1397403

[2] Vincent, J., 2024. All these images were generated with Google's latest text-to-image AI. The

Verge. Available from: https://www.theverge.com/2022/5/24/23139297/google-imagen-text-to-image-ai-system-examples-paper (cited 28 March 2025).

[3] Edwards, B., 2024. FLUX: This new AI image generator is eerily good at creating human hands. Ars Technica. Available from: https://arstechnica.com/information-technology/2024/08/flux-this-new-ai-image-generator-is-eerily-good-at-creating-human-hands/ (cited 28 March 2025).

[4] De Rooij, A., 2024. Bias against artificial intelligence in visual art: A meta-analysis. PsyArXiv Preprints, 23–24. DOI: https://doi.org/10.31234/osf.io/n4jdy

[5] Sharkey, N., 2007. The programmable robot of ancient Greece. Available from: https://www.newscientist.com/article/mg19526111-600-the-programmable-robot-of-ancient-greece/ (cited 28 March 2025).

[6] Brett, G., 1954. The automata in the Byzantine "Throne of Solomon". Speculum. 29(3), 477–487. DOI: https://doi.org/10.2307/2846790

[7] Kelinich, 2014. Maillardet's automaton. The Franklin Institute: Philadelphia, PA, USA. Available from: https://www.fi.edu/maillardets-automaton (cited 28 March 2025).

[8] Natale, S., Henrickson, L., 2022. The Lovelace effect: Perceptions of creativity in machines. White Rose Research Online. Available from: https://eprints.whiterose.ac.uk/182906/6/NMS-20-1531.R2_Proof_hi%20%282%29.pdf (cited 28 March 2025).

[9] Lovelace, A., 1843. Notes by the translator. Taylor's Scientific Memoirs. 3, 666–731.

[10] Turing, A., 1950. Computing Machinery and Intelligence. Available from: https://www.csee.umbc.edu/courses/471/papers/turing.pdf (cited 28 March 2025).

[11] Crevier, D., 1993. AI: The Tumultuous Search for Artificial Intelligence. BasicBooks: New York, NY, USA.

[12] Newquist, H.P., 1994. The brain makers: Genius, ego, and greed in the quest for machines that think. Macmillan/SAMS: Gordonsville, VA, USA. pp. 45–53.

[13] Elgammal, A., 2019. AI is blurring the definition of artist. American Scientist. 107(1), 18. DOI: https://doi.org/10.1511/2019.107.1.18

[14] Greenfield, G., 2015. When the machine made art: The troubled history of computer art, by Grant D. Taylor. Journal of Mathematics and the Arts. 9(1–2), 44–47. DOI: https://doi.org/10.1080/17513472.2015.1009865

[15] McCorduck, P., 1991. Aaron's code: Meta-art, artificial intelligence, and the work of Harold Cohen. W. H. Freeman and Company: New York, NY, USA. p. 210.

[16] Poltronieri, F.A., Hänska, M., 2019. Technical images and visual art in the era of artificial intelligence. In Proceedings of the 9th International Conference on Digital and Interactive Arts; 23–25 October, 2019; Braga, Portugal. pp. 1–8. DOI: https://doi.org/10.1145/3359852.3359865

[17] Harold Cohen, 2016. Art Forum. Available from: https://www.artforum.com/news/highlights/harold-cohen-1928-2016-73975 (cited 28 March 2025).

[18] Diehl, T., 2024. A.I. art that's more than a gimmick? Meet AARON. Available from: https://www.nytimes.com/2024/02/15/arts/design/aaron-ai-whitney.html (cited 28 March 2025).

[19] ACM SIGGRAPH history archives, 2017. Karl Sims. Available from: https://history.siggraph.org/karl-sims/ (cited 28 March 2025).

[20] Karl, S., 2016. The Overlap of Science and Art with Karl Sims. Available from: https://cap.csail.mit.edu/engage/spotlights/karl-sims (cited 28 March 2025).

[21] Karl, S., 1991. Sophia Bracy Harris. Available from: https://www.macfound.org/fellows/433/ (cited 28 March 2025).

[22] Golden Nicas, n.d. Ars Electronica Center. Available from: https://www.aec.at/press/en/press-releases/golden-nicas/ (cited 28 March 2025).

[23] Karl, S., 1990. Panspermia. Available from: https://www.karlsims.com/panspermia.html (cited 28 March 2025).

[24] Karl, S., 1992. Liquid Selves. Available from: https://www.karlsims.com/liquid-selves.html (cited 28 March 2025).

[25] Karl, S., 1997. Galapagos. Available from: https://www.ntticc.or.jp/en/archive/works/galapagos/ (cited 28 March 2025).

[26] Television Academy, 2025. Nominees & Winners. Available from: https://www.televisionacademy.com/awards/nominees-winners/2025/outstanding-comedy-series (cited 28 March 2025).

[27] Draves, S., 2005. The electric sheep screen-saver: A case study in aesthetic evolution. In: Rothlauf, F., Branke, J., Cagnoni, S., et al., (Eds.), Applications of Evolutionary Computing. Springer: New York, NY, USA. 3449. pp. 458–467. DOI: https://doi.org/10.1007/978-3-540-32003-6_46

[28] Lieutenant, W.H., 2024. Artificial intelligence art. Available from: https://www.collegesidekick.com/study-docs/5519622 (cited 28 March 2025).

[29] Jacquelyn, G., 2017. Robots, Race, and Algorithms: Stephanie Dinkins at Recess Assembly. Available from: https://art21.org/magazine/robots-race-and-algorithms-stephanie-dinkins-at-recess-assembly/ (cited 28 March 2025).

[30] Small, Z., 2017. Future perfect: Flux Factory's intersectional approach to technology. Available from: https://www.artnews.com/art-news/news/future-perfect-flux-factorys-intersectional-approach-to-technology-71835/ (cited 28 March 2025).

[31] Dunn, A., 2018. Multiply, identify, her. The Brooklyn Rail. Available from: https://brooklynrail.org/2018/07/artseen/Multiply-Identify-Her (cited 28 March 2025).
[32] Sonya, C., 2018. Not the only one. Available from: https://creative-capital.org/projects/not-the-only-one/ (cited 28 March 2025).
[33] Sougwen, C., 2015. Drawing Operations. Available from: https://sougwen.com/project/drawing-operations (cited 28 March 2025).