

Education never stands still—it moves, adapts, and transform in response to new realities, while reshaping society in turn. This collection explores some forces defining learning today: digital tools, intercultural dialogue, artistic expression, and the call for ecological responsibility. At its core, education remains a space for negotiation and reinvention.

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PROCEEDINGS

02

Cultures, Practices, and Change

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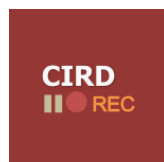
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Vol. 2

**Cultures,
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SYNTHOGRAPHIES. THE AESTHETIC AND EDUCATIONAL CHALLENGES POSED BY AI GENERATED IMAGES

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This article explores the aesthetic and educational implications of AI-generated images, examining their potential to redefine visual literacy. By drawing on the contemporary aesthetic debate, it discusses how text-to-image technologies challenge traditional notions of representation, and reconfigure both the word-image relationship and the documental value of images. Finally, it advocates for a renewed approach to visual literacy, combining pedagogical and aesthetic frameworks to foster a deeper and more critical engagement with the ethical and creative dimensions of AI-generated imagery.

AI images; Aesthetics; visual literacy.

INTRODUCTION

In the field of Aesthetics, the contemporary debate discusses the hypothesis that synthographies (AI-generated images) represent a new frontier in the visual arts, as they transpose the image-creation process from the analog arts to the notational ones (D'Isa, 2023) creating a possible new artistic field within the category of artificial intelligence art (Arielli and Manovich, 2024). Secondly, the discussion regards whether AI-generated images imply a radical linguistic transformation in the visual arts, causing an epistemological shift (Bolter, 2023), which reconfigures the word-image relationship. Thirdly, such a debate explores how TTI (Text-to-image technologies) have been applied within visual culture, and how they affect aesthetic and epistemological issue (Somaini, 2023).

1. ALGORITHMIC IMAGES AND THE CONTEMPORARY VISUAL CULTURE

The latter aspect has been recently discussed by Somaini (2023; 2024), who deepened how artificial intelligence is transforming the ways in which images are generated, modified, captured, and seen.

With 'captured' the author refers to processes embedded in modern cameras, such as those integrated into smartphones, that employ deep-learning algorithms to handle what were traditionally post-production tasks. These include enhancing sharpness, adjusting contrasts, and applying stylistic corrections in real-time. The process transforms images into machine-readable data that includes metadata

and incorporates user-preferred aesthetic standards derived from social media.

'Modified', as AI has automated image-editing processes such as inpainting, out-painting, upscaling, and style transfer. These tools allow users to refine or transform images with minimal manual intervention.

This emergent non-human vision diverges markedly from human perception, as it relies on artificial neural networks that mathematically process pixels. Somaini defines it as an 'algorithmic gaze', a term that heralds a cultural shift in which images are frequently produced by machines for other machines, without human viewers playing a central role.

Finally, they are generated by generative models emerged with text-to-image systems such as Stable Diffusion, DALL-E 2, and Midjourney, capable of generating static images from textual prompts (which the author defines algorithmic images) and sometimes from a combination of text and image inputs. By 2023–2024, this trend intensified with the introduction of text-to-video models like Gen-2 and Sora, which can produce highly photorealistic videos—currently up to one minute in length—again guided by textual prompts, or a combination of images and text:

By recalibrating the relations between images and word, text-to-image technologies are leading us towards a new visual culture in which images and words are inseparable: a visual culture in which the visible and the dicible are algorithmically connected (Somaini, 2023: 78).

2. RETHINKING THE OF THE WORD-IMAGE RELATIONSHIP

The redefinition of the word-image relationship generated by the development AI generated images has been recently analysed by Hannes Bajohr (2024), who noticed how text-to-image technologies are transforming the conceptual boundaries between text and image. Bajohr developed the concept of 'operative ekphrasis', a term that redefines the traditional understanding of ekphrasis as a performative process in which text does not merely represent or describe visual content but actively generates it. In contrast with the modern understanding of ekphrasis, which focuses on ekphrasis as an interactive process that involves a viewer and a material artifact, "a poetic description of a pictorial or sculptural work of art" (Spitzer, 1955). Bajohr shifts the focus from representation to performance, arguing that the advent of digital and AI-driven technologies demands a rethinking of ekphrasis as an operative mechanism.

Central to this argument is the distinction Bajohr draws between traditional, sequential computing paradigms and the connectionist architectures that underpin modern neural networks. Sequential models, characterized by deterministic and transparent algorithms, contrast sharply with the probabilistic and non-linear operations of connectionist models like DALL-E. In the latter, meaning emerges from complex, multilayered neural interactions, making it impossible to directly trace input to output in a linear manner. This technical evolution enables a mode of interaction in which text and image are no longer discrete entities but are processed within a shared representational space.

Bajohr illustrates these ideas through the analysis of three visual texts, each produced using distinct technological substrates: analogue typewriting, classical digital algorithms, and neural networks. While analogue methods rely on physical manipulation to create visual structures, classical algorithms translate syntactic instructions into predetermined visual outputs. Neural networks, by contrast, introduce a fundamentally new paradigm in which text and image are encoded as the same type of data. This collapse of medium-specific distinctions, Bajohr argues, challenges established notions of digitality, representation, and creativity.

A particularly compelling aspect of the author's analysis lies in the analysis of multimodal AI systems. These systems integrate text and image within a unified computational framework, effectively dissolving the boundaries that have traditionally defined their interaction. For instance, DALL·E's architecture employs models like CLIP to create a shared embedding space, where text prompts and their corresponding images are mapped onto a common semantic field. This process not only enables the generation of novel visual outputs from textual inputs but also suggests a form of "artificial semantics". While this semantic capacity remains limited in comparison to human cognition, it nonetheless signifies a shift in how meaning is generated and interpreted in computational contexts. By foregrounding the performative, rather than representational, aspects of text/image relations, Bajohr's perspective allows, in our view, a future fruitful exploration of the aesthetic and epistemological dimensions implied in the field of AI generated images.

3. SYNCRETIC IMAGES

A profound reconfiguration of the relationship between words and images has emerged as a central theme in the aesthetic debate on AI-generated images, with scholars exploring how these technologies reshape longstanding conceptual boundaries. Among the most insightful contributions is Montani's exploration of "inert syncretism", which examines the structural pairing of words and images intrinsic to text-to-image and image-to-text systems. The author developed a perspective which focuses on the inert syncretism of these algorithmic outputs (Montani, 2024). Firstly, the author argues that the structural syncretism in AI-generated images results from the algorithmic pairing of words and images that is inherent in TTI and ITT systems. However, the author argues that this syncretism is inherently limited. AI systems learn to generate images based on pre-existing datasets, which consist of enormous collections of labeled images. These systems operate within a latent space, where images are not seen as representations of reality but as combinations of alphanumeric data. This latent space is a black box, a zone of unknown processes that does not contain conventional images but instead complex data structures that AI uses to generate outputs. Montani asserts that AI's ability to generate images is limited by its dependence on existing datasets. These datasets are inherently biased and constrained by their source material, which is often culturally and socially specific. Therefore, AI-generated images do not represent the world directly but are, at best, images-of-images, with a meaning confined within the

system's internal logic. The creative potential of these systems, according to Montani, is thus fundamentally limited to combinatorial creativity. This form of creativity, akin to Chomsky's Rule-Governed Creativity, involves generating new combinations from a finite set of elements according to predetermined rules, but it lacks the capacity for Rule-Changing Creativity, where new paradigms or categories might emerge.

In our perspective, the most significant aspect lies in the shift of image production from analog arts to what Nelson Goodman would classify as notational, or from autographic to allographic art forms. Within this framework, AI-generated images may be considered partly autographic and partly allographic: linguistic prompts constitute only the notational component of the resulting file, just as a musical score serves as the notational backbone of a musical composition. Unlike conventional notations, however, text-to-image (TTI) prompts do not unambiguously determine the final output. The same prompt can yield different images due to the inherent randomness and variability of the AI's generative process. This indeterminacy implies that TTI cannot be wholly allographic, as the prompt does not guarantee a fixed, repeatable result.

While Montani emphasizes the inherent limitations of AI-generated images, seeing them as confined by the structural biases and constraints of their datasets, our view highlights the productive tension between these constraints and the creative possibilities introduced by the hybrid nature of their production. Where the author critiques the inert syncretism of AI systems as fundamentally limited to recombining existing elements, it might be argued that such a process transposes the image-creation process from the analogue arts to the notational ones or, by drawing on Nelson Goodman's terminology (1968), from the autographic to the allographic forms of art.

In our view, the production of synthetic images using TTI software is allographic in its initial design phase, which involves formulating prompts that precisely specify the image's elements. In the subsequent phase, the process becomes autographic, as it centers on the execution of a series of linguistic prompts that shape the image's final characteristics. Ultimately, the production history of the image plays a key role in differentiating two images created with the same prompts but at different points in time.

4. THE REDEFINITION OF THE DOCUMENTAL VALUE OF IMAGES AND THE EDUCATIONAL ASPECTS INVOLVED IN AI GENERATED IMAGES

A further aspect involved in AI images is the redefinition of the documental value of images. In this regard, Fontcuberta (2024) argues that the contemporary proliferation of algorithmically generated, photorealistic images mark a watershed moment, forcing us to confront longstanding assumptions about photography's credibility as a documentary medium. Whereas some critics fear that these developments undermine the evidentiary value of photographs, the author reframes the issue, highlighting society's longstanding reliance on photography as a de facto proof of

reality—a belief system he characterizes as “an act of faith”. He maintains that generative AI does not simply blur the line between authentic and fabricated images. Rather, it exposes and challenges our ingrained faith about the photographic medium itself.

Fontcuberta envisions a future in which cameras, once at the heart of image production, are reduced to functions akin to surveillance devices, much as paintbrushes have persisted as niche tools in the digital era. Generative AI, he observes, democratizes image creation by removing the need for specialized skills or labor-intensive processes. Yet, this technological ease raises fundamental questions: does it foster deeper intellectual engagement with visual culture, or does it contribute to cultural superficiality? Despite the automation of image production, Fontcuberta emphasizes that interpretation, agency, and the pursuit of deeper comprehension remain distinctly human responsibilities.

Moreover, the author links the shift from a camera-centric paradigm to generative AI with broader cultural transformations, noting the displacement of once-utopian visions such as Moholy-Nagy’s modernist ideal of universal visual literacy. In this emerging AI-driven landscape, the notion of visual illiteracy evolves: the critical challenge is no longer mastering camera techniques but rather understanding and navigating AI systems.

If the advent of digital photography re-defined the image, which moved from a permanently marked surface to a transient surface, the possibility to easily create synthographies almost indistinguishable from real photographs might separate the interaction between the detective and the depictive functions to the advantage of the latter.

In our view, this emerging scenario requires the development of new forms of visual literacy. This calls for a dual approach, rooted in both pedagogy and aesthetics, to cultivate a deeper understanding of how we engage with images in an increasingly digital and interconnected world.

On the one hand, there is a need for a renewed visual literacy, a process of learning to see, understand, and critically engage with images. This involves reflecting on the very nature of images, asking fundamental questions about what an image is and how it reveals itself to us. It also means examining their historical and cultural meanings, understanding the truths they carry, and exploring their role in shaping our emotional and cognitive landscapes. Equally important is learning to live ethically with images, questioning how we interact with them and how they, in turn, influence us. Such an approach would not only foster the ability to decode and interpret images critically but also to recognize the intentions and implicit strategies they often carry.

These images can play an active role in new forms of visual literacy, offering opportunities for reflection and critical engagement. They remind us that the act of seeing is not passive but a dynamic interaction between the viewer and the image—a space where meaning is constantly negotiated and reimaged.

By intertwining these perspectives, we can move toward a more thoughtful and

responsible engagement with images. AI-generated imagery, with its unprecedented capacity for creation and manipulation, challenges us not only to understand what we see but to question how we see and what those visions mean for our shared cultural and ethical future. This journey is not merely about mastering new technologies but about fostering a deeper connection between our visual world and the values that shape it, ensuring that innovation serves as a tool for enrichment rather than alienation.

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