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MAIN PAPER

# Art histories from nowhere: on the coloniality of experiments in art and artificial intelligence

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**Abstract**
This paper considers recent experiments in art and artificial intelligence that crystallize around training algorithms to generate artworks based on datasets derived from the Western art historical canon. Over the last decade, a shift towards the rejection of canonicity has begun to take shape in art historical discourse. At the same time, algorithmically enabled practices in the US and Europe have emerged that entrench the Western canon as a locus and guarantor of aesthetic value. Operating within the epistemic framework of a "view from nowhere," this tendency in generative art inherits the coloniality of both art history and artificial intelligence. Producing "art histories from nowhere," this tendency conflates the conceptual category of visual art with the histories of Western cultural production. It reproduces a set of aesthetic values that entrench the mythology of the artist-genius and his imputed whiteness and masculinity; the extolment of innovation and novelty as self-evident virtues; disembodied Cartesian models of knowing and sensing; and the erasure of contributions that have been occluded from canonical visibility. As we encounter systems trained on particular visions of art history and of the artist, how might we remain attentive to the specific lens through which they are taught to see? This essay addresses that question by bringing the coloniality of recent experiments into view, bridging data feminisms and decolonial studies to formulate alternative visions of encounters between art and AI.

**Keywords** Artificial intelligence · Art history · Coloniality · Decolonial aesthetics · Algorithmic art · Data feminism

## 1 Introduction

Encounters between art and artificial intelligence present sites of ongoing speculative imagining. They gesture towards the possibility of articulating nonhuman sensoria, dislodging anthropocentric ways of knowing and representing the world, giving visual form to the interface of human-nonhuman collaboration, and dismantling prevailing epistemic frameworks.

Rather than explore these possibilities, a prominent thread in art and AI has crystallized around training algorithms to generate artworks based on datasets derived from 500 years of European art. Over the last decade, a shift towards the rejection of canonicity has begun to take shape in art historical discourse. At the same time, algorithmically enabled practices in the US and Europe have emerged that entrench the Western canon as a locus of aesthetic value. As we encounter systems trained on particular visions of art history and of the artist, how might we remain attentive to the specific lens through which they are taught to see? This essay addresses that question by bringing the coloniality of recent experiments into view, bridging data feminism and decolonial studies to formulate alternative visions of encounters between art and AI.

## 2 Venus recoded

In 2017, The *Birth of Venus* was algorithmically generated. Its title reproduces Sandro Botticelli's own exhaustively reproduced Renaissance painting of the Roman goddess of beauty and desire, "a young woman with nonhuman countenance…carried on a conch shell, wafted to shore" (Poliziano 1993). The contemporary work is attributed to AICAN, an acronym for AI Creative Adversarial Network. Departing from Botticelli's tempera rendering, AICAN's Birth of Venus withholds elements that overtly reference

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a nude subject or the visual motifs of Renaissance representation. AICAN's picture plane presents a geometrically segmented tableau of muddled greens whose Hex colors hover around #516363, diagonally intersected by a rivulet of pale blue suggestive of sea or sky. Its textures oscillate between softened pixelation, low-resolution blurring effects, and pops of dark lineation reminiscent of Albert Gleizes. In the bottom right quadrant, a tangle of pale curvilinear forms approximates what may be a naked white torso, a rolling landmass, or neither of these. Absent any figurative components; the image seems to stage an encounter between an abstracted Cubist landscape and the psychedelia of Google DeepDream.

Even as Botticelli's figure appears only as an absence, the titular invocation of Venus brings forth the familiar mesh of discursive signification that has accrued to the 1484 painting since its completion. Namely, Venus's circulation as a durable icon of gendered and raced ideality, originally addressed to the masculinist gaze of a moneyed white European viewer. Part and parcel of that iconicity are the outsized role The *Birth of Venus* plays in fortifying a particular model of canonicity, one whose prioritization of Western cultural production exemplifies the coloniality of art history.

As Gardner's Art Through the Ages explains to the novice student of art history, Botticelli's depiction courts the Neoplatonic interpretation that the physical beauty of Venus' form offers a link to the beauty of the divine (Kleiner 2014). Venus' body enables the beholder to access a realm beyond the human through the act of beholding. Probing the act of beholding further, the critic John Berger famously cut Venus' face out of a large-scale reproduction of Botticelli's *Venus and Mars* (1483) in the 1972 BBC program, "Ways of Seeing," wherein he argued that the nudes of European painting position women as objects of vision, "a sight to be looked at." Incarnated in the guise of novelty merchandising, the popular circulation of Venus' image continues in the present. Pithily described by Sotheby's as "the original blond bombshell," the Birth of Venus presents a racialization of beauty that starkly conflates ideality with whiteness. Today, the Eurocentricity of this visualization of the divine remains an active site of contestation.

In works such as Kerry James Marshall's *Untitled (La Venus Negra)* (1992), Yin Xin's *Venus, after Botticelli* (2008), and Awol Erizku's portrait collaboration with Beyoncé, *I Have Three Hearts* (2017), Botticelli is invoked in aesthetic interventions that tactically cite Venus's iconicity and decouple that iconicity from whiteness.

In tandem with the gendered and raced dimensions of representation that the painting brings to the fore, its early social and political functions are noteworthy. Art historian Jill Burke outlines that the reception of mythological nudes by Renaissance political elites enabled courtly masculinity based on a shared erotics of viewing (Burke 2018). Participation in the visual pleasures of beholding, and the capacity to express aesthetic appreciation in the appropriate register, served as performances of class belonging. Beyond that, a well-honed masculinist gaze attested to the ability of political actors "to assert and justify their dominance not just over women sexually, but over the dominions that they controlled or hoped to conquer" (Burke 2018). For Burke, the invention of Renaissance art as a conceptual category is inextricable from the effort to create "a shared language of a European cultural elite, deeply entwined in colonialist violence" (2020).

To be sure, the algorithm that produced *Birth of Venus* is wholly unaware of this context. For that reason alone, it is vital to untangle these webs of historical significance to understand how they might inflect an algorithmically generated image in the present. That is, the decision to train an algorithm on this image and others like it is a value-laden one. While AICAN's piece marshals no explicit visual references to the fifteenth-century painting, it is haunted not just by the logic of this work but by the entangled logic of Western art history and the visual cultures of the colonial project.

Like so many recent encounters between art and AI, AICAN's oeuvre is premised on the conceit of what might be called art histories from nowhere. On the one hand, AICAN has been optimized for the exaltation of the new. Its algorithm has been coded to aspire to novelty as a self-evident virtue without a historically situated or culturally contingent point of origin. Yet, the algorithm's approach to novelty is routed through exposure to 500 years of Western art history as well as on canonicity that enshrines the endeavors of masculinist European cultural producers and political actors. Accordingly, AICAN's output is shaped by datasets that reflect a particular vision of history, that feature feminine-coded and nonwhite subjects as recipients rather than bearers of the gaze—as objects rather than agents of representation.

One might wonder, how did an algorithm learn to see from this particular vantage?

## 3 The "greatest works in art history" as told to an AI creative adversarial network

AICAN has been described as the "first and only patented algorithm for making art using Artificial Intelligence."[1] The project was developed at the Art and Artificial Intelligence Laboratory at Rutgers University, led by computer scientist Dr. Ahmed Elgammal. In a process likened to an artist enrolling in an art history course, AICAN's algorithm was

[1] Dr. Ahmed Elgammal, "A Note from Dr. Ahmed Elgammal," https://aican.io/story.

trained on "80,000 images of the greatest works from art history… representing the Western canon over five centuries."[2] Deviating from the model of the GAN (generative adversarial network), AICAN's objective is not to produce outputs that replicate existing images. Instead, the network's imperative is to craft something emphatically new.

AICAN operates through two competing forces to create artworks that will register as novel for a universalized viewer, but not so novel as to "depart too far from what's considered acceptable" or call into question the output's status as art (Elgammal 2019; Elgammal et al. 2017). At the technical level, this entails a generator and a discriminator. The latter of these, the discriminator, furnishes a signal that indicates whether a generated image can be classified as "art or not art" (Elgammal et al. 2017). At the same time, AICAN's discriminator pushes image generation towards works that appear ambiguous in relation to existing art historical styles and movements. To put a fine point on it, one of the network's core tasks is to determine whether something can or cannot be identified as art. The discriminator engages in that process by deciding whether "the generated art is coming from the same distribution as the actual art it knows about" (Elgammal et al. 2017).

AICAN's process involves making a claim about whether the image it has produced properly fits within the categorical boundaries of "art." To make that claim, the algorithm relies on what it has learned from exposure to training data: in this case, "the Western canon over five centuries." Given its training data, AICAN decides whether an image can be categorized as art partially on the basis of that image's proximity to—or distance from—the Western art historical canon. In effect, the network's ability to mimic the functions of an artist is understood as contingent upon its ability to mimic, and invent upon, Western art history.

Explanatory texts by AICAN's creators alternate between specifying that the network's training is grounded in the particularities of the Western canon and attributing a more generalized "fervent expertise in art history" to the algorithm. Through slippages like these, the discourse around AICAN veers towards conflating the whole of art history with the particular histories of Western cultural production. In turn, the conceit of value-neutral and generalized expertise glosses the specificity of a canon whose formation was co-constituted with institutional and market forces directly shaped by colonial projects. By eliding these historically and geopolitically situated specificities, the network inscribes something like artificial art history or art history from nowhere.

Over the last decade, critiques of artificial intelligence from feminist, critical race, and media studies perspectives have aimed to dismantle the notion of AI as a "view from nowhere." Crucial interventions across these fields include Safiya Umoja Noble's model of algorithmic oppression, Ruha Benjamin's formulation of the New Jim Code, Joy Buolamwini and Timnit Gebru's exposure of machine vision's coded gaze, and Sasha Costanza-Chock's writings on design justice (Noble 2018; Benjamin 2019; Buolamwini and Gebru 2018; Costanza-Chock 2020). The "view from nowhere" frames algorithms as unbiased arbiters rendering neutral outcomes from a space of nebulous, free-floating universality. To maintain that illusion requires suppressing AI's status as a sociotechnical (rather than a merely technical) system. This, in turn, effects a dismissal of the ways in which AI emerges from and reinforces existing sociopolitical conditions and structures of power.

A cursory glance at the demographics of AI research reveals the "view from nowhere" as an untenable claim. Between 2000 and 2020, North America, Europe, and Central Asia account for a combined 27.3% of the world's total AI journal publications, with East Asia and Pacific regions comprising 26.7% of publications. Compared with 4.9% for South Asia; 3.1% for the Middle East and North Africa; 1.3% for Latin America and the Caribbean; and 0.3% for Sub-Saharan Africa (Zhang et al. 2021). As these data attest, publications shaping the field of artificial intelligence are heavily concentrated in a narrowly delimited set of regions. A Stanford AI Index survey of 17 universities around the world found that among tenure-track faculty in Computer Science departments, only 16.1% were women (Zhang et al. 2021). In the US, an average of 62.7% of new computing PhDs over the last 10 years were "white (non-Hispanic)" (Zhang et al. 2021). Data like these reveal that AI systems do not emerge from "nowhere" either with respect to geopolitical coordinates or coordinates of race and gender. Rather, the view from nowhere is decidedly emplaced.

In *Artificial Whiteness*, Yarden Katz identifies the view from nowhere as a key "epistemic forgery" produced by computing systems. "How," Katz asks, "does a view from somewhere creep into AI's computing systems and haunt the endeavor?" (2020). Media scholars Lauren Klein and Catherine D'Ignazio suggest that we can think of the illusory neutrality of data through what Donna Haraway refers to as "the god trick of seeing everything from nowhere" (2020). The disembodiment of AI systems—the fact that their learning and behavior doesn't appear to be situated in a particular, marked body—enables the illusion of their distanced neutrality with respect to their object of knowledge.

In a similar vein, art history inherits an illusory "view from nowhere." That view emerges from a Western epistemological framework premised on the Cartesian division between mind and body. Amelia Jones's writing on this subject is instructive:

[2] Elgammal, "A Note from Dr. Ahmed Elgammal."

> Art history and art criticism thus work to frame a set of practices via interpretive acts that are legitimated through the suppression of the investments—the desires—of the interpreter…The Kantian notion of disinterested judgment requires a pose of neutrality (a repression and veiling of desire) on the part of the interpreter…Aesthetic judgment is precisely the mode of logic through which European 'man' takes account of the uncodifiable (1999).

These tendencies are traceable to the broader legacy of colonial knowledge systems that imagine a universalized knowing subject. Walter D. Mignolo describes that knowing subject as "disincorporated from the known and untouched by the geo-political configuration of the world in which people are racially ranked and regions are racially configured" (2009). Dominant approaches to AI operate within a related set of universalizing and disincorporating epistemologies. They inherit what Jason Edward Lewis calls "an intellectual lineage heavily infected with Cartesian duality," grounded in "separating mind from the body…and violently forcing all experience into binary terms to make it (appear to be) computable" (2021).

AI systems are designed to naturalize the biases of the embodied human agents who code their operations. In a similar vein, the art historical canon stakes a claim to universality that naturalizes aesthetic judgments originating in embodied interpreters. By the same token, the traditional role of the art historian assumes a pose of disinterested objectivity that aspires to the condition of automated, disembodied classification.

> AICAN team members Ahmed Elgammal and Marian Mazzone explicitly address AICAN's relation to (dis) embodiment, writing:

> AI and conceptual art coincide in locating the art act in the system network of the brain, rather than in the physical output. The physical act of an artist, either applying paint or carving marble, becomes optional. This removes the necessity of a human body (the artist) to make things (2019).

What does it mean to remove the human body from algorithmic artmaking? Where does the body of the human agent disappear in this scenario? Which nonhuman agent presides over artistic production in the body's imputed absence? By whom was that agent coded? Which forms of embodiment—*whose bodies*—are erased in this process? These questions linger at the periphery of prevailing discourses on generative art. Autonomous artists are positioned as exemplary Cartesian generators of visions from nowhere, despite replicating canons that map onto a narrow set of geopolitical and embodied coordinates.

Proceeding from a disembodied view of aesthetic practice, an algorithmic agent might emerge not just as an ideal aesthetic producer, but as an ideal interpreter of art history. Yet, neither datasets nor canons preexist the interlocking networks of human agents who produce them.

## 4 Lives of the most excellent algorithms: gender, invention, and innovation

Given that the view from nowhere is untenable, it is crucial to locate the "somewhere" from which an algorithm's ways of sensing and interpreting emerge. In the case of AICAN, paintings used to train the algorithm were drawn from the WikiArt dataset and span a variety of Western styles including High Renaissance, Romanticism, Impressionism, Cubism, Minimalism, and Pop Art (Elgammal et al. 2017). Among its named influences are Rembrandt, Bruegel, and Robert Rauschenberg.[3] As AICAN's creators have it, "AICAN has studied with Mich[e]langelo, Kandinsky, Warhol, (among many more)…After extensive training from the masters, AICAN is creating his own original body of art."[4] These descriptions couple a celebration of specific male European and American "masters" with the masculine coding of an algorithmic agent who has studied them to produce "his" own novel outputs.[5]

As the algorithm's creators have it, "novelty reigns" for a network resolutely "seeking innovation" (Elgammal 2018; Mazzone and Elgammal 2019). In its emphasis on novelty, the discourse surrounding algorithmic art usually taps into an enduring art historical investment in the originality of the masculinist artist-genius, and into the longstanding rhetoric of progress and innovation in technical disciplines. For examples of the former, we can look to Giorgio Vasari's *Lives of the Most Excellent Painters, Sculptors, and Architects,* a sixteenth-century text credited with helping to establish the field of art history (1998).

During this time, Vasari codifies a vocabulary around the "originality of invention" that continues to inflect ar

[3] http://www.AICAN.io.

[4] Elgammal, "A Note from Dr. Ahmed Elgammal.".

[5] The question of authorial subjectivity in the case of AICAN is complicated by the fact that Ahmed Elgammal is intermittently listed as AICAN's collaborator in specific contexts, as in the HG Contemporary show discussed later in this paper. However, Elgammal and Marian Mazzone explicitly address the question of authorship in their joint paper from 2019, writing, "We heard one question time and again: Who is the artist? Here, we posit that the person(s) setting up the process designs a conceptual and algorithmic framework, but the algorithm is fully at the creative helm when it comes to the elements and the principles of the art it creates. For each image it generates, the machine chooses the style, the subject, the forms, and composition, including the textures and colors." See Mazzone and Elgammal, "Art, Creativity, and the Potential of Artificial Intelligence," 26.