When the Algorithm Takes Root

AI-Generated Plants and the Crisis of Ecological Realism

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This essay tracks the sudden bloom of AI-generated plants across social media and argues that their plausibility precipitates a crisis of ecological realism. These "algorithmic botanicals" borrow photography's rhetoric of evidence while severing any indexical bond to the living world, producing images that are photographic without being photographs. Situating this phenomenon within lineages of realism—from Renaissance naturalism and Dutch still life to taxidermy, staged wildlife, and the spectacle— the essay shows how generative imagery weaponizes botanical desire for attention, clicks, and sales. The result is a miseducation of the gaze: an aesthetic norm calibrated to impossible perfection that diminishes the ordinary wonder of actual plants. Read through capitalist realism, AI flora offer frictionless connection without ecological consequence, anesthetizing care. The essay concludes by calling for new visual literacies and curatorial protocols, and by reframing realism as attunement—an ethics of looking that restores discernment between the living and the lifeless.

Keywords: Algorithmic plants, AI-generated imagery, Capitalist realism, Ecological realism, Material poetics, Miseducation of the gaze, Posthuman aesthetics, Simulation and authenticity, Spectacle, Visual literacy

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It began innocently enough. I was finishing some work in the garden when, idly scrolling through Instagram, I came across a photograph that stopped me in my tracks. A lush, luminous plant appeared on the screen: its leaves so intricate, the lighting so plausibly natural, that for a moment I thought it must be real. But something in the geometry of the veins, the implausible iridescence of the petals, made me doubt my eyes. I know my plants. This one could not exist. And yet, the image spoke the language of truth: photographic light, plausible detail, and the insistent aura of documentation.

That moment of hesitation, of wondering whether the plant might somehow be real, marked the beginning of a quest. It soon became clear that the Internet had been quietly taken over by a new and invasive species: AI-generated plants, populating Facebook and Instagram feeds with impossible flora in perpetual bloom. At first glance, these algorithmic plants seemed harmless. But the more I looked, the more they unsettled me. Dominating the composition of the photographs, they appeared fully integrated into their

surroundings: embedded in gardens, sidewalks, and suburban yards. Their plausibility was precisely what made them dangerous.

The New Invasive Species

In the span of a year, social media has become a digital greenhouse filled with *impossible* botanicals: 10-foot-tall hostas, blue pampas grass, black marigolds, purple sunflowers, rainbow roses. These images are not isolated curiosities. They circulate widely, accumulating likes, comments, and even sales. Many of these posts are accompanied by captions offering seeds or bulbs for purchase, and thousands of users, seduced by the promise of the rare and exotic, click "buy now". Months later, when their "plants" fail to grow, the sellers have already disappeared.

What might seem a trivial scam in the long history of horticultural fads – an updated version of the tulip craze or the Victorian fern fever – reveals something far more disquieting. It exposes a deep fracture in our collective perception of nature. The digital economy has weaponized our longing for beauty and rarity, transforming botanical desire into a commodity loop with no referent in the living world.

The Internet has long oscillated between enlightenment and deception in its relationship to plants. On the one hand, it democratized access to botanical knowledge: vast archives of images and data once restricted to scientists are now freely available. On the other, it unleashed a wave of misinformation: blogs, gardening sites, and social media accounts that recycle content without verification. For years, the damage was limited to mislabeled cultivars or exaggerated claims about plant care. But the rise of generative AI has dramatically altered this landscape. Today, entire Instagram profiles are devoted to AI plants. Their feeds are indistinguishable from those of real nurseries or botanical photographers. Even experienced gardeners have found themselves deceived. At botanic gardens, visitors reportedly approach staff with screenshots, asking where to find the «electric blue sunflower»

or the «neon-teal geranium». The confusion is spreading, and with it, a subtle but profound shift in how we perceive vegetal life[1].

As an art historian, I am struck by how these algorithmic images echo earlier struggles over realism. From the Renaissance onward, Western art has equated visual truth with moral or philosophical truth. Leonardo da Vinci's *Virgin of the Rocks* offers a telling example: in the Louvre version, the plants are botanically accurate; in the London version, they are not: the blooms don't match the leaves. The difference marks the line between knowledge and imitation, between the painter's empirical engagement with nature and the studio assistant's formulaic repetition.

Realism has always been a negotiation between *the seen* and *the believed*. In Dutch still life painting, flowers that could never bloom together, at the same time of the year, were arranged into perfectly balanced bouquets: optical realism concealing botanical impossibility[2]. Photography, hailed in the nineteenth century as a guarantor of objective truth, quickly betrayed that faith. As early as the 1850s, taxidermied animals were staged in outdoor scenes to simulate wildlife, and ghost photographs exploited long exposures to produce spectral apparitions. Each new technology of representation has arrived with a corresponding crisis of belief[3].

AI-generated plants extend this lineage of illusion, but with a difference. Unlike painting or even Photoshop, these images are born digital; they are photographic without being photographs. Their realism is algorithmic: an aesthetic of statistical probability rather than optical observation. What troubles me most is their *vernacular*: they speak through the idiom of photography, a medium still socially coded as truthful. These images perform the rhetoric of evidence without any referent at all.

The famous artist Lucian Freud once said that he painted plants because they had «no emotional charge»[4]. He meant that their truth lay in their presence, not in symbolic

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[1] THV11, *Experts Share Tips to Avoid AI Plant Scams*, www.youtube.com, October 2024, URL: https://www.youtube.com/shorts/m04v3UOrgZQ. Accessed 05/10/2025.

[2] N. Schneider, *Still Life Painting in the Early Modern Period*, Taschen, Köln-London 2003.

[3] M. Brower, *Developing Animals: Wildlife and Early American Photography*, University Of Minnesota Press, Minneapolis 2011.

[4] G. Aloi, L. Freud. *Lucian Freud Herbarium*, Prestel-Munich, New York 2019.

substitution. Against the allegorical conventions of the Dutch masters, Freud sought an unmediated realism, a confrontation with what is. The AI plant represents the precise opposite: an image devoid of reference, saturated with affect. Its seductive surfaces mimic the tactile intensity of life, yet nothing lives behind them.

The Capitalist Sublime and the Miseducation of the Gaze

To understand why these artificial plants feel so plausible, we must turn to the ideological terrain from which they sprout. Cultural theorist Mark Fisher defined capitalist realism as «the widespread sense that not only is capitalism the only viable political and economic system, but also that it is now impossible even to imagine a coherent alternative»[5]. More than a doctrine, capitalist realism is an all-pervasive inescapability – a condition that radically shapes perception, desire, and imagination. It functions, Fisher argued, by collapsing the boundary between reality and representation: capitalism no longer needs to conceal its illusions because it presents itself as the only reality available.

AI-generated flora exemplifies this condition. It offers a nature perfectly attuned to the logics of the attention economy: endlessly novel, frictionless, unblemished, and

[5] M. Fisher, *Capitalist Realism: Is There No Alternative?*, Zero Books, Winchester 2009.

unthreatening. In Fisher's terms, they are the unconscious fantasy framework of late capitalism: a «fake reality» we willingly inhabit because it flatters our desire for beauty while shielding us from the trauma of ecological collapse[6]. These algorithmic blooms, with their hyper-symmetrical petals and impossible hues, deliver the emotional satisfaction of connection to nature without the labor or discomfort of genuine ecological awareness.

Guy Debord foresaw this dynamic half a century earlier when he defined the spectacle as «capital accumulated to the point where it becomes image»[7]. In the spectacle, he wrote, the real world is replaced by its representation; the image becomes an autonomous reality that demands our devotion. The AI garden is the logical culmination of this process: a seamless spectacle of nature without nature, a simulation that monetizes our longing for the real.

Under capitalist realism, simulation becomes the preferred mode of engagement with the natural world. Why cultivate, when you can scroll? Why tend to living plants, with their irregularities and vulnerabilities, when an algorithm can produce perfect blossoms on demand? The allure of AI plants lies precisely in their impossible perfection; one that mirrors the idealized bodies once generated by Photoshop, now transposed onto the vegetal realm.

This algorithmic nature is not neutral. It educates the gaze, reprogramming our sense of beauty and normality. The more we consume these flawless digital specimens, the less extraordinary real plants appear. The quiet, imperfect dignity of a withering leaf or the asymmetry of a wildflower begins to seem inadequate. AI flora thus participates in what might be called a capitalist sublime: an aesthetic of boundless possibility that simultaneously induces apathy.

Just as heavily retouched images of women's bodies distorted collective expectations of beauty in the early 2000s, AI plants distort our expectations of the botanical. They teach us to desire what does not and cannot exist. And because the images circulate in the same spaces as genuine plant photography like Instagram feeds, gardening forums, online stores, they blur the line between evidence and fantasy.

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[6] *Ibid*.
[7] G. Debord, *The Society of the Spectacle*, PM Press, NY 2024.

This miseducation of the gaze has real consequences. When visitors arrive at botanical gardens expecting to see «rainbow roses» or «electric blue tulips», the living specimens appear dull by comparison. The authentic, living world suffers from an aesthetic deficit produced by the synthetic. What is at stake is not merely deception but a deeper estrangement from ecological reality. The digital sublime anesthetizes our capacity for wonder, replacing curiosity with meaningless consumption.

Fisher's notion that «it is easier to imagine the end of the world than the end of capitalism» resonates powerfully here. These seductive images of impossible flora allow us to *feel* close to nature while remaining psychologically distant from its destruction. The result is a paradoxical form of detachment: an affective ecology of distraction in which the spectacle of life replaces life itself.

There is something perverse in the pleasure these images elicit. I hate them, yet I cannot look away. Their visual appeal is addictive: the glossy texture, the saturated colors, the perfection of algorithmic rendering. They are, in a sense, *fleurs du mal* for the digital age: poisonous blossoms whose beauty conceals a deeper toxicity.

Why do they captivate us so powerfully? Part of the answer lies in desire itself. These images are generated not merely *for* us but *from* us. The algorithms that produce them are trained on vast databases of human preference: our likes, our clicks, our affective histories. They materialize our collective fantasy of what nature should always be: abundant, symmetrical, unblemished, and available on demand.

In this sense, AI plants are mirrors reflecting the pathologies of the Anthropocene. They literalize our disconnection from the living world by transforming ecological imagination into digital ornament. Their proliferation signals not only technological advancement but also an intensification of what Fisher called «reflexive impotence»: the sense that we know things are wrong, yet feel incapable of changing them. We scroll through impossible gardens while the forests burn.

From Taxidermy to Instagram: Realism Without Reference

In my earlier work on taxidermy, I described the quintessential medium of 19th century natural history it as an art of preservation that stages the illusion of life even as it depends on

death[8]. The taxidermied animal, posed with aristocratic dignity, is less a reflection of nature than of human desire. It encapsulates the patriarchal desire for controlling nature and for maintaining the normative structures that keep society in place. AI flora function similarly but without any material anchor.

The historical arc is instructive. Each new medium of realism – painting, photography, film – has expanded the domain of the visible while complicating the boundary between truth and fabrication. But AI differs in one crucial respect: it no longer requires an original. The indexical bond that once guaranteed photographic truth has been severed. What remains is a hall of mirrors, an ecology of pure signifiers detached from the world they claim to depict.

The danger is not simply that we might mistake an artificial plant for a real one, but that we might cease to care about the difference. In a culture saturated with simulations, the very notion of authenticity becomes obsolete. And with it, our capacity for ecological empathy wanes. Faced with this new visual ecology, institutions like botanical gardens, museums, educational platforms must intervene. Just as early twentieth-century audiences required guidance to distinguish documentary photography from photomontage, today's viewers need new forms of visual literacy to navigate AI imagery. Clear labeling, critical pedagogy, and curatorial contextualization are not mere bureaucratic measures; they are ethical imperatives.

The history of photography offers a useful precedent. In the nineteenth century, manipulated photographs of fairies and ghosts captivated the public imagination, prompting debates about truth and illusion[9]. Eventually, institutions such as the Royal Photographic Society and the Natural History Museum established conventions to safeguard epistemic integrity. We need similar frameworks for the age of generative AI today. What distinguishes the current moment is its ecological urgency. At a time when species extinction and climate breakdown demand renewed attention to the living world, the proliferation of artificial nature risks deepening our detachment. If we come to prefer the algorithmic garden to the real one, what hope remains for conservation?

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[8] G. Aloi, *Speculative Taxidermy: Natural History, Animal Surfaces, and Art in the Anthropocene*, Columbia University Press, New York 2018.

[9] D.A. Brugioni, *Photo Fakery*, Brassey's, Dulles 1999.

AI-generated plants are not just digital curiosities; they are techno-philosophical provocations. They compel us to reconsider what we mean by *realism* in an era when reality itself is algorithmically mediated. These images inhabit the liminal space between desire and deception, beauty and fraud, nature and culture. They are both symptom and allegory of capitalist realism: a visual manifestation of our inability to imagine alternatives to the system that produces them.

In this sense, they reflect the contradictions of our time. Their impossible perfection seduces us even as it distances us from the imperfect beauty of living ecosystems. They offer the comfort of connection without consequence, the illusion of abundance without the labor of care. Against this tide of simulation, realism must be reimagined not as mimesis but as *attunement* – a commitment to seeing the world as it is, in all its fragility and complexity. The task before us is not to reject technology but to cultivate discernment: to learn again how to tell the living from the lifeless, the true from the barely plausible. Only then can we hope to reclaim our gaze from the algorithm and restore it to the world that still grows, quietly, beyond the screen.