

# From Aesthetics to Traffic: The turn of photographers under algorithm

Xiaonuo Zhu\*

New Channel, Beijing, 100020, China

**Abstract.** In the digital age, algorithms and platform logic increasingly shape artistic creation and aesthetic outcomes. This paper explores how algorithmic aesthetics lead to homogenization, how platform logic restricts or transforms artistic autonomy, and what social consequences arise from these shifts. Based on a literature review of recent scholarly works, it analyzes three key themes—algorithmic aesthetics, artistic autonomy, and cultural impact—followed by a discussion and conclusion. The study finds that while algorithms expand artistic exposure and democratization, they also create conformity pressures and embed cultural production within new forms of commodification and stratification. Future research should emphasize artist-centered and policy-oriented approaches.

## 1 Introduction

In recent years, art and aesthetic production have been influenced by the widespread use of algorithms and digital platforms. From generative-art tools based on machine learning, to social-media and short-video platforms that determine exposure, the impact of these forces have prompted a series of questions, such as, how are aesthetics produced? How is creative agency exercised? And, how is cultural meaning constructed? For instance, the popularity of AI-generated images has raised questions of authorship and originality. Similarly, the emergence of short-video content on social-media platforms have generated new forms of aesthetic standardization and audience engagement.

The importance of this research lies in the fact that understanding how algorithmic logics influence aesthetic production can not only be seen as a technical process, but also as a cultural phenomenon that influences the ecosystem of creativity.

The purpose of this paper is to explore how the algorithmic recommendation systems and platform economies redefine artistic expression and value. By referencing both theoretical works and recent publications, the paper aims to contribute to the broader debates on digital cultural production, artistic autonomy, and social consequences of algorithmic mediation.

Research problem: There is a need to unpack how three related phenomena are occurring in contemporary art and culture: (1) the rise of algorithmic aesthetics and accompanying homogenisation of style and theme; (2) the altered autonomy of artists under platform logic (visibility, metrics, monetisation); (3) the social and cultural impact of these changes, including questions of identity, commodification and stratification. This paper asks: How do

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\* Corresponding author: [xiaonuo677@gmail.com](mailto:xiaonuo677@gmail.com)

algorithmic and platform logics impact aesthetic production in contemporary art? What are the implications for autonomy? What social and cultural consequences follow?

Literature collection and screening method: This question was explored via a systematic literature review. The author searched the former two (SpringerLink, Taylor & Francis, MDPI) and the latter (pre-print servers such as arXiv SSRN) for publications between January 2020 and September 2025 inclusive, using combinations of “algorithmic aesthetics”, “artistic autonomy platform logic”, “digital art homogenization”, “social consequences algorithmic art”. The result was screened by the title and abstract for relevance to the intersections of algorithm, art, platform logic and social/cultural consequence. From these, 28 full-texts were read, and 12 chosen to cite here in depth for their empirical data, normative critique or conceptual clarity. At least six are published 2023–2025 inclusive, thus more than half in the last five years. Citations are in-text.

In what follows, the paper is divided into three major argument sections, followed by a discussion comparing different views, and a conclusion noting the study’s contributions and limitations.

## **2 Algorithmic aesthetics and homogenization**

The first set of arguments concern how systems coded with algorithmic logic—whether generative AI for images or recommendation systems that show what we see—are influencing aesthetic production, and also leading to homogenisation.

### **2.1 Algorithmic aesthetic mediation**

Generative AI art tools have reshaped aesthetic production. They allow non-specialist users to produce visuals through text prompts, or to remix large datasets. As one study argues, “the emergence of complex deep-learning models capable of producing novel images ... is beginning to highlight serious inadequacies in the ethical, aesthetic, epistemological and legal frameworks we have so far used to classify art.” Another contribution coined the term “algorithmic aesthetics” to describe how the interaction of AI and human agency reshapes aesthetic experience. Meanwhile, generative art scholarship has argued that the logic of algorithms will tend to prioritize recognizable styles or patterns that score well on certain metrics (e.g. prompts that generate high engagement).

For example, on Instagram, the popularity of photography styles (bright tones, centered composition, minimalist scenery) as recommended by algorithms, on the photography community, shows how metrics work for (or against) certain aesthetic choices. This feedback loop has created a scenario where content creators produce within a popular aesthetic tropes in order to maintain engagement. These trends show how algorithms can work both as an aid and a hindrance.

### **2.2 Homogenization and monoculture**

One danger is aesthetic homogenization. When several creators use similar tools, datasets, prompts, and, when the platforms reward similar visual features, the result may be a reduction in stylistic diversity. For example, on algorithmic monoculture argues that sharing models/training data leads to outcome homogenization [1]. Similarly, in the domain of short-video platforms, the literature review reports how algorithmic curation incentivises creative choices and homogenizes depth by encouraging repeatable formats [2].

Thus, algorithmic mediation does not guarantee aesthetic innovation; paradoxically it may encourage stylistic homogenization. The implication for art is that rather than increasing

diversity, algorithmic systems may compress variation within a narrower range of acceptable styles.

### **2.3 Reconfiguring authorship and taste-regimes**

The shift also reconfigures authorship and taste. In addition to traditional gatekeepers (critics, galleries, curators), we see algorithmic curators. Recommendation systems decide what is visible and thus what aesthetic is rewarded. One study on recommendation systems has shown how algorithms function as cultural gatekeepers and how they shape global culture by promoting global blockbusters over local narratives. In the art domain this means that the aesthetic field is shaped by algorithmic logics rather than a pure artistic deliberation.

We can see the theoretical illustration from Bourdieu's field theory. Artistic judgment, once embedded in a field shaped by symbolic capital and expert deliberation, is now increasingly shaped by algorithmic capital: visibility, availability, engagement, and data-driven feedback mechanisms. This transition implies that aesthetic taste is increasingly defined by quantitative criteria rather than qualitative.

In sum, the algorithmic turn in aesthetics does not only transform tool-making but also the field of aesthetic production: the criteria for style, the mechanisms for visibility and the locus of taste. While opening up new possibilities, the danger of homogenization is real and artists may find their practice framed by subtle affordances and constraints offered by algorithms.

## **3 Artistic autonomy and platform logic**

The second major argument concerns how the autonomy of artists is affected when their work is circulated through digital platforms and when exposure, metrics, monetization, and algorithmic curation are elements of their creative practice.

### **3.1 Platform logic and creative constraints**

Platforms (social-media sites, streaming/video sites, digital marketplaces) have their own logic. For engagement points, algorithmic feeds, monetisation opportunities, "recommendations". In this logic, visibility is dependent on measures such as watch-time, likes, shares etc. Qi's literature review demonstrates how visibility on short-video platforms is gate-kept by these platforms: the artist must work with aesthetics, timing and format within this logic of the platform.

More broadly, argues that the performative nature of platform algorithms constrain and shape the behaviour of creative workers, narrowing autonomy [3].

### **3.2 Autonomy vs algorithmic control?**

A study of content creators found that algorithmic control, combined with monetisation incentives, creates paradoxical tensions for creators: scheduling, format, analytics and platform demands push creators away from autonomous vision, towards creating content for a platform-friendly audience [4].

In the art world, similar pressures may apply—the artist may feel a need to produce content that is optimised for being discovered, rather than content produced for exploratory or non-commercial aesthetics.

A particularly striking example are digital illustrators on TikTok who found that being algorithmically boosted depended greatly on posting frequency and content format. Those

who submitted to posting short, fast-paced timelapse videos were seen more, while slower or experimental pieces remained unseen. This is an example of autonomy being negotiated within an algorithmic ecology.

### **3.3 Platform-driven labour and creative work?**

An artist, when the digital is introduced, also becomes a platform-entrepreneur: an artist now works on visibility, engagement, and sometimes, algorithms.

One might introduce the term “digital art work” in a Chinese context, which is a new condition where artists work with AI, software tools and time in their everyday artistic practice. Thus autonomy is not lost per se, but has to be negotiated within the autonomy of platform infrastructures.

For example, an independent photographer who uses VSCO or Behance will spend a lot of time optimizing metadata and captions of their photos to fit the keywords that are currently trending on the platform. In theory, this can be said to align with the concept of creative precarity, where aesthetic labour is inseparable from digital performance metrics.

### **3.4 Artistic gatekeeping reconfigured?**

While platforms open up access (reduced entry barriers, global reach), in turn they also create new gatekeepers: algorithms, platform policies, monetisation opportunities etc.

Critique: what goes online as an artwork in the art world, going online means the invisibility of these contextual layers of the artwork, replaced instead with visibility and likes as metrics: “visibility online platforms supposedly generate comes at a cost... the invisibility of those social contexts in which works of art are embedded [5].”

One example can be seen with YouTube and video essays/documentaries: creators who write with SEO patterns and algorithmic keywords/phrases outperform those who write only scholarly merit.

In sum, I would not conceive of artistic autonomy in the digital era as simply the freedom to make, but need to recognise it in relation to platform logic around what is made visible, what is rewarded, and how artists position themselves. Platformisation brings opportunities but new constraints too, and autonomy is bestowed as opposed to being taken for granted.

## **4 Social consequences and cultural meanings**

The third argument discusses how algorithmic aesthetics combined with platform logic leads to social consequences: for identity, cultural diversity, commodification, and aesthetic values.

### **4.1 Cultural homogenization and identity-erosion**

Algorithmic recommendation tends to boost popular aesthetics, while dampening niche, local or different aesthetics. For example, his recent paper on algorithmic identity compression in TikTok examined how Latinx creators’ mixed identities are flattened by affordances of the platform, which compress intersectional identities into simple, algorithm-friendly forms. This highlights how algorithmic logics have consequences for cultural representation and identity practices, in terms of diversity of expression.

For example, his research on TikTok aesthetics demonstrated that creators from different cultural contexts often modify their style to fit the global algorithmic aesthetic – in terms of specific lighting, aspect ratios, trends in dance, thus blurring different identities into a global

aesthetic (Technically, he draws on Appadurai's notion of "global cultural flows" where local expressions become homogenised in digital transnational circuits).

Aesthetic commodification and attention economy – algorithms and platforms turn aesthetic production into attention economy workflows. He argues that algorithmic-driven content curation produces certain discourse (algorithmic echo chamber), commodify attention and drive "synthetic social alienation" [6]. In terms of art, this means that aesthetic practices may turn from meaning-making to maximising attention, and this may change cultural meaning.

Democratization vs new stratifications – One can argue that algorithms and platforms turn access more democratic (Anyone can post, anyone can share, anyone can be discovered). However, visibility is still stratified: algorithms reward certain profiles, certain forms, certain patterns – thus new stratifications emerge. For example, his paper on algorithmic monocultures and social stratification warns about potential algorithmic monocultures and how they may stratify social hierarchies, even when platforms aim to democratise access.

Changing value of art and aesthetic judgement – his paper outlines how AI-generated imagery leads us to question what should be regarded as "art" and thus shift legal, ethical, and aesthetic judgement. This in itself has cultural consequences: if artworks are increasingly mediated by algorithmic systems (in both creation and distribution), then what should be regarded as aesthetic value, and what is visible as art may change.

For example, the case of AI-generated portrait series such as Edmond de Belamy demonstrates how the boundaries of artistic value and authorship are changing [8]. Although the portrait was created by a generative adversarial network (GAN) trained on data of historical art works, it was auctioned as an "original artwork" and signed by the artists' signature, Obvious. This event is well-known in art theory due to debates surrounding the theoretical interpretation of the case, for example, suggest that such events signal that we have moved "from 'aesthetic intention' to 'algorithmic authorship' where value is attached to the novel computation rather than human vision".

## **4.2 Social consequences: labour, surveillance, affect, etc**

The above issues go beyond art itself, and affect issues such as labour, surveillance, and emotional affect. In the book *Artificial Aesthetics*, authors discuss how generative AI affects our understanding of creativity and design as well as cultural aesthetics [9]. The increasing commodification of data, aesthetics, and cultural production raises a question of whose labour is involved, and how cultural production is tracked and monetised.

Theoretically, this phenomenon can be conceptualised in relation to Foucault's biopower and Zuboff's surveillance capitalism. Digital labour on platforms is not only aesthetic, but also affective and data-generating: every interaction, posts and likes are part of the processes that make algorithms about us and generate data for monetizing attention. In this sense, artists' emotional labour and self-expression are also part of the economic machine of the platform. As many scholars such as have noted, algorithmic mediation turns aesthetic labour into a dual-edged sword: artists are more visible, but at the same time they also generate data capital for the profit model of the platform [8].

In total, the consequences of the entanglement between algorithmic aesthetics and platform logic include: from homogenization of styles and identities, commodification of aesthetics, transformation of creative labour, to transformation of standards of value and aesthetic judgement that challenge existing cultural institutions, create new forms of inequality, and change how we enjoy art in society.

This section compares and contrasts different scholarly views on the three main issues above and reflect critically on the implications.

## 5 Discussion

This section compares and contrasts differing scholarly perspectives on the three major issues above and reflects critically on the implications.

Comparison of views on aesthetic homogenisation—some scholars are more positive: generative AI and platforms can facilitate greater participation and new aesthetics (Manovich & Arielli 2024). While others are more critical: they emphasise outcome homogenisation and monoculture algorithmic identity compression [9]. The tension here is between possibility (new aesthetic forms, greater participation) and risk (reduction of variation, loss of context and local specificity).

On artistic autonomy and platform logic, some authors focus on the empowerment of artists—the possibility of jumping over traditional gatekeepers and having access to global platforms. Other ones focus on the new forms of constraint and labour relation—creators facing the algorithm and metrics and Duester on “digital art work” precarity. Here, the question of autonomy vs. algorithmic governance is key.

On social consequences, while some authors underlines the democratization of the voice and access, and the possibility of participation, others focus on the new stratifications of visibility, audience economy and surveillance. The idea of “visibility at cost” is central to understand the ambivalence of being on a platform: more access, but at the cost of new commodification logics.

Critical reflection: While the algorithmic logic and the platform logic are not per se negative forces, their effects depend on the context and the forms of governance, as well as the agency of creators and institutions. The intertwining of technology, economy and culture means that the shift is complex: artists may master the algorithm in an expressive way, but also have to deal with it in new ways, new norms, new metrics and new forms of labour. Moreover, diversity may be increased in some ways and limited in others.

Implications for practice and policy: From a practice perspective, artists and curators should be aware of the affordances of the algorithm on the choices of prompts, format and timing, and on what is valued by the platform. The development of knowledge about the algorithmic mediation may be a way to preserve the creative autonomy. From a policy perspective, reflection on platform governance, the transparency of the algorithmic curation and measures to protect diversity should be developed. For cultural institutions, the challenge is to preserve depth, context and critical engagement on a space optimised for visibility and metrics.

This paper has argued that the combination of algorithmic aesthetics, platform logic and cultural production lead to three effects in turn: aesthetic homogenization, restricted artistic autonomy, and three social and cultural consequences. In the third section, we have seen how algorithms filter aesthetics and may lead to a convergence of style and taste. In the second section, we have seen how platforms shape artistic autonomy and introduce new forms of labour and negotiation. In the third section, we have seen broader social consequences: identity compression and commodification, new stratifications of visibility, audience economy and new forms of surveillance and commodification of aesthetic value.

This study has some limitations. First, it is based on literature rather than new empirical data, on secondary sources instead of interviewing artists or analysing platforms. Second, although it reviews recent scholarship, the paper has an interdisciplinary character and covers a wide range of studies, which means that the rapid evolution of AI and platforms may lead to the findings of this study being superseded.

Future work should include ethnographic and survey work with artists, platform analytics, case studies of diverse geographic and cultural contexts (especially related to the Global South) and policy-oriented studies on the governance of platforms in the creative sector.

## 6 Conclusion

The digital turn in art and aesthetic production opens opportunities and risks. Algorithmic and platform logics are not neutral, nor emancipatory. They reconfigure the field of art and aesthetic production – in terms of creative practice, visibility, labour and meaning. Being aware of these configurations is important for artists, curators, cultural institutions and policymakers if we are to maintain aesthetics as a field of meaningful, diverse and autonomous cultural production – rather than one measured by engagement points, algorithmic compliance and platform profitability.

## References

1. C. Avlonitou, AI: An active and innovative tool for artistic creation. *Arts* **14**, 52 (2025)
2. R. Bommasani, K.A. Creel, A. Kumar, D. Jurafsky, P. Liang, Picking on the same person: Does algorithmic monoculture lead to outcome homogenization? *Advances in Neural Information Processing Systems* **35**, 3663–3678 (2022)
3. E.D. Duester, Digital art work and AI: A new paradigm for work in the contemporary art sector in China. *Eur. J. Cult. Manag. Policy* **14**, 12470 (2024)
4. D. Gardiner, Balancing act: The role of digital platforms in shaping the conditions of creative work. ILO Working Paper, No. 123 (2024)
5. M.S. Khokhar, M. Ayoub, Generative AI as a philosophical mirror: Machine hallucination and the aesthetics of algorithmic representation. *Contemp. Vis. Cult. Art* **1**, 54–67 (2025)
6. J. McLoughlin, The work of art in the age of artificial intelligibility. *AI & SOCIETY* **40**, 371–383 (2025)
7. X. Qi, Algorithmic gatekeepers: How short-video platforms shape artistic creativity and visibility. SSRN (2025)
8. A. Serttaş, H. Gürkan, G. Dere, Synthetic social alienation: The role of algorithm-driven content in shaping digital discourse and user perspectives. *Journalism and Media* **6**, 149 (2025)
9. J. Lovato, J. Zimmerman, I. Smith, P. Dodds, J. Karson, Foregrounding artist opinions: A survey study on transparency, ownership, and fairness in AI generative art, in proceedings of the AAAI/ACM Conference on AI, Ethics, and Society, 7, 905–916 (2024)