Curation Power Structures in the Age of AI: From Human Curation to AI Curation of the Redistribution of Discourse Power

Received: December 21, 2025
Revised: December 27, 2025
Accepted: December 29, 2025

Kuan-Lian Lee[1*] YiChing Hsieh[2]
[1*]Dhurakij Pundit University
[2]Shanghai Sanda University
[*]leekuan.lia@dpu.ac.th

Abstract

This study aims to explore the redistribution and structural shift of exhibition discourse power driven by technology after AI intervenes in curation. The research method combines theoretical analysis with analyzation of typical AI exhibition cases to observe how artificial intelligence reshapes exhibition narratives, exhibits visibility, and audience participation models in practical operations, and compares different levels of technological intervention to reveal its specific mechanism in curatorial decision-making. The research results show that the introduction of AI not only changes the curatorial process and exhibition logic, but also redefines the curatorial subject, shifting the power from a single curator to a multi-subject network composed of curators, algorithms, and audience data. This study further proposes a structural model of the power flow mechanism of curation in the AI era, presenting the power reconfiguration formed by the interaction between the three. The conclusion points out that AI is driving the dynamic, multicentric, and data-driven characteristics of exhibition discourse, representing a profound change in the curatorial system. However, this case is still limited by the scope of data acquisition and cannot cover all technical scenarios. As AI technology evolves rapidly, the proposed models need to be continuously adjusted and validated.

Keywords: Artificial Intelligence; Curatorial Power; Discourse Redistribution; Algorithmic Mediation; AI-driven Curation

1. Introduction

As artificial intelligence (AI) technologies increasingly intervene in the field of art and design curation, the power structures underpinning curatorial practice are undergoing significant transformation. In particular, exhibition discourse production, decision-making authority, and audience navigation are being reshaped through algorithmic mediation. This study focuses specifically on contemporary art and design exhibitions that explicitly integrate AI systems into curatorial processes, including exhibition planning, narrative structuring, content recommendation, and visitor interaction design. Temporary and permanent exhibitions staged in museums, galleries, and experimental art spaces between 2018 and 2024 constitute the empirical scope of this research, while exhibitions using digital tools solely for documentation or basic information display are excluded.

Although scholarly attention to AI in curatorial studies has grown in recent years, existing literature predominantly emphasizes technical and instrumental dimensions, such as the digital transformation of exhibition models, the application of generative AI in content production, and AI's role as an auxiliary curatorial tool. These studies provide valuable insights into practical implementation, yet they largely overlook the deeper structural implications of AI intervention. Specifically, three major gaps remain. First, the mechanisms through which AI systems intervene in exhibition narratives and shape audience pathways are often discussed descriptively through isolated case studies or technical reports, with limited engagement with theories of power and agency. Second, while emerging research has begun to address the notion of the "algorithmic curator," insufficient attention has been paid to how curatorial identity and authority are redefined through the hybrid configuration of human–algorithm collaboration. Third, there is a notable lack of theoretical analysis concerning how curatorial discourse power—affecting meaning production, cultural representation, and interpretive hierarchies are redistributed within AI-mediated exhibitions.

Existing studies thus tend to emphasize the instrumental benefits of AI in curation. For instance, AI-supported museum applications have been shown to broaden access to cultural heritage, enhance visitor engagement, and introduce new modes of interaction, while also influencing the digitization of cultural identity and museum education practices (Suiçmez et al., 2025). However, the broader consequences of AI intervention for curatorial power relations, discursive authority, and cultural governance remain underexplored.

To address these gaps, this study adopts a qualitative research design combining comparative case analysis of six AI-integrated exhibitions with process tracing of curatorial decision-making. The analytical procedure involves three stages: (1) mapping the points of AI intervention across the curatorial workflow; (2) identifying shifts in decision authority among curators, algorithms, and institutional actors; and (3) analyzing how these shifts affect exhibition narratives and audience interpretation paths. Within this framework, the typology of AI intervention in exhibitions proposed by Covas (2025) is employed as an analytical reference.

As summarized in Table 1, Covas's typology categorizes exhibition practices according to different levels of machine learning involvement, ranging from assistive systems to semi-autonomous curatorial agents. In this study, Table 1 serves not as a prescriptive classification, but as a conceptual tool for comparing degrees of AI intervention across cases. The Covas framework is consistently cited throughout the analysis to ensure terminological coherence and theoretical continuity. Building upon this typology, the study recontextualizes AI intervention as a catalyst for the redistribution of curatorial power, examining how authority, agency, and discourse production are negotiated among human curators, algorithmic systems, and audiences.

Furthermore, Figure 1 visualizes the dynamic feedback loops and decision nodes that emerge within AI-mediated curatorial systems. By illustrating how data input, algorithmic processing, curatorial judgment, and audience feedback recursively influence one another, the figure clarifies the non-linear power structure shaping contemporary exhibition practices.

Overall, this study aims to contribute to curatorial theory by theorizing the transformation of curatorial power structures in the AI era. By moving beyond an instrumental view of AI, it offers a power- and discourse-oriented framework that supplements existing research and provides a foundation for future critical inquiry into human–algorithm co-curation.

Table 1

Exhibition Statistics per Year

Year	Total Exhibitions	Exhibitions with Object IDs	Works of Art Found	Word Count
2000	55	6	168	5911
2001	59	11	403	6554
2002	54	11	254	6242
2003	56	9	371	5911
2004	57	6	342	6052
2005	49	4	239	5544
2006	49	5	308	6147
2007	51	16	847	6019
2008	57	19	1203	6947
2009	61	18	863	6905
2010	61	16	1307	6246
2011	68	24	1574	7246
2012	65	30	2661	7373
2013	79	39	2863	9301
2014	94	53	2827	9832
2015	90	53	2741	8663
2016	95	58	3646	9103
2017	95	2	111	9694
2018	78	2	129	8222
2019	74	2	129	7462
2020	56	5	276	5876
2021	58	26	2042	9727
2022	56	47	3711	12,796
2023	60	47	3483	14,078
2024	50	36	2986	10,434
2025	9	8	736	1590
Total	**1636**	**553**	**36,220**	**199,875**
Total after removal of multi-year exhibitions	**1009**	**338**	**20,172**	**123,349**
Total after removal of artworks not on Met Museum		**236**	**10,470**	**26,388**

Note: Typology of AI intervention in exhibition curation (Adapted from Covas, 2025. Curating art exhibitions using machine learning (arXiv Preprint, https://arxiv.org/abs/2506.19813).

2. Literature Review

Scholarly discussions of curatorial power and exhibition discourse are deeply rooted in

theories of power, knowledge, and visibility. A foundational reference is Michel Foucault (1995), whose analysis of power–knowledge relations conceptualizes power as operating through classification, surveillance, and normalization rather than overt coercion. In book of "*Discipline and punish: The birth of the prison"*, Foucault (1995) describes how hierarchical observation and normalizing judgment function as mechanisms through which institutions regulate subjects. This framework has been widely applied to cultural institutions, where exhibitions operate through selective visibility, legitimization of knowledge, and the regulation of meaning.

Within curatorial studies, this Foucault (1995) perspective has been extended to examine how exhibitions function as sites of cultural authority. Curatorial practices such as selecting artists, constructing narratives, and defining interpretive frameworks are understood as forms of discursive control that shape public knowledge and cultural values. Macdonald (1998), for instance, interrogates how decisions about what is displayed are made, how claims to objectivity and expertise legitimize particular representations, and who is authorized to speak on behalf of science, the public, or the nation. From this perspective, exhibitions are not neutral presentations but processes through which cultural power is continuously negotiated and reconfigured.

However, much of this literature assumes a human-centered model of curatorial authority, in which power is exercised primarily by curators and institutions. Although recent scholarship has begun to address the impact of digital technologies on exhibition practices, discussions often remain focused on mediation tools rather than on structural transformations of curatorial power. With the rapid development of artificial intelligence, this assumption is increasingly challenged. AI systems are no longer limited to supporting documentation or visualization tasks; they actively participate in selection, classification, and narrative construction. As Covas (2025) argues, existing exhibitions already contain sufficient structured information to train AI models capable of replicating curatorial patterns at a level significantly above random selection.

Despite these insights, a critical gap remains in the literature. While prior studies acknowledge that AI can replicate or assist curatorial decision-making, they rarely examine how the intervention of AI transforms the distribution of curatorial power itself. Specifically, three issues remain under-theorized. First, existing research lacks a systematic analysis of how AI-mediated decision-making alters traditional hierarchies between curators, institutions, and audiences. Second, although the notion of "algorithmic curation" has emerged, there is insufficient conceptual differentiation between human-led, algorithm-driven, and hybrid AI-assisted curatorial models. Third, little attention has been paid to the role of audience data as an active component in curatorial power structures, particularly in terms of how feedback mechanisms reshape exhibition narratives over time.

In response to these gaps, this study aims to theoretically and empirically examine the redistribution of curatorial power in AI-driven exhibition practices. Rather than treating AI as a neutral tool, the research conceptualizes AI as a mediating actor within a broader power configuration composed of human curators, algorithmic systems, and audience data. By integrating theories of power and discourse with comparative case analysis of AI-integrated exhibitions, this study seeks to clarify how curatorial authority is reconfigured, how exhibition discourse is reshaped, and how cultural power is redistributed in the era of artificial intelligence.

3. Methodology

To systematically examine how artificial intelligence reshapes curatorial power structures,

this study adopts a comparative qualitative research design that distinguishes among three curatorial modalities: human-led curation, algorithm-driven curation, and AI-assisted hybrid curation. Human-led curation refers to exhibitions in which curatorial decisions—such as narrative framing, artwork selection, and interpretive emphasis—are made primarily through human expertise and institutional authority. Algorithm-driven curation denotes exhibition systems in which decision-making processes are largely automated, relying on data-driven models to generate narratives, recommendations, or display logic with minimal human intervention. In contrast, AI-assisted hybrid curation, which constitutes the core focus of this study, describes exhibition practices where curatorial agency is distributed across human curators, algorithmic systems, and audience data through iterative feedback loops.

Based on this distinction, the study analyzes AI-integrated exhibitions across three analytical dimensions: (1) narrative agency, examining how exhibition narratives are generated, adjusted, or reconfigured through human–algorithm interaction; (2) selection and visibility, focusing on how AI systems influence the inclusion, ranking, and prominence of artworks or information; and (3) audience participation, analyzing how visitor data and behavioral feedback actively intervene in curatorial decision-making processes. Together, these dimensions provide an analytical framework for comparing how different curatorial modalities redistribute power from a centralized, curator-dominated model to a dynamic, multi-actor structure.

Empirically, the study conducts a comparative case analysis of six exhibitions representing varying degrees of AI intervention. These include two predominantly human-curated exhibitions employing digital tools only as supportive infrastructure, two exhibitions characterized by algorithm-driven recommendation or generative systems, and two hybrid AI-curated exhibitions in which curators, algorithms, and audiences co-produce exhibition narratives. Each case is analyzed through curatorial documents, exhibition interfaces, system descriptions, and observational data to trace decision points and shifts in agency.

Methodologically, the analysis proceeds in three steps. First, the degree and location of AI intervention within each exhibition's curatorial workflow are identified and mapped. Second, decision-making authority across human curators, algorithmic systems, and institutional constraints is compared across cases. Third, the effects of these configurations on narrative coherence, visibility hierarchies, and audience interpretive pathways are examined. By juxtaposing AI-assisted exhibitions with human-led and algorithm-driven models, the study reveals how AI curation does not simply replace human agency, but reconfigures curatorial power through negotiated, feedback-based mechanisms.

Through this combined theoretical and empirical approach, the methodology clarifies the specific ways in which AI-mediated curation differs from both traditional human curation and fully automated algorithmic systems, thereby providing a robust foundation for analyzing the transformation of curatorial power structures in contemporary exhibition practices.

4. Results

Following the analytical framework outlined in the methodology, the selected AI-integrated exhibition cases were examined through iterative comparison across narrative agency, selection and visibility, and audience participation. Rather than treating individual cases in isolation, the analysis focused on identifying recurring configurations of decision-making and mediation across different levels of AI intervention. Through this process, a series of observable patterns emerged, which form the basis of the results presented below.

The first pattern concerns exhibition narrative construction. Across multiple cases, the

analysis shows that AI systems intervene at distinct but recurring points in the curatorial workflow. While overarching themes and conceptual orientations are generally initiated by human curators, algorithmic systems increasingly participate in organizing narrative sequences by recommending relational links between exhibits, generating alternative interpretive pathways, or dynamically adjusting narrative emphasis in response to data inputs. These interventions were observed to alter narrative logic from a predefined, linear structure to one characterized by adaptability and recalibration. This pattern was consistently identified in cases where AI systems processed curatorial content alongside audience interaction data.

A second pattern emerges in relation to selection and visibility. Comparative analysis reveals that AI-mediated exhibitions display different visibility hierarchies from those observed in predominantly human-curated contexts. Algorithmic processes such as recommendation ranking, pattern recognition, and real-time engagement metrics influence which artworks, themes, or information nodes are emphasized within the exhibition space. Through repeated comparison, it becomes evident that curatorial selection is no longer exercised solely through human judgment, but is partially delegated to algorithmic systems. This does not result in the disappearance of curatorial authority; rather, it introduces an additional decision-making layer that reshapes traditional selection logics and redistributes influence over what becomes visible or marginalized.

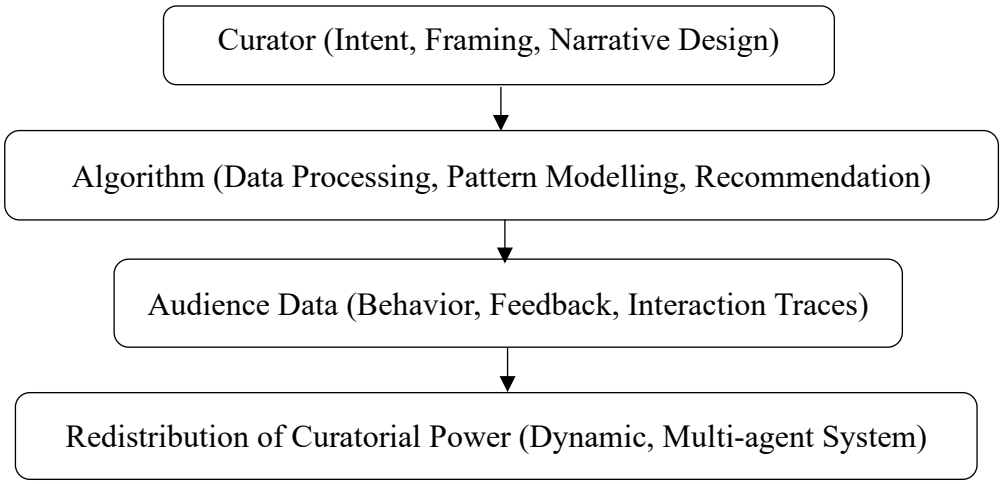
The third pattern relates to audience participation as a structural component of curation. Analysis of visitor interaction data across cases indicates that audiences contribute indirectly to curatorial outcomes through behavioral traces such as movement paths, interaction frequency, and engagement duration. These data streams are continuously fed back into AI systems, which then adjust content presentation and narrative sequencing. As a result, audiences are no longer positioned solely as end-users of exhibitions, but become data-generating participants whose aggregated behavior influences curatorial decisions over time. This pattern highlights a shift in the role of the audience from passive recipients to active, albeit indirect, contributors within the curatorial process.

Taken together, these three patterns point to a broader reconfiguration of curatorial power structures. Through cross-case synthesis, the analysis identifies a transition from a curator-centered model of authority toward a multi-subject configuration composed of human curators, algorithmic systems, and audience data. This configuration is characterized by iterative decision-making, distributed agency, and continuous feedback rather than unilateral control.

Based on this synthesis, Figure 1 is constructed to integrate the empirical patterns identified above into a conceptual model. The model visualizes how curatorial intent, algorithmic mediation, and audience data are linked through feedback loops and decision nodes, illustrating the process through which curatorial power is redistributed in AI-driven exhibition practices. Rather than representing a fixed hierarchy, the model reflects a dynamic structure derived from observed interactions across cases.

Figure 1

Conceptual Model of AI-Driven Curatorial Power Redistribution



Note: This conceptual model illustrates how curatorial intent, algorithmic mediation, and audience data interact to form a dynamic and multi-directional redistribution of curatorial power in AI-driven exhibition practices. Model created by the author.

5. Conclusion

Based on theoretical deduction and case analysis, this research points out that artificial intelligence is promoting the dynamic redistribution of exhibition discourse, so that curatorial power is no longer concentrated in a single subject, but a more fluid power allocation is formed between curators, data-driven algorithm systems, and audience behavior data. The intervention of artificial intelligence is therefore not only a technical adjustment but also represents a structural shift at the curatorial level. However, the cases used in this study are still limited, focusing on currently publicly available or available AI curation practices that may not fully reflect all types of technology application scenarios. In addition, with the rapid evolution of artificial technology, the power flow model proposed in this study needs to be continuously updated and revised with new curatorial techniques and institutional changes in the future.

6. Recommendations

Based on the analysis of the power structure of artificial intelligence intervention in curatorial affairs in this study, the future development of curatorial practice, institutional design and artificial intelligence systems needs to respond to the structural changes of curatorial power from a single subject to multi-subject collaboration. Firstly, at the level of curatorial practice, curators should not only view AI as a technological tool to improve efficiency but also incorporate it into a reflective framework for curatorial decision-making processes. Curators should clearly define which curatorial judgments can be assisted by algorithms, and which key narratives and value choices still need to be handled by human curators, so as to avoid curatorial discourse being misguided by technical logic in the process of insufficient data calculation. Secondly, at the institutional and organizational levels, it is necessary for cultural institutions and museums to establish a governance mechanism for "algorithmic curation", including the disclosure of curatorial data sources, the explanation of algorithmic recommendation logic, and the ethical norms for the scope of use of audience behavior data. Through institutionalized

normative design, artificial intelligence can no longer intervene in the curatorial process as a hidden technical operation but become a curatorial decision-making link that can be discussed and modified, thereby maintaining the responsibility of exhibition institutions in public knowledge production. Finally, at the AI system design level, future AI models for curation should not only focus on public interaction or dwell time but also take into account the visibility of cultural diversity and disadvantaged perspectives. By introducing curatorial value parameters into the algorithmic framework, AI has the potential to become a tool for promoting multicultural representation rather than simply promoting established preferences and mainstream aesthetics. I think only by simultaneously adjusting the three levels of curatorial practice, institutional management, and technical design, and the restructuring of power caused by artificial intelligence intervening in curation, can we have better reflection.

References

Covas, E. (2025). Curating art exhibitions using machine learning [Preprint]. arXiv. https://arxiv.org/abs/2506.19813v2

Foucault, M. (1995). Discipline and punish: The birth of the prison. Vintage Books.

Macdonald, S. (1998). Exhibitions of power and powers of exhibition. In S. Macdonald (Ed.), *The politics of display: Museums, science, culture.* Routledge.

Suiçmez, İ., Altinay, F., Dağlı, G., Zeng, H., Shadiev, R., İşlek, D., Danju, İ., & Altinay, Z. (2025). Artificial intelligence application for museum to experiential transformation of cultural heritage and learning. *Smart Learning Environments, 12*, 45. https://doi.org/10.1186/s40561-025-00404-2