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Museums in Dispute: Artificial Intelligence, Digital Culture, and Critical Curation

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Abstract: Museums in Dispute: Artificial Intelligence, Digital Culture, and Critical Curation analyzes contemporary debates in the museum field through the lens of tensions between technology, digital culture, and political and epistemological disputes. Structured in three parts, the article develops a critical approach that, in the first section, revisits critiques of the modernist museum model, highlighting how discourses from New Museology, institutional critique, and decolonial perspectives challenge the idea of neutral, universal, and Eurocentric museums. The second part explores the shift from temple-like museums to interface-museums, focusing on the analysis of practices such as digitization, immersive exhibitions, and gamification. It argues that while these technologies may expand access, their uncritical use can reproduce inequalities and render plural and inclusive narratives invisible. The third part addresses the emergence of hyperconnected museums and the application of artificial intelligence (AI) in curatorial, mediating, and reconstructive processes, analyzing collaborative and artistic projects such as Demonumenta and Curationist that critically reinterpret collections. Throughout the article, the concept of meta-algorithmic curation is developed, which is understood as a practice that makes algorithms visible, open to critique, and reconfigurable as cultural and political devices. Methodologically, the article combines critical theoretical review with analysis of institutional and artistic case studies, highlighting practices that appropriate the supposed neutrality of data to develop a critical pesrpective and advocate for more inclusive, distributed, and politically engaged curatorial narratives.

Keywords: critical museology; artificial intelligence; digital culture; data colonialism; meta-algorithmic curation

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1. Introduction

The Critique of the Modernist Museum and the Debates on the Museum and Coloniality: A Brief Introduction

Debates about the interfaces between museums and digital technologies gained momentum starting in the 1990s, with the popularization of the internet. Beyond the traditional notion of the museum as an exclusively physical space, the incorporation of these technologies into the museum field enabled the emergence of new forms of preservation, exhibition formats, and expanded modes of access to cultural heritage. The presence of digital technologies has transformed not only the means of museological mediation and communication but has also prompted a shift in institutional practices, inviting experimentation with new ways of engaging with collections and audiences.

However, it is essential to understand that this debate cannot be reduced to a merely instrumental or technicist perspective. While digital technologies offer new possibilities for exhibition and access, it is essential to recognize that they should not be regarded as

neutral tools. In many cases, these technologies operate not merely as technical devices but as systems embedded with the operational logic of powerful technology corporations. When museums adopt these tools uncritically—without interrogating their underlying structures and ideological implications—they risk becoming subordinated to the interests of those corporations. Prioritizing scalability, user engagement, and data extraction, often in alignment with platforms such as Google and Facebook, museums may inadvertently shift their focus away from cultural and educational missions toward market-driven metrics (Pepi 2014).

A critical perspective is therefore necessary when engaging with digital culture in the museum context. This debate must go beyond technicist enthusiasm or instrumental adoption and involve a broader reflection on the role of museums in contemporary society. Such a reflection demands an epistemological revision—one that considers not only exhibition and conservation methods, but also policies of representation, relationships with communities, and the narratives that underpin the construction and dissemination of collective memory.

This revision, in fact, had already been taking shape since the mid-20th century, driven by critiques of the Eurocentric museum model, the colonial logic of collections, and the need to build more pluralistic and inclusive institutions beyond those dictated by hegemonic thought.

In this sense, as early as the 1950s, essays emerged that problematized the modernist vision of the museum from different perspectives. These discussions questioned the notion of a neutral museum and addressed the elitism and colonialism present in museum institutions.

Among the discussions, it is worth highlighting the essay "Valéry Proust Museum" published by Theodor Adorno (1983) in which he critically discusses the concept of the museum from the contrasting perspectives of Paul Valéry and Marcel Proust. While Valéry saw the museum as a repository of dead memories, Proust saw it as a space for sensory and affective experiences. Adorno, on the other hand, argued in favor of the presence of a critical subject within the museum. In *Imaginary Museum*, André Malraux (1947) argues that photography has radically transformed our relationship with art, allowing works from different times and places to be brought together in catalogs and books, creating an "ideal" and accessible museum without the physical limitations of traditional museums. The central idea of the *Imaginary Museum* is that the reproduction of works of art in books and photographs would democratize access to art, dissolving the spatial and temporal boundaries that previously separated artistic creations.

Without aiming to provide an exhaustive historical account, it is possible to observe that the questioning of the museum and its function has accompanied theoretical thought for quite some time. However, it was in the 1970s and 1980s, with the rise in so-called postmodernity, that this debate gained new momentum. During this period, alongside discussions on cultural tourism and the role of the museum in consumer society, even more pressing issues emerged, such as the impact of technologies on these institutions and the redefinition of their social role. Rosalind Krauss (1990), in her essay "The Cultural Logic of the Late Capitalist Museum", points out how museums began to operate within a logic of spectacle, serving more as spaces of entertainment and symbolic order maintenance than of cultural critique. For Krauss, this shift compromises the critical and experimental potential of artistic practices, which end up being captured by logics of commodification and consumption.

The so-called New Museology, which emerged from the cultural and political effervescence of the post-World War II period and gained momentum after the May 1968 protests in France, brought about a profound transformation in the conception of museums throughout the 20th century. Thinkers such as Georges-Henri Rivière and André Desval-

lées were central to this movement, challenging the traditional, Eurocentric, and elitist museum model that had long been conceived as a temple, palace, or mausoleum of the elites. In contrast to the conventional focus on the conservation and exhibition of artistic and historical objects, New Museology reimagined the museum as an active agent of social participation, critical education, and community engagement. Rivière, one of the founders of the concept of the ecomuseum, advocated for institutions committed to the everyday life of local populations, expanding the role of the museologist beyond collection curation and emphasizing transversal, collaborative relationships with civil society (Rivière 1989).

One of the most talked-about texts on the crisis of the modern museum is *On the Museum's Ruins*, by Douglas Crimp (Crimp 1993), originally published in *October* magazine in the 1980s. The essay was expanded and became the title of a book that brings together a series of texts on the collapse of the modernist museum model and its relationship with photography, appropriation, and postmodernism in art. In this essay, Crimp announces the death of museum institutions—or, more precisely, the death of the modern understanding of the museum. Anchored in the debates of post-modernity and the crisis of modern values, he does not refer to the physical disappearance of museums, but to the exhaustion of the museological conception that defines them as homogeneous and universalizing spaces.

In *Inside the White Cube: The Ideology of the Gallery Space*, Brian O'Doherty (1976) presents a critique of the modernist museum model, especially the idea of the *white cube* that became consolidated as an exhibition standard throughout the 20th century, under the influence of the Museum of Modern Art in New York (MoMA). O'Doherty argues that this apparently neutral and timeless space is actually an ideological construction that privileges certain art forms and exhibition modes. The white environment, aseptic and isolated from the outside world, reinforces a formalist conception of art as something autonomous and formally pure, detached from social, political, or historical contexts.

In Brazil, it is essential to highlight the role of Walter Zanini, director of MAC-USP (Museum of Contemporary Art of São Paulo University), who was able to articulate, in a pioneering way in the 1970s, reflections on the museum, the relationship between art and technology, and the political dimension of the museum as a space for action and social transformation. The JACs (Jovem Arte Contemporânea), conceived by Walter Zanini at the end of the 1960s, can be seen not only as spaces to foster and legitimize the production of young Brazilian artists and incorporate new media into the museum space, but also as a platform to broaden discussions about the role of the contemporary art museum as a forum and laboratory during the harsh years of the civil–military dictatorship in Brazil (1964–1985).

From the 1980s/90s onwards, in the context of cultural and decolonial studies, a critique of colonialism, Eurocentrism, and the cultural hegemony present in museum institutions emerged with greater force from a more political perspective. These debates had a significant impact on thinking about museums and the modernist conception of these institutions, questioning their role in constructing hegemonic historical narratives.

Not by chance, in 1995, Tony Bennet (Bennett 1995) published *The Birth of the museum: history, theory, politics*. In this book, he analyzes museums from a Foucaultian perspective, arguing that museums are not just spaces for preserving and exhibiting objects but devices of power that discipline and educate the public.

Authors such as Walter Mignolo (Mignolo 2011), Aníbal Quijano (Quijano 2005), and Achille Mbembe (Mbembe 2018) have, since the early 2000s, highlighted the inherently colonial role of museums. A more radical perspective is offered by Françoise Vergès (Vergès 2022) in *Decolonizing the Museum: A Program of Absolute Disorder*, where she reconstructs the colonial history of the so-called "universal museum", exposing its symbolic and dominative functions. Vergès shows how museums, through practices of collecting, ex-

propriating, and reproducing power structures, operate as legitimizing spaces for colonial narratives. Building on this critical lineage, historian Bénédicte Savoy (Savoy 2018, 2022) has significantly contributed to the decolonial debate in museology. In *Africa's struggle for its art: history of a postcolonial defeat* (Savoy 2022), Savoy examines the legacy of colonial looting and argues for the return of African artifacts held in European museums. She calls for a new ethical and political framework based on cultural reparation and the dismantling of Eurocentric museum narratives, stressing that restitution is not merely a legal or logistical matter but a symbolic and transformative gesture toward epistemic justice.

Within a similar perspective, we can refer to the Tupinambá cloaks—ceremonial garments of great symbolic and cultural value, made from the colorful feathers of tropical birds and worn by Tupinambá Indigenous leaders in Brazil during religious rituals. Today, these cloaks are held primarily in European museums, the result of colonial processes of collection, appropriation, and displacement of Indigenous artifacts. In recent years, the issue of returning the cloaks to Brazil has gained prominence in public and political debates, driven by Indigenous movements, scholars, and cultural institutions advocating for the restitution of these items as a form of historical reparation, recognition of the cultural sovereignty of Indigenous peoples, and reinforcement of their identities.

In her article "*O voo do Manto e o Pouso do Manto: uma jornada pela memória Tupinambá*", Glicéria Tupinambá presents the project "Manto em Movimento" (Jesus da Silva 2024), an artistic–diplomatic initiative carried out between September and December 2023. The project involved the circulation of the Tupinambá Cloak from Serra do Padeiro through various spaces and institutions in the city of São Paulo—from the Kalipety village in Parelheiros to the Museum of Contemporary Art at USP, including places such as Casa do Povo and Pontifical Catholic University of São Paulo. Conceived by a curatorial committee of which Glicéria was a member, the project was driven by what she calls the "spell of the thread"—the relational power of the cloak to gather people, objects, and institutions around its presence and its path of cultural resurgence. Rather than keeping it confined in a single institution—a gesture that would evoke the colonial logic of appropriation and immobilization of Indigenous artifacts—the cloak traveled, weaving encounters and affective alliances with different audiences and contexts. For Glicéria, this movement not only reinforces the memory and living presence of Indigenous peoples but also proposes a clear gesture of decolonizing cultural institutions, demanding that these structures open themselves to listening, dialog, and historical reparation.

In this sense, discussions on the decolonization of museums recognize that the processes of their construction, the circulation of images and works on display, as well as the orientation of their interpretations play a central role in social control and the formation of collective memory. Decolonial critique points to the need to reconfigure these spaces, questioning their hegemonic narratives and proposing practices that include other perspectives, especially those of peoples historically marginalized by museum institutions.

This legacy remains essential for thinking about digital museums today, which must respond to local and collective needs rather than merely conforming to global visibility logics. More than just platforms for displaying collections online, digital museums should be conceived as spaces for listening, participation, and the collaborative construction of knowledge—attentive to the cultural, social, and historical specificities of the contexts in which they operate.

2. From Museums–Temples to Museums-Interface

In this sense, it is clear that the discussions that have been taking place in museus are broad and complex and that the debates on the use of technology in museums should be seen through this more general lens.

Without going into too much detail, we can highlight three fronts, among many others, that museums have been developing in this relationship with digital technologies: the digitization of collections, the development of virtual exhibitions, and what has been called *gamification*.

Digitizing collections has been one of the most widespread practices, guaranteeing preservation and remote access to collections that were previously restricted to physical spaces. One example is the *Europeana Project* www.europeana.eu (accessed on 20 April 2025), which began in 2008 and brings together millions of items from museums, libraries, and archives in Europe. Functioning as a digital library, it brings together millions of digitized items, including books, paintings, photographs, maps, films, manuscripts, and audio files, from museums, libraries, and historical archives in various countries. The project relies on the collaboration of more than 3000 cultural institutions and makes its collection available to the public free of charge, allowing it to be used for educational, scientific, and creative purposes. In addition, the platform encourages the reuse of its content through APIs and open licenses, enabling new forms of interaction and research.

Another fundamental aspect of digitization is its role in preservation, especially in contexts of risk and loss of heritage. One example is the National Museum in Brazil which, after the tragic fire in 2018, has relied on digitization as a tool to map and virtually reconstruct part of its lost collection.

Although technologies have become valuable tools for documenting and reconstructing lost collections, it is essential to recognize that no technology, no matter how advanced, can replace destroyed material heritage.

One of the most emblematic examples of this digital reconstruction process at the National Museum is the work carried out on the fossil of *Luzia*, the oldest human skeleton found in the Americas. Luzia's skull was damaged by the fire, but the researchers managed to salvage fragments and, with the help of scanning techniques, artificial intelligence, and 3D printing, recreate its original structure. The team used previous records, such as photographs, 3D scans, and scientific studies, to feed machine learning algorithms that helped fill in the gaps in the reconstruction.

Virtual and immersive exhibitions are another aspect developed by museums. Google Arts & Culture, launched in 2011, is a good example of this, allowing 3D visits to institutions such as the Musée d'Orsay in Paris and the Pinacoteca in São Paulo, for example.

Using Google Street View technology, the platform allows users to explore the interior of various museums with high-resolution images. To do this, the Google team takes 360° cameras on site, recording detailed images of the corridors and galleries. This feature allows visitors to virtually navigate the exhibition spaces, touring the rooms as if they were physically present and *zooming* in to observe specific details of the work.

The advantage of this project lies not only in the access to digitized exhibitions—which, although they do not replace the face-to-face experience, offer an alternative for those who cannot physically visit museums—but also in the quality of the images captured. While many institutional websites only offer low-resolution photographs, which limit the observation of details, Google Arts & Culture presents works of art in extremely high quality, allowing you to see textures, brushstrokes, and subtleties that are almost imperceptible to the naked eye.

In addition to digitization and online exhibitions, gamification has also been used to attract visitors. Gamification in museums refers to the incorporation of game elements into museum exhibitions and experiences to increase audience "engagement". This can include challenges, missions, rewards, scores, and digital interactivity to make the visit more engaging.

One example is the São Paulo Museum of Modern Art (MAM), which became one of the first Brazilian museums to integrate Minecraft: Education Edition, the educational version of the popular Microsoft game. The partnership, with Microsoft and the Africa agency, sought to broaden access to modern and contemporary Brazilian art, making the museum experience more interactive and accessible to students, teachers, and art and video game enthusiasts (https://mam.org.br/mam-no-minecraft/, accessed on 20 April 2025).

While the aforementioned projects bring important contributions regarding access and the preservation of archives, it is essential to point out that the mere incorporation of technologies into museum spaces does not necessarily lead to changes in the critical use of collections or the adoption of more plural institutional policies.

From this perspective, I would like to highlight the *(Im)material Artefacts* project, a partnership carried out in 2012 between artist Sarah Younan and the National Museum Cardiff in the United Kingdom. As part of this research, several artifacts from the museum's ceramics collection were 3D scanned, and the resulting digital models were made available online to invited artists, who were encouraged to remix the scans. The project culminated in an exhibition at the museum, where the participants' screen-based works and 3D-printed objects were displayed alongside the original artifacts (Younan 2015, p. 27).

One of the artworks developed as part of this project was by the Mexican artist Padilla, who 3D-printed a model of a supposed Mexican mask. For the artist, this digital reproduction functioned as a form of *symbolic repatriation* of the object to its culture and country of origin. In dialog with experts from the National Museum of Mexico, he discovered that the object, labeled in the British museum's records as a "mask", was actually likely the head of a Teotihuacan figurine. In this case, the reinterpretation of the artifact through an artistic and collaborative project mediated by technology not only enabled a re-signification of the piece, but also a challenge to colonial classification systems (Arantes 2018).

This example illustrates how collaborative curatorial and artistic initiatives can generate critical readings of institutional collections, using technology not as an end in itself but as a means to foster more plural, decentralized, and inclusive museological practices.

It is important to emphasize that many museum collections still reflect a hegemonic worldview and, beyond reproducing Eurocentric narratives, often lack the presence of works by black, Indigenous, women, LGBTQIA+ artists, and other historically marginalized groups. Therefore, independente and colaborative initiatives that seek to provide visibility to these productions outside traditional institutional circuits are gaining increasing relevance. One such example is the *Projeto Afro* (https://projetoafro.com/, accessed on 20 April 2025) an Afro-Brazilian platform developed by Deri Andrade dedicated to mapping and promoting the work of black artists. More than a digital archive, the project reflects critically on the historical and hegemonic systems that have shaped Brazil's art world and proposes new ways of seeing based on collaboration, exchange, and recognition. The result of over six years of ongoing research, the platform offers a wide range of content: an interactive map, artist profiles, collaborative articles, interviews, academic texts, and event suggestions—all curated and systematized in a space dedicated to contemporary black expression.

Another interesting example of the use of digital technology to give visibility to practices and productions often marginalized in traditional spaces is the Plateau Peoples' Web Portal (https://plateauportal.libraries.wsu.edu/, accessed on 20 April 2025). This collaborative digital archive preserves and shares the cultural heritage of the Native Plateau communities of the Northwestern United States, including the Nez Perce (Nimíipuu), Spokane, Yakama, Coeur d'Alene, Umatilla, Warm Springs tribes, among others. Developed in partnership with the Center for Digital Scholarship and Curation at Washington State University, the portal is built on Mukurtu CMS—a content management system designed

specifically for Indigenous communities. Through this platform, tribal representatives curate, contextualize, and control access to digital materials according to their own cultural protocols. One example of its content is the video series *Stories from the River* (https://plateauportal.libraries.wsu.edu/digital-heritage/stories-river-celilo, accessed on 20 April 2025), which shares Indigenous perspectives on the cultural meanings of rivers. The portal serves as an educational and cultural tool, promoting respectful and contextualized access to Indigenous heritage while strengthening the digital sovereignty and autonomy of the Plateau peoples.

It is important to note that highlighting projects like the Plateau Peoples' Web Portal is not to suggest that museums should be reduced to purely digital platforms. The work of museums—especially those that steward physical collections—extends far beyond digital visibility; it involves the material care, conservation, interpretation, and critical contextualization of cultural objects. However, initiatives such as the Plateau Portal demonstrate how digital platforms can be used in meaningful and critical ways. By centering the voices and authority of original peoples in the curation and management of their heritage, such projects challenge dominant institutional models and contribute to the redefinition of archival and museological practices. In this sense, they act as forms of cultural resistance and powerful tools for promoting epistemic justice, equity, and self-determination in the fields of memory, heritage, and representation.

3. Hyperconnected Museums and the Use of AI in Museum Collections

While digital museums have primarily focused on expanding access through digitized collections, online exhibitions, and interactive interfaces, the integration of artificial intelligence (AI) takes this transformation a step further. Whereas digital technologies enhance mediation and offer new forms of engagement, AI introduces layers of automation, personalization, and data-driven analysis that reshape curatorial processes and visitor experiences. Museums employing AI are not just hyperconnected; they are capable of adapting content in real time, detecting patterns in large archives, automating metadata generation, and even producing new interpretations or reconstructions of lost objects.

However, the growing adoption of artificial intelligence in museological practices also raises critical concerns that must be addressed. If applied uncritically, AI may intensify pre-existing inequalities within museum structures, such as the exclusion of peripheral narratives and the concentration of decision-making within technocratic environments (Pepi 2014).

There are also warnings that the use of AI in museums—when driven by productivity metrics and algorithmic engagement—may drain exhibitions of their critical potential. In such cases, artificial intelligence often serves to reaffirm what is already known, automating cultural behaviors and reinforcing existing power structures. Museums must therefore be cautious not to allow AI to become a tool for confirming established tastes; its critical application requires a fundamental questioning of classification, recommendation, and mediation systems themselves.

In their essay, *Genetic Drift: Artsy and the Future of Art*, João Enxuto and Erica Love (Enxuto and Love 2014) offer a compelling critique of the data-driven promises of platforms like Artsy, illuminating the tensions between technological innovation and entrenched hierarchies in the art world. Enxuto and Love examine how the Art Genome Project—a classificatory algorithm designed to map esthetic and conceptual characteristics across artworks—reproduces curatorial authority through automated taxonomies. This raises urgent questions for museums adopting AI: Who defines the categories, and whose knowledge systems are legitimized or erased in the process? As the authors suggest, rather than democratizing access to art, these platforms may deepen the centralization of cul-

tural capital and reconfigure curatorship into a form of algorithmic governance. Their insights underscore the need for museums to approach AI not as a neutral tool but as a sociotechnical construct that must be interrogated critically and ethically

Artificial intelligence (AI) has been integrated into museums in various ways, improving both the management of collections, their conservation, and the visitor experience.

One application of AI in museums concerns the creation of virtual assistants who interact with the public, providing real-time information about the works and historical contexts. For example, the "AskMona" application allows visitors to "talk" to works of art such as the Mona Lisa, making the visit more interactive and personalized.

As well as enriching the public experience, AI has played a crucial role in the preservation and management of museum collections. The digitization of collections, combined with advanced AI techniques, makes it possible to create "digital twins" of monuments and works of art. These models allow for structural analysis and scenario simulations, helping with preventive conservation. One example is the Vatican project which, using generative AI, has created a digital replica of St. Peter's Basilica, facilitating both preservation and remote access to the monument.

From another perspective, we can highlight the idea of hyperconnected museums that emerge as spaces that transcend the physical limitations of museums, integrating digital networks, artificial intelligence (AI), and distributed intelligence systems to increase accessibility and interaction between their collections.

The incorporation of AI and distributed intelligence into museum collections enables the analysis of large volumes of data, automated cataloging, and the creation of personalized recommendation systems for visitors. Machine learning algorithms can identify "invisible" patterns in collections, suggesting new curatorial connections and facilitating interdisciplinary research. In addition, distributed intelligence, which involves collaboration between humans and machines in a network, allows different agents—from curators and art historians to the general public—to actively participate in the construction and reinterpretation of collections.

One example of a museum that allows users to incorporate new perspectives and reinterpret its collection is the Cooper Hewitt, Smithsonian Design Museum in New York (https://www.si.edu/museums/cooper-hewitt-smithsonian-design-museum, accessed on 20 April 2025). The institution uses interactive technologies such as Pen, a digital pen that allows visitors to save objects from the digitized collection, create their own personalized collections, and explore them online later. In addition, the museum adopts artificial intelligence to suggest connections between pieces and encourage new interpretations beyond a historicist vision, promoting a collaborative model where the public actively participates in constructing meanings of works and design.

Another example is *Curationist* (https://www.curationist.org/, accessed on 20 April 2025), a free platform that brings together millions of images of works of art from digital collections around the world. The proposal, as pointed out on the *instagram* of the research group "Digital collections and research" (https://www.acervosdigitais.fau.usp.br/, accessed on 20 April 2025), came about in order to overcome common obstacles in museums and archives, such as the lack of resources to publicize and digitize their collections. In this sense, the platform connects the public to the most diverse collections: "each item on *Curationist* contains some information (metadata) provided by museums. The difference is that the platform augments this metadata with its own data, making the content more open and diverse. This is because metadata is not just "facts". Historically, they tend to reflect visions that exist in the world, visions that are generally Eurocentric and exclusionary", says the research group's instagram.

Although the term may sound technical, metadata is simply the information that describes an object or artwork—such as the title, the name of the creator, the date of production, or the materials used. These data make it possible, for instance, to locate all works by a particular artist or all images related to a specific theme. On *the Curationist* platform, metadata is typically provided by the institutions that hold the objects, such as the Metropolitan Museum of Art or the Art Institute of Chicago. However, one of Curationist's main features is its active work in reinterpreting and expanding these data. The platform's team conducts independent research and, whenever necessary, complements or updates the metadata, offering more complete, current, and, above all, socially conscious information.

This means that the metadata presented by Curationist is not neutral and that is intentional. Historically, cataloging systems in museums and archives have reflected Eurocentric, Western worldviews and white supremacist values. By proposing more "inclusive" metadata, Curationist not only broadens access to cultural heritage but also offers new ways to narrate and understand these legacies. The project seeks to reimagine how we classify and organize cultural memory, making visible the knowledge, histories, and subjects that have long been marginalized or silenced.

This work is evident, for example, in how the platform treats the portrait of journalist and activist Ida B. Wells-Barnett. While institutional metadata may limit itself to mentioning her role in the civil rights and suffrage movements, Curationist's team expands that narrative, including information about her race, gender, background as an educator, journalist, and activist, as well as details relating to the history of enslavement. This reformulation allows the work to be discovered through searches across different thematic axes—such as black women, civil rights, journalism, or social movements—and offers the public a richer and more politically engaged context.

To ensure transparency in this process, the platform indicates which metadata was created by the Curationist team, distinguishing it from information provided by partner institutions. In this way, users can follow how objects are being rewritten and reinterpreted through a curatorial lens that is more attuned to issues of inclusion, memory, and historical repair. In this sense, the work with metadata at Curationist goes far beyond organizing collections: it is a political gesture that reconfigures how we access and belong to culture.

In her essay, "Digital archives: between distributed intelligence and data colonialism", artist and researcher Giselle Beiguelman elaborates on the transformations and challenges of digital archives in the age of artificial intelligence and collaborative networks and the challenges posed by data colonialism. Beiguelman highlights projects that use collective collaboration to expand access to cultural collections, such as Wikipedia's GLAM (Galleries, Libraries, Archives, and Museums) partnerships, which involve cultural institutions in digitizing and making their collections available. Another relevant case is the US Library of Congress' "By the People" project (https://crowd.loc.gov/, accessed on 20 April 2025), which uses crowdsourcing to transcribe and tag digitized pages, making access to and research of these documents more efficient.

At the same time, the author problematizes the issue of data colonialism, drawing attention to the risks of technological dependence and corporate control over digital collections. She emphasizes the need to develop critical uses of networks and foster memory cultures that resist obsolescence and the dominance of large digital platforms. In this sense, Beiguelman proposes the creation of "mutant archives", which allow for multiple narratives and dynamic readings of art and society, promoting distributed intelligence and collective participation in the construction and preservation of digital heritage.

From this perspective, it is essential to observe how artists have been exploring the intersection between artificial intelligence (AI) and museum collections, not only to put

creative use of large volumes of data on stage but also to propose critical and political readings on memory, control, and digital appropriation.

This is the case with the *Demonumenta* project (http://demonumenta.fau.usp.br/, accessed on 20 April 2025), which resulted in a series of visual and audiovisual experiences with artificial intelligence on the collection of the Paulista Museum of the University of São Paulo (Brazil). It is important to note that this collection is fundamental to understanding not only the construction of the São Paulo imaginary and its historiography of Brazil but also the narratives of art history itself. Iconic works such as *Independência ou Morte* (*Independence or Death*) by the Brazilian artist Pedro Américo—considered to be the most widespread representation of the moment of Brazil's independence and a supposed national "foundation"—or the (*Retrato de Dom Pedro I Portrait of Dom Pedro I*), by Benedito Calixto, are part of the museum's collection.

Coordinated by Giselle Beiguelman, Bruno Moreschi, and Bernardo Fontes and with the participation of FAU-USP students, the motto of these experiments, which were named *Demonumenta*, was to activate a critical discourse on art history, questioning at the same time the procedures of historical colonialism and data colonialism. "How does Artificial Intelligence reproduce the ways in which official discourses on history are perpetuated? How can we develop AI-based methodologies to map the constitutive elements of image representations of historical colonialism?". These were some of the questions that formed part of the project's assumptions.

From a set of works that the Museu Paulista itself has made available on Wikipedia and Wikidata—thus allowing its collection to be subject to new resignifications and displacements—*Demonumenta* has created a series of categories—around 50—from the collection. They are Sky, fauna, flora, white man, indigenous man, black man, white woman, indigenous woman, black woman, indigenous child, black child, white child, enslaved, former enslaved, bandeirante, coffee grower, farmer, religious figure, military, politician, rural worker, urban worker, domestic artifacts, outdoor artifacts, political administrative space, cultural space, church, industrial space, streets and squares, wealthy residence, poor residence.

In the article, "Historical continuum and standardization in art collections and datasets—experiments with artificial intelligence at the Museu Paulista", the group itself analyzes the application of categories to images representing Indigenous peoples, enslaved blacks, and white men. In the montage made by the group—which tagged areas in the images of works from the Museu Paulista, part of a training dataset built collectively in the project—we observed patterns of representation. Indigenous people are often shown as rebellious and violent, while black people appear as manual laborers. The tag "white man" is predominantly associated with categories such as "bandeirante", "coffee grower", "politician", or "military man", which is not the case with "indigenous man" or "black man".

The use of artificial intelligence (AI) in the *Demonumenta* project makes explicit how colonial patterns continue to shape the production and circulation of images. Through the aggregation and recombination of visual data, AI reveals how historical representations are not only preserved but also reactivated in contemporary digital systems. In this sense, *Demonumenta* can be understood as a kind of digital *Mnemosyne Atlas*—referencing the work of German art historian Aby Warburg, who created an unfinished visual archive that mapped recurring gestures, poses, and iconographies across different historical periods. Warburg's *Atlas* was not chronological, but thematic and affective, exposing how Western visual culture is haunted by persistent symbols and power relations.

A clear example of this iconographic "repetition" can be seen in the representation of "powerful" white men, who follow the same visual codes as historical paintings, such as the

portraits of King João VI, made by Jean Baptiste Debret in 1817, and of King Pedro II, who reinterpret classical patterns such as the *Doriphorus (sculpture* made by Policleto around 440ac), reinforcing gestures of imposing authority. Similarly, the AI-driven visual outputs in *Demonumenta* bring to light the continuity of racialized and colonialist representations. Black men, for instance, often appear in scenarios of manual labor or physical exertion, while Indigenous peoples are portrayed in passive, subservient, or exoticized roles—both groups situated within a visual logic that reinforces their subordination to the white male gaze. What emerges is a process of *domestication of the sensible*—a term that signals how perception and esthetic regimes have been structured by systems of domination. In *Demonumenta*, AI becomes a tool that not only reflects these dynamics but also enables their critical exposure, transforming the archive into a contested and political space.

Rather than employing AI as a tool of glorification or esthetic enhancement, *Demonumenta* embraces a critical and meta-algorithmic use of artificial intelligence to expose and interrogate its underlying processes. As Menotti (2025) argues in his essay, *The model is the museum: generative AI and the expropriation of cultural heritage*, so-called "intelligent" systems are trained on databases embedded with cultural, racial, and geopolitical biases. When applied uncritically in museological contexts, these systems risk reinforcing dominant narratives and reproducing hegemonic logics under the appearance of technical neutrality. Menotti critiques how algorithmic mechanisms—often governed by popularity metrics, statistical patterns, and consumer behavior—tend to eliminate the space for critical mediation, esthetic dissent, and epistemic displacement traditionally enabled by curatorial practices.

Demonumenta does not adopt AI simply as a curatorial tool but reframes it as a site of epistemological conflict—a terrain where the power structures embedded in visual culture, data, and history are confronted. AI is used here to trace iconographic patterns and inherited visual codes, particularly those rooted in colonial and patriarchal imagery.

To explore these dynamics, the research group developed several experimental works, including *Numerical Natures*, *Possible Landscapes*, *Archaeology of Colors*, *Affirmative Album*, and *Animated Ignorance*. The latter project transforms portraits from the museum's collection into animated memes, pairing them with absurd and authoritarian contemporary statements. One notable instance places Paulo Guedes' infamous remark about domestic workers and Disney alongside the image of Conselheiro Rodrigues Alves, a historical figure associated with anti-abolitionist positions. These ironic and provocative juxtapositions expose the continuities of colonial power in contemporary discourse and draw attention to the ethical stakes of algorithmic media and synthetic images.

In this sense, we can understand *Demonumenta* as operating within what I propose as a framework of *meta-algorithmic curation*—a curatorial approach that not only utilizes algorithms but also interrogates their mechanisms, rendering their operations transparent and subject to cultural and political critique. Rather than accepting algorithmic classification and recommendation systems as neutral or objective tools, *meta-algorithmic curation* seeks to expose and subvert the biases, hierarchies, and normative logics embedded within them.

4. Conclusions

The increasing incorporation of artificial intelligence in museums has undoubtedly created new opportunities for access, preservation, and interpretation. However, it has also introduced new forms of inequality and control that demand close attention.

This article has shown that the discussion around digital technologies in museums must be framed within a broader historical and political critique—one that includes, but is not limited to, the long-standing questioning of the modern and colonial museum model.

Today, the dispute in museums is not only about confronting the legacy of colonial narratives, exclusionary collections, and elitist models of display—it also involves grappling with the profound implications of algorithmic systems and platform logic. These technologies, when adopted without critique, tend to reinforce the same structures of exclusion that critical museology seeks to dismantle. Whether through biased databases, popularity-based metadata, or corporate-driven infrastructures, AI and digital platforms risk transforming museums into engines of automated curation that privilege dominant perspectives while erasing marginal ones.

As this article emphasized, technologies must not be treated as neutral or purely technical tools. They carry cultural assumptions, political consequences, and ethical risks.

In response to these tensions, we propose the framework of meta-algorithmic curation—a practice that does not merely rely on algorithmic systems but actively interrogates and reconfigures them. Meta-algorithmic curation makes the logic of classification, recommendation, and data structuring visible, turning algorithms themselves into objects of curatorial inquiry. It involves identifying and challenging the normative assumptions embedded in digital infrastructures, exposing their epistemic limits.

Ultimately, to embrace artificial intelligence critically in museums is to engage in an ongoing struggle over memory, power, and representation. It is to understand curation not as a task of technical optimization but as a political act—one that can and must foster epistemic diversity, historical justice, and cognitive resistance. In this light, the dispute in museums reveals them not only as sites of preservation but also as battlegrounds for collective memory.

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References

Adorno, Theodor. 1983. Valéry Proust Museum. In *Prisms*. Cambridge: MIT Press.

Arantes, Priscila. 2018. Contemporary art, the archive and curatorship: Possible dialogues. *Curator: The Museum Journal* 61: 395–518. [CrossRef]

Bennett, Tony. 1995. *The Birth of the Museum: History, Theory, Politics*. London: Routledge.

Crimp, Douglas. 1993. *On the Museum's Ruins*. Cambridge: The MIT Press.

Enxuto, João, and Erica Love. 2014. GENETIC Drift: Artsy and the Future of Art. *X-tra: Contemporary Art Quarterly* 17. Available online: https://www.x-traonline.org/article/genetic-drift-artsy-and-the-future-of-art/ (accessed on 16 April 2025).

Jesus da Silva, Glicéria. 2024. O voo do Manto e o Pouso do Manto: Uma jornada pela memória Tupinambá. *MODOS: Revista de História da Arte* 8: 294–333. [CrossRef]

Krauss, Rosalind. 1990. The cultural logic of the late capitalist museum. *October* 54: 3–17. [CrossRef]

Malraux, André. 1947. *The Imaginary Museum*. Paris: Gallimard.

Mbembe, Achille. 2018. *Crítica da Razão Negra*. São Paulo: N-1 Edições.

Menotti, Gabriel. 2025. The model is the museum: Generative AI and the expropriation of cultural heritage. *AI & Society* 22: 1–5. [CrossRef]

Mignolo, Walter. 2011. Museums on the Colonial Horizon of Modernity: Fred Wilson's Garimpando o Museu (1992). Available online: https://monoskop.org/File:Mignolo_Walter_2011_Museums_in_the_Colonial_Horizon_of_Modernity_Fred_Wilsons_Mining_the_Museum_1992.pdf (accessed on 16 May 2025).

O'Doherty, Brian. 1976. *Inside the White Cube: The Ideology of the Gallery Space*. Berkeley: University of California Press.

Pepi, Mike. 2014. Is a museum a database? *e-Flux Journal*, n. 45, maio 2013. Available online: https://www.e-flux.com/journal/45/60197/is-a-museum-a-database/ (accessed on 16 May 2025).

Quijano, Aníbal. 2005. Coloniality of power, Eurocentrism and Latin America. In *Coloniality of Knowledge: Eurocentrism and the Social Sciences*. Edited by Edgardo Lander. Buenos Aires: CLACSO.

Rivière, Georges-Henri. 1989. Le musée de demain: Nouvelle muséologie. *Museum International* 41: 4–8.

Savoy, Bénédicte. 2018. Objets du désir, désirs d'objets: Musée et marché. In *Acquisitions: Héritage et Innovations*. Edited by Bénédicte Savoy. Paris: Publications de la Sorbonne.

Savoy, Bénédicte. 2022. *Africa's Struggle for Its Art: History of a Postcolonial Defeat*. Translated by Susanne Meyer-Abich. Princeton: Princeton University Press.

Vergès, Françoise. 2022. *Decolonizing the Museum: A Program of Absolute Disorder*. São Paulo: Editora Ubu.

Younan, Serene. 2015. Poaching museum collections using digital 3D technologies. *Journal of Science and Technology of the Arts* 7: 25–32. [CrossRef]

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