

Post-Digital Creative Processes in Generative Video Art: Between Intensive Algorithmisation and Artificial Intelligence and Authorship

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Abstract

This article addresses generative video art from a post-digital perspective, analysing the role of intensive algorithmisation and artificial intelligence as agents that support and enhance the creative process, leading to the redefinition of artistic authorship itself. Through the analysis of concepts such as the 'aesthetics of machine intelligence' and 'data narratives,' the discussion explores how artificial intelligence and algorithmisation transform artistic perception and creation by introducing algorithms capable of reinterpreting cultural and historical data into new visual languages. Three generative video art artefacts by artists Refik Anadol, Pedro Alves da Veiga and Ian Cheng are analysed, demonstrating the complexity and social impact of this practice. Artificial intelligence and algorithmisation are analysed here not only as technical tools but also as innovative forces that challenge intentionality and originality, expanding the frontiers of art in the post-digital era. With this article, the authors aim to contribute to the understanding of the new paradigms of authorship and aesthetic experience in contemporary digital media art under the growing influence of artificial intelligence and algorithmisation in general.

Keywords: generative video art; artificial intelligence; intensive algorithmisation; post-digital aesthetics; collaborative authorship; data narratives.

I – Introduction

The digital revolution, characterised by the widespread algorithmisation of processes — here termed intensive algorithmisation — and the advent of artificial intelligence (AI), has been reconfiguring the contemporary artistic and cultural landscape, reshaping how we conceive and experience artistic creation. In digital media art, particularly in generative video art, algorithmisation, pushed to its extreme, together with AI technologies, has not only expanded creative possibilities but also challenged traditional concepts of authorship, intentionality, and originality. The recent introduction of AI algorithms capable of processing large volumes of

data and generating new content has accelerated the redefinition of the artist's role, transforming the artist into a mediator between creative vision and the machine's interpretative capacity (MANOVICH, 2023; SANTAELLA, 2021).

Thus, algorithms in general, and AI in particular, emerge as a quasi-human active collaborator, or even as a creative entity that, by systematising processes and “learning” cultural and aesthetic patterns, contributes significantly to the evolution of post-digital aesthetics — understood here as the inevitability of the omnipresence and ubiquity of the digital in all aspects of life — thereby imposing the emergence of a new materiality or re-materialisation within digital artistic practices and within the experience of video art itself, which frequently blends with tangible physical devices and materials.

In generative video art, algorithmisation is commonplace; the term “generative” describes creative processes based on algorithms and even neural networks that can operate autonomously or semi-autonomously to produce visual artefacts. These systems enable AI not only to reproduce styles and techniques but also to introduce elements of visual innovation, often arising from the combinatory randomness of pictorial elements, thereby creating a distinctive aesthetic frequently described as the “aesthetics of machine intelligence” (ANADOL, 2024). Refik Anadol, one of the pioneers of this approach, explores the potential of AI to reconfigure historical and cultural data into new visual languages that challenge conventional perceptions of art. In his project *Unsupervised* (2022), Anadol employs neural networks trained on data from the Museum of Modern Art (MoMA) collection, generating visual “hallucinations” that translate the history of modern art into an abstract, immersive, and constantly transforming visual universe. This process exemplifies how algorithmisation and AI techniques, when integrated into the creative process, reconfigure the space of art by proposing a visual data aesthetic that incorporates the intrinsic characteristics of the data themselves, thereby transcending the artist's control and allowing the machine to actively participate in aesthetic innovation.

The interdisciplinary research underpinning Anadol's practice reflects an ongoing inquiry into the relationship between the human mind, technology, and aesthetics. Since 2016, Refik Anadol Studio has explored what it terms “data narratives”, in which data are regarded as collective memories containing stories, emotions, and meanings. Contrary to the conventional view that classifies data as mere numerical representations, Anadol proposes that they constitute elements of cultural expression, which, when reinterpreted by AI, acquire new layers of meaning and social relevance (ANADOL, 2024). This perspective redefines the role of data as a source of creative, aesthetic, and social inspiration, providing what Anadol designates as “post-digital architecture”, in which the aesthetic experience is dynamic, adaptive, and interactive, and technology is intrinsic to the very essence of the artwork.

This article seeks to contribute to a critical reflection on the influence of systematised algorithmisation combined with AI, particularly generative algorithms in contemporary artistic

creation, with a focus on generative video art, framed within a post-digital theoretical perspective. The implications of these technologies for the redefinition of authorship and artistic collaboration will be discussed, as will the ways they transform the viewer's perception. To this end, theoretical contributions from authors such as Lev Manovich and Lucia Santaella will be addressed, alongside a critical analysis of specific works by Refik Anadol, Pedro Alves da Veiga, and Ian Cheng. Through this approach, we aim to contribute to a deeper understanding of the influence and role of generalised algorithmisation, AI, and the aesthetics of machine intelligence, which challenge the boundaries of art and expand both the process of artistic creation and its experience in the post-digital era.

The selection of the analysed artefacts was based on their representativeness of different approaches to generative video art within the post-digital context, all of which involve high levels of algorithmisation: one work without AI (BioFlux), one employing AI in data aesthetics (Unsupervised), and one featuring interactive narrative AI (Life After BOB). This diversity enables the exploration of nuances in authorship, aesthetics, and machine–artist collaboration.

II – Theoretical Contextualisation

A) ON THE ROLE OF THE ARTIST AND AI IN CONTEMPORARY ARTISTIC CREATION

Artificial intelligence and the proliferation of creative processes supported by digital tools and high levels of algorithmisation have redefined both the concept and the role of the “artist”, reopening the debate about what constitutes art and authorship in the digital era. Lev Manovich proposes an expanded definition of “artist” or “creator” that encompasses any qualified individual who produces cultural artefacts in any medium or format (MANOVICH, 2023).

Adopting this broad definition, and recognising that not all individuals develop innate artistic abilities — these are largely capacities that require learning and practice, whether acquired through formal education, online tutorials, or other sources — it becomes evident that generalised algorithmisation, particularly through AI, has demonstrated the capacity to replicate such technical skills by simulating human learning methods and adapting to previously exemplified artistic styles and techniques (MANOVICH, 2021).

While algorithmisation, especially AI, can replicate certain technical aspects of artistic creation, the conceptual dimension of the creative process remains more complex for the machine. By learning from sequences of operations and parameters used in producing digital artefacts, AI can imitate aesthetic and even conceptual decisions, incorporating references and cultural elements; however, this capacity remains limited. Manovich argues that AI lacks a genuine understanding of the meanings underlying the concepts it manipulates; it merely replicates patterns. To achieve a level of creativity closer to that of humans, AI would need to

learn conceptual processes — a form of learning that would approximate AI to what might be termed “artistic intelligence”, enabling it to imitate not only techniques but also the conceptual logic employed by the human artist when interpreting, critiquing, and reflecting upon their medium and the world (MANOVICH, 2021).

At present, AI can replicate the technical and stylistic aspects of the human creative process, but it has not yet attained an “artistic intelligence” that genuinely comprehends concepts and meanings. AI learns aesthetic patterns and techniques from vast datasets, generating outputs based on statistical correlations, without consciousness or intentionality. Consequently, AI produces content without understanding the context or the cultural and personal purposes that often guide a human artist's work. For AI to develop a true artistic intelligence, it would require some form of consciousness or, at least, a capacity for meaningful interpretation. This would imply moving beyond current data-processing models towards systems that not only learn from final outputs but also comprehend and process cultural concepts and meanings in a manner analogous to human cognition (SANTAELLA, 2021).

B) ON THE DIGITAL AND NETWORKED CREATIVE PROCESS

Lev Manovich argues that creativity in contemporary society — which he designates as the “software era” — is predominantly mediated by digital environments, through specialised software packages, search engines, online services, and digital resources (MANOVICH, 2021). Contemporary artists have immediate online access to other artists' portfolios and exhibitions, where they may frequently consult videos and files that reveal working methods, techniques, and tools, such as those available in Adobe Creative Cloud (2024). This shift enables any artist, anywhere in the world, to observe another author's creative decisions and aesthetic and operational choices, and even to apply them within their own work.

In code-based creative practices — that is, those that rely heavily on algorithmisation, such as generative art — access to libraries and platforms, such as Processing, plays a fundamental role, enabling artists and programmers to view, modify, and extend others' code. This transformation not only reshapes the creative process, making it accessible and replicable, but also expands the scale and reach of digital creation, enabling any artist to connect with a global repertoire of techniques and styles (FERNANDES-MARCOS, 2023; MANOVICH, 2021).

The concept of creativity in digital media art thus ceases to be understood as an isolated act of individual inspiration and is instead recognised as a collaborative process in which tools, tutorials, and online libraries enable a continuous cycle of learning and reinterpretation of existing ideas. AI, by emulating this process, establishes a new form of creativity: one informed and expanded by neural networks that actively participate in the circuit of inspiration and cultural innovation in the digital age.

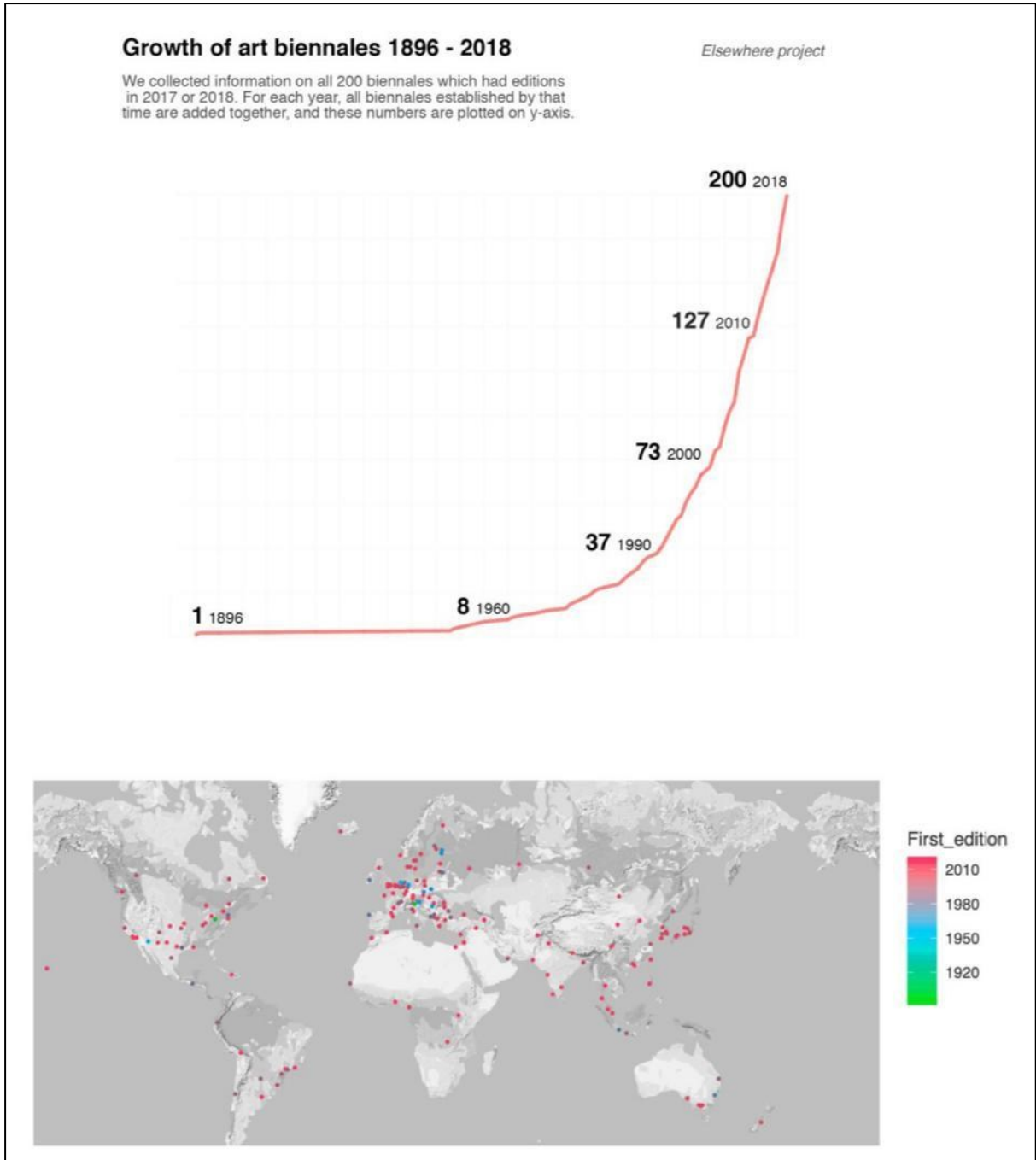


Figure 1. The growth of art biennales between 1896 and 2018, data from *Cultural Analytics Lab*, MANOVICH (2018)

Figure 1 shows the growth and diffusion of international art biennials. Many biennials initiated in recent decades had only a limited number of editions and did not continue; this graph includes only those biennials for which the Cultural Analytics Lab identified continuity, covering 81 cities. The first art biennials took place exclusively in Europe and the United States, and following the Second World War, their geographical distribution gradually expanded. After the year 2000, this expansion accelerated significantly: in 2002, Asia surpassed North America in the number of biennials, and in 2017, it also surpassed Eastern Europe.

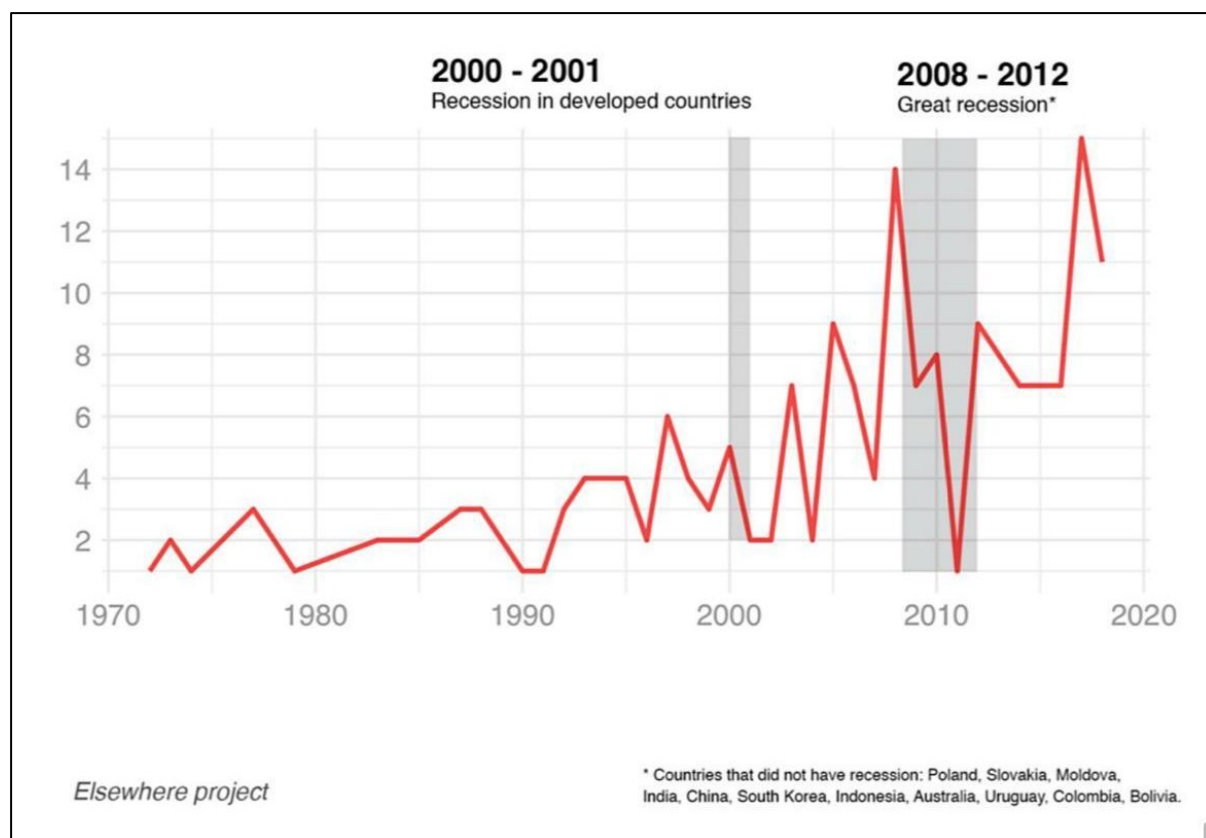


Figure 2. The evolution of art biennials between 2000 and 2012, data from *Cultural Analytics Lab*, MANOVICH (2018)

In 2020–21 (see Figure 2), the COVID-19 pandemic prompted rapid, widespread adoption of internet-based platforms and exploration of diverse digital formats across the cultural industries and contemporary art. Some art galleries created online exhibition rooms; many museums developed interactive three-dimensional (3D) virtual recreations of their physical exhibitions; auction houses such as Christie’s and Sotheby’s held hybrid auctions combining tangible and virtual art; South Korean K-pop companies developed formats that combined live group performance with real-time 3D graphics and augmented reality, enabling online viewers to interact with artists and select camera angles. Notably, the NFT (non-fungible token) art format also experienced significant growth during this period.

III – Generative Video Art in the Post-Digital Context

Generative video art within the post-digital context is a form of expression in which algorithms and artificial intelligence not only facilitate the creation and modification of audiovisual content but also introduce a new aesthetic and challenge traditional concepts of authorship and originality. The post-digital dimension derives from digital ubiquity and the emergence of new materialities — or re-materialisation — within digital artistic practices, particularly through modes of reception that merge with tangible physical devices and materials. This form of art is grounded

in the notion of the “generative” as a creative process involving computational algorithms, often dependent on neural networks to generate and manipulate content, while innovating within predefined visual and aesthetic parameters (MANOVICH, 2023). In generative art, the artist acts more as a programmer or system mediator, establishing the conditions under which the machine participates in the creative process. Generative video art thus challenges the traditional idea of authorship, transforming the artist into a collaborator with a system that also possesses “agency” in the act of creation.

For Lucia Santaella, the impact of AI on video art extends beyond the mere automation of techniques, raising the question of how far a generated work may be considered an extension of the human creator or an independent creation. According to Santaella, this “shared authorship” between the artist and artificial intelligence implies that the artist relinquishes part of creative control to the machine, which, in turn, operates according to algorithmic rules and correlations (SANTAELLA, 2021).

Edmond Couchot argues that the use of algorithms and neural networks in artistic creation entails direct collaboration between the artist and the machine, resulting in co-creation and making the artist a facilitator. By introducing the unpredictability of algorithmic processes, the artist relinquishes total control over the work, becoming a partner with technology in artistic production. This partnership is a fundamental characteristic of digital aesthetics and reflects a significant shift in what is understood as “authorship”, since the final product results from both human intentionality and computational operations (COUCHOT, 1998).

David Berry deepens this discussion by introducing the concept of the post-digital, in which technology becomes omnipresent and integrated into everyday practices, including artistic production. Berry suggests that generative video art and other forms of digital media art are manifestations of this post-digital environment, where aesthetic experience and interaction with the artwork are transformed by technology (BERRY, 2015). In the context of generative video art, this means that the viewer often interacts with the work in an active manner, influencing it and being influenced by it, thereby creating an immersive and continuously evolving experience in which the artwork becomes fluid and transformative. It is frequently integrated into physical exhibition settings where digital processes interweave with tangible materiality.

In this context, the artist Refik Anadol proposes an “aesthetics of machine intelligence”, exploring AI not merely as a facilitator but as an active, creative collaborator. Drawing on vast volumes of cultural and environmental data, Anadol produces generative artefacts processed in real time and continuously transformed, creating a sensory aesthetic that transcends the human domain and, in a sense, becomes a manifestation of the machine’s “vision” and “perception”. Anadol conceptualises his work as a “post-digital architecture”, in which the artwork is not solely visual or auditory but also involves physical space and interacts directly with the environment. This post-digital architecture redefines the space and temporality of art,

transforming physical structures into dynamic data interfaces and enabling audiences to experience the work as an extension of machine intelligence itself (ANADOL, 2024).

By incorporating environmental and historical data as the foundational material for creation, Anadol argues that post-digital architecture is not merely an aesthetic space but a platform where data becomes tangible, providing an immersive experience that is continually updated by new data inputs. Anadol's post-digital architecture implies that the artist not only mediates creation but also designs an environment in which AI continues to evolve and transform space in response to external data, introducing a data aesthetic in continuous mutation.

IV – Analysis of Artefacts

PEDRO ALVES DA VEIGA (2024), *BIOFLUX*

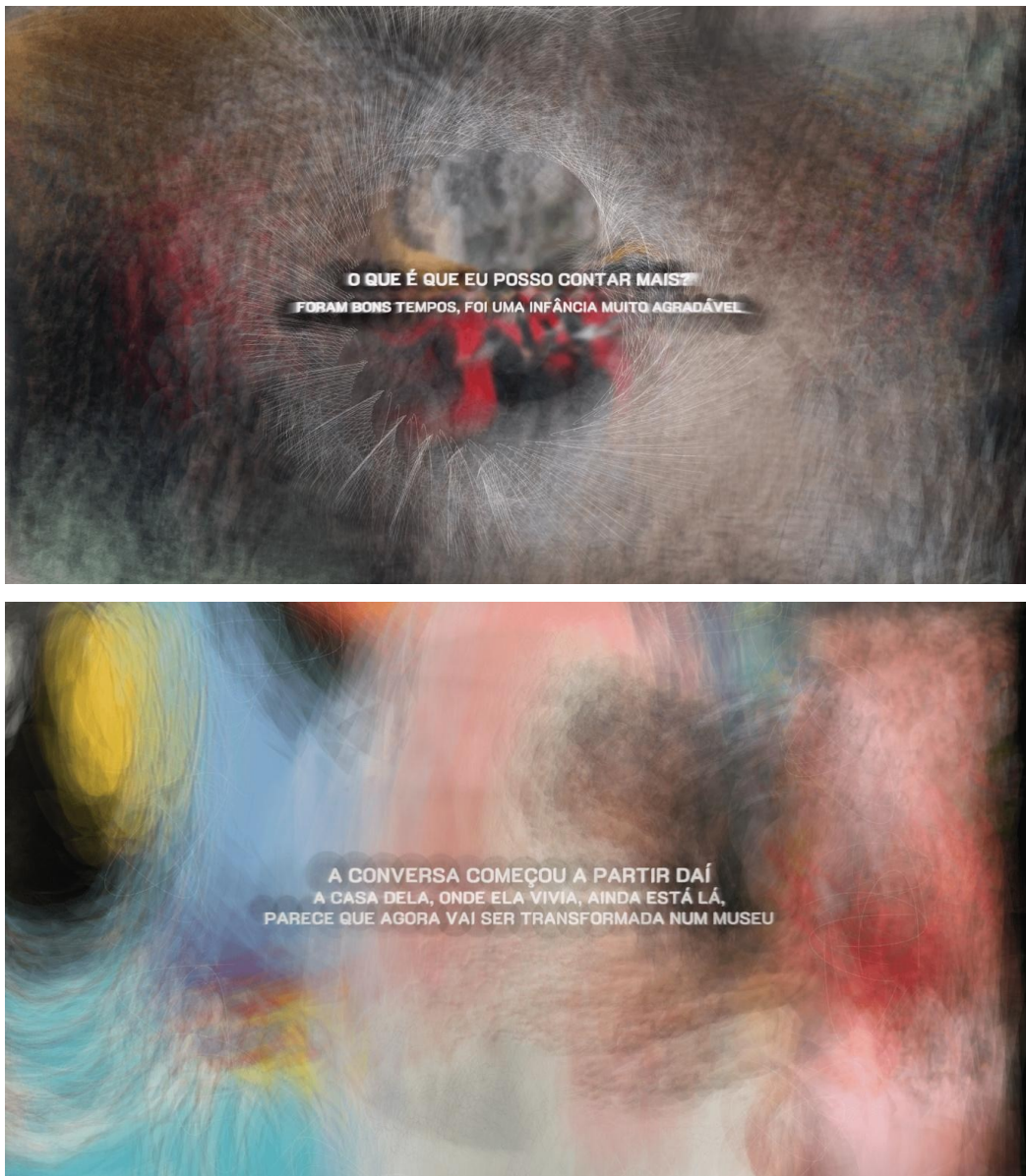


Figure 3. Images from the artefact *BioFlux* by Pedro Alves da Veiga (2024)

Analysis of the Artefact

For the artefact BioFlux, the artist Pedro Alves da Veiga imagined a distant future in which someone discovers a computer drive containing a series of fragmented files that preserve a community's collective memories in an unspecified geographical area. BioFlux unfolds as a continuous, dynamic flow of narrative fragments and visual reconstructions of memories of Macau, interwoven with conversations and personal photographs of the interviewees. Macau, a Special Administrative Region of China, is a multicultural territory situated at the intersection of China, Asia, and the West.

In BioFlux, the artist employs extensive algorithmic generative techniques, without explicitly resorting to AI, to explore and deconstruct the biographical narratives collected as part of the Conta.Me project. The artefact moves beyond traditional narrative structures, offering viewers a contemplative and surreal — yet intrinsically human — journey through the complex and interconnected nature of identity, visually shaped by fragments of the various interviewees' spoken and transcribed stories, alongside images of the interlocutors and their life photographs. BioFlux invites the audience to reflect on the complexity of personal histories and the shared bonds connecting the interviewees to one another and to the viewer, revealing the profound interdependencies of our collective narrative. Aesthetically, the work evokes the deconstructed spatial compositions of Vieira da Silva and the Polaroid collages of David Hockney.

From a post-digital perspective, BioFlux enables modes of reception that integrate into hybrid exhibition contexts, ranging from individual viewing on a computer or mobile device screen to full immersion within a physical exhibition space, whether as a dynamic screen-based work or as part of a hybrid digital media art installation. Algorithms play a primary role in the creative process, enabling infinite combinatorial possibilities among the foundational pictorial elements — namely, the audiovisual biographical material — thereby defining the artefact as an open work. In BioFlux, one may identify a “data narrative”, in which biographical material constitutes the core medium; here, too, the artist employs the machine as an aesthetic mediator, potentially within a process of co-creation (ALVES DA VEIGA, 2025).

The artefact was developed within the Conta.Me project, which aimed to analyse the impact of biographical narratives as instruments of social affirmation and cultural diversity, using sustainable human development criteria in Macau. Within this scope, a systematic collection of biographical narratives was undertaken, integrating materials from existing archives and conducting interviews with a representative group of Macau residents, reflecting the territory's strong cultural diversity (FERNANDES-MARCOS, 2024).

Brief Contextualisation of the Artist

Pedro Alves da Veiga is a Portuguese transdisciplinary artist with a PhD in Digital Media Art from Universidade Aberta and the University of Algarve. He has exhibited his work, both individually and collectively, in Portugal, Spain, the Netherlands, Italy, Romania, Russia, China, Thailand, Brazil, and the United States of America. He has contributed to several research projects at the intersection of art, science, and technology. His research interests include art and society, sustainability, activism and hacktivism, practice-based artistic research methodologies, and the curation of digital media art.

B) REFIK ANADOL (2022), *UNSUPERVISED*



Figure 4. Frames from the artefact *Unsupervised*, by Refik Anadol (2022)

Analysis of the Artefact

In his project *Unsupervised* (ANADOL, 2022), Refik Anadol transforms modern art into an experience that combines history, technology, and data aesthetics. Using neural networks trained on a massive dataset of 138,157 metadata entries from works in the Museum of Modern Art (MoMA) collection, Anadol creates visual “hallucinations” that reinterpret modern artworks across unprecedented visual and sensory dimensions. Through a proprietary AI model, the work generates abstract forms and images in which the machine, without explicit supervision, interprets the collection’s historical data and expands it into a multidimensional space. The MoMA archive, containing digital representations of modern artworks, serves as the basis for creating new visual languages, reformulating the artistic past and offering new interpretations through a data-driven aesthetic. Beyond its innovation, this creative process underscores the

autonomy of AI in translating art history into abstract and dynamic forms exhibited within the museum itself, thus establishing a continuous cycle between the archive and the generation of new artistic expressions.

Unsupervised extends the project *Machine Hallucinations*, in which Anadol explores the aesthetics of “collective visual memory”, interpreting data as a visual universe that challenges conventional perceptions of artworks. Within this framework, Anadol employs AI to create works that go beyond the mere visualisation of data; he explores the capacity of algorithms to learn from and transform collective visual memories into sensory experiences that evoke new meanings and perceptions. According to the artist, artificial intelligence becomes a “collaborator” that interprets and reorganises data, resulting in a unique visual aesthetic that connects to art history while proposing new forms of interaction and interpretation.

Since 2016, Refik Anadol Studio has conducted interdisciplinary research exploring the relationship between the human mind, architecture, and aesthetics, and speculating on how AI might capture and reinterpret human perception. Anadol’s machine aesthetic is characterised by machine-learning algorithms that process vast datasets and generate visual representations reflecting collective memories and cultural perceptions (ANADOL, 2024). This approach enables AI to move beyond functioning merely as a processing tool, becoming an artistic “collaborator” that, by reinterpreting historical data, challenges traditional perception and proposes a new digital aesthetic.

Anadol conceptualises this process through what he terms “data narratives”, in which data are treated not merely as abstract numerical sets but as forms of memory and expression, containing stories, emotions, and cultural contexts. From this perspective, the “politics of data” becomes a source of aesthetic inspiration, and art becomes a medium for exploring and revealing new meanings embedded within data. His objective is to create “alternative spaces” where data may acquire new forms and aesthetic meanings, within environments in which AI interprets and transforms these collective visual memories, generating immersive, sensory experiences that invite audiences to reflect on the cultural and social impact of data.

Brief Contextualisation of the Artist

Refik Anadol, born in 1985 in Istanbul, Turkey, and currently based in Los Angeles, California, is a pioneering artist in developing an aesthetics of machine intelligence. With a background spanning art, science, and technology, Anadol creates works that transcend the purely visual and engage the senses, transforming data into immersive artistic experiences. In his studio, Refik Anadol Studio, founded in 2014, Anadol leads an interdisciplinary team of architects, data scientists, neuroscientists, musicians, and storytellers. The objective of this

collaboration is to investigate and develop innovative approaches to “data narratives”, exploring how large volumes of information may be transformed into aesthetic experiences.

For Anadol, the challenges and opportunities presented by ubiquitous computing in the “era of Artificial Intelligence” reflect a new reality for humanity, one in which perceptions of space and time are radically transformed. In works such as *Unsupervised*, Anadol explores how data and artificial intelligence not only reinterpret the experience of art but also expand our understanding of what it means to be human in a world shaped by technology. This concept of “humanity in the age of AI” entails an aesthetic in which time and space are fluid, and interaction with the artwork becomes a continuous, adaptive experience that challenges the limits of traditional artistic reception and introduces technology as an essential element in the creation and reception of art (ANADOL, 2024).

C) IAN CHENG (2021), *LIFE AFTER BOB: THE CHALICE STUDY*

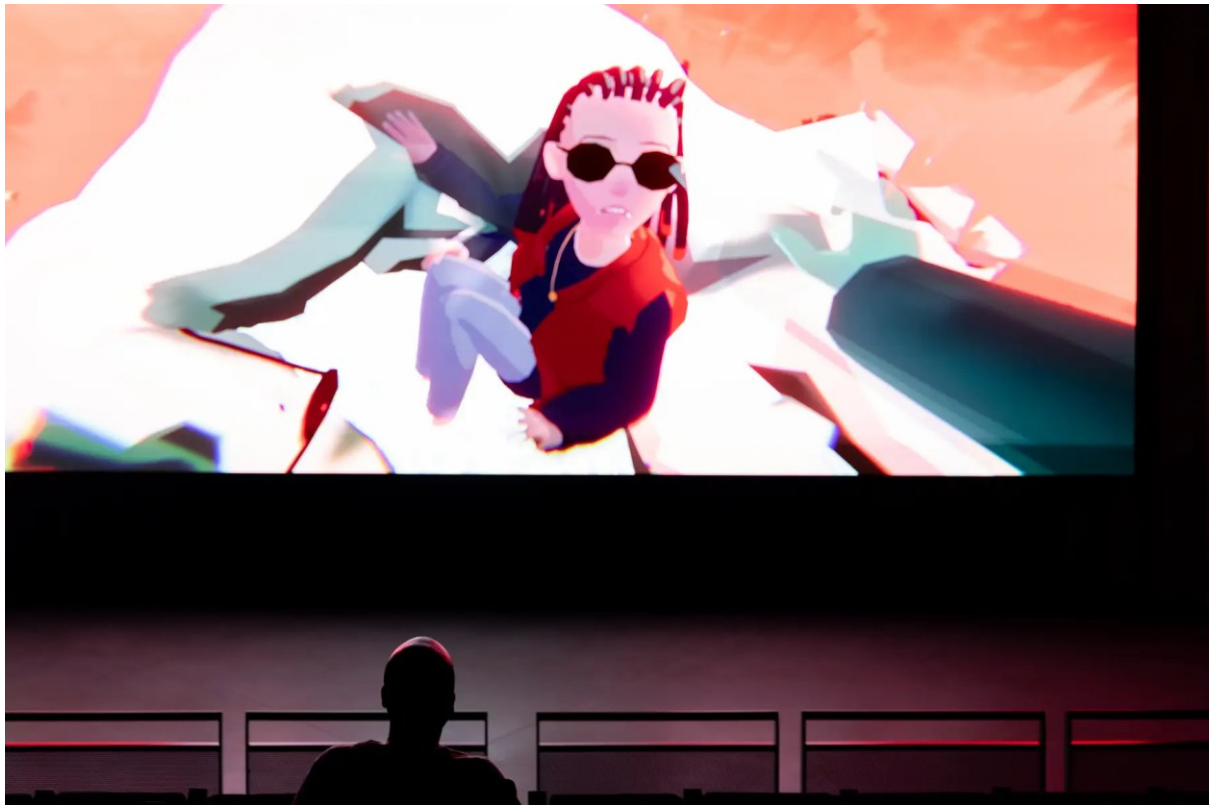


Figure 5. Frame from the artefact *Life After BOB: The Chalice Study* (2021) by Ian Cheng.

Analysis of the Artefact

Life After BOB: The Chalice Study (2021) is a 48-minute live-action animation created in real time using the Unity game engine, integrating elements of artificial intelligence to develop a dynamic, interactive narrative.

In *Life After BOB*, Ian Cheng addresses the complex implications of rapidly evolving technologies. Within this project, the artist also developed an experiential enhancement environment, resulting in different atmospheric versions of *Life After BOB*, presented at Halle am Berghain, Berlin, in 2022.

BOB (Bag of Beliefs) is an AI entity endowed with a personality, body, and life history that evolve autonomously throughout exhibitions — described by the artist as “art with a nervous system”. Through interactions with the audience, BOB adapts and transforms, exhibiting unpredictable behaviours that challenge traditional notions of linear narrative in art. The work was presented at the 2019 Venice Biennale, where visitors could interact with BOB via an iOS application, influencing its actions and decisions (CHENG, 2019).

The narrative of *Life After BOB: The Chalice Study* is set in 2074, when BOB (Bag of Beliefs) seeks to alleviate existential stress by co-piloting human consciousness. With the support of Dr Wong, a BOB unit is implanted in the nervous system of Chalice, an involuntary test subject.

Brief Contextualisation of the Artist

Ian Cheng is a contemporary American artist, born in 1984, whose practice centres on creating digital simulations that explore how agents navigate constantly changing environments. With academic training in Cognitive Science at the University of California, Berkeley, and in Fine Arts at Columbia University, Cheng combines his background in cognitive science with artistic practice to develop artefacts that reflect on cognitive evolution and the complexity of living systems.

Cheng introduced the concept of “art with a nervous system” to describe works capable of evolving and responding to their environment in ways analogous to living organisms. This concept implies that the artwork is dynamic and responsive, capable of adapting to both external and internal stimuli. Through the integration of AI systems and complex algorithms, Cheng creates works that possess a form of “nervous system”, enabling emergent and evolutionary behaviours (CHENG, 2021).

Cheng’s approach to generative video art is distinguished by the use of game engines and artificial intelligence models to create virtual environments that evolve autonomously. This methodology enables his works to develop unpredictably, reflecting the complexity and randomness of living systems. By integrating principles from video game design, improvisation, and cognitive science, Cheng challenges traditional notions of linear narrative and authorial control in digital art (Art21, 2021).

Cheng’s work has been widely recognised and exhibited at major institutions, including the Museum of Modern Art (MoMA) in New York, the Serpentine Gallery in London, and the Carnegie Museum of Art in Pittsburgh (CHENG, 2024).

V – Concluding Remarks

The exploration of high levels of algorithmisation combined with artificial intelligence in generative video art, as analysed in this article, reveals a field rich in possibilities and with profound implications for the redefinition of authorship, intentionality, and interaction in contemporary art. Concepts such as the “aesthetics of machine intelligence” and “data narratives”, present in the practices of artists such as Refik Anadol and Ian Cheng, point towards a significant transformation in the way art is conceived, perceived, and experienced. In these cases, intensive algorithmisation and AI function not merely as technical tools but as active co-creators, capable of directly influencing the creative process, challenging traditional artistic authority and control, and inaugurating a new phase in which authorship becomes a shared phenomenon between human and machine.

The analysis of generative video art from a post-digital perspective reveals fertile ground for reflection on new paradigms of artistic creation, authorship, and aesthetics in the era of intensive algorithmisation and artificial intelligence. The artefacts examined here demonstrate distinct approaches to the role of algorithmisation and AI within the creative process, highlighting that not every digital generative practice necessarily entails the use of artificial intelligence techniques.

It is essential to clarify that, in the specific case of *BioFlux* by Pedro Alves da Veiga, neural networks, machine learning, or any other AI technique were not employed. The work was entirely programmed in Processing, relying heavily on conventional generative algorithms and the combinatorial manipulation of visual and narrative elements. This distinction is crucial to avoid generalisations that might ascribe to AI a role it does not perform in this instance. The authorship of *BioFlux* remains centred on the human artist, who conceives and programs the generative logic of the work without delegating any form of autonomous creative agency to the machine.

Conversely, works such as *Unsupervised* by Refik Anadol and *Life After BOB* by Ian Cheng exemplify the potential of algorithms and neural networks to transform large sets of historical and cultural data into immersive visual experiences that challenge the notion of the static artwork. Anadol employs metadata from modern art collections to generate visual “hallucinations” that expand the boundaries of traditional visual language, transforming the digital archive into a space for dynamic interaction. Cheng, in turn, utilises the concept of a “virtual nervous system” to develop autonomous, continuously evolving ecosystems in which narratives unfold in a non-linear and unpredictable manner. Both works demonstrate how the integration of complex algorithms and the simulation of adaptive behaviours produce generative art experiences that challenge conventional notions of control and authorship.

Pedro Alves da Veiga, with *BioFlux* (2024), introduces a distinctive dimension to this discussion. In this artefact, the artist investigates the cultural and collective memories of Macau

through a visual narrative that reconstructs biographical fragments of the local community. *BioFlux* employs generative techniques to deconstruct and reconfigure biographical narratives collected through the Conta.Me project, producing a continuous flow of visual fragments that resonate with David Hockney's collages and Vieira da Silva's compositional structures. Veiga's work not only expands the visual experience but also invites reflection on memory and cultural identity, transforming personal and communal data into a continuous, interactive artistic representation. This practice reinforces the idea that video art may transcend aesthetic experience to explore questions of belonging and identity within the post-digital context.

The practices of Anadol and Cheng prompt a critical reconsideration of the roles of the artist, the viewer, and the machine itself, as digital technologies enable audiences to interact dynamically with artworks, thereby challenging traditional concepts of artistic reception. The integration of algorithms that generate real-time digital environments demonstrates how AI may construct artistic experiences that transcend the visual plane, extending into domains of cognitive and sensory immersion.

Thus, this article proposes a differentiated and critical approach to the intensive use of algorithms and AI techniques in generative video art, recognising that collaborative authorship with machines is not a universal condition but one possibility among many. Post-digital aesthetics, by integrating the digital as an inseparable component of artistic experience, creates space for multiple forms of creation in which the role of algorithms, their intensive application, and the use of AI must be analysed on a case-by-case basis, with rigour and careful attention to the technical and conceptual specificities of each work.

References

ALVES DA VEIGA, Pedro. BioFlux: collective memory as generative video art through deconstructed biographical narratives. *Rotura – Revista de Comunicação, Cultura e Artes*, edição especial, p. 67-78, 2025. DOI: 10.34623/2184-8661.2025.tell_me.371. Disponível em: <https://publicacoes.ciac.pt/index.php/rotura/article/view/371>. Acesso em: 13 out. 2025.

ALVES DA VEIGA, Pedro. *Pedro Alves da Veiga*. Site oficial. 2024. Disponível em: <https://pedroveiga.com/>. Acesso em: 13 out. 2025.

ANADOL, Refik. *Art in the Age of Machine Intelligence*. TED Conferences, 2020. Disponível em: https://www.ted.com/talks/refik_anadol_art_in_the_age_of_machine_intelligence. Acesso em: 13 out. 2025.

ANADOL, Refik. *Refik Anadol: na interseção da arte, ciência e tecnologia*. Site oficial do artista. 2024. Disponível em: <https://www.juliusbaer.com/pt/insights/nossos-compromissos/refik-anadol-na-intersecao-da-arte-ciencia-e-tecnologia>. Acesso em: 13 out. 2025.

BERRY, David M. *Critical theory and the digital*. New York: Bloomsbury Publishing, 2015.

CHENG, Ian. *BOB (Bag of Beliefs)*. Apresentado na Bienal de Veneza, 2019. Disponível em: <https://www.labiennale.org/en/art/2019/partecipants/ian-cheng>. Acesso em: 13 out. 2025.

CHENG, Ian. *Life After BOB: The Chalice Study*. 2021. Disponível em: <https://lifeafterbob.io/>. Acesso em: 13 out. 2025.

CHENG, Ian. Site oficial de Ian Cheng. 2014. Disponível em: <https://iancheng.com/>. Acesso em: 13 out. 2025.

COUCHOT, Edmond. *La technologie dans l'art: de la photographie à la réalité virtuelle*. Paris: Éditions Jacqueline Chambon, 1998.

CROSBY, Eric. In plain view: Ian Cheng's live simulations. *Art21*, March 2, 2018 [2021]. Disponível em: <https://art21.org/read/in-plain-view-ian-chengs-live-simulations>. Acesso em: 13 out. 2025.

FERNANDES-MARCOS, Adérito; MUCHERONI, Marcos Luiz; PEREIRA, Selma. A transdisciplinaridade na mídia-arte digital enquanto processo de criação-investigação. *Novos Olhares*, v. 11, n. 2, p. 14-23, 2023. DOI: 10.11606/issn.2238-7714.no.2022.205267. Disponível em: https://revistas.usp.br/novosolhares/pt_BR/article/view/205267. Acesso em: 13 out. 2025.

MANOVICH, Lev. AI Image Media through the Lens of Art and Media History. In: *Image. Zeitschrift für interdisziplinäre Bildwissenschaft*. Generative Imagery: Towards a 'New Paradigm' of Machine Learning-Based Image Production, v. 19, n. 1, p. 34-41, 2023. DOI: 10.25969/mediarep/22323. Disponível em: <https://mediarep.org/entities/article/498bd714-bd3f-41e7-a51c-0872000ac490>. Acesso em: 13 out. 2025.

MANOVICH, Lev. *Culture in the pandemics era? Examining the growth of art biennales, 1895–2019*. Cultural Analytic Lab – Elsewhere Project, 2021. Disponível em: <https://manovich.net/content/04-projects/119-culture-in-the-pandemics-era-examining-the-growth-of-art-biennales-from-1895-to-2019/biennale-article-final.pdf>. Acesso em: 13 out. 2025.

MANOVICH, Lev; ARIELLI, Emanuele. *Artificial aesthetics: a critical guide to AI, media and design*. 2022.

MIT OPEN DOCUMENTARY LAB. *In conversation with Refik Anadol*. YouTube, 7 fev. 2022. Disponível em: https://www.youtube.com/watch?v=B51H6_vVxfw. Acesso em: 13 out. 2025.

SANTAELLA, Lucia. *A inteligência artificial e a criatividade humana sob interrogação*. São Paulo: Editora Paulus, 2021.