

# Dance Creation in Expanded Contexts: Mediated Bodies and Generative Processes in the Screendance *Nuven*

Diogo Angeli Theotonio  
Universidade Estadual de Campinas (UNICAMP)

## Abstract

This article reflects on contemporary dance-making practices mediated by technologies, with an emphasis on generative creative processes and forms of technological mediation of the body within the context of screendance. Drawing on a theoretical-practical approach, it analyzes the creative process of the screendance work *Nuven* (2025), taking it as an experimental field of inquiry through which the operation of generative systems, modes of bodily image representation, and the sharing of creative decision-making between human and non-human agents are examined. The discussion engages with theoretical frameworks that underpin the notions of generativity, virtuality, and mediation, highlighting contributions from Galanter (2003), Lévy (2003), and Latour (2012). By articulating theory and practice, the article seeks to expand the understanding of the ontological, poetic, and authorial transformations that emerge in dance within technologically mediated contexts.

**Keywords:** screendance; mediated bodies; generative art; dance; art and technology.

## Introduction

The presence of technology in artistic and creative dance processes has intensified significantly in contemporary contexts, moving beyond a merely instrumental role to assume conceptual, dramaturgical, and perceptual functions. Beyond technical resources that expand possibilities for the construction of scenic elements — such as sets, costumes, and interactive components — technology increasingly operates as an active agent within creative processes, capable of destabilizing the body and movement by introducing new logics of time, space, composition, and relationality.

Recent artistic practices have presented technologically mediated bodies in hybrid configurations, traversed by algorithms and digital imagery that establish alternative dynamics of interaction with audiences and spectators. Moreover, new processes have emerged in which computational intervention operates directly and structurally within artistic creation, sharing

decisions and procedures between human thought and algorithmic systems — such as artificial neural networks — that function generatively, producing variations, indeterminacies, and outcomes that are not entirely predictable throughout the development of the work.

Within this context, the scope of this article focuses on technology-mediated creative explorations in dance, seeking to deepen discussions concerning generative creative processes and forms of technological mediation of the body within screendance through a theoretical-practical approach. This investigation includes an analysis of the creative process behind the screendance *Nuvem*. Throughout this discussion, the research engages with authors whose work contributes to these debates, particularly Galanter (2003), Lévy (2003), and Latour (2012).

*Nuvem* (2025)<sup>1</sup> is conceived as an investigation of the body in its creative condition, exploring imagetic, technological, and generative dimensions. The screendance emerged from the research project *Expanded Sonic Body (Corpo Sonoro Expandido – CSE): Expanded Spaces Between Sound, Movement, and Technology in Mixed Realities*, funded by FAPESP and coordinated by Professor Daniela Gatti at the University of Campinas (UNICAMP). Interdisciplinary in nature, the project was conducted between 2023 and 2025 and brought together researchers from dance, music, and data science, in addition to collaborations with other research initiatives and institutions.

The research resulted in two creative versions of *Nuvem*. The first consists of a screendance that explores the imagetic representation of the body through the point cloud technique, emphasizing visibility and the composition of technologically mediated movement. The second takes the form of a generative screendance, in which computational thinking mediates the creative process by sharing narrative construction and creative agency between the artist and the computational system.

By moving across these two creative territories, this article discusses notions of technological mediation of the body as well as generative creative processes through the case of *Nuvem*.

With regard to relational dynamics, technology reconfigures the connections established between dance and spectators by mediating artistic experience through digital, imagetic, and interactive systems. Lévy (2003) emphasizes that the virtualized body is transformed by its technological condition, enabling the intensification, expansion, and multiplication of its qualities. Such “actualizations” make possible new forms of connection between mediated

---

<sup>1</sup> Video available at: <https://youtu.be/VCCdTg2qvIM>. Accessed on: Jan. 27, 2026. Credits: Research and Artistic Direction: Daniela Gatti. Screendance Direction: Diogo Angeli. Video Editing: Diogo Angeli and Guilherme Zanchetta. Audio Composition and Editing: Diogo Angeli. Image Capture: Daniela Gatti, Diogo Angeli, and Guilherme Zanchetta. Research and Image Representation Design: Guilherme Zanchetta. Software Operation: Guilherme Zanchetta. Movement Research and Performance: Diogo Angeli and Isadora Faustino. Support: NICS – Núcleo Interdisciplinar de Comunicação Sonora da Unicamp, Instituto de Artes da Unicamp, FAPESP – Fundação de Amparo à Pesquisa do Estado de São Paulo, Núcleo de Dança REDES.

bodies and spectators through digital systems, disrupting physical boundaries and provoking new questions regarding creative processes.

In relation to generative creation, Galanter (2003) describes it as an artistic practice structured through procedures, rules, or systems — whether computational or not — that actively participate in the artistic process and intervene in its constitution with a certain degree of autonomy. According to the author, creative processes mediated by computational thinking challenge and destabilize human creative logic by introducing instabilities into decision-making throughout the development of the work. As a result, the creative process operates under conditions of unpredictability, situated within an intermediate territory between order and chaos, where decision-making and creative agency are shared with such systems. As Galanter states, “the key element in generative art is the system to which the artist cedes partial or total subsequent control.” (Galanter, 2003, n.p.).

From this perspective, the article reflects on how the body that appears in screendance, when technologically mediated, shifts expressive conditions originally constituted through physical presence into other regimes of perception and action. Furthermore, it investigates how generative creative processes, by partially mediating control of the work, influence the construction of narratives and scenic experiences within screendance.

These articulations constitute territories of considerable exploratory and expansive potential within contemporary dance, revealing fertile grounds for experimentation and critical inquiry. By examining the technological, mediating, and generative dimensions present in the creative process of *Nuvem*, this study investigates the tensions that emerge within technologically mediated dance creation, particularly regarding notions of scenic presence, corporeality, and creative authorship.

Accordingly, the article proposes a discussion on the expansion of conventional creative formats, considering how dialogues and relationships established among the various components that constitute artistic experience may displace habitual practices, challenge established structures, and promote new configurations of creation, perception, and reception. As Leeker, Schipper, and Beyes (2017), “contemporary technological devices and the means of communication provoke new forms of ‘intra-action’ between what is generally considered human or machinic agency” (Leeker; Schipper; Beyes, 2017, p.9, our translation<sup>2</sup>). In this sense, the entanglement of human and non-human elements within artistic creation opens new investigative pathways and enables a reconsideration of the structures and relationships that traverse contemporary performance. Technology therefore ceases to function merely as support and instead becomes an active agent in the constitution of artistic poetics, reconfiguring the dynamics between body, gesture, mediation, and meaning.

---

<sup>2</sup> Source text: “os aparelhos tecnológicos contemporâneos e os meios de comunicação provocam novas formas de ‘intra-ação’ entre o que geralmente é considerado agência humana ou maquina” (Leeker; Schipper; Beyes, 2017, p.9).

## Preliminaries on Technology and Generative Art in Dance

Today, the relationship between dance, image, and technology has become increasingly deep and complex as a result of ongoing technological and scientific developments, as well as the philosophical debates that traverse this field. Contemporary artistic creation processes in dance are established through constant dialogue with the elements, stimuli, and environments that permeate everyday experience, expanding their interdisciplinary character by articulating cultural, social, political, economic, and technological dimensions. Through these complex relationships, technology has assumed an increasingly significant role within creative practices.

When considering the interdisciplinary relationship between dance, image, and technology, it becomes evident that such articulation is not recent. In this regard, Muniz (2011) argues that interest in interdisciplinarity within dance creation processes intensified throughout the twentieth century in diverse contexts around the world. Driven by countercultural movements and artistic avant-gardes, these transformations disrupted the stylistic and organizational models that had previously dominated the arts, generating critical reflections on the very notion of form, questioning what could be considered art, and expanding both its characteristics and its social function through challenges to the sociopolitical role of artistic production.

Through dialogue with other fields of knowledge, this interdisciplinary context brought dance into closer contact with other artistic manifestations and, consequently, with technology. By the end of the nineteenth century, dance had already begun engaging with early cinematic experiments and visual culture. In its formative years, cinema showcased the work of artists such as Thomas Edison, the Lumière brothers, Loïe Fuller, and Georges Méliès, who foregrounded the body and dance within their experiments, raising questions about how movement could generate sensations, narratives, and connections with audiences through its visual dimension (Angeli, 2020).

Subsequently, with the emergence of portable video cameras, musical films, and experimental cinema, artists and creators began exploring more deeply the relationships between dance, camera, and screen. Important figures in this context include Maya Deren, Hilary Harris, Yvonne Rainer, Merce Cunningham, Analívia Cordeiro, and Nam June Paik, whose works contributed to expanding the relationship between body and image, deepening knowledge about technologically mediated bodies, and consolidating the foundations of hybrid languages emerging between dance, image, and technology. These investigations were decisive for the emergence of later practices such as video art, screendance, and music videos. Moreover, Merce Cunningham and Analívia Cordeiro pioneered the integration of dance, technology, computing, and artistic creation by incorporating computational logic and generative thinking into choreographic processes through the use of choreographic composition software. Systems such as *Life Forms* and *Nota-Anna*, designed for movement notation and visualization, functioned as

mediating agents within the creative process, sharing choreographic authorship with the artist, as evidenced in works such as *M3x3*<sup>3</sup> (1973), by Cordeiro, and *Trackers*<sup>4</sup> (1991), by Cunningham. These shifts transcended traditional conceptions of dance, challenging artistic practices and significantly expanding their expressive and communicative possibilities.

Over recent decades, possibilities for dance creation — particularly through its imagetic dimension and its articulation with technological devices — have expanded considerably, driven by the rapid development of technologies that permeate contemporary techno-creative realities. Within this context, artistic experiments involving algorithmic processes, artificial neural networks, extended reality environments, and machine-learning systems have become increasingly common, intensifying and complexifying the relationships among body, image, technology, and creation.

This scenario has fostered investigations into new inventive and expressive possibilities for the body and movement, which increasingly become shaped by the incorporation of non-human elements, including technological systems and processes capable of actively intervening in choreographic construction. In this context, both the imagetic condition of the body and generative creative processes — explored and expanded since the nineteenth century — function as creative catalysts in contemporary dance, establishing new representational and relational possibilities for both body and movement.

Ribeiro and Bressanin (2023) define generative art as a set of artistic practices mediated by algorithmic intelligences, in which certain characteristics of human creative behavior — such as creativity, problem-solving capacity, and critical-provocative thinking — become visible. Galanter (2003), however, argues that generative art must be understood in dialogue with technological developments and with a genealogy of artistic experimentation that predates the computer. For him, generative art constitutes a practice in which artists design systems based on rules, algorithms, or processes that operate with a degree of autonomy, producing emergent and unpredictable outcomes.

Accordingly, generative art shifts attention away from the finished artwork and centralized authorship, emphasizing process, complexity, and emergence as central elements of aesthetic experience. As Galanter (2003) states:

Generative art refers to any art practice where the artist uses a system, such as a set of natural language rules, a computer program, a machine, or other procedural

---

<sup>3</sup> The screendance *M3x3* made use of a computer program that generated instructions for the dancers during the choreographic composition process, coordinating the performance developed for the video.

<sup>4</sup> *Trackers* “was the first dance whose choreography Cunningham developed in part with the use of an early model of the computer software *Life Forms*. The title comes from a button on the software called ‘Track’. Cunningham himself was in the piece: at one point he reentered carrying a portable barre such as he used in the studio, which he then used as an aid in performing some of his movements. The other dancers continued without reference to him.” (Merce Cunningham Trust, 2026).

invention, which is set into motion with some degree of autonomy, contributing to or resulting in a completed work of art. (Galanter, 2003).

When considering generative creative processes in dance, a transformation in the ontological nature of the artwork becomes evident, as the work ceases to exist as a stable form and instead emerges as a relational process in which creative dynamics, decisions, and relationships remain in a continuous state of modification and renewal.

In dialogue with Pierre Lévy's notion of "actualization", generative creation can be understood as a process through which relationships and artistic roles are displaced — or, in Lévy's terms, "actualized". Such displacement directly affects creative autonomy and modes of reception, producing consequences that reverberate throughout the poetics of the artwork.

For Lévy (2003), actualization is not simply the realization of pre-existing possibilities but rather a process of invention and creation emerging from dynamic configurations of forces and purposes. Actualization therefore refers to the manifestation of the powers and potentials of the virtual — understood as a problematic field of possibilities — under specific conditions, actions, or events, materializing in singular and inventive forms that exceed the logic of mere realization.

Thus, the presence of systems — whether computational or otherwise — that participate in decision-making processes establishes a condition of instability in which not all variables are entirely foreseeable by the artist, thereby expanding the creative possibilities of the work. Within this framework, creative thought is reconfigured. Decisions and actions become situated within an intermediate field between human cognition and computational logic, allowing chance and randomness to become integral components of creative reasoning.

Such circumstances introduce continuous deviations into the creative process, multiplying its potential trajectories. Generative actions therefore function as ongoing mechanisms of actualization, emerging from interactions between human creators and the actions and responses of non-human systems.

Creative decision-making is consequently neither centralized in the artist nor delegated entirely to technological systems. Rather, it is distributed among human intentions, algorithmic logics, data structures, and stochastic processes. The artwork emerges from a network of interactions — a multidirectional environment of stimuli whose overall behavior cannot be completely controlled.

Understood in this way, generative art functions as a process of actualization in Lévy's sense, enabling the virtual field — composed of ideas, rules, algorithms, data, aesthetic intentions, and poetic concerns — to materialize into singular and contingent forms through a hybrid, relational, and unstable process. The artwork is therefore not predetermined but emerges from interactions between human and non-human agents, establishing regimes of co-authorship and distributed decision-making.

As authorship becomes reconfigured within generative creation, reflection on the role of creative agents becomes central to understanding the dynamics that structure this process. Because generative art destabilizes boundaries between human and non-human entities by integrating hybrid elements into creative production, Bruno Latour's reflections on associations between human and non-human actors provide important theoretical contributions to this discussion.

Latour (2012) proposes an understanding of the social not as an autonomous domain but as an effect of associations among natural, epistemic, cultural, and technological spheres. Through Actor-Network Theory (ANT), he defines an actor as any agent — human or non-human, conscious or unconscious — that participates in a network of events and influences the outcomes of actions.

Within the context of generative art, actors include artists, technologies, devices, computational systems, algorithms, and other elements that directly influence the trajectories of creative processes. These actors do not operate independently but are integrated into mediation processes themselves, sharing agency and co-constituting the totality of actions. In this perspective, hierarchical distinctions between human and non-human agents are dissolved.

Accordingly, all elements involved in artistic creation become inseparable from the process itself. Human and non-human agents actively shape creative trajectories and the meanings that emerge from them, continuously redefining the identity of the creative process. Throughout this dynamic, both categories of agents participate in relative equivalence, sharing responsibilities, values, and contributions to authorship.

Thus, the role of the artist shifts from the position of central creator to that of orchestrator of a heterogeneous set of elements and agents that make up the creative process. The ability to manage the participation of these agents, articulating the poetic intentions of the work with the destabilizations inherent to the unpredictability of generative systems, is, therefore, a fundamental knowledge for the creator in generative art contexts.

From the perspective of *Actor-Network Theory*, generative art can thus be understood as a socio-technical event in which creative processes emerge from networks of mediation involving bodies, systems, devices, algorithms, and spaces. Within this framework, authorship is distributed among multiple creative agents, and the expressive trajectories generated by continuous transformations directly influence the spectator's experience and the production of meaning.

Generative art manifests itself today across a broad range of contemporary creative practices. In dance and movement-based arts, one encounters artistic processes mediated by autonomous systems that share creative agency through technological means, including

computers and artificial intelligence systems, as well as stochastic systems and algorithmic procedures whose origins can be traced back to the twentieth century.

Pioneering examples include the work of John Cage and Merce Cunningham, who incorporated indeterminacy and chance operations as structural principles of artistic creation, anticipating key concepts later associated with generative art. Cunningham regarded the *Life Forms* software (later renamed *DanceForms*) as a technological mediator within choreographic composition, using it to explore and organize movement sequences that did not necessarily emerge from the immediate possibilities of the human body. The software enabled the visualization, creation, and experimentation of choreographic movement within a virtual environment through dancing avatars articulated in space and time.

In *BIPED* (1999), Cunningham employed choreographic procedures based on chance and indeterminacy while integrating computers, sensors, and projected imagery into the performance environment. These characteristics, present both in the creative process and in the final composition, allow the work to be recognized as a significant example of generative art, in which movement and imagery are partially produced by autonomous systems collaborating with the artist in shaping the aesthetic outcome.

As described by Cedar Dance Studio (2019):

One of Cunningham's landmark dances, BIPED, encompasses not only human movement conceived using DanceForms but also abstract images and dance figures created from motion captured dance sequences re-imaged and re-sequenced on the computer in collaboration with Paul Kaiser [Dance and the Computer – Paul Kaiser] and Shelley Eshkar. The impact of BIPED is that the audience viewed over-sized dance images projected onto a sheer screen behind which live dancers performed simultaneously. Both live and projected movements were staged in a random and unique way. This exceptional work brought together computer technology and humanity, abstract and human, as well as the machine and the soul (Cedar Dance Studio, 2019).

More recently, advances in machine learning and artificial neural networks have introduced new questions and configurations into artistic practice and generative creation. Generative artificial intelligence systems — understood as systems trained on large datasets to produce probabilistic models capable of simulating certain human abilities — have become increasingly prevalent within artistic contexts, particularly in dance.

In an interview, Memo Akten explains that “artificial intelligence” refers fundamentally to machine learning: the improvement of systems through data-driven deep learning techniques that enable the processing of large-scale datasets. In his words, AI is “a system which is able to improve its performance on a particular task as it gains experience” (Zachariou, 2018). Experiments involving generative AI establish multiple points of connection with contemporary creative processes, reconfiguring dynamics of authorship, mediation, and artistic decision-making.

One notable example is the dance performance *Eu não sou só eu em mim (Estado de Natureza – Procedimento 01)*, directed by Alejandro Ahmed and developed by *Grupo Cena 11*<sup>5</sup>. The work proposes the “use of devices structured through Artificial Intelligence (Natural Language Processing) and machine learning to construct a choreographic ecosystem that feeds back into dance, language, sound, and image” (Grupo Cena 11 Cia De Dança, 2026, our translation<sup>6</sup>). The performance employs sensors and generative AI systems as mediators of its visual and sonic experiences. At specific moments, lighting and sound effects are activated by sensors distributed throughout the performance environment, creating a relational system that articulates bodies, movement, light, and sound within an autonomous and continuously evolving structure. Cameras track performers in real time and project their images onto screens, where they are processed and transformed by generative AI systems that produce distorted versions of the body laden with symbolic and social meanings. Such strategies expand conventional understandings of authorship, technological mediation, and generativity within contemporary choreographic creation.

Another example is *Peça para salvar o mundo (A Play to Save the World)*, by the theatre company *Os Satyros*<sup>7</sup>, whose dramaturgy was developed in collaboration with a generative artificial intelligence system. Interactive avatars engage with audience members around themes concerning the destruction of humanity, establishing a performative space of participation and co-authorship. Generative thinking manifests itself within the narrative structure of the work, proposing dramaturgical developments and solutions that emerge in real time through dialogue between the audience and the AI system. The result is an open, relational, and partially unpredictable creative process.

### **Between Body and Code: The Creative Process of the Generative Screendance *Nuvem***

*Nuvem* is a screendance production that explores the body in its imagetic and virtualized condition. Screendance is understood here as a hybrid artistic form whose creation integrates procedures and aesthetics derived from dance, cinema, and audiovisual practices (Angeli, 2022). Within this framework, the articulation between dance and technology constitutes the context through which creative processes in dance are transformed and reorganized, incorporating relationships with image-capture devices, virtual manipulation procedures, and computational systems capable of directly influencing the poetic and expressive construction of movement.

---

<sup>5</sup> <https://www.cena11.com.br/>.

<sup>6</sup> Source text: “uso de dispositivos estruturados em Inteligência Artificial (Processamento de linguagem Natural), e aprendizado de máquina para construir um ecossistema coreográfico que retroalimente dança, palavra, som e imagens”.

<sup>7</sup> <https://satyros.com.br/>.

The creative process of *Nuven* unfolded into two distinct versions, each oriented toward different lines of inquiry. The first materialized as a screendance investigating the virtual representation of the body and movement, exploring poetic and narrative construction through imagery and the modes of reception resulting from this condition. The second took shape as a generative composition, expanding the investigation into the field of generative creation by incorporating computational processes as active elements of the artwork.

The production of *Nuven* emerged from the research project *Expanded Sonic Body (Corpo Sonoro Expandido – CSE): Expanded Spaces Between Sound, Movement, and Technology in Mixed Realities*. This project proposed methodological, improvisational, and compositional investigations in dance within multimodal and virtual creative contexts through the articulation of dance and music in computational, technological, and artistic interaction. The research group operated across multiple investigative fronts, with particular emphasis on studies concerning the transformation of movement into computational data through various sensing technologies and software environments. These investigations explored the applicability of such processes within different creative contexts while questioning notions of bodily presence in relation to virtuality and the relationship between movement and computational systems. Part of the practical and theoretical experiments developed within the project directly informed the creation of *Nuven*, particularly through its engagement with screendance and generative art.

## THE CREATIVE PROCESS AND POINT CLOUDS

The first version of *Nuven* originated from investigations into the possibilities of representing the body within virtual environments and its imagetic condition when mediated by technology. The possibility of reinterpreting the body through technological means prompted a series of experiments involving dance, cameras, software, and digital imagery. The process began with the capture of bodily movement and gradually expanded toward the exploration of alternative modes of representation through the manipulation of the captured material. In the search for new visualities of the body, these imagetic and computational explorations led to the adoption of the *point cloud* method.

A “point cloud” is a three-dimensional geometric representation of an object obtained through 3D scanning procedures (Groetelaars & Amorim, 2011). The object is visualized through thousands of individual points that collectively describe its visible form. Each point is defined by Cartesian coordinates (x, y, and z) and may also contain additional information, such as acceleration data, spatial positioning, vibration patterns, and other parameters.

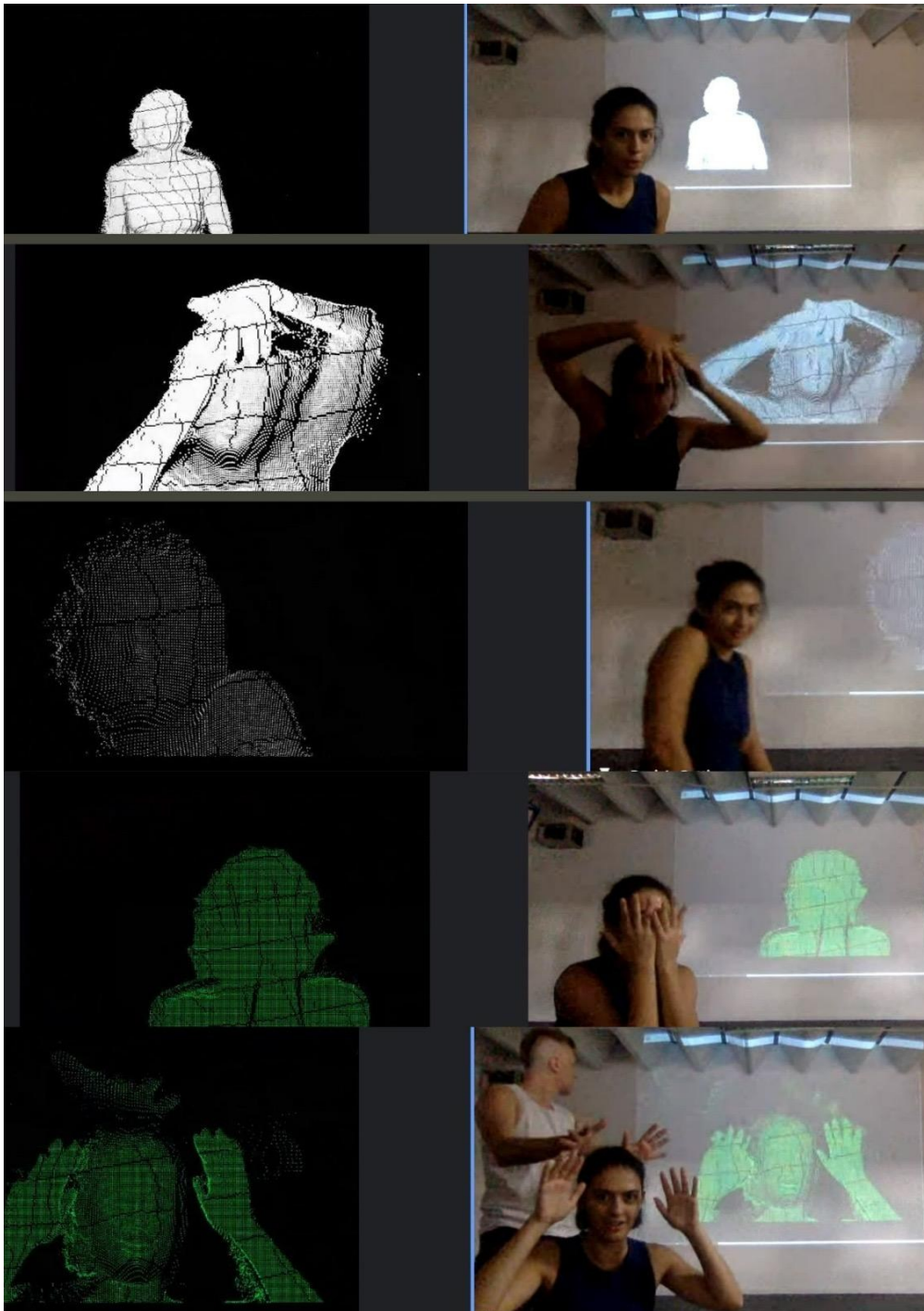


Figure 1 – Body visualizations generated using the Point Cloud technique  
(source: research group archive)

The imagetic investigation developed in *Nuven* appropriated this resource to explore new possibilities of representation and expressivity for the technologically mediated body. To achieve this, the visual creation of the work relied on a depth-sensing camera<sup>8</sup> (Microsoft

<sup>8</sup> The depth camera is a video capture device that, unlike traditional film cameras, reads the framed elements by measuring the distance of these elements in relation to the camera lens, generating a 3D image of the landscape.

Kinect) capable of performing three-dimensional readings of bodies in space, as well as the software platform *TouchDesigner*<sup>9</sup>, whose programmable coding environment enabled the exploration of multiple visual representations of the body, including point-cloud visualizations.

The investigations undertaken throughout this process unfolded through several stages of experimentation involving an integrated dialogue among the depth camera, the *TouchDesigner* environment, the performers, and their visual representations.

Initially, bodily movement was mediated through the perception of the Kinect depth camera. During this phase, different methods of capturing bodies and movement were tested, including variations in camera angles, compositional perspectives, framing strategies, and both static and moving camera configurations. These experiments revealed both the possibilities and limitations of the system within the creative process.

A particularly significant finding concerned the operational field of the depth camera itself. When performers moved either too close to or too far from the device, the resulting image could become unstable or lose precision altogether. Another relevant discovery emerged from attempts to manipulate the camera through spatial displacement during recording. Camera movement generated oscillations that destabilized image structures, producing distorted, deformed, and fragmented representations of moving bodies. Depending on the intensity and speed of displacement, such distortions became artistically compelling precisely because they challenged bodily legibility and expanded the expressive possibilities of technologically mediated movement.

In parallel with these investigations, experiments conducted within *TouchDesigner* revealed important possibilities for manipulating and transforming captured material. Through programmable parameters and multiple configurations, various forms of bodily and movement representation were explored. The software enabled the visualization of images captured by the depth camera through the application of different textures, forms, noise patterns, animations, chromatic variations, color temperatures, and other visual treatments.

In this sense, *TouchDesigner* functioned as a compositional agent capable of continuously reconfiguring the perception of the moving body and expanding the expressive potential of technologically mediated creative processes.

---

<sup>9</sup> *TouchDesigner* is a platform that uses node-based visual programming language, intended to create interactive multimedia content in real time, exploring 2D and 3D image creations. The software was developed by the Canadian company Derivative, in Toronto.

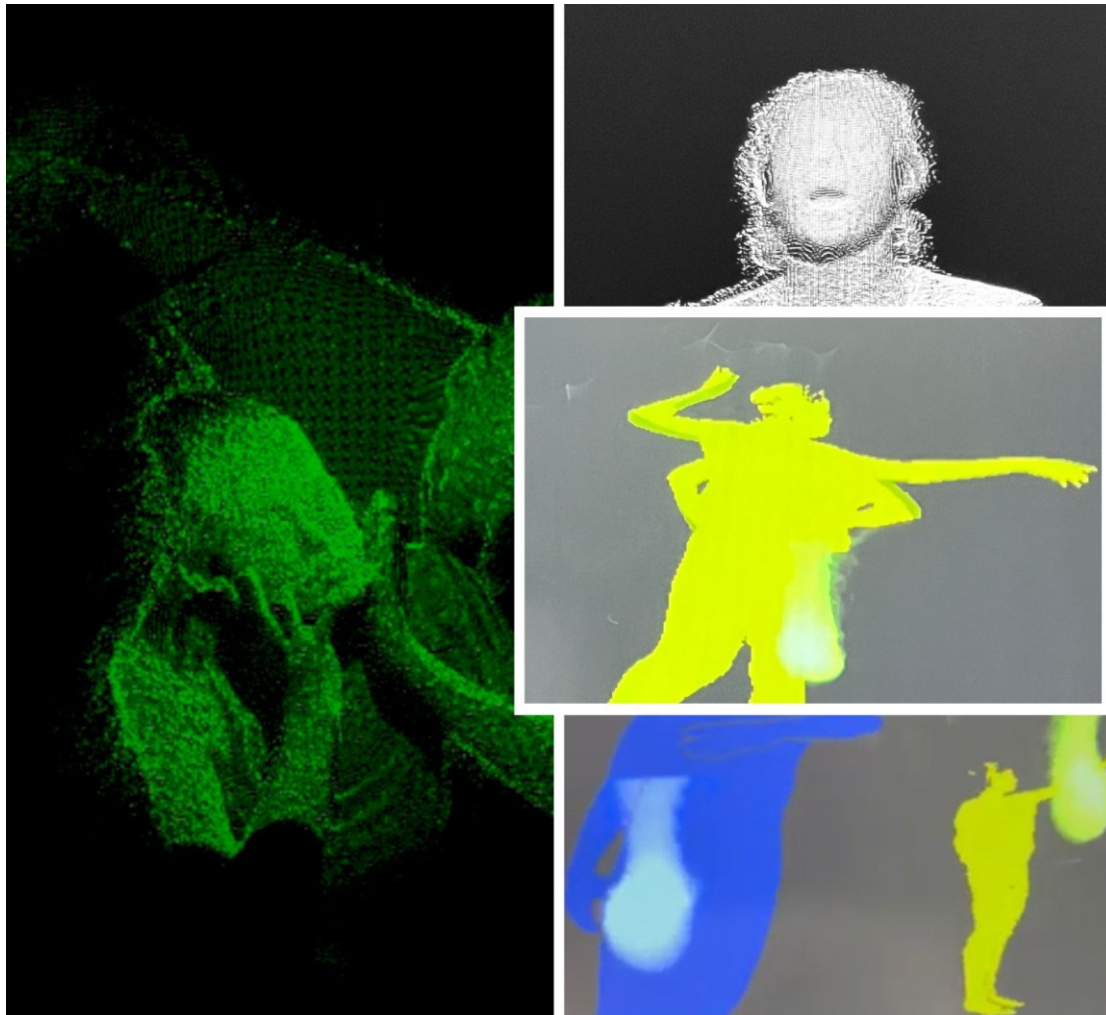


Figure 2 – Different representations of the body generated using the *TouchDesigner* software (source: research group archive)

Within the experiments involving point-cloud representations of movement, *TouchDesigner* also enabled the investigation of procedures that destabilized the structure of the points themselves, generating visual compositions that creatively reorganized their arrangement on screen. Various compositional strategies were tested, including different aggregation speeds and variations in acceleration during transitions from one spatial configuration to another.

Among these explorations, one proved particularly significant for the poetic construction of *Nuven*: the incorporation of visual trails into moving bodies.

To implement this effect, a delay was introduced into the movement of the points composing the image, generating moments of visual overlap and temporal displacement. This temporal modulation opened new possibilities for interpreting mediated bodies, as the cloud-like quality produced by delayed point movement generated additional visual and poetic densities. The investigation of relationships among velocity, points, and bodies resulted in visual traces that at times revealed recognizable corporeal configurations and at other moments unfolded into abstract compositions.

Together, these visual layers produced distinct modes of perception for spectators. The deceleration of point movement evoked sensations of particles suspended in space, as though invisible magnetic forces continuously reorganized the elements displayed on the screen. From this dynamic emerged an unstable and mutable sensory landscape, seemingly generated through random processes and reminiscent of ocean waves as images slowly transformed over time.

This aesthetic dimension significantly expanded the poetic potential of the work and was ultimately incorporated as a constitutive element of the screendance.

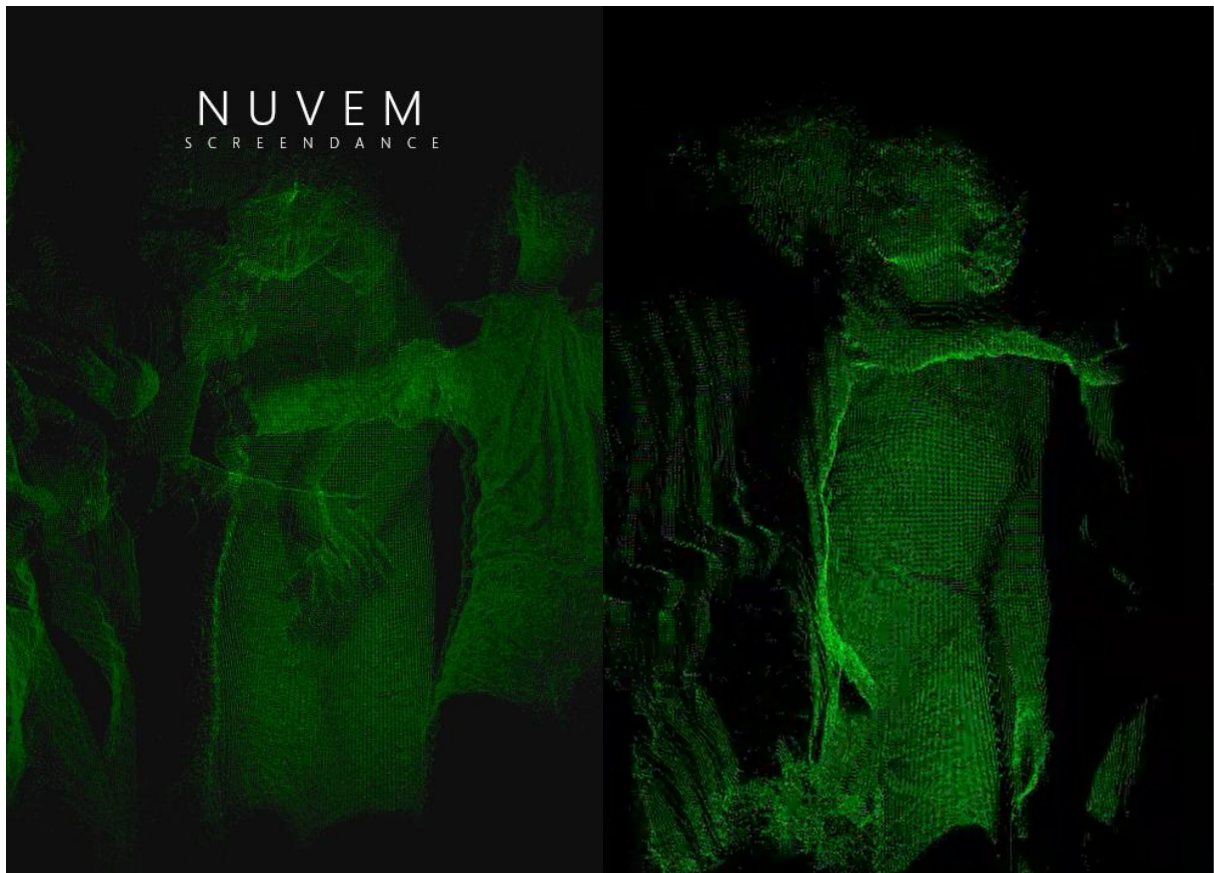


Figure 3 – Final aesthetic composition of *Nuvem*, featuring the implementation of motion trails and image overlays (source: research group archive)

The relationship established among body, camera, sensor, computational code, and image generated a multiple and integrated environment encompassing methods, procedures, and modes of creation. In technologically mediated dance creation, human and non-human elements exist within an interrelational network in which each component continuously influences the others throughout the process, stimulating alternative perspectives on creative, poetic, and expressive possibilities.

Because of the symbiotic condition established between body and technology in *Nuven*, it became possible to incorporate multiple subjectivities into the movement and imagery produced. The bodies did not operate autonomously but were continuously traversed, modulated, and reconfigured by the technological devices involved, influencing both the organization and visualization of gestures and the perceptual dynamics of movement.

Within this context, performers reconsidered and restructured their movements through observation of their own projections and point-cloud visualizations. Images themselves became mediating agents, directly influencing movement execution within physical space through continuous interaction with technological systems. Through the point cloud, the relationship between image and body was fundamentally redefined, establishing a perceptual field in constant negotiation.

At the same time, the technological devices mediating the bodies enabled the construction of new expressive configurations for the screendance. The mediations introduced by *TouchDesigner* directly influenced the work's poetics, expanding interactions among movement, camera, software, and image while opening multiple creative trajectories.

The delay applied to image composition generated unprecedented dynamics in encounters between bodies and images. It also affected movement fluency and velocity: the faster the movement relative to the depth-camera capture and software manipulation processes, the less recognizable the point-cloud structure became; conversely, slower movements revealed greater clarity in the shape, density, and appearance of the points.

Accordingly, the software functioned not merely as a recording tool but as a compositional agent within the artwork, enabling bodies and technologies to operate synergistically in shaping the perceptual and poetic configuration of movement in *Nuven*. Human and non-human elements mutually influenced one another throughout the process, generating new questions regarding the relationship between dance and technology and concerning the representation of body and movement within virtual environments.

## GENERATIVE CREATION

In a second phase of exploration, the production of *Nuven* incorporated creative investigations mediated by autonomous computational systems, giving rise to a generative version of the screendance.

To accomplish this, the system was trained using short excerpts extracted from the original screendance, creating a database of imagetic fragments derived from its narrative. From these materials, the computer autonomously recombined sequences through stochastic procedures, generating new narrative structures from the original content. This process resulted in the creation of *Generative Screendance Nuven*, characterized by a narrative composition mediated by computational thinking and marked by unpredictability.

The manipulation of the original fragments enabled the generation of multiple versions of the work — unstable and ephemeral configurations that never repeated themselves in exactly the same way. This variability significantly expanded possibilities for audience engagement, producing different articulations between the perceptual universe of spectators and the images projected on screen.

Computer-mediated generative creation displaced the narrative of *Nuvem* from a linear and predetermined trajectory toward a field of continuously evolving possibilities. By manipulating the original material, the system did more than simply reorganize images and temporalities; it generated narrative variations emerging in real time, transforming the work into an unstable and irreproducible event.

This process complexified both creation and reception by destabilizing expectations and predictability. The unpredictability and impermanence embedded within the experience of *Generative Screendance Nuvem* place spectators in contact with a dynamic creation permanently situated in a state of incompleteness.

Small narrative units and fragments, when randomly reorganized by the computational system, allow viewers to perceive the same material from different perspectives with each new configuration. Although the imagetic content remains unchanged, every rearrangement establishes new relationships among images, generating alternative harmonies and meanings.

The impermanence of the elements structuring the narrative allows the same set of images to be perceived from multiple viewpoints, each unfolding into distinct meanings, much like a prism that reveals a spectrum of colors when refracting white light. Each singular organization expands possible interpretations and modes of engagement, allowing new layers of meaning to emerge through continuous variation.

By sharing narrative composition between artist and technological system, *Nuvem* opens new possibilities for the artwork, revealing different expressive landscapes and reconfiguring its aesthetic nature. Authorship ceases to belong exclusively to the artist and becomes shared with the computational system, constituting a technologically mediated creative process in continuous execution, situated between order and chaos.

As Galanter (2003) observes, in generative art the artist does not directly determine every aspect of the work but instead designs systems that operate with a degree of autonomy, from which partially unpredictable outcomes emerge.

By presenting itself as a process rather than a fixed object, generativity disrupts the sequential structure of screendance, fragmenting its narrative and transforming the artwork from a closed object into a field of possibilities in constant actualization. In this sense, *Generative Screendance Nuvem* ceases to belong exclusively to the artist and becomes an autonomous system whose trajectory of transformations unfolds collaboratively with technology.

This instability directly impacts audience perception. Spectators no longer encounter the work as a fixed object but as a process of continuous becoming. Each update generated by the system invites viewers to reconstruct meaning through interactions among images, bodies, and their own perceptual frameworks.

Within this configuration, the artwork no longer communicates through a singular structure. Instead, it establishes a regime of shared attention in which meaning emerges at the intersection between the autonomous behavior of the generative system and the active perception of the spectator.

## MEDIATED BODY AND SCENIC PRESENCE

The body that appears in the screendance *Nuvem* is a body made visible through its imagetic representation — a body captured and manipulated by software and technological devices. In other words, it is a technologically mediated body that establishes dialogue and connection with the spectator. When bodies are mediated by technology, dance emerges from a hybrid relational field in which physical, digital, and sensory dimensions interpenetrate, expanding the possibilities of creation, perception, and aesthetic experience in contemporary dance. Amorim emphasizes the expressive dimension of this relationship by arguing that:

Dance in interaction with digital media does not imply a compositional format emptied of human emotions and subjectivities. The electronic medium constitutes a new way of presenting the artwork and establishing a new dialectical relationship between author and spectator. This new environment must remain aware of its capacity to stimulate creativity and innovation while enhancing its social applications as essential values for human development (Amorim, 2009, p. 1, our translation<sup>10</sup>).

This hybrid and digitized condition of the body promotes new qualities and capacities of movement, displacing conventional understandings of scenic presence, materiality, and embodiment. Within this context, the poetics of *Nuvem* emerge from the friction between heterogeneous materialities of both human and non-human nature: bodies, flesh, data, light, framing, image, and editing.

Consequently, the spectator's experience of dance is no longer grounded solely in the physical presence of the body but is constructed through the relationship between body and technology. This articulation between presence and mediation establishes new forms of sensibility and perception, expanding the ways in which movement and poetics are apprehended.

---

<sup>10</sup> Source text: "Dança em interação com meios midiáticos digitais não significa um formato de composição exaurido das emoções e subjetividades humanas. O meio eletrônico constitui uma nova forma de expor a obra e estabelecer uma nova relação dialética entre o autor e o espectador. Esse novo ambiente deve manter-se consciente de seu poder de estimular a criatividade e o espírito empreendedor e potencializar suas aplicações sociais como algumas das funções construtoras dos valores essenciais ao desenvolvimento humano".

Under these conditions, the notion of scenic presence assumes different contours. Muniz and Falci (2018), drawing upon the work of Jean-Louis Weissberg (2000, 2004), discuss the concept of telepresence — the virtual or distant presence of the body. The authors argue that when artistic production enters the realm of technological mediation, the place and space of action unfold into virtuality.

In this context, the actions of the mediated body take place in cyberspace, a domain without stable physical references, understood by Lévy (2003) as a socio-technical environment in which society and technology are inseparably articulated through the circulation of information, people, languages, and cultural practices. Within this space, the nature of the body becomes partially dematerialized, and its actions operate through nomadic coordinates, allowing the incorporation of new configurations into artistic production.

Virtuality therefore enables the multiplication of artistic experiences across different environments, since reproduction may occur simultaneously in multiple spatialities and temporalities. In this sense, the body's presence is simultaneously expanded and fragmented.

Beyond the expansion of its modes of reception, the agents involved in artistic action are themselves transformed, and consequently the expressivity of the body is actualized (Lévy, 2003) in relation to its mediated condition. The technologically mediated body undergoes a reconfiguration of its nature, expanding and complexifying its attributes and expressive qualities while directly influencing the relationships it establishes with audiences.

The possibilities of manipulating the body's spatial and temporal coordinates within virtual environments problematize both representation and modes of expressive action. When considering the spectator's experience of virtualized artworks, one observes the incorporation of multiple modes of perception and meaning. As Lévy (2003, p. 22, our translation<sup>11</sup>) states, "once subjectivity, signification, and relevance come into play, one can no longer consider a single extension or a uniform chronology, but rather multiple forms of spatiality and duration."

Thus, each subject who encounters the virtualized artwork establishes unique relationships with space and temporality, generating singular forms of interpretation and meaning.

The emotions and intentionalities of the body are therefore not annulled through technological mediation; rather, they are modulated, displaced, reconfigured, and potentially expanded. The fragmentation of the body and its representation through points generates new forms of empathy, estrangement, and affective engagement. The digital does not empty the sensible dimension of experience; instead, it reorganizes its modes of emergence, summoning a corporeality constructed at the intersection of aesthetic, technical, and expressive experience.

---

<sup>11</sup> Source text: "a subjetividade, a significação e a pertinência entram em jogo, não se pode mais considerar uma única extensão ou uma cronologia uniforme, mas uma quantidade de tipos de espacialidade e de duração".

In *Nuvem*, the points that compose the visual field enable alternative perspectives on the relationships established between bodies. Fragmentation, together with the suspension of bodily contours and forms within the virtual environment, generates expressive contexts distinct from those found in face-to-face encounters. Movements displayed on screen acquire different qualities through the manipulation of temporal and spatial references.

Furthermore, from the spectator's perceptual standpoint, the suspended particles that compose the narrative of *Nuvem* open space for multiple interpretations of the images configured on screen. The technological mediation of the body, combined with the construction of a virtualized narrative, produces new meanings and modes of perception, establishing connections with diverse poetic, social, and political contexts activated in the relationship with the spectator and highlighting the sensitive and communicative potential of the work.

Although the body is not physically present within this experience, it remains possible to reflect upon the effects of its virtualized condition and reception. Scenic presence, in this context, is not reduced to the physical dimension of the body but manifests as an expanded presence distributed across technical and affective layers. It is a presence actualized through attention, perception, and the sensitive relationship established with the moving image.

Even in its virtual and mediated condition, the body in *Nuvem* calls upon the spectator through technology, movement, rhythm, visual textures, and soundscapes, producing a form of encounter that is no less intense than physical presence, but qualitatively different.

## Final Considerations

Drawing upon the theoretical framework mobilized throughout this study and the analysis of the screendance *Nuvem*, this article sought to expand reflections on the role of technology within contemporary dance creation, with particular emphasis on generative processes and the configurations of the technologically mediated body that emerge from them.

Thinking about dance creation in conjunction with technology reveals a creative terrain traversed by complex networks of relationships, in which the body exists in dialogue with multiple human and non-human agents that challenge its aesthetic, poetic, and epistemological attributes. The body's relationship with non-human elements — including technological devices, software environments, applications, algorithmic systems, and digital platforms — transforms the expressive possibilities of movement, since these elements do not operate merely as neutral tools.

Within this framework, technologically mediated dance expresses bodily intentions and movement through negotiations established with the systems that traverse it. Movement is captured, transformed, translated into data, edited, recombined, and expanded across spatial and temporal dimensions, displacing traditional understandings of what dance can be.

Each human and non-human element participating in this network actively contributes to what is created and shared with the spectator, directly influencing the compositional trajectories of the work. Bodies and devices, integrated within the same system of mediation, jointly configure the spectator's experience.

This pluralized creative environment produces ruptures in conventional distinctions between dance and technology, as different forms of knowledge intersect and reconstruct one another, rendering the boundaries between artistic languages increasingly indistinct. The poetics of the artwork emerge from the collective actions of all human and non-human agents involved, constituting a network of associations characterized by horizontal mediations and the shared construction of meaning.

When generative systems are incorporated into artistic creation, the tensions and instabilities already present within these processes become intensified. Whether in the generation of images, movement, intentions, or narratives, generative systems challenge conventional notions of identity, originality, and authorship.

Although randomness is often celebrated as a poetic force capable of expanding creative possibilities, it may also weaken dramaturgical coherence and artistic intentionality. Human creators must confront outcomes that do not always align with the conceptual framework of the work, requiring continuous intervention, curation, and revision.

Questions of authorship and responsibility also become particularly significant. The opacity of algorithmic systems may obscure the processes through which certain aesthetic choices emerge, rendering authorship diffuse and raising ethical concerns regarding creative production.

In dance, where the body functions simultaneously as medium and message, such diffusion may weaken the political and identity dimensions of artistic practice, particularly when generated gestures fail to acknowledge the bodily and social histories embedded within them. Generative intelligence therefore does not replace compositional labor but rather shifts creative effort toward mediation, selection, and the curation of generated materials.

The relationship explored in *Nuvem* highlights the instability of connections produced within virtual environments, where both the body and the creative process cease to appear as integral and fully recognizable entities and instead assume hybrid, partial, and unstable configurations.

By losing its continuous organic form, the mediated body does not disappear; rather, it is reconfigured as a field of articulations between human and technological agencies, traversed by technical and symbolic systems. Likewise, the generative system involved in the creative process dilutes human centrality by sharing aesthetic and poetic decision-making with algorithmic intelligence.

From this perspective, unreal or fragmented representations of the body are not positioned in opposition to reality. Instead, they produce alternative forms of materiality and existence in which image, data, and algorithm actively participate in the construction of the sensible.

As in contemporary forms of social interaction mediated by digital platforms and social networks, the “real” body in *Nuvem* does not disappear. Rather, it coexists with multiple layers of representation that challenge its stability and identity. Far from signifying loss, this instability expands the field of meaning available to the body, opening space for social, cultural, and political interpretations that emerge precisely from its hybrid, partial, and continuously reconfigured condition, as well as from the unpredictability and processuality embedded in its generative creative process.

In this way, the relationship between dance and technology can be understood as a field of ongoing experimentation in which every redistribution of agency among the actors involved destabilizes and reconfigures the artistic field itself.

## References

- AMORIM, Belkiss. Dança contemporânea e tecnologia digital: novos suportes técnicos, novas configurações artísticas profissionais. In: REUNIÃO CIENTÍFICA ABRACE, 7., 2009, São Paulo. *Anais...* São Paulo: Abrace, 2009. p. 1-4.
- ANGELI, Diogo. *A arte da videodança: olhares intermediários*. Rio de Janeiro: Autografia, 2020. 217 p. ISBN 978-65-5531-597-4.
- ANGELI, Diogo. *A poética da videodança: narrativas de manifesto na contemporaneidade*. 2022. 253 f. Tese (Doutorado em Artes) – Instituto de Artes, Universidade Estadual de Campinas, Campinas, 2022. Disponível em: <https://hdl.handle.net/20.500.12733/8410>. Acesso em: 20 jan. 2026.
- CEDAR DANCE STUDIO. *Dance and the computer* – Merce Cunningham. 2019. Disponível em: <https://cedardance.com/dance-the-computer-merce-cunningham/>. Acesso em: 13 jan. 2026.
- GALANTER, Philip. What is generative art? Complexity theory as a context for art theory. In: GENERATIVE ART CONFERENCE, 6., 2003, Milão. *Proceedings...* Milão: Politecnico di Milano, 2003.
- GROETELAARS, Natalie Johanna; AMORIM, Arivaldo Leão de. Tecnologia 3D laser scanning: características, processos e ferramentas para manipulação de nuvens de pontos. In: CONGRESO DE LA SOCIEDAD IBEROAMERICANA DE GRÁFICA DIGITAL – SIGRADI, 15., 2011, Santa Fé. *Anais...* Santa Fé: Universidad Nacional del Litoral, 2011. p. 1–5.
- GRUPO CENA 11 CIA DE DANÇA. *Cena 11*. 2026. Disponível em: <https://www.cena11.com.br/>. Acesso em: 22 jan. 2026.
- LATOURE, Bruno. *Reagregando o social: uma introdução à Teoria do Ator-Rede*. Salvador: EDUFBA; Bauru: EDUSC, 2012.
- LEECKER, Martina; SCHIPPER, Imanuel; BEYES, Timon (ed.). *Performing the digital: performativity and performance studies in digital cultures*. Bielefeld: Transcript Verlag, 2017. 304 p. ISBN 978-3-8376-3355-9.
- LÉVY, Pierre. *O que é o virtual?* Tradução de Paulo Neves. São Paulo: Editora 34, 2003.
- MERCE CUNNINGHAM TRUST. Trackers. In: *The work – choreography*. 2026. Disponível em: <https://www.mercecunningham.org/the-work/choreography/trackers/>. Acesso em: 22 jan. 2026.

MUNIZ, Mariana Lima; FALCI, Carlos Henrique. A eficácia da presença na cena contemporânea mediada pela tecnologia: o caso *Play Me*. *Visualidades*, Goiânia, v. 16, n. 2, 2018. DOI: 10.5216/vis.v16i2.48603. Disponível em: <https://revistas.ufg.br/VISUAL/article/view/48603>. Acesso em: 20 jan. 2026.

MUNIZ, Zilá. Rupturas e procedimentos da dança pós-moderna. *O Teatro Transcende*, [S. l.], v. 16, n. 2, p. 63–80, 2011. DOI: 10.7867/2236-6644.2011v16n2p63-80. Disponível em: <https://ojsrevista.furb.br/ojs/index.php/oteatrotranscende/article/view/2688>. Acesso em: 6 jan. 2026.

RIBEIRO, Regilene A. Sarzi; BRESSANIN, Marcelo. Inteligência artificial, arte e tecnologia: visualidades, audiovisualidades e sonoridades. In: ALBINO, João Pedro; VALENTE, Vânia Cristina Pires Nogueira (org.). *Inteligência artificial e suas aplicações interdisciplinares*. 2023. DOI: 10.47402/ed.ep.b202320930201. Disponível em: <https://editorapublicar.com.br/ojs/index.php/publicacoes/article/view/797>. Acesso em: 7 jan. 2026.

WEISSBERG, Jean-Louis. Paradoxos da teleinformática. In: PARENTE, André (org.). *Tramas da rede: novas dimensões filosóficas, estéticas e políticas da comunicação*. Porto Alegre: Sulina, 2004.

WEISSBERG, Jean-Louis. *Présences à distance: déplacement virtuel et réseaux numériques: pourquoi nous ne croyons plus à la télévision*. Paris: L'Harmattan, 2000.

ZACHARIOU, Renée. Machine learning art: an interview with Memo Akten. *Artnome*, 13 dez. 2018. Disponível em: <https://www.artnome.com/news/2018/12/13/machine-learning-art-an-interview-with-memo-akten>. Acesso em: 19 jan. 2026.