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Generative design and smart scenography: Reshaping theatrical space in the age of artificial intelligence

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Abstract:

This study explores the aesthetic and philosophical transformations of contemporary theatrical space amid the rise of generative design and AI-driven smart scenography. It argues that algorithmic systems have produced not just technical improvements, but a structural shift in scenography, theatrical creativity, and the designer's role. Using a critical analytical approach, it traces generative art from its traditional roots to its digital evolution and examines the transition from fixed physical space to dynamic, algorithmically governed environments. The study reconsiders authorship as a collaborative process between humans and machines, where algorithms actively shape the visual and aesthetic experience. It also addresses post-human philosophical perspectives and highlights ethical concerns related to aesthetic responsibility, technological dependence, and the limits of algorithmic intervention in creative practice.

Keywords: Generative desig; intelligent scenography; theatrical space; artificial intelligence; digital theatre.

1. INTRODUCTION

The contemporary art scene is undergoing profound transformations due to the digital revolution and the rise of artificial intelligence. The creative process is no longer based solely on direct manual action or individual aesthetic intuition, but rather on the design of systems, rules, and algorithms capable of dynamically and evolvingly generating forms, images, and spaces. In this context, generative design has emerged as one of the most significant conceptual shifts in the visual arts, moving the focus from the artwork as a fixed, final product to an open, system-based production process.

With its historical roots extending from decorative and geometric systems to modernist experiments based on organized chance, generative art has paved the way for a new understanding of creativity, one based on establishing rules rather than executing details. With the development of algorithms and interactive software, this logic can now be extended to theatrical space, where scenography is no longer merely a static set, but has transformed into an intelligent system capable of interacting with the actor, the audience, and the digital environment in real time. The shift from hand to code, from static space to algorithmic space, and from the human as the sole agent to a collaborative model combining human and machine, reflects a profound philosophical shift in the understanding of theater itself. Theatrical performance has become a field where software systems, interactive projections, and artificial intelligence intersect, redefining concepts of presence, representation, authorship, and creativity.

Therefore, this research aims to analyze the transformations brought about by generative design and algorithmic scenography in the structure of theatrical space, while examining the aesthetic, philosophical, and ethical dimensions resulting from the integration of artificial intelligence in constructing the theatrical image. It also seeks to explore the future of intelligent scenography, navigating the spectrum between the horizons of technological innovation and the boundaries of aesthetic and human responsibility.

The Problem Statement of the Study:

The central question of this research stems from the following question:

How have generative design, algorithms, and artificial intelligence reshaped the concept of scenography and the theatrical image? What aesthetic, philosophical, and ethical transformations have resulted from this shift from physical to algorithmic and post-human theater?

This central question branches into a set of sub-questions related to the nature of theatrical space, the role of the designer, the concept of authorship, and the limits of technology within the aesthetic experience.

• How has the concept of generative art evolved from its traditional roots to its contemporary digital form?

• What role does the algorithm play as a tool for aesthetic formation within the visual arts and scenography?

• How has the transition from hand to code changed the nature of artistic creation and the role of the theatrical designer?

• What is the nature of the transformations that have occurred in theatrical space as it has moved from physical stability to algorithmic dynamism?

• How does artificial intelligence contribute to redefining the theatrical image as a creative partner? • What are the philosophical dimensions associated with the transition from humanistic to posthumanistic theater?

• What are the ethical challenges associated with intelligent scenography, particularly concerning authorship, data, and aesthetic responsibility?

Methodology:

This research employs a multi-pronged approach, comprised of:

1. Analytical Methodology: This involves analyzing the concepts of generative design, algorithms, algorithmic scenography, and artificial intelligence, and outlining their conceptual and aesthetic development.

2. Descriptive Methodology: This involves describing the transformations that have occurred in theatrical space and the role of the designer within the context of digital technologies.

3. Comparative Methodology: This involves comparing traditional scenography with algorithmic scenography, and analyzing the differences in the nature of space, the creative role, and the mechanisms of formation.

4. Critical Philosophical Approach: This involves examining the transformations related to the concepts of presence, authorship, and post-humanism, in addition to analyzing the ethical issues associated with the use of artificial intelligence in theater.

This integrated methodological approach allows for a comprehensive reading of the subject, combining theoretical, aesthetic, and philosophical dimensions, and providing a deeper understanding of the transformation that contemporary theater is undergoing under the dominance of algorithmic systems and artificial intelligence.

2. Generative design in visual arts:

2.1 The emergence of generative art:

Generative art did not originate with the advent of computers; its roots lie in ancient artistic experiments that aimed to introduce systems and rules to define the form of the artwork or to allow organized chance to generate the final composition. The philosophical essence of this art lies in transforming the artist from a direct executor into a designer of the creative system, whether that system is physical in traditional arts or digital in the modern era. "There is no doubt that generative art, which is created by computers and is often referred to as generative art or computer art, is born from artificial intelligence (GAI). The art is produced automatically by a program."[1] In traditional visual arts, such as Islamic geometric patterns, artists used rigorous mathematical systems to generate intricate and complex patterns, enabling the production of works of infinite variety from specific basic units. These historical experiments form the intellectual foundation for what later became digital generative design, where art is no longer merely a form but a continuous and flexible process of production, dependent more on the system itself than on the individual will of the artist.

With the development of modernism, the element of organized chance entered the artwork, as seen in the works of Ellsworth Kelly, who combined specific rules with deliberate randomness to produce unexpected compositions. This idea established a new understanding: that a work of art can be the product of a complex system interacting with external factors—a concept that later extended to the design of theatrical space.

In modern theatrical scenography, the designer is no longer merely a set maker, but a designer of an integrated visual production system encompassing light, movement, interaction with the actor, and even the digital generation of environments. Using generative software, interactive projections, and even artificial intelligence, the theatrical space can continuously generate itself according to predefined rules, while also allowing for momentary changes during the performance, making each performance experience unique and distinct from the last. It can be said that modern scenography represents a natural extension of generative art, where the same theoretical principles are applied - order, rules, organized chance, and mechanical generation - but it extends to include space, movement, and live interaction between the actor, the audience, and the machine, giving the theater new aesthetic and experimental dimensions that are no longer possible in traditional ways.

2.2 The concept of an algorithm as a shaping tool:

The algorithm is a cornerstone of generative art. It is not merely a series of technical instructions, but a creative tool capable of redefining the relationship between the artist and the visual result. In an artistic context, the algorithm is viewed as a specific system of rules and organized procedures that determine how an artwork is generated. This allows the artwork to be produced repeatedly, yet it remains diverse through modifications or variations within the same system. One of the central ideas in understanding the logic of algorithmic production is the multiplicity of artistic output within a single structure: "The first idea revolves around the fact that the artwork is created and its multiplicity, meaning that the same basic algorithm can produce an infinite number of unique works."[2]

This perspective reinforces the idea that the essence of generative work lies not in the single output, but in the system's structural capacity to produce unlimited possibilities, where variation becomes an inherent property of the algorithm itself, not an incidental element.

Algorithms in art are not alien to previous experiments with traditional systems; they can be compared to the geometric and decorative rules that artists in antiquity employed to create complex patterns. The fundamental difference lies in the fact that the algorithm adds a procedural and interactive dimension, controlling the process and producing potentially unpredictable results, within the boundaries of the rules established by the artist. In this sense, the algorithm becomes a formative tool; it does not merely execute the artist's commands, but contributes to shaping the form itself, thus transforming the nature of creativity from a direct, individual act to one based on order and interaction.

On a practical level, algorithms allow the artist to transform space, material, or image into a dynamic, changing system. For example, an algorithm can be designed to control the distribution of lighting, the movement of an actor, or the colors on a stage, producing different results each time the system is run, while maintaining the overall aesthetic harmony of the work. This usage demonstrates that the algorithm is not merely a mechanical tool, but a mechanism for creative innovation that integrates computational precision with artistic freedom.

The algorithm can also enable interaction between the artist and the system, allowing inputs or variables to be modified during execution. This positions the artist as a guide and observer of the system, rather than a sole executor of forms. This interactive nature elevates the algorithm to more than just a tool; it becomes a creative partner capable of producing complex and evolving works, redefining the very concept of art.

In a theatrical context, the algorithm can be considered a tool for shaping stage space, determining the distribution of visual elements, lighting, movement, and digital interactions. When artificial intelligence is integrated with these algorithms, the system becomes capable of learning and adapting to the performance context, granting the scenography the

ability to regenerate the scene for each production and creating unique experiences for the audience. In this way, the concept of the algorithm is transformed from a mere technical tool for performing calculations into a formative and artistic mechanism, where every equation, every rule, and every variable is part of an integrated creative process, making the algorithmic system itself a space for artistic experimentation and aesthetic vision, and redefining the role of the artist from executor to designer and organizer of the artwork.

3. The transition from the hand of the painter and designer to the code:

For centuries, art and design have relied on the artist's and designer's direct manual skill in crafting artistic form. A drawing, painting, or theatrical set was the product of individual artistic skill, based on manual techniques, aesthetic sense, and acquired experience. In this context, the hand was the primary intermediary between the artist's vision and the final artwork, while the entire aesthetic decision was linked to the artist's feeling and imagination.

With the advent of the digital revolution, a gradual shift began from direct manual execution to digital media and programming code, transforming the artist or designer from a mere executor of processes into a facilitator of those processes. This shift was not simply a change of tools, but a complete redefinition of the nature of artistic creation. Artists could now use programming languages and algorithms to create systems that generate forms, colors, and movement partially independently, according to predefined rules, while allowing for a degree of randomness or interactive adaptation.

In visual arts, such as generative paintings or digital drawings, this technology allows the artist to program a series of computational rules that determine how colors are distributed, how lines are formed, or how patterns are repeated. The result is artworks that produce multiple and varied outcomes from the same system, without direct intervention in every detail, while maintaining the aesthetic harmony designed by the artist.

In theatrical scenography, this shift has become even more

pronounced. Designers no longer simply construct sets by hand or sketch scenes on paper. Instead, they have begun designing rules for the distribution of visual elements, lighting, and movement. Using generative software, digital projections, and even interactive algorithms, the theatrical space can change and respond to instantaneous changes during a performance, making each experience unique. Here, code acts as an extension of human creativity, achieving what was previously only possible through manual skill, while also opening up new horizons for experiencing dynamism, repetition, and artistic diversity.

This shift from hand to code represents a paradigm shift in the concept of artistic creation. The artist no longer defines every detail by touch or movement but becomes a guide for a system that generates the artwork. Code here is not merely an execution tool, but a formative and creative one, capable of producing complex and intricate works. It empowers the artist and designer to interact with, modify, and transform the results in real time.

This shift can be seen as a bridge between traditional creativity and modern digital art, between direct control over materials and the ability to design systems that generate fluid and ever-changing forms. This makes the artistic process more dynamic and responsive to chance, instantaneous interaction, and the constant changes in the display environment.

4. From traditional scenography to algorithmic scenography:

4.1Transformations of theatrical space: from static reality to algorithmic dynamics:

Theatrical space has always been a cornerstone of the creative process of a performance. It is not merely a backdrop for the actors, but an active element that contributes to shaping the meaning of the theatrical event and guiding the viewer's experience. In traditional scenography, space was limited by the physical parameters of the theater: the stage, the backstage area, static sets, and limited lighting. Prevailing concepts focused on stability, symmetry, and the ability to convey the realistic or symbolic environment of the performance, relying heavily on painted backdrops and tangible sets.

With the advent of digital design technologies and algorithmic

scenography, theatrical space began to undergo radical transformations on several levels:

• **The shift from static to dynamic and instantaneous change:**

It became possible to design theatrical spaces that change in real time, influenced by the actors' movements or the audience's interaction. The set is no longer just a fixed framework, but a dynamic element that adds layers of meaning to the performance.

• **The Shift from Reality to Virtual and Imaginary Worlds:**

Thanks to generative software and digital simulation, environments can be created that transcend the constraints of physical logic, opening the door to a new and immersive sensory experience where lighting, colors, and shapes interact seamlessly with the theatrical event.

• **Multiple and Interwoven Levels of Space:**

Theatrical space is no longer confined to a single dimension. It is now possible to integrate multiple levels of virtual and augmented reality, extending the theatrical scene to include the projection screen, 3D elements, and even audience interaction via digital devices.

• **Interactive and Personalized Space:**

Algorithmic scenography allows for the customization of the scene for each individual audience experience. Viewing angles and visual changes can vary depending on audience interaction, making each performance a unique experience.

In short, the transformations in theatrical space reflect a design journey from adherence to physical and realistic limitations to an open world of digital and algorithmic possibilities. Space becomes a living element, capable of engaging in dialogue with both the actor and the audience, thus redefining the relationship between venue, event, and spectator.

4.2 The role of the designer between creativity and software supervision:

In the modern era, the stage designer is a vital link between artistic creativity and digital technologies. Their role has evolved from simply selecting sets, colors, and lighting to a broader responsibility encompassing the supervision of the software processes that generate the theatrical space

and control its interaction with the actors and the audience. While artistic creativity remains at the heart of their work, the designer is responsible for translating the director's and playwright's vision into a complete visual and experiential space. This includes designing sets that reflect the characters' psychological states, selecting colors and materials that enhance the overall atmosphere of the performance, and using lighting and sound as interactive narrative tools that add sensory and emotional dimensions to the show. Simultaneously, the designer must be familiar with the technical capabilities of digital scenography and generative algorithms, and oversee how these software programs are implemented in accordance with their artistic vision. They adjust algorithms to change the set in real time based on the actors' movements, design audience interactions via sensors or digital applications, and coordinate digital lighting and sound to achieve synchronized and harmonious effects with the theatrical event. In this context, they face dual challenges combining technical and aesthetic considerations. They need to understand programming tools, handle technical errors, and ensure stable performance throughout the production. The performance, while maintaining the artistic identity of the performance without allowing technology to overshadow the theatrical meaning or the audience experience, has thus become the contemporary theatrical designer as a “director of space” who combines artistic sense, technical knowledge, and the ability to innovate within a dynamic theatrical environment. This reflects the transformation of scenography from an art based on realistic representation to an integrated science that interacts with technology, redefines the meaning of creativity in the theater, and gives the theatrical space a lively and active role in shaping the theatrical experience as a whole.

4.3 Redefining the concept of decoration:

In light of the radical transformations taking place in contemporary theater, set design is no longer merely a fixed, physical framework defining the location of the theatrical event or reflecting the tangible reality of the text. Instead, it has become a dynamic, multidimensional element capable of interacting with the actor's movement, the changing scenery, and the audience itself. Traditional scenography relied on tangible, fixed elements

such as backdrops, furniture, and props that contributed to conveying realism or symbolism. However, digital technologies and algorithmic scenography have emerged, granting designers the ability to create dynamic and interactive spaces in real time. Set design can shift according to the actor's movements or the audience's response, allowing for the integration of physical, virtual, or augmented reality. This creates new sensory and emotional dimensions for the performance. Set design is no longer simply a backdrop but a narrative partner that contributes to shaping the dramatic scene through interactive lighting, digital sound effects, and algorithms that generate changing shapes and colors. These elements reflect the psychological states of the characters and the temporal and spatial shifts in the theatrical text. Furthermore, it has become possible to reproduce each performance uniquely, varying according to different circumstances and audience interaction, thus expanding the possibilities for creativity. The theatrical redefines the relationship between the designer, the event, and the audience, and transforms the set into a living element that participates in telling the story, rather than just a fixed framework for it. This transformation reflects the great development of scenography from an art based on realistic representation to a dynamic creative process that integrates art with technology, and opens a new horizon for understanding the theater as a living space capable of dialogue and interaction with all elements of the performance, making the audience's experience richer and deeper.

5. Artificial intelligence as a creative partner in building the theatrical image:

The theatrical landscape has witnessed a radical transformation in the last two decades due to the integration of digital technologies and artificial intelligence (AI) into the design of theatrical space and the visual presentation of a performance. AI is no longer merely a tool to assist designers in executing their ideas; it has become a creative partner capable of contributing to the development of aesthetic and formative visions. Thanks to its ability to process vast amounts of data and analyze literary

and kinetic texts, AI can offer unconventional design proposals and suggest complex theatrical compositions that dynamically combine movement, light, and sound.

Furthermore, AI allows designers to explore limitless spaces for artistic experimentation, as computer simulations can generate interactive visuals that change in real time according to the actors' performances or the audience's interaction. Collins emphasizes that "AI is not just about execution; it can become a catalyst for human creativity, generating scenarios and visuals that were impossible with traditional methods."[3] This interaction between artificial intelligence and stage design redefines the concept of theatrical imagery, transforming the stage space into more than just a static set; it becomes an integrated sensory system that interacts with events and human emotion. As Burns points out, "When artificial intelligence becomes part of stage design, the scene transforms into a living entity that interacts with the audience and actors, making the performance a constantly evolving sensory experience."[4]

It can therefore be said that artificial intelligence acts as a creative partner, enriching the designer's imagination and opening up limitless possibilities for theatrical design, both in terms of visual composition and the kinetic rhythm of the performance. It provides tools that allow for a re-examination of the relationship between the stage, the actor, and the audience, and enables a new level of artistic interaction that integrates technology with human creativity.

6. The aesthetics of digital space and interactive projections in theatrical performance:

6. 1 The aesthetics of digital space in contemporary theater:

In contemporary theater, digital space has become an essential element, expanding the horizons of visual experience and redefining the relationship between actor, venue, and audience. Theater is no longer confined to the traditional stage or static sets; it has transformed into a hybrid space where the real and virtual worlds intertwine, enabling designers to create new dimensions of time and space. Digital theater relies on the use of three-dimensional visual maps, interactive digital lighting, and virtual models,

allowing the scene to change with the actor's movement or the narrative rhythm of the performance. This transformation allows directors and designers to express abstract and symbolic concepts more flexibly, transforming the theatrical space into a narrative tool in its own right, capable of enhancing dramatic messages and adding multiple layers of visual depth. Freeman notes that: "Digital space in theater is not merely about creating new environments; it becomes a true formative element that contributes to storytelling and shapes a complete sensory experience for the audience."[5]

Through this intensive use of digital media, theater can achieve a level of sensory immersion unavailable in traditional theater, where the audience feels part of a dynamic and interactive world. The digital space also enhances the capacity for artistic experimentation, as it allows for the creation of dynamic spaces in real time, permitting the interplay of visual symbols, revealing new relationships between characters and events, and expanding the expressive possibilities for the director and designer. Therefore, the digital space today constitutes an integral creative element in theatrical construction, transcending its purely decorative function to become a partner in the visual and dramatic narrative of the performance.

6. 2 Interactive projections and their role in shaping the theatrical image:

Interactive projections are a central tool in modern theater, granting the stage the ability to transform instantly and interact with the actors' live performances, and even with the audience in some cases. This technology relies on the integration of intelligent software that allows images, symbols, and visual patterns to be animated based on movement, sound, or audience interaction, making the theatrical image dynamic and ever-changing. Thanks to these characteristics, the stage designer can create multi-layered spaces that blend the physical world with the virtual world, making the play appear as a living entity constantly changing according to the unfolding events and dramatic rhythm. King affirms that: "Interactive projections transform the theater into a living, constantly changing space, where the

relationship between the audience and the performance becomes more dynamic and aesthetically rich."[6]

Interactive projections also offer an opportunity to rethink the traditional function of set design. Static backdrops can be replaced with transformable spaces that interact with the actors and add new symbolic layers to the performance. Furthermore, this technique allows for a more immersive narrative experience, where the audience becomes part of the theatrical environment and interacts directly with the visual changes, enhancing the sense of immersion and visual excitement. Therefore, interactive projections are not merely a decorative addition, but an advanced formative tool that redefines the theatrical image as a whole, making the stage scene richer, more interactive, and more dynamic.

7. Future prospects and ethical challenges in smart scenography:

7. 1 Future prospects for intelligent scenography: Towards a self-forming theatrical space:

With the rapid development of artificial intelligence and machine learning systems, contemporary scenography is moving towards a new horizon that can be described as "smart scenography." In this concept, the theatrical space is no longer static or subject to pre-planned design, but rather becomes a dynamic system capable of interacting with performance, data, and the immediate context of the show. This transformation not only affects the technical aspect but also redefines the very concept of theatrical design, shifting it from a pre-planned process to a continuous, generative process that takes shape during the performance.

In this context, smart scenography can rely on motion sensors, sound analysis, and emotion recognition to reshape lighting, projections, and visual backgrounds according to the actor's performance or the audience's interaction. Here, the space becomes a living, constantly changing entity, ensuring that the theatrical image is never repeated in the same way in two consecutive performances. Furthermore, generative algorithms enable the creation of complex visual compositions in real time, enhancing the immersive nature of the performance. Manovich argues that: "Software is no longer just a tool for production, but has become a cultural medium that

shapes the way we see the world and construct aesthetic experiences."[7] Based on this conception, intelligent scenography can be considered an extension of software culture, where the algorithm becomes part of the aesthetic sensibility itself, not merely an executive tool. It enables the designer to move from thinking about a fixed "form" to thinking about a "system" that produces multiple forms. It also opens new horizons for experimentation, such as interactive performances that transcend geographical boundaries, or plays that visually adapt to different cultural contexts.

However, these future prospects necessitate a re-examination of the designer's role: Will they remain the primary author of the image, or will they become a programmer of its generation mechanisms? Will scenography transform into an open system shared by artistic and technical expertise? The future seems to be heading towards a hybrid model, combining human aesthetic sensibility with the computational power of algorithms, to establish a self-forming theatrical space where creativity and programming intertwine in a new organic unity.

7. 2 Ethical challenges in smart scenography: between creativity and responsibility:

Despite the vast potential offered by smart scenography, it raises a number of ethical issues that cannot be ignored. The use of artificial intelligence systems in constructing theatrical imagery raises questions about intellectual property, algorithmic transparency, the source of data used in training, and the limits of technology's intervention in the creative process.

One of the most prominent challenges is the question of authorship: when an algorithm produces an innovative visual composition, to whom is the result attributed? To the designer? The programmer? Or the system itself? Furthermore, the use of audience data (such as facial expressions or vocal reactions) to modify the theatrical space in real time opens the door to discussions about privacy and informed consent, especially if the audience is unaware of the nature of the technical manipulation taking place during the performance. Praidotti warns that: "The shift towards a post-human

world requires a new ethical framework, one capable of incorporating non-human actors within the context of shared responsibility."[8]

In light of this perspective, smart scenography cannot be viewed as a neutral technological advancement, but rather should be integrated within a critical framework that balances innovation and responsibility. Smart technologies can enhance the aesthetic experience, but they can also reproduce biases inherent in data or algorithms, or marginalize the artist's role in favor of a purely technical logic if not properly utilized.

Another challenge lies in the risk of "reification" of the theatrical experience, transforming it into a dazzling technical spectacle at the expense of dramatic depth and the human dimension. Therefore, it becomes essential that technology remains at the service of aesthetic and intellectual vision, not replaces it. The true ethical challenge lies in achieving a delicate balance: employing artificial intelligence to enhance creativity without compromising the essence of theater as a human art form based on expression, presence, and live interaction.

Thus, the future of smart scenography depends on our ability to develop an ethical and critical framework that keeps pace with technological development and ensures that innovation remains linked to cultural and human responsibility.

8. Study Findings:

• Generative design represents an epistemological shift in understanding theatrical creativity, not merely a digital technology.

• Smart scenography reshapes the structure of theatrical space as an open, interactive system.

• Algorithms have become an active aesthetic element within the theatrical performance.

• Theatrical authorship is being redefined in light of the partnership between humans and machines.

• Contemporary theater is moving towards a model of "algorithmic theater" or "smart theater."

• An ethical framework is needed to regulate the use of artificial intelligence

in the arts.

• The integration of technology and aesthetic vision is essential to ensuring the preservation of the human dimension in the theatrical experience.

9. CONCLUSION:

This study reveals that the transformations occurring in contemporary theater under generative design and intelligent scenography are not merely circumstantial technological developments, but rather represent a profound structural shift in the understanding of theatrical space and its aesthetic and philosophical function. The integration of algorithms and artificial intelligence has led to a reshaping of the relationship between humans and technology, between the designer and the system, and between stability and change within the theatrical performance.

The stage space has moved from being a fixed, physical structure, manually constructed and presented in its final form, to being a dynamic, open system based on generative rules that allow for multiple visual possibilities and their real-time transformation. In this sense, scenography is no longer a decorative element or a supportive framework for dramatic action, but has become an active entity that participates in the production of meaning and the shaping of the audience's perceptual experience.

The research also shows that generative design redefines the very concept of creativity. The designer is no longer the direct executor of every visual detail, but rather an architect of the system, establishing the rules that produce forms that may exceed their initial expectations. This shift moves the focus of creativity from manual action to structural thinking, and from complete control to the management of possibility.

From a philosophical perspective, intelligent scenography appears to fall within a post-human horizon, where human agency intersects with the computational power of machines in a new participatory structure. However, this shift raises ethical challenges related to authorship, aesthetic responsibility, and the limits of relying on algorithmic systems in producing artistic experience.

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