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Rethinking Space in Telepresence Art through Merleau-Ponty's "Eye and Mind"

Abstract

Eduardo Kac, an important contemporary telepresence artist, has maintained that telepresence art contributes to the breakdown of our sense of space. His argument rests in part on a reading of Merleau-Ponty's "Eye and Mind." Contrary to Kac on this matter, I argue that an interpretation of telepresence art through Merleau-Ponty's phenomenology does not inevitably lead to the conclusion that such art diminishes our experience of space; in fact, such a reading can reveal telepresence art to be a means of expanding that experience.

Keywords

Maurice Merleau-Ponty, Eduardo Kac, telepresence art, space, embodiment

Telepresence art, a type of contemporary interactive art that utilizes various telecommunications technologies to allow participants to experience and participate in distant events, has been implicated in the alteration of our conception of space in recent decades. Such claims are part of a broader criticism of contemporary life on the part of philosophers, anthropologists, and communications scholars who have maintained that space is gradually being subsumed under time, particularly the notion simultaneity.[1] Their arguments generally hinge on the role of technologies such as television, the telephone, and other telecommunications devices, as well as the internet, which allow us to be instantaneously present to those who are spatially dis-

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[1] See, for example, Augé 1995; Harvey 1990; Meyrowitz 1985.

tant, or to observe distant events in real time. In addition, these technologies force us to experience the world through the mediation of a screen, keyboard, headset, or other device, thereby competing with or even displacing our direct experience of objects in our immediate vicinity. This combination of instantaneous presence at distant events and a mediated experience of the world, they argue, has led to a breakdown in our ability to experience ourselves as situated in space in the way that previous generations did.

In this essay, I will focus on the position of one of the most important telepresence artists, Eduardo Kac, who has argued that telepresence art, like all applications of telepresence technology, has contributed to the "disappearance" of space and distance from contemporary life. To make his point, Kac draws in part on Merleau-Ponty's "Eye and Mind," but he does not discuss the text in great depth. A closer examination of the conception of vision and embodied experience that Merleau-Ponty develops there will show, however, that Kac has failed to see the potential of Merleau-Ponty's phenomenology for an analysis of telepresence art. Through an examination of the conception of embodied perception developed in "Eye and Mind," along with key sections from *Phenomenology of Perception*, I will present an alternative interpretation of telepresence art to that which Kac offers. Specifically, while Kac uses Merleau-Ponty to argue that telepresence art contributes to the marginalization of space, I argue that his phenomenology actually provides a means of demonstrating that such art enriches, as opposed to impoverishing, our experience of space.

I

I will begin with a brief discussion of telepresence art, along with a few examples. *Artforum* magazine described telepresence as "the ability to produce action at a distance" (*Artforum*, September 2001, 42). In a similar vein, in an early discussion of cyberspace it was defined as "the experience of presence in an environment by means of a communication medium" (Steer 1995, 36). Telepresence art grew out of telematic or telephone-based art, which has existed in one form or another since the 1920s.[2] Contemporary Brazilian artist Eduardo Kac, one of the pioneers of telepresence art, describes it in his seminal 1993 essay "Telepresence Art" as "an art based on the integration of telecommunications, robotics, new kinds of human-

[2] For a multifaceted introduction to the history and theory of telematic art by one of its most important proponents, see Ascott 2003.

machine interface, and computers" (Kac 1993).[3] Crediting cognitive scientist and AI researcher Marvin Minsky with the first use of the term 'telepresence' in a scholarly context, Kac lists some of the many scientific applications of telepresence, which range from bomb disposal to remote surgery, and which have in common the fact that they enable users to perform remote actions using robotics and wearable devices designed to give the user "a quantifiable feeling of 'being there'" (Kac 1993). In his own work, Kac states, he emphasizes the interactivity that such technologies facilitate, seeing telepresence art as "a means for questioning the unidirectional communication structures that mark both high art (painting, sculpture) and mass media (television, radio)" (Kac 1993). While the sense of "being there" is a necessary component of any successful telepresence artwork, for Kac it is not in itself the ultimate "point" of such works, but rather the basis for an inquiry into the nature of communication, perception, and various social structures.

Before continuing with Kac's analysis of telepresence art, I will first briefly describe a few examples of telepresence works which should help explain the genre to those unfamiliar with it. As a first example, "Ornitorrinco," the piece Kac discusses in "Telepresence Art," was a long-term artistic collaboration he engaged in with Ed Bennett, a staff member in the Electronics Department of the School of the Art Institute of Chicago.[4] The work takes its name from the small one-eyed telerobot which was its central component. Between 1990 and 1998, Ornitorrinco was installed in various locations, where its movements within its environment could be controlled by members of a remote audience by means of a touch-tone telephone keypad. As Ornitorrinco changed position in response to the user's commands, a feed from a camera in its "eye" transmitted a still image every eight seconds, allowing the user to experience the remote environment from Ornitorrinco's perspective (Kac 1991, 233). Describing the significance of this early telepresence work, Kac states that

> In Ornitorrinco, the enigmatic idea of 'telekinesis' is embodied in electric and electronic parts, to unveil new paths for telecommunications as an art form beyond the exchange of images. This project is meant to express some of the possibilities of an out-reaching vision, in particular, and an extended body, in general, as a consequence of the cultural impact of telecommunication systems (Kac 1991, 233).

[3] Originally published in English and German in Teleskulptur, ed. R. Kriesche, Graz, Austria: Kulturdata, 48–72.

[4] The name of the piece means 'platypus' in Portuguese. Other important telepresence works include Ken Goldberg's "Telegarden", Rafael Lozano-Hemmer's "Pulse Park", and the cyborg-based performance art of Stelarc and Marcel·lí Antúnez.

To take another example, Kac's 1999 telepresence work "Darker Than Night" addressed the question posed in the title of Thomas Nagel's influential 1974 article "What is it Like to Be a Bat?" (1974, 435–450).[5] Nagel argued there that any organism that can be said to have conscious mental states must have a unique type of subjective experience, "something that it is like to *be* that organism—something it is like *for* the organism" (Nagel 1974, 436). In "Darker Than Night," Kac attempted to demonstrate what it is like to experience the world as bats do by means of a telerobotic bat (the "batbot") which was placed in a cave in a Rotterdam zoo where 300 Egyptian fruit bats were living. The batbot produced ultrasonic emissions, transmitted a video stream, and transformed the bats' echolocation emissions into sounds audible to humans. Participants stood outside the cave wearing virtual reality headsets which allowed their "sight [to be] transformed into the point of view of the batbot's sonar." According to Kac, the experience of "being there" in the cave as a bat was so immersive that he referred to "the behavior and the telerobotic sonar *of the participants* in the body of the batbot." While Kac's specific goal for "Darker Than Night" was to explore "the human-machine-animal interface and telepresence as a means of mediating relations of empathy" (Kac 1999), the work is of interest here because it attempted to achieve this goal by making the viewer present in a distant and unfamiliar place and engendering an experience of a wholly different form of embodiment.

As a final example, the dance performance "Dancing on the Feet," a collaboration between BeAnotherLab and the dance troupe Liant La Troca, allowed a group of dancers who use wheelchairs to experience the embodied perspective of dancers who are able to stand upright and move their legs. Wearing a special headset, a wheelchair dancer (the "user") communicated through hand gestures with a standing dancer wearing a video camera (the "performer"), who moved her legs in response to the user's gestures. The user was thus able to experience her "virtual legs" moving in response to her commands (BeAnotherLab). During performances of "Dancing on the Feet," users reported "a very strong and unfamiliar feeling that many of them couldn't remember in their lives (being able to stand up or vertigo of being taller)" (Bertrand et al.). This, it was claimed to indicate, allows not only a perceived change of location or position, but, as in "Ornitorrinco" and "Darker Than Night," a profound shift in the nature of their embodied expe-

[5] While Kac does not explicitly discuss Nagel's article in his notes for this piece, the connection has been made in the scholarly literature. See, for example, Milevska 2000, 47–52.

rience as well. These three examples give a good illustration of the ways in which telepresence art stretches the notion of presence and embodiment, allowing participants, in some sense, to experience the world with an "extended body" of some sort. As I will show, this "extension" comes about not through a destruction of the participants' sense of space or situatedness, but rather through an expansion of these aspects of their subjective experience.

II

Returning to Kac's "Telepresence Art" essay, one of his main goals there is to discuss the way that telepresence art makes space "disappear" in deference to time, specifically the "real time" of videoconferencing, live televised sporting events, or any application of telepresence technology. With our ability to interact with people, and witness or participate in events, anywhere on the globe in real time, Kac argues, "real space and the very notion of distance are becoming increasingly irrelevant, giving up their once privileged status to real time" (Kac 1993). With the growth of virtual reality applications, the distinction between direct and mediated perception of reality is growing ever more blurred, as works such as "Darker than Night," and "Dancing on the Feet" illustrate in striking fashion (Kac 1993).

Kac relies in part on Merleau-Ponty's analysis of the intertwining of vision and embodied experience in "Eye and Mind" to make his point about our increasingly mediated experience of the world, and how he claims it suppresses and homogenizes space. In particular, he references Merleau--Ponty's critique of Cartesianism and operationalism in science, in which he asserts that movement "is not a decision made by the mind … some change of place miraculously executed in extended space" (Merleau-Ponty 1964b, 162). On Kac's interpretation, Merleau-Ponty is implying that traditional science constructs the world in such a way that "the constructs are abstracted from that body caught in the fabric of the world which generates them," in part because "science uses instruments that 'sense' phenomena that the human body doesn't respond to" (Kac 1993). In this sense, the operational models produced by scientists are akin to experiences such as the simulation of echolocation in "Darker Than Night," which provide participants with input from sense-organs that humans do not possess.

Thus, for Kac, telepresence art creates the same type of "miraculous" change of place for which Merleau-Ponty rejects Cartesianism, although in this case the miracle "is not achieved by a mental command but by the use of specific instruments (telerobot, video modem, telephone, video monitors,

etc.)" (Kac 1993). In contrast to Merleau-Ponty's attempt to remove Cartesian dualism from his own work, Kac, while perhaps equally critical of it, chooses to highlight, and even intensify it in his telepresence art, in order to bring participants' attention to its detrimental effects. Referencing Merleau-Ponty's discussion of the "maps" of "the visible world and the world of my motor projects" in "Eye and Mind" (Merleau-Ponty 1964b, 162), Kac argues that the ubiquity of video monitors and telecommunications instruments has created a world in which "electronic images command the map of the visual and of the motor projects of humankind" (Kac 1993). Screens are thus "both the bridge to another place and that which makes vision possible. But this vision doesn't separate what it sees from where it sees it," and thus all places, regardless of how distant, take on a similarly mediated character (Kac 1993). The maps of the visual and the tangible, the overlapping of which is central to Merleau-Ponty's conception of painting as a form of vision in "Eye and Mind," are thus decoupled from each other, and our embodied experience of space, location, and distance is necessarily impoverished. Whether in robotic surgery or telepresence pieces such as "Ornitorrinco," "the screen, then, is as much a part of the process of seeing, as the movements made by the participant in consonance with the telerobot" (Kac 1993).

In such cases, Kac argues, the body is not operating with the same "map" as the vision, since it cannot move within the space mapped by the eyes. The users of "Ornitorrinco," for example, are directing the telerobot in a different city from where the robot itself is located; in one implementation in 1990, for instance, the users were in Rio de Janeiro while the robot was in Chicago (Kac 1991, 233). Thus, even though the users are controlling the robot's movement and seeing what it "sees" on the video monitor, the world through which their bodies are able to move at that moment is located in Rio, not Chicago.[6] By decoupling the two maps, then, telepresence art reinstates a Cartesian perception, in which "worked-out phenomena" are presented to a disembodied intellect and the prediscursive level of phenomenal experience is suppressed (Merleau-Ponty 1964b, 160). As Kac puts it, "The use of the video monitor in our telepresence installations is meant both as a door or passage between two spaces and a metaphor for our mediated

[6] Although contemporary "virtual reality" technology allows for a much more immersive experience than that which was available during the years "Ornitorrinco" was being staged, the same principle holds true; even in the case of such technologies, the user's body is physically located in a different environment from that which her vision experiences.

experience of an intelligible world" (1993). Kac thus sees Merleau-Ponty's conception of embodied perception as supporting his own position that telepresence art represents a subsumption of space under time, in particular simultaneity. On Kac's view, by enhancing the Cartesian divide between intellect and embodied experience, his telepresence art illustrates the same points that Merleau-Ponty makes regarding the way in which mediated experience impoverishes our sense of space. However, I believe that this interpretation fails to see the full implications of the account of vision and motility developed in "Eye and Mind." A close examination of some key passages will reveal that, contrary to what Kac contends, Merleau-Ponty's account can help us to see how telepresence art actually reveals an expanded, extended experience of space and embodiment.

"Eye and Mind" begins with the statement that "[s]cience manipulates things and gives up living in them" (Merleau-Ponty 1964b, 159). In other words, empirical science constructs models of the world and gives meaning to objects based on those models. As a result, it fails to confront lived, individual objects, instead "admit[ting] only the most 'worked-out' phenomena" which it constructs on the basis of experimental data (Merleau-Ponty 1964b, 160). To embark on a more fruitful path, "[s]cientific thinking, a thinking which looks on from above, and thinks of the object-in-general, must return to the "there is" which underlies it" (Merleau-Ponty 1964b, 160). No sort of scientific methodology can help effect this return, however: only the "vision" of the painter has that ability. In contrast to philosophy, literature, and music, "art, especially painting, draws upon this fabric of brute meaning which activism [or operationalism] would prefer to ignore. Art and only art does so in full innocence" (Merleau-Ponty 1964b, 161). Inasmuch as painters are not required to evaluate what they see, they are exempt from the "working-out" and manipulation of phenomena which characterizes scientific inquiry. The painter's objects thus remain brute objects without being "transformed into thought" (Merleau-Ponty 1964b, 163). Here Merleau-Ponty expresses a sentiment that is also present in the essay "Cézanne's Doubt", where he wrote that "Cézanne's painting … reveals the base of inhuman nature upon which man has installed himself" (Merleau-Ponty 1964a, 16).

Being a process that makes accessible a prediscursive level of experience, painting cannot be a product of representational thought. "The painter "takes his body with him … Indeed we cannot imagine how a *mind* could paint" (Merleau-Ponty 1964b, 162). The painter's vision is fundamentally embodied and cannot be separated from the movements of the body, insofar as "[t]he visible world and the world of my motor projects are each total

parts of the same Being" (Merleau-Ponty 1964b, 162). While Kac maintains that mediated, electronic images have taken over both of these worlds, disrupting our sense of space and situatedness in our environment, Merleau-Ponty's conception of painterly vision provides an alternative to this view, rather than reinforcing it. At the center of "Eye and Mind" lies the notion of the "reflexivity" of vision: the basic insight that the body is "a thing among things", and that "the world is made of the same stuff as the body" (Merleau--Ponty 1964b, 163). As opposed to the representationalist understanding of perception, in which the subject creates internal representations of objects it assumes exist in a world outside of it, on Merleau-Ponty's account, vision and movement are inseparable aspects of a body which is itself inextricably enmeshed in the world. He thus sets aside the false dichotomy of self and world, or inner experience and external states of affairs, conceiving of vision and painting as fundamentally embodied processes.

If we view telepresence art in this light, the fact that it relies on a mediated form of vision and creates action at a distance becomes less important than its underlying ability to create a profound experience of "being there," even in a distant and very different sort of body. When directing the "Ornitorrinco" telerobot, the user still experiences the body as both seer (that who sees) and (that who is) seen, and recognizes it as the same type of thing as any other visible object. What makes this case unusual is the geographical location of the body being experienced, not an impoverishment of the spatiality of that body. This understanding is supported by Merleau--Ponty's own characterization of vision as "not a certain mode of thought or presence to self; it is the means given me for being absent from myself" (Merleau-Ponty 1964b, 186). In other words, vision allows me to experience both the commonality between my body and other visible objects and those objects' physical distance from me. By "seeing myself" in distant objects, I experience a connectedness at least as fundamental as the physical separation between objects. Thus telepresence art, rather than destroying or disrupting space, expands my embodied experience and thus my sense of space insofar as it relocates my visual and motor worlds to a geographically distant place.

Interestingly, in his discussion of the aims of "Ornitorrinco," Kac himself characterizes the project as an exploration of "some of the possibilities of an out-reaching vision, in particular, and an extended body, in general," phenomena that he sees as arising from our constant exposure to contemporary telecommunications technologies in everyday life (Kac 1991, 233). This sentiment is very much in keeping with Merleau-Ponty's conception of vision as

an "absence from myself," but crucially, as discussed above, for Merleau-Ponty this "absence" does not equate to a loss of the sense of self or a "disembodiment" of any sort. On the contrary, it "makes us learn that beings that are different, 'exterior,' foreign to one another, are yet absolutely *together*, are 'simultaneity'" (Merleau-Ponty 1964b, 187). The mediated experience of simultaneity, which Kac sees as indicative of the breakdown of our natural sense of space and embodiment, is thus, for Merleau-Ponty, a central aspect of embodied vision. Far from removing me from the spatial world, this "reflexive" vision emphasizes my status as one material, visible object among others in the world. In a similar vein, media and communications scholar Panayiota Tsatsou has argued that "through mediated images, people either become aware of the existence of other places or enrich their perceptions of what a place can be, acting in favor of the evolution of their own place" (Tsatsou 2009, 27). She suggests that theorists who forecast the demise of place or space tend to reduce it to a mere geographical location, overlooking factors such as subjective experience, perception, and individual identity, all of which contribute to the "continuously evolving process of place construction, as places are still significant elements of social reality and individual identity" (Tsatsou 2009, 25). Acknowledging the transformative power of the mediated experience of the world created by recent technological advances, she concludes that "[m]ass and new electronic communications mediate the sense of place … but without eliminating the essence of place, space, and time" (Tsatsou 2009, 27). Telepresence art, which takes advantage of these communications media, likewise produces mediated experiences that are constructive, rather than destructive.

III

While "Eye and Mind" provides compelling support for this "constructive" understanding of the spatiality of telepresence art, I would like to briefly consider some further evidence from *Phenomenology of Perception*, in particular with respect to the question of whether it makes sense to speak of "embodied experience" when, as in "Ornitorrinco," the parts of the "body" in question are not spatially continuous with one another. In that text, Merleau-Ponty argues that the spatiality of my own body is something quite different from the geometrical spatiality of the world: "my body appears to me as an attitude directed towards a certain existing or possible task. And indeed its spatiality is not, like that of external objects or like that of 'spatial sensations', a *spatiality of position*, but a *spatiality of situation*" (Merleau-Ponty 1962,

100). My directedness toward a particular object, task, or activity defines the 'here' of my lived body, a body which always finds itself already situated within a world that makes sense to it. This experience of being already in--the-world cannot be explained by the objective spatiality of external objects: "[e]ven if the universal form of space is that without which there would be for us no bodily space, it is not that by which there is one" (Merleau-Ponty 1962, 101). As in "Eye and Mind," Merleau-Ponty contends that perception provides the foundation of our lived experience of the world, but he also acknowledges that the mechanisms by which this occurs are difficult to articulate, inasmuch as "it is of the essence of consciousness to forget its own phenomena thus enabling 'things' to be constituted" (Merleau-Ponty 1962, 58). Although it seems as if terms such as 'on' or 'under' should have some universal meaning apart from our embodied experience of such relations, the self-evident givenness of these relations

> […] suggests that we should look beneath the explicit meaning of definitions for the latent meaning of experiences. … The truth is that homogeneous space can convey the meaning of orientated space only because it is from the latter that it has received that meaning (Merleau-Ponty 1962, 102).

While, in our everyday, discursive engagement with the world, we assume that objective, "homogeneous" space is the background against which our experience of experiential, embodied space derives its meaning, in fact, the reverse is the case.

Returning to the consideration of telepresence art, it becomes clear that Merleau-Ponty's conception of spatiality allows for the experience of radically different types of embodiment beyond that allowed by the limits of one's physical body. Users who direct the Ornitorrinco telerobot or the standing dancers of "Dancing on the Feet" are experiencing situatedness or "directedness" toward objects and activities in the environment in which their "extended" body is located. The reports of the wheelchair dancers of "being able to stand up or vertigo of being taller" provide compelling first-person evidence of this (Bertrand et al., 3). By conceiving of the spatiality of the body solely in terms of the body's geographical position, Kac is failing to acknowledge the extension of the user's body and the "out-reaching" of her vision across space and is instead seeing the kind of "miraculous change of place" that Merleau-Ponty decries. The philosopher and cultural anthropologist Michel de Certeau gives a particularly clear explanation of this distinction in *The Practice of Everyday Life*, when he invokes Merleau-Ponty in a discussion of space and place. Drawing on Merleau-Ponty's distinction between geo-

metrical and lived space, which Certeau refers to as 'place' and 'space,' respectively, he states that, while a place is "an instantaneous configuration of positions": a space "exists when one takes into consideration vectors of direction, velocities, and time variables" (de Certeau 1984, 117). For Certeau, place is determined by our physical relations to other objects, but space arises as "a determination through *operations* … by the actions of historical *subjects*" (de Certeau 1984, 118). While Certeau is not concerned with aesthetic experience in particular, he, like Merleau-Ponty, argues more generally that space is not simply a sort of supplement to place, but is rather "*a practiced place*": for example, "the street geometrically defined by urban planning is transformed into a space by walkers" (de Certeau 1984, 117). While "objectively" composed of disparate elements such as the sidewalk, lampposts, trees, and stoplights, a pedestrian experiences a single street—a geographically extended whole comprising all of these objects as well as the pedestrian's own body. Applying this interpretation to telepresence art, we can see the activities performed by participants in works such as "Ornitorrinco" and "Dancing on the Feet" as this type of transformative "practice," which turns two geographically distinct places into a unified space of embodied vision and motor activity.

Throughout *Phenomenology of Perception*, Merleau-Ponty himself addresses situations in which an individual's experience of embodied spatiality does not precisely coincide with the physical boundaries of her body; prominent examples include his treatment of phantom limb pain and various disruptions of proprioception and body awareness (Merleau-Ponty 1962, 76ff, 103ff, respectively). While he acknowledges that "it is clear that there is a knowledge of place which is reducible to a sort of co-existence with that place" (Merleau-Ponty 1962, 105), if that were all there was to embodied experience and situatedness, then there would be no way to explain the experience of patients who have difficulty locating a spot on their body that has just been touched or describing the position of their arms, or of amputees who feel sensations in absent limbs (Merleau-Ponty 1962, 107). Such conditions seem even more perplexing given patients' ability to easily complete routine motor tasks such as sewing. They become more understandable, Merleau-Ponty argues, when we acknowledge that "it is never our objective body that we move, but our phenomenal body," a body which, "as the potentiality of this or that part of the world, surges toward objects to be grasped and perceives them" (Merleau-Ponty 1962, 106).

While it might seem that a "body" composed of a human in one city and a telerobot in another is well beyond what Merleau-Ponty is referring to here,

I believe that, at least by the time of "Eye and Mind," his conception of the body was expansive enough to accommodate the types of embodied experience created by telepresence art. Rejecting the view that the body is merely a collection of parts organized in a certain way, he characterizes it instead in terms of the reflexivity inherent in its status as both seer and seen: "There is a human body when, between the seeing and the seen … a blending of some sort takes place—when the spark is lit between sensing and sensible" (Merleau-Ponty 1964b, 163). Telepresence works such as "Ornitorrinco," "Darker Than Night," and "Dancing on the Feet" allow for this "blending" of seer and seen to occur even across great distances, producing in participants an experience of embodiment, vision, and motion in a place other than where they were before they put on the headset or stepped up to the monitor. While the ability to be in direct physical contact with other objects in the new visual environment may be lacking, it is also absent when we view a painting. However, for Merleau-Ponty this does not detract from the ability of painting to access the "brute meaning" of our prediscursive embeddedness in the world. Indeed, "painting evokes nothing, least of all the tactile. What it does is much different, almost the inverse. … thanks to it we do not need a 'muscular sense' in order to possess the voluminosity of the world" (Merleau-Ponty 1964b, 166). Locational contiguity is thus not required for an experience of spatial situatedness, and the mediated vision that telepresence art produces does not marginalize space, as Kac contends is the case. Spatial separation is inherent in vision, and our embodied spatiality is no more threatened by telepresence art than it is by painting. Like painting, telepresence art expands and enriches this spatiality, bringing us closer to the "latent meaning of experiences" that underlies discursive thinking and homogeneous geometrical space. Contrary to Kac's concern that the simultaneity and the mediated nature of telepresence art are contributing to the destruction of space, such artworks in fact have the opposite effect. By creating embodiment across physical distance, they allow participants to experience new forms of situatedness and embodied experience, thus enriching our sense of spatiality and contributing to its ongoing evolution.

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