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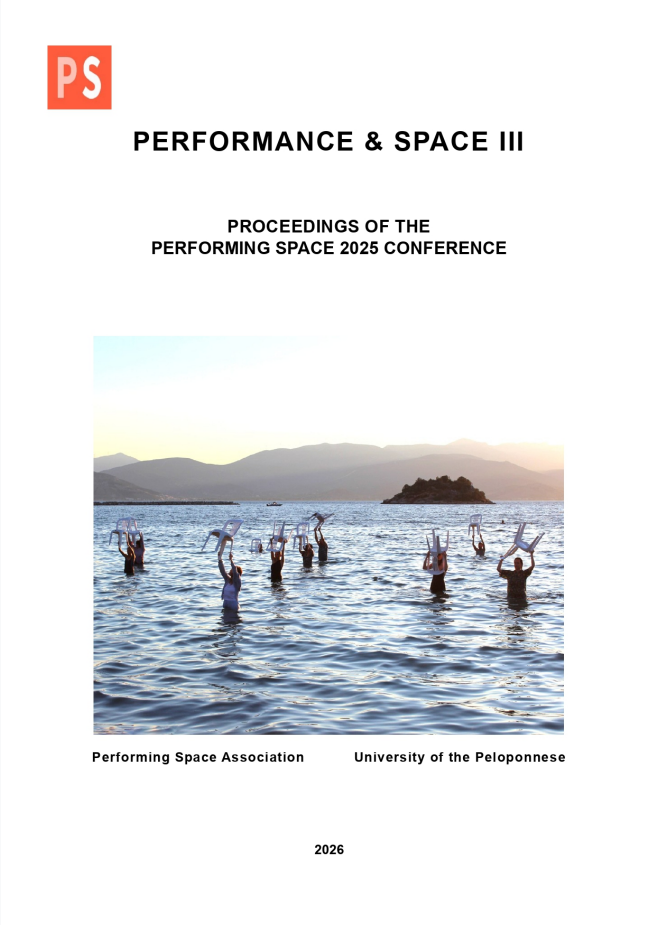

Where do I Play my Body?

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Where do I Play my Body? A Round Trip Between Virtual Stages and Real-World Arenas

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Abstract

In 1991, Laurel published the book *Computers as Theatre*, positing that to enhance the user experience, computers should engage users dramatically, stimulating both thoughts and emotions. Thirty years later, the computer and the world it opens up have increasingly become the stage for our actions and lives. Conversely, the tangible and concrete world is progressively losing its role as the stage where our stories unfold.

Rather than complementing the real dimension with the virtual, a substitution is taking place. The virtual, welcoming and tailored to the user, is supplanting the real world, which appears harsh and indifferent to human goals. In the virtual realm, everything seems possible and accessible, whereas in the real world, processes are more arduous and complex.

This contribution aims to critically examine this trajectory. By contrasting the virtual experience offered in Iñárritu's *CARNE y ARENA (Virtually Present, Physically Invisible)* with the experiential physicality of the *Digital Water Pavilion* by Carlo Ratti Associati and the performance *My body, the stones: Accademia sensitiva/somatica* by choreographer Di Pietro, it seeks to highlight the paradox of considering the virtual as a realm of infinite possibilities. In truth, the virtual is inherently bounded by the algorithms that dictate its limits and usability.

In Di Pietro's performance, the body, through its interaction with the surrounding environment, discovers infinite possibilities, invents scenarios, deconstructs boundaries, and proposes new codes. It transcends the confines of the real while remaining rooted within it. The real world, if reimagined as a stage, stimulates actions and imagination, fostering the creation of new possibilities. It transforms the body into the true protagonist of reality, engaging in a vibrant and tangible participation that goes beyond mere appearance.

Keywords: digital-physical space, coding, body, sensorial experience, affordances

In-Active Performing

The reflections in this article are the result of an in-depth study carried out within my doctoral dissertation *"PERFORMING SPACES. From the progressive dehumanization of architecture to the reactivation of the contemporary anesthetized space."* The research aims to understand which direction architecture should take in order to once again become an active stage for human action. The recognised tendency toward the anonymisation and sterilisation of activities possible within space is traced back to the radical advent of the digital realm in everyday contemporary life. Of course, it is not only the computer revolution that has caused a numbness of bodies in space — as Richard Sennett (1996) effectively explains in *Flesh and Stone: The Body and the City in Western Civilization* — yet the increasing familiarity with worlds constructed within devices, and above all the immaterial nature of those worlds, plays a crucial role in redefining the perception and experience of physical places.

The computer is, in fact, increasingly altering the very concept of interaction. In the early 1990s, much of the effort of programmers was directed toward replicating the stimuli and social conditions through which humanity interacted in physical reality (Laurel, 1991). The last decade of the 20th century was marked by the intention to create a *mirror world* (Gelernter, 1991), a virtual reproduction of the real-world experience: a dimension in which it would be "possible to go out into the square without taking off one 's pyjamas" (Gelernter, 1991, p. 23), where simply interacting with icons on a screen would be enough to affect the external world — gradually replaced by its imitation within software (Gelernter, 1991, p. 5). In a volume intended to suggest to architecture how to integrate electronic instances into physical matter, McCullough (2005) observes how computer developers, recognising the social-infrastructure role information technology was assuming, were intent on reconstructing the dynamics of the physical world: paying particular attention to the way space shaped and influenced activities and social compositions (McCullough, 2005, p. 63).

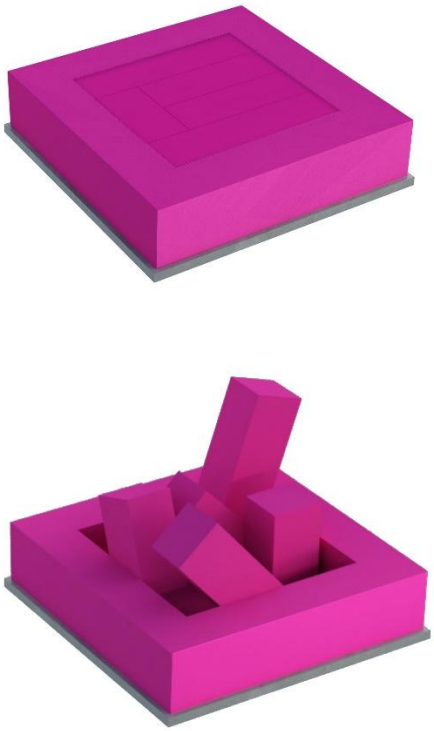
It took only thirty years to make the efforts of computer science effective; in parallel with the pervasive spread of ubiquitous computing,[1] the space of action has undergone a significant relocation into the sphere of the virtual. The experimental universe of *Second Life* has branched out into numerous digital environments, among which the *Metaverse* proposed by Facebook stands out.[2] It is interesting to note how these worlds become attractive precisely because of the possibility they offer of overcoming the physical limits of space: in the virtual dimension the body is freed from real constraints, it can fly, teleport, move from micro to macro scale, explore invisible systems, etc. This corresponds to a

[1] The possibility of accessing and connecting to the virtual sphere seamlessly

[2] It is interesting that Zuckerberg's holding company, which includes the major platforms (WhatsApp, Instagram, Facebook), has been renamed Meta.

semantic inversion of what is understood as animated matter and inert matter. The distinction goes back to Spinoza (*materia animata. materia inerte*): the philosopher used it to draw attention to the physical characteristics of the world, their mutability, their capacity to generate interaction, to change through contact. The rise of the virtual world, made of pre-programmed artificial matter, as the dynamic one, on the one hand overshadows the sensitive characteristics of the real world, while on the other reduces human experience to the possibilities inscribed in the code from which it is generated.

Figure 1
Sofa rumble by Gianni Pettena. (3d model by the Author).



A Matter of Code

It is precisely around the concept of *code* that the paradox of virtual space emerges, considered as a dimension of “endless possibilities” (Di Egidio, 2025, p. 6). To properly understand this distinction, it is important to recall Gibson's (1986) theory of affordances, coined by the psychologist in the mid-20th century. Affordance is the ability to perceive information in space, the ability to grasp the intrinsic possibilities of an object or environment; translated into terms of code, it is the ability to decode environmental information. As Duchamp demonstrated disruptively in the 1920s, a urinal can be a fountain. A world apparently inert and with an already-assigned symbolism contains, for those who know how to see them, infinite possibilities of interpretation and use. The choreographer Halprin

demonstrates this when she seeks out all the possible uses and dynamics of a bicycle, just as Pettena — an exponent of Italian Situationism — transforms it into an object: in his project *Sofa Rumble* (Figure 1) lies the provocative possibility of interpreting space according to one's own will or need.

From the definition of *code,* one understands how the word signifies the passage of information from one form to another, from one system of rules to another. This implies an interpretability and a constant possibility of reformulating the semantic sphere of environmental characteristics. Nevertheless, *code* is also one of the cornerstones of computer science, where it assumes the meaning of the skeleton of the virtual environment: behind every web page or 3D model — habitable environments in increasingly familiar and varied forms — there lies a data source and a compositional structure. In other words, the virtual environment is the expression of a code, this time hidden and not directly interactable. Or rather, interaction with elements is permitted only in the way the system allows. Whether broad or narrowly functional, this always reveals the limit of being unable to go beyond what is unprogrammed. In a certain sense, one could say that the distinction between the physical and the virtual world lies in the difference between *de-coding* and *en-coding.*

Translating this split into the sphere of theatrical action, of the performativity of places, two attitudes emerge, set in contrast within the article. When action takes place in a purely virtual context, the participant acts within a simulation whose outcome they cannot change: they are immersed in a dimension they undergo, while believing they inhabit and transform it. A telling example is Iñárritu 's installation *Carne y Arena (Virtually Present, Physically Invisible).* With this work, the famous Mexican director seeks to break the contemplative-only relationship of participation with cinema. He wants to insert the spectator directly into the context, lifting them from their seat and immersing them in a virtual reality made believable through its physical staging: in *Carne y Arena (Virtually Present, Physically Invisible),* those who experience the painful events through the VR headset walk barefoot on sand and are buffeted by gusts of wind. The projection of the Mexican desert, where a group of migrants approaches the U.S. border, is heightened by the contact with dunes spread across the floor and by the air blown from fans integrated into the walls. The spectator's body disappears from view — the headset does not even recognise the hands. When the sound of a border patrol helicopter descends into the desert, the wind in the room stirs the sand beneath the spectator's feet; when armed officers begin firing at the group of migrants, the spectator, completely absorbed in the action, also begins to flee, feeling the desert tangibly underfoot. Yet, while the bullets never strike them, they cannot suggest or do anything to save their traveling companions, who perish before their terrified eyes. The action unfolds despite them; the course of events remains predetermined. While Iñárritu's work perfectly conveys the condition of powerlessness one would feel in such a real-world

situation, it also exemplifies the dynamics of immersive action: in a virtual context, actions are pre-programmed; one cannot go beyond the limits of the code.[3]

By contrast, action in the physical context can rely on a code in constant mutation, depending on the inclinations of the subject who perceives it. The article presents the case of the *Digital Water Pavilion* designed by Carlo Ratti Associati in 2008 for the Zaragoza Expo (Figure 2). This example was chosen because it integrates a technological code into the physical dimension: the pavilion consists simply of a roof around whose perimeter a home-automation system is installed that recognises people. Sensor detection allows the interruption of the water flow cascading from the edges of the roof, forming four sensory, mutable facades and permitting people to enter the illusory parallelepiped. The waterfall opens to create a passage for the detected person. It did not take long for people to start challenging the mechanism, interpreting and interacting with the code playfully: soon the pavilion enlivened the surrounding space, prompting people to run in and out, amused by the bet, “will I get wet or not?” The wall, born as an elegant water curtain, was recoded into a playful mechanism through interaction with space. Almost ironically, the mechanism one day suffered a short circuit, causing the water flow to break its programmed rules and activate randomly — leading people to interact even more actively with the space.

Reading the environmental characteristics also underpins the *Accademia Sensitiva Somatica* workshop proposed by choreographer Lucia Di Pietro. Located within historic and artistic sites — today viewed primarily as heritage to be preserved and minimally interacted with — the workshop guides participants into gradually contacting the elements of space (Figure 3). Starting as paired dynamics, each participant within three minutes, must ask the other to perform specific actions or gestures, the environment itself becomes the protagonist of these requests. The proposal “blindfold me and assist me” is common: in its execution, the surrounding walls become the guide of movement, their structure a sensory labyrinth for the hand moving in darkness; uneven floors prompt requests to be dragged, while the textures of encrusted colours on pavements become invisible maps upon which to move. The inert — and protected — matter of the physical place, to which participants had been essentially insensitive before the workshop, becomes animated matter, suggesting actions. As a reification of the theory of affordances, the workshop turns space into a substance full of information to decode, semantic spheres to reinvent, and possibilities to actualise. The old roof of an Etruscan house, previously just a display material, becomes the refuge in which to seek out the echo of one’s own voice while being enveloped by shadow and coolness.

[3] The Matrix film saga played precisely on the exceptional ability to understand and manipulate the virtual code governing the unaware lives of humans embedded within the system

Figure 2
Digital Water Pavillon by Carlo Ratti as an elegant and playful device. (Courtesy of Ramak Fazel).

Conclusion

If in virtual space — towards which humanity rushes ever more precipitously amid digital transitions and device dependencies — action is permitted only as the code allows, in physical space — considered less dynamic and interactive compared to its electronic counterpart — action can be endlessly reinvented: through reading environmental stimuli and through the depth of an experience that includes not only vision but also fully engages the body and the senses. It is therefore necessary to find a balanced way of integrating the technological revolution into the performativity of places. The question *Where do I play my body?* is crucial in this paradigm shift. The body is in fact a central element, since it can directly perceive the differences: in the virtual world, it is projected into a simulation in which it can only act according to the lexicon of the program, inhabiting a reality that is sensory insofar as it can inscribe sensations into a code. The cognitive sphere of the physical world is reduced to what can be described; likewise, actions are reduced to the code that inscribes them. Analysed in light of expressive conditions and the state of the body, the computer revolution reveals an endemic problem: that of narrowing the field of possibilities. Yet, through the study of the performativity of places, it is possible to steer the process in another direction: interpreting technological devices not as instruments of virtual reduction of spaces, but as tools to enhance the physical characteristics of the environment — thus amplifying the human sensory sphere and opening new perspectives for interpreting the field of existence. This approach could lead toward a new relationship between digital tools and architecture: instead of building architecture into the sensorially limited virtual dimension, it proposes to export into the physical world the possibilities introduced by technologies, as shown with the example of Carlo Ratti Associati's Digital Water Pavilion. Code can then cooperate with the unpredictability of the real world, instead of defining the predetermined experience of the digital realm, and the body regains an enhanced role in play.

Figure 3

Accademia Sensitiva Somatica by Lucia Di Pietro. Getting in touch with the surroundings. (by the Author).

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