

Performative forms of architecture: from real space to virtual space

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In this paper we will relate the term «performance» to what, in different ways, can be considered the components of architecture: the project, the body of the dweller, the space itself, the virtual models. The different ways in which each of these elements can «perform» will be analysed in the paragraphs: (1) digital performatism, which redefines the form of the project with new tools; (2) bodies as performative agents in the architectural space; (3) architecture as a place for artistic performances, which can be defined as a performed object, but also as a performing subject; (4) and finally, virtual space, where architecture finds many possibilities of expression, in relation to the bodily performance of the user.

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As Richard Schechner affirms, «performance» must be considered an inclusive term¹, encompassing different fields and applications in our everyday life. If we consider the word in the field of architecture alone, we will see that it can take on many meanings and refer to different actions: we can consider as performance project, the relationship of the body to space, the role of place in determining a certain type of artistic practice. In this contribution, we will focus in particular on the idea of the performativity of bodies in architectural space and try to consider architecture not only as a performed object, but as a *performing subject*, i.e., an active part of the performative action. Finally, we will open up our reflection to virtual space, where architecture finds its own manner of configuring itself in a different way, but always in relation to bodily action².

1. Design and form

In this context, the word «performatism» encompasses a range of practices which rethink design in relation to digital tools. Although an unambiguous definition of performance

¹ R. Schechner, *Performance Theory*, Routledge, London/New York 1988, p. XVII.

² This article was written in the framework of the research project "AN-ICON. An-Iconology: History, Theory, and Practices of Environmental Images". The project has received funding from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (grant agreement No. 834033 AN-ICON), and is hosted by the Department of Philosophy "Piero Martinetti" at the University of Milan (Project "Departments of Excellence 2023-2027" awarded by the Italian Ministry of University and Research).

related to this field of application has yet to emerge³, one can speak of a *performance digital turn*⁴. Without dwelling at length on this point which, as we shall see, concerns aspects more related to design practices, we will limit ourselves to highlighting at least some research directions that may help to understand the general lines of the phenomenon. Undoubtedly, the concept of «performance» is used to describe a change in the historical relationship between form and function which, at least in modern days, has led to a widespread debate on the essence of design and, consequently, shifted it in one or the other direction (Hensel 2010). In the theoretical framework of performatism, the idea of form is defined as «an outcome of performance», since «digitisation shifts form-making to a complex, dynamic operation based on performative aspects»⁵. So, to put it simply, performance concerns the process of generating the form of the structure which is realised digitally in accordance with certain parameters. Thus, morphogenetic designs fall within this meaning, in which the form can be, for example, aimed at achieving maximum structural efficiency by means of the production of many models from which to choose: «Instead of modelling an external form, designers articulate an internal generative logic, which then produces, in an automatic fashion, a range of possibilities from which the designer could choose an appropriate formal proposition for further development»⁶. This framework certainly raises a number of important questions, firstly about the role of the architect, as this type of approach seems to turn towards «the quest for an architectural process without a subject»⁷ where the architectural creation that is displayed on the screen resembles an *event* that *simply* happens. The term *performatism*, however, also refers to the actual responsiveness of buildings to various environmental factors – in this case, performance is spoken of in the same way as one would speak of the performance of an actor on the cinema screen, something about its qualities: «the

³ See A. Kassem, *Rehearsing a performative theory for architecture*, in M. Ming Kong, M. Rosário Monteiro, M. João Pereira Neto (ed. by), *Creating Through Mind and Emotions*, CRC Press, Leiden 2022, pp. 61-9; Y.J. Grobman, E. Neuman, *Performatism. Form and Performance in Digital Architecture*, Routledge, London/New York 2012; B. Kolarevic, A.M. Malkawi (ed. by), *Performative Architecture: Beyond Instrumentality*, Routledge, London/New York 2005.

⁴ C.A.C. Quin, *Cybernetic Architectures: Informational Thinking and Digital Design*, Routledge, London/New York 2022.

⁵ Y.J. Grobman, E. Neuman, *Performatism. Form and Performance in Digital Architecture*, cit., p. 5.

⁶ B. Kolarevic, *Architecture in the Digital Age: Design and Manufacturing*, Taylor & Francis, London 2003, p. 13.

⁷ A. Picon, *Architecture as performative Art*, in Y.J. Grobman, E. Neuman, *Performatism. Form and Performance in Digital Architecture*, cit., p. 17. See also L. Ortega, *The Total Designer: Authorship in the Architecture of the Postdigital Age*, Actar Publishers, New York-Barcelona 2017.

ability for a given system to exchange information with its environment»⁸, making architecture in many ways responsive to its surroundings⁹.

2. Architecture as performative space of bodies

To say that architecture is a performative space may indeed seem tautological. In fact, we could say that it intrinsically requires a «performance» on the part of the subject: there is no architecture without a body inhabiting it, acting in its spaces or around it. To put it in phenomenological terms, it is in the relationship between the living body (*Lieb*) and space that human existence is fulfilled, even when we speak of the home¹⁰. Along these lines, the Finnish architect Juhani Pallasmaa develops his theoretical work, investigating the relationship between human beings and architecture as a true performative action. In fact, the project of a fragile architecture, with which *The Embodied Image* closes, aims to define a category of spaces which solicit interaction and relationship, as opposed to «strong images» which exclude the participation of subjects. What Pallasmaa proposes is precisely an architecture that is capable of engaging the body in its entirety, offering users spatial situations conceived to be *lived*, which reveal their meaning thanks to the perceptive experience of those who inhabit them: the body resonates with the structure of the buildings it experiences, in a sort of mimetic exercise of spatial embodiment.

[...] the architecture of weak image is contextual and responsive; it is concerned with sensory interaction instead of idealised and conceptual manifestation. This architecture grows and opens up, instead of the reverse process of closing down from the concept to the detail. [...] These works invite us as participants and open up spontaneous architectural narratives¹¹.

Architecture must therefore be conceived from two different but complementary points of view. On the one hand as the space that is acted upon, traversed, looked at, and

⁸ A. Sprecher, *Informationism: information as architectural performance*, in Y.J. Grobman, E. Neuman, *Perfomalism. Form and Performance in Digital Architecture*, cit., p. 27.

⁹ D. Katunsky, J. Huang, *Responsive Architecture*, MDPI, Basel 2019.

¹⁰ O.F. Bollnow, *Human Space* (1963), Hyphen Press, London 2011.

¹¹ J. Pallasmaa, *The embodied Image. Imagination and Imagery in Architecture*, Wiley, Hoboken, New Jersey 2011, p. 133.

even, in some way, touched¹² by means of the body. On the other, by virtue of the aesthetic experience that takes place, as a dimension which acquires meaning through the vision and subjective action of those who inhabit it. Space, then, far from being a mere aseptic container of human action, is structured in the light of the experience we have of it with our bodies, as Shusterman points out. Inaugurating a relationship that must be understood as *reciprocity* between the 'soma' and the space it addresses:

If architecture is the articulation of space for the purpose of enhancing our living, dwelling, and experience, then the soma provides the most basic tool for all spatial articulation by constituting the point from which space can be seen and articulated. [...] The concrete living space that the soma architectonically defines is not an abstract, fully homogeneous space but rather a space shaped by the body's directionality – with its front, sides, and back¹³.

Some projects and installations function precisely in this way: they directly solicit our corporeality. The Swiss pavilion set up at the 2018 Venice Biennale – and which won the nation the Golden Lion – with the installation *Switzerland 240. House Tour* by Alessandro Bosshard, Li Tavor, Matthew van der Ploeg and Ani Vihervaara, stressed the limits of image the representation of environments in images, i.e. the discordance between visual impression and actual experience of reality. Visitors were invited to walk through the different rooms physically interacting with elements on different scales: the group of architects, in fact, reversing the traditional process from image to finished project, wanted to translate into matter the different perspectives and proxemics brought into play by some photographic images¹⁴. The result – paradoxically – was a path in which one had to stoop to cross a threshold of reduced dimensions or stretch to reach a switch too high to be pressed. Beyond the playful side that undoubtedly forms part of this installation, I would like to emphasise how such a space obliged the visitor to redesign his or her actions and habits, resulting in a performative experience in which bodies had to adapt to the spatial proposals brought into play. The significant crux of this installation certainly does not lie

¹² See J. Pallasmaa, *The eye of the skin. Architecture and the Senses*, Wiley, Hoboken, New Jersey 1996.

¹³ R. Shusterman, *Somaesthetics and Architecture. A critical Opinion*, in *Architecture in the Age of Empire – Die Architektur der Neuen Weltordnung, 11. Internationale Bauhaus-Kolloquium*, Verlag der Bauhaus-Universität Weimar, Weimar 2012, pp. 288-289.

¹⁴ See M.C. Ghia, *Padiglione Svizzero: il sense of humor di un interno inverosimile*, in “Rassegna di architettura e urbanistica”, 155/2, 2018, Quodlibet, Macerata, pp. 63-67; and C. Brisotto, C.C. Murphy, M. Battaglin Ramos, *FREESPACE and the Citizen: Stories of Generosity from the Venice Architecture Biennale 2018*, in “The Plan Journal”, 4/1, 2019, pp. 237-252.

in the uninhabitable spaces that were configured, but in the dialogue in which the body had to engage from time to time with the various spaces.

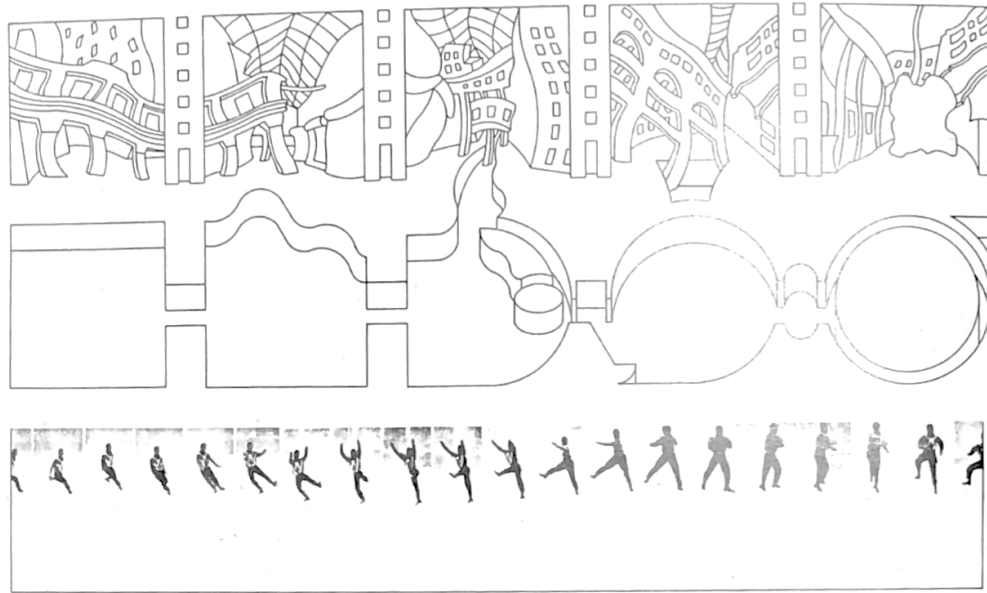
Based on what we have said so far, it seems clear how architecture is necessarily a performative space for bodies. However, it is necessary to focus on another element that contributes to determining this assumption. Indeed, perceiving a building or an architectural space requires a specific approach. In fact, one cannot consider an architectural structure as an object to be perceived in the same way as a painting: the overall view will always be partial. The same applies to an interior in which the subject is located. The perception of a building necessarily requires an «exploration», here understood as a real action of the body in space, so that the gaze unfolds «as one turns around it»¹⁵, thus generating a perceptual sequence closely linked to the kinaesthetic movement of the subject. This consequently leads to considering the building not simply the object of my observation, but giving it the «quality of an event»¹⁶, even more precisely of «an event in time that man perceives by acting»¹⁷. It is then in this sense that we can call architecture a «performative space»: a place that requires a complex aesthetic experience in order to be grasped, implying an exploratory action of a certain duration.

¹⁵ R. Arnheim, *The Dynamics of Architectural Form*, University of California Press, Berkeley/Los Angeles/London 1977, p. 149.

¹⁶ *Ibid.*

¹⁷ *Ivi*, p. 150.

Also in Bernard Tschumi's experimental vision, the body and movement are, together with the event, such determining factors of architecture that they must be included in its representation. In *Manhattan Transcripts*, the Swiss architect tries to provide different images [Fig. 1] which account for the complexity – here understood as reciprocity and conflict – that opposes a «dynamic» definition of architecture to a traditionally «static»¹⁸ one.



[Fig. 1.] Bernard Tschumi, *The Manhattan Transcripts* (1981)

3. Architecture as a performed object and performing subject

Considering the role of space in performance art is perhaps the easiest but also the most insidious way to talk about performance and architecture. Clearly not all performances, although naturally linked to the place in which they take place, are to use the correct term *site-specific*, in so far as they can be repeated in other places. While others, which are, establish an essential link with the place. On the one hand, we could say, with Carlson, that *site-specific* performance indicates «the use of unconventional performance spaces, indoors and out, with particular attention to the physical characteristics of the space and, at times, to its social or historical associations»¹⁹; and at the same time, as Pearson states that, in this kind of work, the «site itself becomes an active component in the creation of

¹⁸ B. Tschumi, *The Manhattan Transcripts*, St. Martin's Press, London, New York 1981, p. 9.

¹⁹ M. Carlson, *Performance: A Critical Introduction*, Routledge, London/New York 1998, p. 98.

the performance meaning»²⁰; so much so that, if the same work were performed in another *context*, it would lose its meaning, as Caldarola makes clear²¹. In this perspective, the constructed space is on the one hand evoked in its own specificity, in the light of which it becomes constitutive of the artistic gesture: in this sense, it is not only a *performed object* – such as the materials used by performers to carry out certain actions – but rather a *performing subject* in the same way as the artists who create the action.

«I cannot separate how intimately linked the work is with the process as a form of theatre in which both the working activity and the structural changes to and within the building are the performance»²² Gordon Matta-Clark said about one of his last projects, *Office Baroque* in Antwerp. The operation *Conical Intersect* which he presented at the 1975 Paris Biennale remains iconic; in this he made two conical cuts, on two buildings in Les Halles destined to be demolished to make way for the Centre Pompidou. In this kind of performance, it is easy to understand how architecture is at the centre of the action and can therefore be defined both as a *performed object* on which the artist acts; but also, as a *performing subject* whose role becomes decisive for the identity of the work, that without which the action could not be realised in that particular way, with those particular historical, social references, etc. The fact that the artist acts on that specific wall, in that precise building, gives the gesture its specificity.

The projects of the British duo Ewan Forster and Christopher Heighes, who describe themselves as «site-specific performance and installation artists»²³, are also embedded in the space they occupy, establishing a privileged dialogue with architecture. The recent project *Die Erde eine gute Wohnung (The Earth, a Good Apartment)* [FIG. 2], realized in 2007, is set in Bruno Taut's iconic Berlin building, *Hufeisensiedlung* (1925-33). This is an example where the poetics of the two artists, who aim with their performances to actively *re-write* places, effectively emerges²⁴. In this practice, therefore, the site is not

²⁰ M. Pearson, *Site-specific Performance*, Partridge Macmillan, Basingstoke 2010, p. 36.

²¹ E. Caldarola, *Filosofia dell'arte contemporanea: installazioni, siti, oggetti*, Quodlibet, Macerata 2020, p. 126.

²² G. Matta-Clark, *Interviewed by Florent Bex*, in B. Florent (ed. by), *Gordon Matta-Clark*, Internationaal Cultureel Centrum Antwerp, 1977, p. 8.

²³ C. Croft, *The lives of buildings*, in "C20 Magazine/Issue", 3, 2014, p. 8.

²⁴ <https://www.forster-heighes.org.uk/>

«just an interesting, and disinterested, backdrop»²⁵ (Pearson: 2007). In fact, the identity of the housing estate, an experiment in urban utopia from the 1920s – now obliterated by the market – re-emerges through films and live performances which the artists stage in the courtyard garden.



[FIG. 2] Ewan Forster and Christopher Heighes, *Die Erde eine gute Wohnung* (Berlin, 2007)

Architectural space can even be the sole performing subject: alone on stage, Gregor Schneider's *Totes Haus ur*, according to Philip Auslander, «performs» in front of visitors:

Parts of the house also perform: the rooms with artificial lighting and breezes simulated by ventilators 'act' by pretending to be something they are not. Other parts perform choreographically: the coffee room that rotates very slowly or the room whose ceiling rises and falls very slightly are examples. But the movements of which they are capable are not ends in themselves - they serve the same purposes as the materials in which the rooms are

²⁵ M. Pearson, *Site-specific Performance*, University of Art and Design, Helsinki, lecture notes, August 2007.

clad and the things hidden behind walls (whether other walls, photographs, dolls, etc.). The house as a whole is an actor [...] ²⁶.

It is a house that the German artist built *ad hoc* for the German pavilion at the Biennale in 2001. The rooms remain the only witnesses of a past presence – that of the artist – while retaining a certain coefficient of life in the individual elements that constitute it.

If in these examples we manage to fully grasp the sense of architecture as performed object and performing subject, there are cases in which the presence of an architectural element or of the entire space participates in the action, so to speak, more silently, but not for this reason playing a secondary role. In other words, even outside a context of site-specificity, the architectural space must be considered, in some cases, as something that *essentially and internally* determines the action through its symbolic values, creating, we might say, specific *affordances*. «[T]he door speaks», said Simmel ²⁷.

On 2 June 1977 at the Galleria Comunale d'arte moderna in Bologna, Marina Abramovic and Ulay staged a performance that was to become one of the most famous in history, *Imponderabilia*. The two artists, both completely nude, stood facing each other in the doorway from the atrium of the gallery to the exhibition, and anyone wishing to enter had to pass through the narrow gap between their bodies. The core of this performance lay in the fact that visitors, in order to cross the threshold, had to choose whether to turn toward Abramovic or to Ulay, coming into contact with the naked bodies of two strangers.

However, the aspect I would like to emphasise is another. The subtitle of the film produced by the Louisiana Museum of Modern Art in Copenhagen ²⁸, in which the two artists recount the experience, reads 'A living door of the museum' – the words with which Abramovic closes the interview. The bodies of the two artists recreate a very specific place, the door, which becomes a constituent part of the action performed by artists and visitors.

²⁶ P. Auslander, *Behind the Scenes: Gregor Schneider's 'Totes Haus Ur.'*, in "PAJ: A Journal of Performance and Art", 25/3, 2003, p. 87.

²⁷ G. Simmel, *Bridge and Door*, in "Theory, Culture & Society" (SAGE, London, Thousand Oaks and New Delhi), 11, 1994, p. 7.

²⁸ Louisiana Channel: <https://vimeo.com/225986826>

This performance thus operates on a very precise gesture, ingression, properly the act of entering a place, although certainly charging it with other meanings as well. An everyday action, such as entering a place through the front door, is transformed by the performers' bodies into artistic practice. In this sense the original performance is more striking than the more recent re-enactments, where the visitors' passage involved entering from the atrium of the gallery to its interior²⁹, emphasising the distinctive *contradiction* between exterior and interior expressed by the element³⁰. Here too, as in the site-specific works we have discussed, the architectural element, the door, becomes a *performing subject*, as it does not merely represent one the place where something happens, but rather determines the very nature of the performance. Crossing the threshold is already *imponderable*.

4. Performance in virtual space

The threshold is an effective starting point to talk about another kind of experience that can be interpreted as performance: virtual reality. If, in fact, by passing through a door we are entering another environment, in the same way, when we put on a VR headset, we can say that we cross *the threshold between reality and its representation* (Pinotti 2021). The HMD (head-mounted display) device in fact allows access to a digitised world-image into which we are, so to speak, immediately teleported: the helmet *detritorialises* us³¹ from the reality in which we find ourselves and *reterritorialises* us into another environment. It is certainly no coincidence that one of the first experimental studies on virtual space, i.e., *cyberspace*, came from the world of architecture. In the 1990s, a group of scholars from schools of architecture and the arts in the United States and Canada organised a conference at the University of Texas, the proceedings of which were published the following year in the volume edited by Benedikt, *Cyberspace. First Steps*.

²⁹ In the re-enactment at the MoMa in 2010, not only did the performance take place between indoors and outdoors, but the audience's route was not obligatory, so visitors were free to choose whether or not to walk through the installation. See C. Stern, *The artist is present in the bodies of many: Reperforming Marina Abramović*, in "Agôn", 6, 2013. Online since 23 February 2014: <http://journals.openedition.org/agon/2739>; DOI:<https://doi.org/10.4000/agon.2739>.

³⁰ R. Venturi, *Complexity and Contradiction in Architecture*, Museum of Modern Art, New York 1966, p. 249.

³¹ P. Lévy, *Becoming Virtual: Reality in the Digital Age*, Plenum Trade, New York 1998.

However, it is one thing to speak of a generic virtual space and quite another to speak of actual virtual reality. With these devices, the user is completely immersed in the digital image and experiences a strong sense of presence, known as '*being there*', just as if he or she were in a physical place. Here the user is called upon to continuously perform within the space, moving and looking around and thus modifying his or her view of the environment: generating «a personalised experience that is never completely replicable», but «always re-performed by the position of the gaze and the body»³².

However, there are different types and purposes of virtual realities, in which architecture takes on different roles and forms. For some years now, especially since Zuckerberg launched his business project in October 2021, there has been increasing talk of the “metaverse”. This direct descendant of *cyberspace* (the term “metaverse” has also been extrapolated from the world of science fiction novels, in this case Snow Crash from 1992) announces itself as a territory of experimentation for architecture too³³. Major architectural firms have already given shape to their visions, such as Zaha Hadid Architects who collaborated on Liberland. This metaverse project is «a one-to-one digital twin of the physical land mass of Liberland (beautifully situated at the Danube River between Serbia and Croatia)»³⁴, where parametric design finds a virgin ground in which to build. But architecture also finds there a place to reinterpret the past, as in the case of Temple University in Philadelphia, which has built on Second Life its virtual campus inspired by Louis Kahn's famous National Parliament House in Dhaka³⁵.

Even outside the virtual realms of the metaverse, there are more circumscribed experiences that give the possibility not only to recreate unrealised spaces, but also to experiment with ways of interacting with and manipulating the surrounding built space. With the VR *Osaka '70* experience [FIG.3], Valentina Temporin and John Volpato, founders of Ultra, have brought to life the never realised project of Roman architect Maurizio Sacripanti. I do not say “brought to life” casually. His drawings, made for the Italian pavilion for the World Expo in Osaka in 1970, prefigured a kinetic architecture

³² G. Grossi, *Performativo*, in Pinotti, A. (ed. by), *Il primo libro di estetica*, Einaudi, Torino 2022, p. 197.

³³ See S. Shakeri, M.A. Ornek, *How Metaverse Evolves The Architectural Design*, in “Architecture And Planning Journal (Apj)” 28, 3, Article 35, 2023.

³⁴ P. Schumacher, *The metaverse as opportunity for architecture and society: design drivers, core competencies*, in “Architectural Intelligence”, 1, 11, 2022, p. 14.

³⁵ A. Moneta, *Architecture, Heritage, and the Metaverse: New Approaches and Methods for the Digital Built Environment*, in “Traditional Dwellings and Settlements Review”, 32, 1, 2020, pp. 37-49.

capable of reacting to the passage of visitors. Wearing the helmet, one is guided to the discovery of this design, which finds its full realisation not so much in static contemplation, but in a true exploration by the user inside the digitally recreated space.



[FIG.3] T.E.A.M., *Osaka '70* experience (2021)

In contrast, in Sara Tirelli's VR installation *Cilia*³⁶, the actual space surrounding the user is recreated in the helmet. This, however, is virtually covered by a texture that resembles fur – precisely *cilia*. The environment, which the user recognises as the 'real' one outside the helmet, does not remain a mere setting, but co-constitutes the experience itself: the walls and shapes become *responsive* to the gestures that the user enacts. The room gradually transforms, through the user's intervention, into a space that is fashioned in different ways each time.

Undoubtedly, these examples put into practice different modes of interaction, different *agencies*, with virtually constructed spaces: if the first, the metaverse, immerses us in the scenario of an urban landscape, the instances of the realisation of architectural projects in virtual reality let us enter into the specificity of an individual design, while some

³⁶ <https://www.saratirelli.com/Cilia>

installations, such as Tirelli's, invite free and creative experimentation with artificial space.

Although they offer experiences which are different and, perhaps, not even to be assimilated into the same category, the common denominator of these dimensions is the space generated by the subject's performance. The medium already demands of the user an intrinsic performativity: in the 6Dof installations, in which the user can move with his or her feet, the virtual space is literally traversed and discovered, in a perceptive sequence quite similar to the one Arnheim spoke of, referring to experience in the physical world. In virtual reality there emerges a kind of «performance consciousness [...] full of alternatives and potentialities»³⁷, just as in the mystical dimensions opened up by rituals, in which the user can enjoy experiences beyond the predetermination of everyday life.

Using a virtual reality headset, one can walk through buildings that have not yet been built or will never be built, experiencing a form of inhabiting space, which through our gestures, shapes it, generates it, endows it with meaning it for the first time. If we defined the relationship between body and space in terms of *reciprocity*, the nature of these experiences makes this reciprocity even more consubstantial. The ephemeral matter of virtual spaces is modelled by our passage, the machine follows us, tracks us and generates new forms, in which architecture itself is experienced as «liquid», as Marcos Novak³⁸ (1991) defined it, and capable of assuming unrealisable semblances that we can only experience inside the helmet.

At the end of this brief journey, the discussion almost seems to take us back to the beginning, to the performativity of the project. And indeed it does. In the virtual space of VR, we encounter several of the directions we have explored so far: the performativity of the machine that «automatically» generates the images that surround the user, allowing architecture, even within the virtual realm, to be a performed object as much as a performing subject; on the other hand, the performativity of the living body, which, despite not being present in the flesh, finds itself relocated in a new dimension which

³⁷ R. Schechner, *Between Theater and Anthropology*, Pennsylvania University Press, Philadelphia 1985, p. 6.

³⁸ M. Novak, *Liquid architecture in Cyberspace*, in M. Benedikt (ed. by), *Cyberspace. First Steps*, MIT Press, Cambridge, MA 1991.

invites it to inhabit a new type of space, to experiment with different forms of sheltering, materiality, and scale.