Dreamlike Environments: "Story-living" in Virtual Reality Installations

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Abstract

This article examines the narrative identity of a new emerging medium, the virtual reality installation. In order to do so, the representation of dream states often presented in virtual art will be considered as a metareflexive model to be analysed in order to comprehend the distinctive characteristics of this experience. From this point of view, the study distinguishes virtual from physical art installations, the experience of which has been compared by Claire Bishop to the process of de-codification of dreams, focusing on the concept of incorporation. Accordingly, this incorporated experience of immersive images will be considered in relation to contemporary dream theory, formulated in the fields of neuroscience and philosophy of mind. At the same time, a second focus will be devoted to the use of the dream metaphor in new media art dealing with media archaeology and in particular in the interactive artwork *Beyond* (1997). In conclusion, the analysis of two contemporary virtual reality installations metariflexively dealing with dream experience, *Somnai* (2018) and *The Key* (2019) will lead to the individuation of a common experiential model: storyliving instead of storytelling.

Keywords: Virtual reality installation; Virtual art; Dream theory; Narrative strategies; Storyliving; New media art.

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1 Introduction

It is not easy to describe the narrative identity of virtual reality. The emerging new medium, as yet neither institutionalised nor occupying a widely-recognised social role, is diffused across several fields of experience, from immersive gaming to virtual art, from what is called "VR cinema" (a merely audio-visual but completely immersive experience) to the most complex virtual reality installations often characterised by the presence of tracking devices producing a superposition between physical and virtual elements (so-called layered reality), a major degree of interaction often integrating the tradition of immersive theatre and performance, a complex multisensory experience of the virtual content. In these conditions, the very concept of storytelling — implying a story recounted by the author with a spectator passively receiving it in a preconstructed form — needs a radical review.

In this study we will investigate the identity of virtual reality installations by examining a meta-reflexive model often purposed by its narrative organisation: that of dreaming, grounded in the similarity between the multimodal and multisensory experience of immersive images and the elements that culturally and historically characterise our conception of nocturnal visions. This similarity does not concern only virtual installations but has been used as a metaphor to describe the experience of installation art in general, for its immersive properties and the process of comprehension this art effectively implies. Consequently, a series of questions arise: is there a similarity between the construction of meaning in dreams and installations? And if so, is it possible to distinguish between the dreamlike involvement experienced in physical installations from that of virtual installations? What does the representation of dreams in virtual reality installations tell us about this involvement?

2 Installation Art and the Dream Scene

Art theorist and critic Claire Bishop proposes "installation art" as "a term that loosely refers to the type of art into which the viewer physically enters, and which is often described as 'theatrical', 'immersive' or 'experiential'" (Bishop 2005: 6). At the same time, Bishop underlines the consonance between the possibility of entering the space of the image and the building of a "dream scene" characterised by a "psychologically absorptive, dream-like environment" (10). This identity is the result of two main factors: firstly, the installation's power to *activate* the viewer, who is asked to reconstruct in a dynamic and personal way the global sense of the art-space in which she is absorbed; secondly, its power to *decentralise* her, since any single element of the art environment can draw attention and become a path to follow so as to shape a narrative meaning. The Cartesian paradigm of vision falls completely apart. The idea of the picture as an organised, controllable field of vision, thanks to the processes of framing and distancing, is substituted by a radically different cognitive strategy. It is a scheme dealing with a vision lost in the meanders of the representation, in which the physical and imaginary spaces almost coincide and the meaning of which is blurred and only with difficulty explicable.

The "dream scene" of installation art is therefore experienceable and readable only by using the same tools developed originally by Sigmund Freud in The Interpretation of Dreams (1900). Claire Bishop argues that for the father of psychoanalysis the dream presents three main characteristics: it is hallucinatory, presenting itself with a sensory vividness closer to perception than to memory or imagination; it is *composite*, absurd if taken for as a whole but comprehensible if read in its constitutive elements as a rebus; it is subjective, since it is not meant to be decoded, but analysed through the technique of free association, which reveals the individual and affective connections of the dreamer. Consequently, for Bishop the whole history of art installations, from their early origins in the Paris Surrealist exhibitions of 1938, 1947 and 1959, and that in New York in 1942, to Illja Kabakov's total installations, has a fil rouge: requiring of the viewer an oneiric disposition for the artwork to be concretely experienced and understood. It was not by chance that in the 1938 Surrealist exhibition directed by Marcel Duchamp visitors were welcomed in complete darkness "since it evoked Freud's comparison of psychoanalysis to archaeology: viewers were cast into the role of excavators, uncovering the works one by one as if retrieving for analytic illumination the dark and murky contents of each artist's unconscious psyche" (Bishop 2005: 22). Accordingly, they could also find "rumpled beds in each corner of the gallery," confirming "this equation between the exhibition's mise-en-scene and the unpredictable and irrational imagery of dreams" (Ibidem).

More recently, Kabakov's 1984 installation *The Man Who Flew into Space from His Apartment* proposes an art space in which a series of cues — a pair of empty shoes, numerous posters of inventions devoted to Soviet space missions covering the walls, a spring mechanism hanging from a partly destroyed ceiling — suggest a story that the viewers, overwhelmed by visual inputs and possible cognitive paths, is asked to reconstruct. They are not allowed to enter the room but can look into it from a small external hall. Any single element could be central to the construction of meaning. While other art historians such as Boris Groys (2006) consider the sense of the artwork as mostly focused on the theme of Soviet Utopia understood as the material realisation of metaphysical concepts rather than on mental states, Bishop asserts the consonance between the total installation and the dream scene. In Kabakov's artworks "we imaginatively project ourselves into an immersive 'scene' that requires free association in order to articulate its meaning; in order to do this, the installation's assemblaged elements are taken one by one and read 'symbolically' — as a metonymic part of a narrative" (Bishop 2005: 16). Kabakov's description of the way total installation may interact with the viewer in his book *On the "Total" Installation* (1995) confirms the oneiric nature of his art: the environment is constructed "in such a way that the viewer ... finds himself inside of it, engrossed in it" (Kabakov 1995: 243) and its main motor is "the cracking up of the wheel of associations, cultural or everyday analogies, personal memories" (317).

The dream scene then coincides with the possibility of finding the meaning of an immersive artwork in the negotiation between the free path of the viewer and the traces left around her. In this sense, the passage from physical immersive art spaces to virtual spaces can be interpreted as an increasing approximation to dream states. In the definition of art historian Frank Popper, virtual art includes several elements of technical media developed by the late 1980s and in particular "interfaces between humans and computers — for example, visualisation casks, stereoscopic spectacles and screens, generators of three-dimensional sound, data gloves, data clothes, position sensors, tactile and power feedback systems, and so forth — [that] allowed us to immerse ourselves completely into images and interact with them" (Popper 2007: 1-2). The recent development of virtual devices includes a new lighter and easily wearable generation of head-mounted displays (Oculus Rift, HTC One, Google Daydream, and so forth) and tracking technologies (from motion to volume capture) that allow an ever-increasing sense of presence and immediacy grounded in the hybridisation between the human body and the medium. Likewise, in the field of game studies Gordon Calleja (2011) proposes the concept of incorporation as a more accurate description of this condition than presence and immersion. Incorporation is defined as "the absorption of a virtual environment into consciousness, yielding a sense of habitation, which is supported by the systematically upheld embodiment of the player in a single location, as represented by the avatar" (169). While immersion and presence express a univocal polarisation between consciousness and digital environment, incorporation describes a biunivocal and reversible relation, resting on multiple strategies of involvement. In particular, narrative involvement arises from the negotiation between two different narrative tactics: Calleja distinguishes between scripted narratives, events pre-scripted into the storyline, and alterbiographies, stories generated by the individual player as she takes part in the game. Similarly to what happens in installation art environments, in virtual worlds too the story arises from the negotiation between pre-designed narrative elements and the free associations and paths created and followed by the user. The radical difference lies in the incorporation of this process in immersive virtual environments, which make this "dream scene" even more similar to dreams. This analogy becomes evident if we move from Freudian dream theory to the recent epistemological understanding of dreaming to be found in neuroscience and philosophy of mind, in which the metaphor of a "virtual reality simulator inside the brain" has become increasingly widespread.

3 The Virtual Reality of the Brain

In the theories of the mind of the 1990s the idea of an immersive simulator inside the brain becomes a common metaphor for the dream state. For the influential psychiatrist and dream theorist John Allan Hobson the brain possesses an innate virtual reality generator able to furnish predictive models of the world (Hobson, Hong and Friston 2014). This model is present in waking consciousness as well as during REM sleep, but with a substantial difference. While during waking life the simulator operates online, constantly updated by sensory prediction errors, during sleep the model is simplified and perfected thanks to the offline condition of isolation. Consequently, the simulation generated in dreams produces a more efficient model of prediction, which is useful, from an evolutionary perspective, during wakefulness. Therefore, Hobson sees consciousness as an

"embodied process of inference, realised through the generation of virtual realities" (1). Dreaming provides the theatre for conscious experiences. In this sense, its function is that of a proto-consciousness, starting in the womb and then active every night, a safe space necessary to optimise cognitive and perceptive skills (Hobson 2009). In his studies, Hobson has used various multimedia metaphors to describe the way the narrative model works in dream states, underlining how virtual reality is more accurate than cinema to this end:

Putting it all together — integrating all of these disparate elements into a credible dream plot — is the job of what's left of the executive *I*. Here we are on thin ice because we don't really know how the dream scenarios are composed, any more than we know how ideas are generated in waking. We emphasise narration because the reports we have of dreams read like stories. This is dangerous because the reports are necessarily given in waking and rely entirely on language, whereas the dreams themselves are experienced more like films. They are multimedia events, including fictitious movement of a type not yet stimulated easily, even in the most technically sophisticated film. Only virtual reality, where the subject's own movements affect perceptions, comes close to this dream experience. Thus, we use the term 'narration' advisedly to signal the coherence of dream experience, which is all the more remarkable given the apparent chaos of REM sleep dreaming (Hobson 2002: 145).

The first scientific views of the dream as a virtual reality simulator situated inside the brain date back to the early 1990s and concern problems related to consciousness in wakefulness and sleep. Its first occurrence in neuroscientific literature appears in a study made by the neuroscientists Rodolfo R. Llinás and Denis Paré, who emphasise the virtual aspect of dream consciousness as opposed to the Jamesian view of consciousness as the product of external sensory input. Accordingly, they claim that "consciousness is fundamentally a closed-loop property, in which the ability of cells to be intrinsically active plays a central role" (Llinàs & Paré 1991: 521).

In 1995 the neuroscientist Antti Revonsuo followed the metaphor of dream as a virtual simulation in several studies. According to Revonsuo, dreams reveal "the subjective, macro-level form of consciousness in general" so that "both dreams and the everyday phenomenal world may be thought of as constructed virtual realities" (Revonsuo 1995: 35). From an evolutionary perspective, they are both simulations aiming at optimising cognitive skills through the generation of efficient models of the world. Together with Katja Valli, Revonsuo elaborated two paradigms for dream theory. Firstly, the threat simulation theory, claiming that the purpose of dreaming is the repeated simulation of threatening events, whose repeated and safe experience during sleep improves our ancestors' recognition and avoidance skills, enhancing survival and reproductive success (Valli & Revonsuo 1995). Secondly, the social simulation theory, introducing into the virtual reality model of the dream the idea of the avatar, simulated subjects to interact with, and suggesting that dreams have the function of rehearseing social perception and cognition, improving mind-reading skills inherited from an ancestral past in which social inclusion in the group was essential for survival (Revonsuo, Tuominen & Valli 2015). A further development of the virtual reality model of dream theory has been put forward by philosophers of mind Thomas Metzinger and Jennifer M. Windt. Following the identification between consciousness and the production of inner virtual reality simulations, they wonder if dreaming could be considered a conscious experience and what degrees of consciousness are present in dreams. For Metzinger and Windt, dreams are conscious experiences as they satisfy three main criteria: globality, since they activate a global model of reality; presentationality, or the integration of this model into a window of virtual presence; transparency, since this simulated model of reality is not recognised as a model by the subject who is experiencing it (Metzinger & Windt 2007). In this sense, waking and dreaming consciousness differ only in one respect, also comprehensible in a virtual sense: that waking life is an online dreaming. Even with some important exceptions — when external auditory stimuli such as the alarm clock are integrated into the dream story — dreams occur offline, in a state of radical separation from the external world.

In conclusion, contemporary dream theory not only uses virtual reality as a heuristic metaphor to comprehend the biological function of dreaming, but also proposes a model of the narrative experience in both dreaming and virtual reality installations. The latter is grounded in the possibility given to the dreamer/visitor of being immersed in a certain imaginary storyline bringing her personal background into it, so that she can interact with the storyworld by enhancing survival skills and making decisions related to ethical and social life. All this, of course, in the safe condition of a separated virtual model of the world.

4 Virtual Dreams and Media Archaeology

Another reflection on the similarity between dreaming and virtual reality devices may be found in the field of new media art, in particular that of Zoe Beloff, who uses interactive media at the service of mediaarchaeological research, focusing on "the psychological and/or gender-specific implications of technologies of the past, visualising them with their re-creations" (Parikka & Huhtamo 2011). In this perspective, the central analogy between the oneiric and the digital realm lies not only in their immersive and multisensory properties, nor in their narrative organisation, but also in their shared ability to archive and re-present past experiences nowadays. Thus the sense of presence provided by virtual reality and dreams can be defined, following Vivian Sobchack, as "the literal transhistorical (yet not ahistorical) transference or relay of metonymic and material fragments or traces of the past through time to the 'here and now'" (Sobchack 2011: 324). In fact, the perspective of media archaeology searches in the past for the traces of trans-historical models which, with both continuities and differences, shape the experiences of the present. In this sense, the capacity of today's immersive images to absorb and capture the viewer inside themselves emerges with equal precision in illusory spaces such as the frescoes in ancient Pompeian villas, Baroque trompe l-oeil, and Nineteenth-Century panoramas (Grau 2003, Griffiths 2008), as well as in the evolution of the screen from its original static perspective to the capacity to "alter the relationship between represented and actual space" (Rogers 2019: 149) right up to its total adherence to the movements of the viewer's gaze. The recursive historical return of the traces of the past in the media devices of the present can also be read as a dreamlike process, as Zoe Beloff does.

In *Beyond* (1997), a QuickTime VR series accessible via cd-rom as well as via web, Beloff offered an exemplary strategy of how digital media, thanks to their symbolic power to archive, can function like a dream by re-immersing the user into a world innervated by XIX century media techniques. In an article indispensable for comprehending the theoretical background of the artwork, Beloff (2005) states that her main goal in using digital tools was to explore "the paradox of technology, desire and paranormal posed as the birth of mechanical reproduction." Beloff calls this peculiar episteme, which constitutes the object of her investigation, the "dreamlife of technologies," a historically and materially determined mental geography that the user can explore in the interactive and nonlinear way allowed by the hypertext structure as well as by QuickTime VR and its 360° visualization tools. The device that *Beyond*'s QuickTime VR vision intends to resuscitate is, however, the *panorama*, the cylindrical painting widely-diffused in the XIX century which trapped the viewer inside a hallucinatory and global representation (Pesenti Compagnoni & Tortonese 2001). In Beloff's (2005) words:

I am fascinated by long outdated forms resurfacing anew in the digital realm. Such are panoramas. Actual panoramas painted around specially constructed circular rooms were a popular form of entertainment in the nineteenth century. Long forgotten, they now reappear in the virtual realm as QuickTime VR. My QuickTime videos are made "live" without digital manipulation, by rephotographing film and text with the Quick Cam, using effects that would not have been out of place in Méliès studio. Just as the earliest filmmakers struggled to find a new visual language through the newly developed technology of cinema, here I aim to invent in a personal way, a new digital articulation of space and time that both grows out of cinema yet goes beyond it (78).

The location represented within the digital panorama, explorable in its totality without a precise direction or point of arrival, consists of a real abandoned asylum, whose ruins stand for the different spaces, both imaginary and real, of the mental and historical geography investigated by Beloff: "from Charcot's clinic at the Salpêtrière, to Raymond Roussel's fictional world of *Locus solus*, to the destroyed buildings of the two World Wars, to the Paris Arcades of the Second Empire, to the ruins of the Great World Expositions, to Edison's laboratory at Menlo Park" (79). Moreover, *Beyonds*' virtual panorama contains several rooms: in any of them there is one or more silhouettes that activate short videos, representing documents of this unconscious topography. These films have been recovered from New York flea market as well as from early film footages taken from the Library of Congress collection, and matched with Beloff's mesmerising metallic voice — "a 1930's BBC radio drama voice, the voice of a medium" (Beloff & Beckman 2006: 78) — reading narrative textbook passages, scientific licences, physio-psychological accounts of the XIX century. These videos represent the dead who are summoned to life by the digital image's function of medium — to be intended in both technological and parapsychological sense. They are lost films that emerge to a new life, isolated from their original context —

the afterlife of images — and resurrected in the dream-space of a digital panorama. In these brief sequences it is possible to find fragments of the narrations that characterise XIX Century technical unconscious: the first phonographic experiments, Jules Antoine Lissajous' machine that visualises vibrations, Raymond Roussel's fictional "Ice House" described in *Locus solus*, Pierre Janet's tests with somnambulists at the Salpêtrière. These are wrecks from the protohistory of media in which it is already possible to guess the interactive and immersive future of digital technologies.

Roussel's role is in this sense central. In *Locus solus* (Roussel 2008) the writer imagined a series of scientific tests performed by inventor Martial Canterel (evidently inspired by Edison). The most intriguing of his inventions is precisely the "Ice House," which consists of a series of dioramas visible behind a glass partition. In each of these, actors are continuously playing out the same sequence, replicating it at any given time with extreme accuracy. The truth behind the invention is that the actors are dead and continuously brought back to life by Canterel using electrical impulses: their performance consists in repeating at every resuscitation the most traumatic moments of their life. This later process corresponds with the same revivification that the psychologist Pierre Janet, who treated Roussel after an episode of delusional ecstasy, at the time investigated in his experiments on somnambulism (Janet 1889, 1989). After Janet, the advent of psychoanalysis will trace in dreaming the possibility of reaching forbidden traumatic experiences beyond the hallucinatory sense of presence provided by the dream content.

For Beloff, this oneiric function of archiving and re-presentation of the past is visible in two realms. The first is early movies, which "were shown initially with a still frame up on the screen that would then suddenly come to life as the projectionist cranked the projector. At the same time these films, each 50 seconds long, were often shown as loops so that the same gestures were repeated with uncanny precision over and over again" (Beloff 2005: 5). The second realm is digital media and the way they can absorb and resuscitate the cinematic experience, in a sense that turns the idea of remediation described by JD Bolter and Richard Grusin into an oneiric process (Bolter & Grusin 1999). In a media archaeological perspective, a new character of the analogy between dream and virtual reality experience emerges: that of a direct access to the past, that can be re-lived and elaborated into the immersive archive of the digital image.

5 Somnai and the Clinic of Lucid Dreams

Having underlined the specific elements that make dreaming a cultural model for virtual reality installations — content which makes sense only in relation to the viewer's personal experience, expressed in free-associations; the incorporation of this experience, which aims at improving individual skills in a safe and simulated virtual environment; the direct access to the past that re-presents itself — it is now possible to analyse virtual experiences openly representing dream states, searching in their contents and forms for a meta-reflective narrative model of the medium's identity.

The first example is Somnai (dotdotdot 2018), a layered reality experience presented in London which combines the tradition of immersive theatre with the use of virtual reality devices. This experience is presented as a clinic of the lucid dream, in which the participants are invited to learn the art of mastering the narratives of their dreams and of immersing themselves into them. Equipped with a tracking device as well as with socks and nightgown, the users are called one by one to submit to face recognition and are identified with a numbered bracelet. At this very moment they can encounter their totemic guide, a woman who introduces them to the art of lucid dreaming. To start, they must wear a night mask, separating external stimuluses from inner ones. The mask obviously consists of a virtual reality head-mounted display. By wearing the helmet, the user finds herself enveloped in imaginary worlds that require her not just to view them but more than all to live them and to explore these worlds in a multisensory way: there are sky landscapes to fly across, sea depths to dive within, a rickety wooden bridge dangerously suspended over an abyss to go through. Confusing these digital dreams with reality is not possible from a merely visual perspective: their obsolete 1990s videogame graphic radically compromises any possibility of the voluntary suspension of disbelief. Only by taking into account the involvement of the other senses it is thus possible to understand the power of the reality effect they provide. In particular, this is evident in relation to the tactile properties of the objects which appears in the imaginary environment, such as the marine flora faithfully corresponding with the softness of props enveloped

by immersive images thanks to a tracking device, or the bridge which, through the same process, effectively creaks under the users' feet, rocked by the wind. The same illusion is enforced by the sense of smell, such as that of the seaweed they meet in the underwater environments. It is not vision, but the hallucinatory idea of presence confirmed by the other senses in absence of an effectively corresponding external object which makes these digital dreams indistinguishable from the real. To which a further factor is added, given that it is possible to interact via a digital avatar both with the actors who lead the experience and also with the other participants, who can be perceived inside the helmet in the form of luminescent ghosts.

In this sense, the lucid dream functions as a model of the narrative strategy proposed by the virtual installation: where the story is only partly pre-designed, and partly corresponds with the result of any participant's personal choices. In fact, in *Somnai* each member of the group is expected to make decisions that lead to multiple and different endings. In the last part of the experience each is invited to select one room in which to finally experience the lucid dream, which may be an idyllic dream for the luckiest or a deadly nightmare for the most unfortunate.

This final option, conferring to the user's blind choice the production of an ending, overturns the concept of storytelling as a participative collective process, and needs new paradigms to describe what a narrative is when we experience a virtual reality installation or a technological dream.

6 The Key and the Concept of "Storyliving"

The French immersive artist Céline Tricart coined the concept of "storyliving" to describe the narrative design she projects for virtual reality installations. What this concept means in concrete terms becomes clear through the analysis of *The Key* (2019), an experience once again devoted to the process of remembrance in dreams.

In this experience, the participant is welcomed by a female performer who asks her to delve deep into her own dreams so as to discover the forgotten secret of her childhood. Along the oneiric journey the participant is invited to bring with her the only object the performer has preserved from the past, a small key. Then, she can wear the head-mounted display and enter into the dream environment. This latter is represented as the interior of a home suspended in the clouds, part of a celestial city visible through the window, where the user feels free to interact with three animated spheres which she is invited to protect from several dangers, and these instantaneously arrive: an explosion destroys all the walls, scattering the spheres into the open sky, while the user falls into apocalyptic scenarios such as a hell-like desert or a line of white-faced humanoids advancing towards a monstrous leviathan. It is in the transition between these visions that the forgotten trauma is finally revealed. The immersion passes from CGI to photography and, contextually, from dream to reality, showing the experience of a bombed-out home in Iraq, with the need to protect loved ones and to emigrate towards a safe refuge and the absence of welcome in the promised lands. The only dreamlike element that remains once the head-mounted display is removed is the key, which symbolises that of the home many refugees have left, and still carry with them during their flight.

Céline Tricart's main goal is thus to create a virtual reality experience in order to produce a sense of awareness towards the real world. In this way, instead of putting the user inside another's shoes, following the experiential model of the empathy machine theorised by Chris Milk in 2015, she projects a magical realist metaphor of the historical trauma that cannot be *recognised*, but experienced in its emotional implications under the camouflage of the dream (Tricart 2018). Accordingly, the oneiric processes of condensation and displacement — from a Freudian perspective — created by the virtual representation are expected to encounter the participant's own personal experience and action to find the complete sense. It is a narrative meaning in which the subject reaches a direct comprehension of collective and historical trauma, bringing together individual and social memories. For Tricart, virtual reality is in fact conceived as a "first-person medium," avoiding "squeezing the participants into the people's bodies and telling them what to think and when" (Tricart & Yu 2019). She calls this possibility, helped by a very easy and user friendly interactional design (Höök 2018), storyliving,

For the philosopher Pietro Montani (2018), dreams as well as virtual reality may be considered as an active part of the operative work
of imagination as understood in a Kantian sense, which de-automatizes the production of cognitive schemes, thus performing new
possibilities of open meanings.

since the participant's personal social and historical comprehension is grounded in the sense she brings into the virtual environment. The metaphor of the dreamlike environment sustains this project, in which a subjective, embodied experience of the image radically undermines the idea of a story to be told. Narration is thus produced by a series of affections, actions, choices which shape an imaginary world conceived as a series of infinite personal possibilities.

7 Conclusion

In conclusion, we can adopt the concept of storyliving to properly describe the narrative identity of virtual reality installations seen as a new, not yet widely-diffused and institutionalised form of medium. The dream experience, already proposed by several scholars and in particular by Claire Bishop as a model for installation art, continues to function as an operative metaphor for comprehending the strategies of storyliving in virtual environments. In fact, both physical and virtual reality share important elements: the idea of an immersive image, which surrounds and absorbs the viewer into its visual field; the absence of a hierarchical organisation of this space starting from a main scene; the possibility for the viewer of choosing any detail of the vision as a privileged centre of her own narrative path (as in Freudian free-association); the integration of some levels of freedom, interaction and decision into the storyline. Virtual reality nonetheless introduces a novelty: the radical incorporation of these processes into a separate individual experience achieved by the use of a wearable device such as a head-mounted display. Accordingly, the similarity between installation and dream becomes even more evident in the virtual realm, in the strategy of a "first-person medium," to be investigated as the most recent form of exteriorisation of the conscious and unconscious self.

References

Beloff, Zoe (2005). "An Ersatz of Life: The Dream Life of Technology." In *The Sharpest Point: Animation at the End of Cinema*, edited by Chris Gehman and Steve Reinke, 78–85. Toronto: YYZ Books.

Beloff, Zoe and Karen Beckman (2006). "Impossible spaces and philosophical toys: An interview with Zoe Beloff." *Grey Room* 22: 68–85.

Bishop, Claire (2005). Installation Art. Millbank, London: Tate Publishing.

Bolter, J. David and Richard Grusin (1999). *Remediation. Understanding New Media*. Cambridge, MA: The MIT Press.

Calleja, Gordon (2011). *In Game: from Immersion to Incorporation*. Cambridge, MA and London: The MIT Press.

Grau, Oliver (2003). Virtual Art: From Illusion to Immersion. Cambridge, MA and London: The MIT Press.

Griffiths, Allison (2008). *Shivers down Your Spine: Cinema, Museums, & the Immersive View.* New York: Columbia University Press.

Groys, Boris (2006). Ilya Kabakov: The Man Who Flew Into Space From His Apartment. London: Afterall.

Hobson, John Allan (2002). *Dreaming: An introduction to the science of sleep*. Clarendon: Oxford University Press.

Hobson, John Allan (2009). "REM sleep and dreaming: towards a theory of protoconsciousness." *Nature Review Neuroscience* 10(11): 803–813. https://doi.org/10.1038/nrn2716.

Hobson, John Allan, Charles C.H. Hong and Karl J. Friston (2014). "Virtual reality and consciousness inference in dreaming." *Frontiers in psychology* 5(1133). https://doi.org/10.3389/fpsyg.2014.01133.

Höök, Kristina (2018). Designing with the Body: Somaesthetic Interaction Design. Cambridge, MA: The MIT Press.

Huhtamo, Erkki and Jussi Parikka, edited by (2011). *Media Archaeology: Approaches, Applications, and Implications*. Berkeley, London and Los Angeles: University of California Press.

Janet, Pierre (1989 [1889]). L'Automatisme psychologique. Essai de psychologie expérimentale sur les formes inférieures de l'activité humaine. Paris: Société Pierre Janet.

Kabakov, Ilya (1995). On the Total Installation. Stuttgart: Cantz.

Llinás, Rodolfo R. and Denis Paré (1991). "Of dreaming and wakefulness." *Neuroscience* 44(3): 521-35. https://doi.org/10.1016/0306-4522(91)90075-y.

Metzinger, Thomas and Jennifer M. Windt (2007). "The philosophy of dreaming and self-consciousness: What happens to the experiential subject during the dream state?" In *The New Science of Dreaming Vol. 3: Cultural and Theoretical Perspectives*, edited by Deirdre Barrett and Patrick McNamara, 193-247. Westport, CT: Greenwood.

Montani, Pietro (2018). "Once again on 'Narrative imagination'. Schematizing without concept in language, image and dreaming brain." *Reti, saperi, linguaggi* 1: 127–134.

Popper, Frank (2007). From Technological to Virtual Art. Cambridge, MA and London: The MIT Press.

Revonsuo, Antti (1995). "Consciousness, dreams and virtual realities." *Philosophical Psychology* 8(1): 35–58. https://philpapers.org/go.pl?id=REVCDA&proxyId=&u=http%3A%2F%2Fdx.doi.org%2F10.1080% 2F09515089508573144.

Revonsuo, Antti, Jarno Tuominen and Katja Valli (2015). "The avatars in the machine: Dreaming as a Simulation of social reality." In *Open MIND*, edited by Thomas Metzinger and Jennifer M. Windt, 32. Frankfurt am Main: MIND Group.

Rogers, Ariel (2019). "'Taking the Plunge': The New Immersive Screens." In *Screen Genealogies. From Optical Devices to Environmental Medium*, edited by Craig Buckley, Rüdiger Campe and Francesco Casetti, 135-158. Amsterdam: Amsterdam University Press. http://dx.doi.org/10.1515/9789048543953-006.

Roussel, Raymond (2008 [1914]). Locus Solus. London: Calder.

Sobchack, Vivian, (2011). "After-word. Media Archaeology as Re-Presencing the Past." In *Media Archaeology: Approaches, Applications, and Implications*, edited by Erkki Huhtamo and Jussi Parikka, 323-333. Berkeley, London and Los Angeles: University of California Press.

Tricart, Céline (2018). Virtual Reality Filmmaking. Techniques & Best Practices for VR Filmmakers. New York and London: Routledge.

Tricart, Céline and Kathrin Yu (2019). "Unlocking the Mystery of 'The Key'." Interview, in https://noproscenium.com/unlocking-the-mystery-of-the-key-q-a-2f8958d65c9b (last accessed 14-01-21).

Valli, Katja and Antti Revonsuo (2009). "The Threat Simulation Theory in Light of Recent Empirical Evidence: A Review." *The American Journal of Psychology* 122(1): 17–38.

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