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A PHENOMENOLOGICAL APPROACH TO MEDIA ART ENVIRONMENTS
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Lorella Scacco

University of Turku

Faculty of Humanities
School of History, Culture and Arts Studies
Art History
Doctoral Programme in History, Culture and Arts Studies (Juno)

Supervised by

Professor Tutta Palin
University of Turku

Adjunct Professor Johanna Vakkari
University of Helsinki and
University of Turku

Professor Emeritus Altti Kuusamo
University of Turku

Reviewed by

Professor Ilona Hongisto
Norwegian University of Science and Technology

Dr, Museum Director Leevi Haapala
Museum of Contemporary Art Kiasma /
Finnish National Gallery

Opponent

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ABSTRACT

This research focuses on immersive art, defined as a multimedia experience where visitors interact with artwork whilst immersed in a range of sensory experiences. In this dissertation, I investigate the immersive art experience from the perspective of art history, social theory, and media studies situated within a phenomenological theoretical framework. I present a comparative analysis of forms of immersive spatiality, including projected moving-image art, spatial environments, participatory installations, video art installations and interactive environments in the international art scene. One of my objectives is to emphasise the role of video art in the development of interactive and immersive art environments. The growing importance of spectators for giving meaning to the artwork allows immersivity to be analysed in relation to the notions of spectacle and spectatorship.

I connect disciplines, practices and concepts by adopting principles from Maurice Merleau-Ponty's phenomenological writings. Spatiality and motility are pivotal points in immersive experiences. Immersive art, as an embodied mutual experience, materialises the phenomenological concepts of spectatorship, corporeality, motility, porosity, chiasm, and encounter.

I have selected a group of relevant Finnish artists from different generations to characterise the development of media art and, particularly, immersive media art in an international context. The group includes Eija-Liisa Ahtila, Lauri Astala, Laura Beloff, Hanna Haaslahti, Tuomas A. Laitinen, Erkka Nissinen, and Marjatta Oja. I examine the historical dissemination of phenomenology in Finland and a renewed interest in the 1990s which coincided with the spatialisation of video art and the emergence of immersivity. I also investigate the opening of Kiasma Museum of Contemporary Art and its impact on Finnish culture, and the recent Amos Rex Museum, specifically built for immersive exhibitions.

Regarding the unstable nature of media art, I analyse the changes in displaying art collections and exhibitions, the new commitments of art museums and the innovative directions taken by media conservators. My examination of immersive art, with its performativity and transience, reveals environmentally friendly and sustainable aspects.

KEYWORDS: immersive art, immersive experiences, video art installation, interactivity, media art environments, spatiality, phenomenology, reciprocity, spectatorship, impermanence, sustainability

TIIVISTELMÄ

Tämä tutkimus käsittelee immersiivistä taidetta multimediaalisena kokemuksena. Immersiossa kävijät ovat erilaisten aistimellisten kokemusten ympäröiminä vuorovaikutuksessa taiteen kanssa. Tutkin väitöskirjassani immersiivistä taidekokemusta fenomenologisessa teoriakehyksessä taidehistorian, yhteiskuntateorian ja mediatutkimuksen näkökulmasta. Esitän vertailevan analyysin immersiivisistä tilallisuuden muodoista, joihin sisällytän liikkuvan kuvan projisoinnit, tilateokset, osallistavat installaatiot, videoinstallaatiot ja interaktiiviset ympäristöt kansainvälisen taidekentän ilmiöinä. Yhtenä pyrkimyksenäni on painottaa videotaiteen merkitystä interaktiivisen ja immersiivisen taiteen kehityksessä. Katsojien kasvava rooli taideteoksen merkityksen muodostuksessa tarjoaa perustan immersion analyysille nimenomaan spektaakkelin ja katsojuuden viitekehyksessä.

Yhdistän eri tieteenaloja, käytäntöjä ja käsitteitä toisiinsa Maurice Merleau-Pontyn fenomenologisten kirjoitusten avulla. Tilallisuus ja liike ovat immersiivisten kokemusten ytimessä. Jaettuna ruumiillisena kokemuksena immersiivinen taide ilmentää materiaalisesti fenomenologisia katsojuuden, ruumiillisuuden, liikkeessä olemisen, huokoisuuden, kiasman ja kohtaamisen käsitteitä.

Olen valinnut joukon eri sukupolvia edustavia suomalaistaiteilijoita hahmottaakseni mediataiteen ja erityisesti immersiivisen mediataiteen kansainvälisiä kehityskulkuja. Heihin lukeutuvat Eija-Liisa Ahtila, Lauri Astala, Laura Beloff, Hanna Haaslahti, Tuomas A. Laitinen, Erkka Nissinen ja Marjatta Oja. Käsittelen fenomenologian saapumista Suomeen sekä siihen 1990-luvulla videotaiteen tilallistumisen ja immersion esiin nousun yhteydessä uudelleen virinnyttä mielenkiintoa. Tarkastelen myös Nykytaiteen museo Kiasman perustamista ja sen vaikutusta suomalaiseen kulttuuriin, samoin kuin vastikään avattua Amos Rex -taidemuseota, joka on rakennettu erityisesti immersiivisiä näyttelyitä silmällä pitäen.

Analysoin muutoksia taidekokoelmien ja näyttelyiden esillepanossa, taidemuseoiden uudenlaisia sitoumuksia ja mediataiteen kuratoinnin uutta luovia suuntia suhteessa mediataiteen nopeasti muuttuvaan luonteeseen. Painottamalla performatiivisuutta ja hetkellisyyttä nostan immersiivisen taiteen analyysissani näkyville sen ympäristöystävällisiä ja kestäviä ulottuvuuksia.

ASIASANAT: immersiivinen taide, immersiivinen kokemus, videoinstallaatio, interaktiivisuus, mediataide, tilallisuus, fenomenologia, vastavuoroisuus, katsojuus, katoava taide, kestävä kehitys

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Introduction

Premise

In the 2000s, statements in a range of fields, from visual studies to philosophy, questioned the status of art history and its activity. The convergence of art, science and technology indeed seemed to have left behind art historians and their considerations on the status of representation. For example, philosopher Alva Noë argues that the role of representation in perceptual theory needs to be reconsidered, and highlights that the snapshot conception of visual experience is invalid.[1] Meanwhile, trans-disciplinary scholar W. J. T. Mitchell maintains that visual culture could offer new possibilities by weaving the visual with other senses and practices.[2] Furthermore, American art historian Edward A. Shanken observes that art historians have failed to contribute to the discourse surrounding media art, as documented by the scientific journal *Leonardo* whose overview is limited to essays from artists and scientists in the 1990s.[3] However, since 2000, art historians have increasingly joined the discourse and have published more actively in the field. Despite this, I argue that the recent attention focusing on computer interaction, electronic spectacles, and screen culture overshadows the importance of key innovations in the field of media art. For instance, video art installation gained popularity during the transition from a single screen and the rise of immersive art environments. Usually, video art installation is absorbed into the notions of expanded cinema or installation.[4] Nonetheless, I would argue that the aesthetical, artistic, philosophical, curatorial,

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[1]   Noë, Alva 2004, *Action in Perception*, The MIT Press, Cambridge, MA and London, pp. 35–36.

[2]   Mitchell, W. J. T. 2005, "There are no Visual Media" in *Journal of Visual Culture*, Vol. 4, No. 2, pp. 257–266.

[3]   Shanken, Edward A. 2007, "Historicizing Art and Technology: Forging a Method and Firing a Canon" in *MediaArtHistories*, edited by O. Grau, The MIT Press, Cambridge, MA and London, p. 46 and p. 65.

[4]   See *New Artists' Video: A Critical Anthology*, edited by G. Battcock & E. P. Dutton, New York 1978; *Illuminating Video*, edited by D. Hall & S. J. Fifer, Aperture Foundation, New York 1990; Cubitt, Sean 1993, *Videography: Video Media as Art and Culture*, Palgrave Macmillan, London.

exhibitive, and social relevance of this intermediate stage of video practice has not yet been sufficiently highlighted. Video art installation has opened up new multisensory experiences related to spatiality, interactivity, and new designs for museums, all aspects that are developed further in immersive art environments.

Why have I adopted a phenomenological approach to media art? First, the thinking of Maurice Merleau-Ponty (1908–1961) on the perceptual dynamics of the body can be applied directly or indirectly to the work of many artists who, at the turn of the 1960s, focused on corporeality, perception, and engagement with the environment. Since Merleau-Ponty's premature death, scholars have continued to examine his rich legacy, providing new interpretations and deriving new methods for analysing our own being-in-the-world. In this legacy, the relationship between the living body and technology is strong. Media art has demonstrated a need to develop a technological phenomenology of the body, as suggested by post-phenomenological theoretical approaches, which inform current immersive art experiences. The lineage I present here is a sort of genealogy of recent developments in art. I highlight the embodied, spatial, and sensorial nature of art experiences that can be defined as immersive. This art history research is based on my personal perspective, in dialogue with phenomenology and considering other important references, such as, among others, Jean Baudrillard, Guy Debord, and Marshall McLuhan.

Background

As a young art historian, I learned the history of art, spanning from the Early Renaissance to the avant-garde movements, by reading textbooks authored by Giulio Carlo Argan. Argan was one of the twentieth century's best-known art historians who adopted a phenomenological view. In the 1960s, he presented a phenomenological interpretation of art history in Italy, including its social and philosophical context. In my master's thesis, I chose to immerse myself into a phenomenological subject and the phenomenological thinking of Merleau-Ponty. Today, I continue to advocate a phenomenological point of view when teaching art history. For many years, I have also worked as a curator and journalist, visiting several contemporary art events across Europe in a professional capacity. Finland was the first Nordic country I visited in 1999. I was so impressed by the high quality of the Finnish contemporary art scene that I started to collaborate as a curator and journalist. This Finnish experience also created a thirst for discovering the other Nordics and their art worlds. As a result, I moved between Italy and Scandinavia and enjoyed the rich opportunities they offered to experience art, to create articles and exhibitions, and to follow the international contemporary art scene at large. In particular, two Finnish museum projects, Kiasma and Amos Rex, inspired me to

expand my ideas about media art and the concept of immersiveness. Not only do both museums represent key venues for media art, but they also function as architectural test sites for a phenomenological approach. This doctoral thesis is a union between phenomenology and all my competences, such as art history, media art, and Nordic contemporary art. Taken from a phenomenological perspective, artworks and artistic phenomena are observed and intertwined with the singularity of my lived experience.

The Present Research

This dissertation draws together three main cultural areas: media art, immersive experiences, and phenomenology. Combining media art and phenomenology generates entanglements between experience and representation that may enlighten, deepen, or restructure scholarly approaches toward human knowledge using multimodal and immersive technologies.

Availing myself of a phenomenological theoretical framework, I adopt a broad perspective on media art installations and their interactive and immersive aspects. I draw on Merleau-Ponty's phenomenological writings to connect disciplines, practices, and concepts. The overarching question linking the different parts of this research investigates the interrelation of technology, artistic milieu, and philosophical thought.

Video art installations, interactive, and immersive art environments are three interlinked types of artistic practices that can overlap with phenomenological concepts: motion and spatiality, reciprocity or chiasm, porosity, embodied interaction, and spectatorship. Given this, various contemporary phenomena, such as multiple authorship, the concept of 'hands-on exhibits' in museums, and non-linear perception (or a multitasking attitude), can be related to the phenomenological 'being-in-the-world' approach. By combining these aspects, I describe how phenomenology has contributed to the present approaches to video art forms, and virtual, augmented, and immersive experiences. Finally, a phenomenological perspective can cater to an interpretation of virtual and immersive art environments and can therefore serve as an alternative to post-Cartesian theories and the dualism of art and illusion.

The Finnish art scene has been my 'lived experience' for the past few years. In this research, I examine the inception of media art in Finland, especially video installation and interactivity. More specifically, I focus on the impact of media art on Finnish artists since the 1990s, namely Eija-Liisa Ahtila, Lauri Astala, Laura Beloff, Hanna Haaslahti, Marjatta Oja, and subsequent generations of Finnish artists, such as Tuomas A. Laitinen and Erkka Nissinen. To capture the connections between visual arts and phenomenological ideas I retrace the dissemination of

phenomenology in Finland during the twentieth century, particularly from the 1990s onwards. Since the 1990s, the Museum of Contemporary Art Kiasma in Helsinki, its name referring to the concept of 'chiasm', possibly symbolises the spread of Merleau-Pontian ideas on the Finnish cultural scene, while the Amos Rex Museum, with its new location in the centre of Helsinki, represents another venue for showcasing the latest developments in immersive art environments.

I also analyse several pioneers and contemporary international artists who have used digital technologies and spatial qualities to create immersive art, and – where possible – I relate them to Finnish authors. It is vital to situate the Finnish art scene in an international context and to consider the involvement of international innovators and current protagonists in a globalised milieu. In this respect, the Finnish art scene functions here as one localized example of international developments.

Finally, by referencing Merleau-Ponty this research is conducted in a chiasmic way. My methodology adheres to the concept of 'ring composition' – a chiasmic circular structure that stems from Greek literature.[5] In other words, I hark back to concepts, artistic movements, and artists in a circular way. In the next section, I elucidate the aims of my research, its defining questions and methodology, and present an overview of the thesis.

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[5]   Korhonen, Kuisma 2018, "General Introduction: Rereading Chiasms" in *Chiasmatic Encounters: Art, Ethics, Politics*, edited by K. Korhonen, A. Haapala, S. Heinämaa, K. Klockars & P. Räsänen, Lexington Books, London, p. XIV.

Methodological View

Research Approaches and Structure of the Study

This dissertation investigates media art to unfold the conditions for experiencing perception in contemporary art. I analyse changes that have occurred in media art, especially in immersive art environments. I approach immersive art as an embodied mutual experience, in the light of phenomenology.

Philosopher Maurice Merleau-Ponty, one of the most original and profound phenomenologists, is central to this thesis. Why Merleau-Ponty? First, the French phenomenologist's thinking is underpinned by concepts such as spatiality, experience, body, circularity, reciprocity, intersubjectivity, chiasm – significant notions for interpreting video, interactive, and immersive installations. In addition, several aspects of Merleau-Ponty's thinking can also explain the paths that media conservators have recently taken in media art and its 'unstable archives', such as intentionality and ambiguity. I highlight how Merleau-Ponty has inspired generations of artists since the 1960s and attempt to chart new affinities between this thinking and artists practicing in earlier years. Moreover, several articles published after Merleau-Ponty's death have diluted awareness of his thinking by scholars and the wider reading public, and new interpretations by researchers are still in progress.

One of my objectives is to emphasise the role of video art in the development of interactive and immersive art environments, along with the concept of spatiality. From the turn of the nineteenth and twentieth centuries onwards, spatiality was increasingly developed by artists to expand the spectator's perception. I refer therefore to earlier art experiences from the international arena and connect them with the Finnish art scene.

I have chosen to focus in more detail on several artists who work in immersive digital art internationally, such as Doug Aitken, Olafur Eliasson, Hanna Haaslahti, Tuomas A. Laitinen, Studio Azzurro, and teamLab. The wide range of available equipment for both production and exhibitions certainly affects practitioners in this sector, but their number is growing daily. In fact, this research can be partially characterised as exploratory, as the temporal milieu does not cover a complete historical-artistic period but is rather very much in progress.

Research Questions

To address the dissemination of phenomenological ideas I focus on four main research questions: when and how did interest in phenomenology in media art practices begin and develop? What kickstarted the dissemination of phenomenology in Finland? To what extent have phenomenological insights contributed to the development of video installation and media art practices in Finland? Could phenomenology have contributed to other digital art practices in a broader international context?

To analyse media art, I draw parallels between art history and phenomenology. I extend my reflections to contemporary issues, such as multimodal perception, environment, and media space, and the new type of spectatorship created through immersion. To address immersive art environments, I focus on six questions: what is an immersive experience and what are its preceding models? Do phenomenology and immersivity correspond through the concepts of spatiality and circularity? To what extent did video art installations contribute to the spread of immersive art? What are the emerging models of immersive environments in Finland and their venues? What is the main role of new museums today? How will immersive art be archived?

Research Methodologies

This research has multiple objectives. As such, I adopt a multidisciplinary approach to texts focusing on three key subjects: phenomenology, media art, and social theory. For phenomenology, I refer to contemporary scholars who have connections with phenomenology, such as Mauro Carbone, Vilém Flusser, Don Ihde, Suzan Kozel, Margaret Morse, and Alva Nöe. For media art and related topics, I examine the latest studies and genealogies of scholars such as Silvia Bordini, Francesco Casetti, Oliver Grau, and the less recent theories of Marshall McLuhan, whose thought has of late been re-considered in a new light in several fields. Focusing on Finnish media art, I explore media archaeology and particularly essays by Erkki Huhtamo and Jussi Parikka.

For social theory, I consider Jean Baudrillard, Guy Debord, and Erving Goffman. The disappearance of the division between reality and representation, namely the third order of simulacra identified by Baudrillard, is an insightful tool to speculate on the concept of immersion, while the Debordian concept of 'spectacle' is still captivating, especially in the case of immersive art experiences as a new form of shared and interactive spectacularisation. I have therefore considered contemporary scholars inspired by Debord, such as Nicolas Bourriaud, Wolfgang Kemp, and Jacques Rancière, who are all interested in defining a new kind of spectator.

Within the Nordic cultural field and academia, I have considered studies in philosophy, video art and media art, focusing on the following Finnish researchers in art history and aesthetics: Saara Hacklin, Kati Kivinen, Hanna Johansson, Harri Mäcklin, Riikka Niemelä, and Marja Sakari, as well as Leila Haaparanta and Sara Heinämaa in theoretical philosophy. Most of these scholars reference the phenomenology of Merleau-Ponty in their inquiries.

The list of the sources I have consulted is not exhaustive. My research includes the prerequisite literature review and is consolidated by interviews with relevant scholars and artists to investigate art and phenomenology in Finland, especially in the 1990s. I used the following methodology to interview Finnish artists: I formulated a number of questions for all interviewees, based on phenomenology and media art. I related other questions to their singular artistic practice. In the case of Finnish experts, I chose some questions related to their activities and others on phenomenological themes. I have also followed recent discussions in art magazines and newspapers to explore the current topic of immersivity.

Contents and Thesis Structure

In Chapter 1, "A Phenomenological Approach over a Century", I describe the influence of phenomenology on the international art scene starting from the early twentieth century. Aside from references to Edmund Husserl and Jean-Paul Sartre, Merleau-Ponty is a key influence in my aesthetic inquiry. Merleau-Ponty uses *Gestalt* theory as a starting point to integrate perception and its relevance to the body. Perception thus becomes an embodied experience. After addressing examples from modern art, including Paul Cézanne, and Alberto Giacometti, I move on to examine Action Painting and performances in the United States, some important European art groups born between the mid-1950s and 1960s, and early experiments in international video art.

In Chapter 2, "The Immersive Artistic Experience", I delve into the concept of immersion in relation to media art and phenomenology. Starting from selected case studies in modern art, I compare them to the modern and contemporary practices of spectator involvement and envelopment. Inspired by 'media archaeology' and its interest in the recirculation of obsolete communication devices, I establish a link between panoramas and lantern slide projections on the one hand, and recent digital art environments on the other. Following on from this, I describe the evolution of video installation into interactive and immersive environments. Before I examine immersive art itself, I offer a reflection on the entwined notions of immersion and illusion applying a phenomenological approach. I also analyse the diffusion of immersive exhibitions dedicated to Modern Masters and connect them with the

notions and dynamics of post-truth and post-production, which contribute to explaining our present-day multimodal ways of perceiving.

In Chapter 3, "New Media Art in the Nordic Countries with a Focus on Finland", I investigate the beginnings of electronic arts in the Nordic Countries, then, as if using a magnifying glass, I focus on the Finnish art scene. First, I trace the dissemination of phenomenological ideas in Finland in the academic and cultural milieu. Next, I analyse the spread of visual arts based on testimonies from artists and curators. I examine the work of Finnish video artists and their experiences related to multiple screens and spectator involvement. I also discuss the architectural design competition for Kiasma, the new museum of contemporary art in Helsinki, and its effect on the Finnish art scene, as well as the recent exhibition plans for Amos Rex Museum. In addition, I examine a selection of artworks by Finnish artists who have adopted an immersive approach.

In Chapter 4, "Post-phenomenological Dynamics in Contemporary Art Practices", I interrogate the concept of experientiality characterising interactive and immersive environments. Embodied interaction, spatiality, and the enactive approach are investigated from a Merleau-Pontian perspective. I analyse the concept of circularity in phenomenology and in contemporary art highlighting their correspondences. I focus on several examples in Finnish and international art to emphasise the current tendency towards circular spatiality in representation to envelop and, effectively, immerse audiences within the perceptive experience. This tendency towards a spherical approach to space is also compared to natural environments and planetary scale. Moreover, immersivity is examined in relation to the concepts of spectacle and spectatorship.

In Chapter 5, "Sharing Archives in Motion", I analyse the sustainability of immersive art by highlighting the opportunities offered by shared archives. I examine the changes in displaying art collections and exhibitions, the new commitments of art museums, and the innovative directions of media conservators. Moreover, I argue that a correlation between these practices and phenomenology may support new approaches and strategies for 'handling' the unstable nature of media art, such as in re-enactments and multiple authorship.

Finally, the Conclusion summarises my findings and contributions to our fast-paced technology-driven society.

Considering the entire research, I would like to underline some general lines of enquiry in the structures of the chapters. Chapter 1 introduces the entire research, while Chapter 2 is dedicated to the immersive experience, which I analyse in an international context, from the perspective of art history, philosophy, and media studies. I present a comparative analysis on previous forms of immersive spatiality and projected moving-image art, such as spatial environments, participatory installations, video art installations, and interactive environments.

Chapter 3 is dedicated entirely to the Finnish art scene in connection with phenomenology and media art. I have selected a group of relevant Finnish artists from different generations to exemplify the development of media art in the Nordic countries and characterise the breeding ground within which Finnish media art has formed. I also refer to other emerging media artists because the immersive field is effectively alive, and these processes are ongoing. While examining the proliferation of phenomenology in Finland, I investigate its origins and development via its protagonists, right up to the renewed interest in this branch of philosophy in the 1990s. Throughout Chapters 4 and 5, I focus on several theoretical concepts and topics in media art and link them to phenomenological ideas to form the basis of this thesis. Here, again, I explore the Finnish art scene in an international context to compare and situate it within a globalised context.

CHAPTER 1

A Phenomenological Approach Over a Century

1.1 An Introduction to Merleau-Pontian Phenomenology – The Aesthetic Key Points

The Phenomenology of Perception is a book about perceptual experience published in 1945 by the French philosopher Maurice Merleau-Ponty. The book intersperses references to Paul Cézanne, Vincent van Gogh, to Marcel Proust, Honoré de Balzac, Paul Valéry, Stendhal, and Ludwig van Beethoven's Ninth Symphony. By drawing on these artists, Merleau-Ponty illustrates how phenomenological experiences – of the body, of language, of time, of sight – articulate embodied being-in-the-world. In addition, he parallels the task of the artist and that of the theorist. In the concluding words of the book's Preface, Merleau-Ponty notes that phenomenology "(…) is as painstaking as the works of Balzac, Proust, Valéry, or Cézanne – by reason of the same kind of attentiveness and wonder, the same demand for awareness, the same will to seize the sense of the world or of history as that meaning comes into being".[6]

Phenomenology is a philosophical movement that originated in the twentieth century thanks to the German philosopher Edmund Husserl (1859–1938). Its primary purpose is to directly analyse and describe phenomena as it is consciously lived and to avoid assumptions about causal explanations and preconceived notions. Following the work of Husserl, Merleau-Ponty attempts to reveal the phenomenological structure of perception. In *The Phenomenology of Perception*, he expounds his thesis of 'the primacy of perception', stating that: "The alleged self-evidence of sensation is not based on any testimony of consciousness, but on widely held prejudice".[7] Merleau-Ponty critiques the Cartesian concept of *cogito ergo sum* and

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[6] Merleau-Ponty, Maurice 1945, *Phénomènologie de la perception,* Gallimard, Paris; English transl. Merleau-Ponty, Maurice, *The Phenomenology of Perception,* translated by C. Smith, Routledge & Kegan Paul, London and New York 1962, Preface, p. XXIV.

[7] Ibidem, p. 5.

describes a different notion of consciousness. Ultimately, he rejects the mind-body dualism in favour of an intersubjective, dialectical, and intentional idea of consciousness. From Merleau-Ponty's viewpoint, the ability to reflect derives from a pre-reflective ground that serves as the basis for reflecting on actions: "The body is the vehicle of being in the world, and having a body is, for a living creature, to be intervolved in a definite environment, to identify oneself with certain projects and be continually committed to them". The body, therefore, links subjectivity and objectivity; it exists before the distinction between the two; it is "the very existence".[8] Merleau-Ponty's thinking centres on the body, to the extent that he becomes the pre-eminent philosopher of the body.

Merleau-Ponty is also one of the most resolute phenomenologists that rejects Platonism and rationalist 'purism' from phenomenology. From the outset, his project aims to modify phenomenological concepts such as reduction, essences, and intentionality in an existentialist way. For instance, he reinstates essences because they belong to the in-between world, to the 'flesh of the world', as he explains in *The Visible and the Invisible* (1964). Phenomenology is thus for Merleau-Ponty a descent into the experience of life and a style of thought rather than a doctrine. He points out that "phenomenology can be practiced and identified as a manner or a style of thinking, that it existed as a movement before arriving at complete awareness of itself as a philosophy".[9] Consequently, Merleau-Ponty re-examines the concepts of subjectivity (or consciousness) and objectivity (or world) by inserting the concept of 'body', which becomes one of the key elements of his phenomenology of perception.

Perception is a concept inherent to artistic practice, thus linking philosophy to the aesthetic field. The word aesthetics is derived from the Greek αἴσθησις, which means 'sensation', and from the Greek verb αἰσθάνομαι, which means I perceive, feel, sense through the mediation of meaning. Merleau-Ponty's first deep incursion into aesthetics happens between 1945 and 1948, whilst teaching at the University of Lyon. During this period, he devotes one-third of his course to examples from aesthetics and the psychology of communication. It is also important to note that he delivers a course entitled "Aesthetics and Modern Painting" in 1946–1947, which includes discussions of Cézanne, cinema, Cubism, André Malraux, and the psychology of art. In the third academic year, he focuses his Aesthetics course on modern poetry and on the French Symbolists (Charles Baudelaire, Arthur Rimbaud, and Stéphane Mallarmé) in particular. Before 1948, when he was appointed as Professor of Child Psychology and Pedagogy at the Sorbonne in Paris, Merleau-

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[8]   Ibidem, p. 94.
[9]   Merleau-Ponty, Maurice 1945, *The Phenomenology of Perception*, Preface, p. VIII.

Ponty investigates how the practice of the artist or writer could be read phenomenologically.[10]

Merleau-Ponty's book *Eye and Mind* (1964) is rich in references to art history. In it, we find references to the following masters: Paul Cézanne, Robert Delaunay, Marcel Duchamp, Max Ernst, Jan van Eyck, Théodore Géricault, Alberto Giacometti, Paul Klee, Étienne-Jules Marey, Henri Matisse, Eadweard Muybridge, Rembrandt, Germaine Richier, and Auguste Rodin. Merleau-Ponty is clearly very attentive to visual art from the Renaissance to coeval times. In addition, he mentions the art historian Erwin Panofsky, whose book *Perspective as Symbolic Form* (1927) was most likely a milestone in the development of his critical and philosophical thought concerning spatial depth in *Eye and Mind*.[11] Finally, the essay with the same title, *Eye and Mind* (dated July-August 1960) was printed for the first time in the magazine *Art de France* (Art from France), edited at the beginning of 1961 by the historian and art critic André Chastel and by the bookseller Pierre Berès.[12] Hence, the French philosopher collaborated closely with art historians.

In the years following *Phenomenology,* the notion of expression, particularly in language and art, plays an increasingly pivotal role in Merleau-Ponty's thought. His aims shift towards formulating a general theory of expression as the basis for a philosophy of history and culture.[13] This ambition is first reflected in a series of essays about painting, literature, and film published in the years immediately after *Phenomenology*. Among these texts, Merleau-Ponty's first essay on painting is entitled "Cézanne's Doubt". Here, he identifies in Cézanne an early phenomenological effort to capture the birth of perception through practicing painting. He begins his analysis of Cézanne using a quote about his unceasing work that was taken from a letter written by the French painter in 1906:

> "He needed one hundred working sessions for a still life, one hundred and fifty sittings for a portrait. What we call his work was, for him, only an essay, an approach to painting. In September 1906, at the age of 67 – one month before his death – he wrote: *I was in such a state of mental agitation, in such great*

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[10]   Silverman, Hugh J. 2008, "Art and Aesthetics" in *Merleau-Ponty: Key Concepts*, edited by R. Diprose & J. Reynolds, Acumen, Stocksfield, p. 96.

[11]   Merleau-Ponty, Maurice 1964, *L'oeil et l'esprit,* Gallimard, Paris; English translation by C. Dallery, *Eye and Mind,* in Merleau-Ponty, Maurice, *The Primacy of Perception and Other Essays on Phenomenological Psychology, the Philosophy of Art, History and Politics*, edited by J. M. Edie, Northwestern University Press, Evanston, 1964, p. 174.

[12]   See Noble, Stephen A. 2011, "Merleau-Ponty: Fifty Years After His Death" in *Chiasmi International*, No.13, p. 112.

[13]   Recent studies on Merleau-Ponty's general theory of expression and its application to literature and the arts include Carbone 2015.

confusion that for a time I feared my weak reason would not survive.... Now it seems I am better and that I see more clearly the direction my studies are taking. Will I ever arrive at the goal, so intensely sought and so long pursued? I am still learning from nature, and it seems to me I am making slow progress. Painting was his world and his way of life".[14]

For Merleau-Ponty, Cézanne embodies the inexplicable effort of creative expression, shaped by the peculiarities of the artist's individual career, as well as by the tradition of painting. The endeavour can only succeed if the artist risks teaching the audience to look at the world anew. Indeed, Merleau-Ponty points out how Cézanne disrupts an understanding of knowledge based on 'habitual' vision in search of the truth. To render his vision of reality as precisely as possible, Cézanne seems to adopt the neutral approach of a scientist free from any preconceived idea. After speculating on Cézanne's painting and determining the infinity of reality, the philosopher affirms that "the expression of what exists is an infinite task",[15] thus eliminating the likelihood of coincidence.

Merleau-Ponty returns to analysing painting in his essay, *Eye and Mind*. Here, he focuses on the concept of vision in its two meanings: on the one hand, the act of seeing and on the other vision as the spectacle that is in front of the viewer. Moreover, the overwhelming effect that the visible has on the viewer has a dual aspect: as the visible is part of the see-er, so too the subject who sees belongs to the visible. This is a condition that many artists have described by saying that they felt they were "being observed by things", as the Swiss-German painter Paul Klee mentions.[16] This resonates with artists depicting themselves in the act of painting. In many paintings with interiors in the Flemish and Dutch style, a visible sign of this appears in the form of a mirror in which the scene is reflected. The mirror for Merleau-Ponty, in these cases, is like a pre-human gaze that "is the emblem of the painter". He adds immediately that "the mirror appears because I am a seeing-visible, because there is a reflexivity of the sensible; the mirror translates and reproduces that reflexivity".[17] Therefore, the mirror in *Eye and Mind* is a symbol of the philosophy of vision.

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[14] See Merleau-Ponty, Maurice 1945, "Le doute de Cézanne" in *Sens et non-sens*, Gallimard, Paris; English translation by H. L. Dreyfus & P. Allen Dreyfus, "Cézanne's Doubt" in *Sense and Non-Sense*, Northwestern University Press, Evanston, 1964, p. 9. Emphasis in original.

[15] Ibidem.

[16] Merleau-Ponty, Maurice 1964, *Eye and Mind*, p. 167.

[17] Ibidem, p. 168.

It is by "lending his body to the world that the artist changes the world into paintings".[18] This assumes that the artist's body is immersed in the universe: to touch, one must be tangible, and to see, visible. Merleau-Ponty outlines this idea as "intertwining" or "overlapping", whereby the embodiment of the artists is the other side of their opening up to the universe. There is no clear-cut division between the sensing and the sensed, between the body and things as they share one common "flesh". Painting appears as the manifestation of this reciprocity: it is a "visible to the second power, a carnal essence or icon" of embodied vision.[19] It can be said that the concepts of vision and reciprocity open to those of spectatorship and embodied experience, which have become increasingly vital to visual art in recent years, from video art installations to the latest immersive art. In an immersive art environment, for instance, interaction is accompanied by a sort of co-empathy in the audience sharing the experience. This aspect of reciprocity is emphasized by several immersive artworks, especially those orientated towards social aims that demand a plethora of users.

Merleau-Ponty believes that no prerogative can justify the linear perspective as a 'fundamental rule' of painting. He argues that the Renaissance perspective is not an infallible 'expedient', but only a particular case, a phase in the poetic knowledge of the world that continues beyond it. According to the philosopher, modern painting attempts to go directly to the 'flesh of the world' and therefore is continuously researching depth, colour, line, and movement.

Moreover, Merleau-Ponty analyses the notion of depth phenomenologically. In *Eye and Mind*, the philosopher quotes a number of artists on this topic: "'I believe Cézanne was seeking depth all his life', says Giacometti. Says Robert Delaunay, 'Depth is the new inspiration'. Four centuries after the 'solutions' of the Renaissance and three centuries after Descartes, depth is still new, and it insists on being sought, not 'once in a lifetime' but all through life".[20] In one of his final lectures, Merleau-Ponty also poses questions about this subject, observing: "What is this – 'search'– of the depth that lasts – 'for a lifetime' – (and not – 'once in a lifetime' –)? (…) *It's overlapping*".[21]

In *Eye and Mind*, he continues to criticise Descartes' *Dioptrique*, where depth is described as the "third dimension derived from the other two", that is, as an unseen

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[18] Ibidem, p. 162.
[19] Ibidem, p. 164.
[20] Ibidem, pp. 179–180.
[21] Merleau-Ponty, Maurice 1996, *Notes de cours. 1959–1961*, edited by S. Ménasé, Gallimard, Paris; Italian translation by F. Paracchini & A. Pinotti, in Merleau-Ponty, Maurice, *È possibile oggi la filosofia? Lezioni al Collège de France 1958–1959 e 1960–1961*, edited by M. Carbone, Raffaello Cortina, Milano 2003, p. 154.

element that originates from height and width.[22] In *Phenomenology*, Merleau-Ponty also argues against the "classical conceptions" of depth as comparable "to the width considered in profile", thus eliminating its true experience. In his opinion, depth "among all the dimensions (...) is, so to speak, the most 'existential,' because – it does not impress on the object itself, but it belongs, quite obviously, to the perspective and not to the things".[23] In his later years, he adds that depth is "between projection and overlap".[24] As the scholar Mauro Carbone notes, in the final phase of Merleau-Ponty's thought, depth "is transcribed within the philosophy of the flesh as visibility of the invisible, so that now depth, rather than as an 'existential' dimension and therefore not belonging to things, emerges as an ontological dimension that falls within the definition of things as they are given and subtracted in a mutual envelopment".[25]

In *Phenomenology of Perception*, the concept of reciprocity is characterised by symmetrical dialogue,[26] but in Merleau-Ponty's later works it is defined in relation to divergence and to the failure of symmetry. The notion of reciprocity is complex and multifaceted. Firstly, it describes the relationship that a person has to themselves. This aspect of reciprocity can be exemplified by the phenomenon of two hands touching, where it is not possible to separate sensing from the sensed. Secondly, the concept of reciprocity describes a person's relationship to others, as well as their relationship with the world at large. In *The Visible and the Invisible*, the phenomenon of reciprocity is assimilated into that of 'chiasm' and claimed to identify the association between our own bodies, our sensing, and our being in the universe with others.[27] The two-sided act of sensible and sentient during self-touch is an emblematic example of chiasmic structure. Chiasm also refers to the intertwining of aspects of reality that are considered distinct, such as body and world, others and me, inside and outside. Merleau-Ponty affirms that "we situate ourselves in ourselves *and* in the things, in ourselves *and* in the other, at the point where, by a sort of *chiasm*, we become the others and we become world".[28] In summary, to perceive, to be embodied, to be "at grips with the world", are not three separate or separable dimensions in Merleau-Pontian thought. Instead, they are three overlapping and interlinked aspects of human life. In conclusion, this

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22   Ibidem, p. 172.
23   Merleau-Ponty, Maurice 1945, *The Phenomenology of Perception*, p. 298.
24   Merleau-Ponty, Maurice 1996, *Notes de cours. 1959–1961*, p. 154.
25   Carbone, Mauro 1990, *Ai confini dell'esprimibile. Merleau-Ponty a partire da Proust e Cézanne*, Guerini Editore, Milano, pp. 156–157.
26   Merleau-Ponty, Maurice 1945, *The Phenomenology of Perception*, p. 413.
27   See Merleau-Ponty, Maurice 1964, *Le Visible et l'invisible,* Gallimard, Paris; English translation by A. Lingis, *The Visible and the Invisible,* edited by C. Lefort, Northwestern University Press, Evanston 1968, pp. 130–155.
28   Ibidem, p. 160.

statement by the French philosopher can represent a starting point for dealing with the phenomenology of aesthetic immersion.

1.2 Cubism and Two Key Figures in Modern Art: Paul Cézanne and Alberto Giacometti – Phenomenology in Post-War Europe and its Reception in Art

According to Octavio Paz, the "aesthetics of rupture" was one of the most prominent aspects of western modern painting in the twentieth century, which dismantled a tradition based on a perspective valid since the Renaissance.[29] Colour, line, and movement no longer hold imitative value for most modern artists, but rather they disrupt the stability of the visual space and endow it with autonomous diacritical organization. An example of this is Pablo Picasso's Cubist period and his redistribution of facial and bodily features.[30] Regarding this turn, Merleau-Ponty considers depth, colour, line, and movement as the agents disrupting the homogeneity of Euclidean or Cartesian space in modern painting that led to the unveiling of a "preliminary spatiality", an "undivided space of flesh, where the vision rises and not where it extends".[31] Temporality, or more precisely the phenomenon of simultaneity,[32] comes into play in the spatial field. The resulting representation is also a synchronic encapsulation of a perceptual path that the artist has temporarily completed around the subject in question. Hence, vision is not an overcoming of the encounter, but the encounter itself, "as at a crossroads, of all aspects of Being"[33] in a simultaneous way. This is the reason why, according to Merleau-Ponty, the painter "just when he [the painter] has reached proficiency in some area, he finds that he has reopened another one where everything he said before must be said again in a different way".[34]

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[29]   Paz, Octavio 1982, "Picasso: el cuerpo a cuerpo con la pintura" in *Los privilegios de la vista I. Arte Moderno Universal*, Volumen 6; Italian translation by E. Corti, "Picasso. Il corpo a corpo con la pittura" in *Pablo Picasso*, edited by E. Grazioli, Marcos y Marcos, Milano 1996, p. 238.

[30]   Until the 1980s, Cubism was considered a monolithic movement, but a critical reinterpretation repositioned its relationship with the Fauves and its generalizing character. See Nigro Covre, Jolanda, *Arte contemporanea: le avanguardie storiche*, Carocci Editore, Roma 2008.

[31]   Carbone, Mauro 1990, *Ai confini dell'esprimibile. Merleau-Ponty a partire da Proust e Cézanne*, p. 158.

[32]   It is noteworthy that the Cubist painter, Fernand Léger, became passionate about cinema for its simultaneity.

[33]   Merleau-Ponty, Maurice 1964, *Eye and Mind*, p. 188.

[34]   Ibidem, p. 189.

The idea of simultaneous vision is central to Cubism, one of the few avant-garde movements that did not produce a manifesto. Because of the unavailability of an explicit programme, a number of scholars refer to Husserl's phenomenology for its rejection of perspective and for reproducing an omni-percipient vision of the sensory realm.[35] As Cubism emerged between 1905 and 1913, the time of the dissemination of Husserl's ideas, the similarity of intent with phenomenology should not surprise us.[36] When looking at a cubist painting, the observer is prompted to regenerate an image starting from the multiple viewpoints simultaneously proposed by the painter in a sort of mutual collaboration on which the success of the painting ultimately depends. Similarly, in media art environments viewers need an attitude of simultaneous attention to different views to complete the artwork. Media theorist Marshall McLuhan already sensed the importance of concurrency and responsiveness transposed from the artistic avant-gardes to the new electronic era when he observed that "Cubism, by giving the inside and outside, the top, bottom, back, and front and the rest, in two dimensions, drops the illusion of perspective in favor of instant sensory awareness of the whole".[37]

The Finnish philosopher Jaakko Hintikka draws a compelling parallel between Husserl and the Cubists.[38] After remarking that Husserlian phenomenology is based on *noemata*, a term standing for the content of a thought, judgement or perception, Hintikka claims that "Cubists have painted noemata not objects", and then continues to quote Gertrude Stein, the American novelist and art collector in Paris, as quoting Picasso: "I do not paint things the way they look, but the way I know they are".[39] With regard to these perceptual issues, Hintikka observes how both Cubism and phenomenology reacted to Impressionism, the philosophical doctrine of Sensism and the positivism of Ernst Mach. Unlike the Impressionists and Mach, who paid

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[35] See *Pittura e idea. Ricerche fenomenologiche sul Cubismo*, edited by A. Pinotti, Alinea, Firenze 1998.

[36] In his 1907 lectures at the University of Göttingen, Husserl proposed the concept of *epoché*. See Ramazzotto, Nicola 2017, "Percezione e pittura eidetica. Per una lettura fenomenologica del Cubismo" in *Arte e fenomenologia. Rifrazioni reciproche*, edited by F. Nobili, Edizioni ETS, Pisa, p. 88. According to the author, it is almost certain that Husserl and Picasso did not know each other, but it is interesting to note the conceptual affinities between the two.

[37] McLuhan, Marshall 1964, *Understanding Media: The Extensions of Man*; 1st ed. Edition McGraw Hill, New York; Sphere Books, London 1967. The statement can be found in Part 1 of the book.

[38] Hintikka, Jaakko 1972, "Concept as Vision: On the Problem of Representation in Modern Art and in Modern Philosophy" (originally in Finnish, 1972) in Hintikka, Jaakko 1975, *The Intentions of Intentionality and other New Models for Modalities*, Reidel, Dordrecht; Italian translation by E. Paganini, "Concetto come visione" in *Pittura e idea. Ricerche fenomenologiche sul Cubismo*, pp. 111–133.

[39] Quote from the Italian edition, pp. 116–117. Emphasis in original.

attention to the human sensory impressions, Cubists and phenomenology turned to the things themselves.[40] In a comparison between the Husserlian noemata and Cubist painting, Hintikka notes that both include expectations and visions of a subject matter from different perspectives in a simultaneous way.[41] Moreover, in Cubist painting, the disavowal of perspective and naturalistic lighting underlines the aspiration to present things for what they are. However, it should be noted that this task had already been undertaken by Cézanne, who is considered to have paved the way to twentieth-century modernism, both visually and conceptually. In retrospect, his investigations in the field of perception could be considered as the main link between these aspects of Impressionism and the artistic movements of Cubism and Expressionism.

In *Eye and Mind*, Cézanne is the fundamental referent for Merleau-Ponty. Earlier, the French philosopher examined Cézanne's paintings in his essay "Le doute de Cézanne", which first appeared in *Fontaine. Revue mensuelle de la poésie et des lettres françaises* (December 1945) and was later reprinted unchanged in *Sens et non-sens* (Gallimard, Paris 1945). According to Merleau-Ponty, while the Old Masters painted as painters who think, and the Impressionists painted as painters who see, Cézanne intended to perform both activities simultaneously. Through the artistic research carried out by Cézanne in re-discussing perspective, Merleau-Ponty highlights that how we perceive is not photographic or geometric. For Merleau-Ponty, the "lived perspective" questions both the previous systems and traditions of academic painting, and a new observation of nature.

Unsatisfied with his first painting *Mont Sainte-Victoire* in 1870, Cézanne started his decades-long fascination with this mountain view by generating more than thirty paintings and watercolours of it. (Fig. 1) His artistic practice is synonymous with a new kind of analytical discipline, where the subject has not yet been colonized by mankind's gaze, by any subjectivity. Like a phenomenologist, Cézanne aimed to achieve the primordial condition of the artist's vision, and the core truths of perceptual experience. Indeed, Cézanne claimed that the Impressionists "created pictures; we are attempting a piece of nature".[42] The mutability of perception is a quality that artists like Cézanne have stubbornly tried to represent, and scientists of the same period have demonstrated with the new technologies available at the time.

In an analysis by American art historian Jonathan Crary, paintings by Cézanne, Édouard Manet and George Seurat appear to hover "between the metric and homogeneous tableau loosely synonymous with classical space, and a decentred and

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[40] Ibidem, p. 118.
[41] Ibidem, p. 121.
[42] See Merleau-Ponty, Maurice 1945, "Cézanne's Doubt" in *Sense and Non-Sense*, p. 12.

destabilized perceptual regime with its mobile and embodied observer".[43] Unlike the broad views often evident in his landscape paintings, Cézanne's *Pines and Rocks* (1897) is a framed, compressed vision of nature, where the painter seems to bring back a trembling vision of nature in its continuous movement. (Fig. 2) Though tree trunks and rocks firmly structure the scene, the painter infuses it with a sense of airiness and impermanence that gives the impression of being almost out of focus. In fact, the artist seems to want to represent the mutability of perception made visible by new technologies like the tachistoscope with its capacity to measure human reactions. Scientists recognized that perception is essentially temporal and unstable. Thus, Cézanne's *Pines and Rocks* appears to be "hovering at a threshold where revelation is inseparable from the onset of its dissolution".[44]

Another example of Cézanne's approach to the perception of a sensory world with no preconceptions and heightened attention is one of the portraits entitled *Boy in the Red Waistcoat* (1888–1890), where he analysed the relationship between figure and space. (Fig. 3) The painter represents a young man in a pensive seated pose with his elbow leaning on a table and his head cradled in his hand. In this portrait, one arm is longer than it should be, because the painter was attempting to relive the sensation of the proximity of the model's arm to his body. In other words, Cézanne attempts to recreate the perception of being closer to this part of the model's body. Several years later, a similar experience is recognizable in *Portrait of Jean Genet* (1954–1955) by Alberto Giacometti. (Fig. 4) Here, one of the leading French writers of the twentieth century is portrayed in a reduced palette of colours sitting in an undefined space. Employing a compositional approach close to that of Cézanne's paintings, the Swiss artist depicts the model's legs as bigger than the rest of his body to restore a sense of his proximity. Without prejudice, Giacometti aims for a primordial perception of the world. It is not by chance that Merleau-Ponty refers to Giacometti twice in *Eye and Mind* to explicate his philosophical ideas about painting and depth. The first French edition of *Eye and Mind* also reproduces some of the Alberto Giacometti paintings which, alongside those by Henri Matisse, Paul Klee, and Nicolas de Staël, and with some sculptures by Germaine Richier and Auguste Rodin make up the philosopher's little *imaginary museum* (*musée*

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[43] Crary, Jonathan 1999, *Suspensions of Perception: Attention, Spectacle, and Modern Culture*, The MIT Press, Cambridge, MA and London, p. 190. Crary's bibliography for this text includes the following phenomenological sources: Husserl, Edmund 1970, *Logical Investigations* (1899–1901), Humanities Press, New York; Husserl, Edmund 1964, *The Phenomenology of Internal Time Consciousness* (1905–1910), Indiana University Press, Bloomington; and Merleau-Ponty, Maurice 1963, *The Structure of Behavior* (1942) Beacon Press, Boston; Merleau-Ponty, Maurice, *The Phenomenology of Perception* (1945); Merleau-Ponty, Maurice, *Sense and Non Sense* (1945).

[44] Ibidem, p. 359.

imaginaire).[45] Merleau-Ponty cites Giacometti again in his university lectures, as reported in "Course notes from the Collège de France",[46] showing that the philosopher's exchanges with artists, writers, and musicians were vital to his understanding of the transformation in the relationship between man and Being that was occurring at the time.[47]

In the post-war period,[48] Merleau-Ponty visited Giacometti's studio in Paris and commissioned the frontispiece of his anthology of philosophy. The parallels between their practices between 1936 and 1945 – when they still had not met – were already astounding. Reinhold Hohl points this out in his monograph on Giacometti,[49] where he also describes the artist's work between the late 1930s and the early 1950s as strongly influenced by a phenomenological approach to reality, imbued with the persistent concern to express the 'totality of life'.[50] Philosopher Simone de Beauvoir, in *The Prime of Life*, also notices that Giacometti's attitude is comparable to that of phenomenologists, since "he claimed to sculpt a face in its context, as it existed at a distance for others, and by so doing to avoid the pitfalls of both subjective idealism and pseudo-objectivity".[51]

On the other hand, Giacometti's encounter with Merleau-Ponty allows him to articulate and gain a deeper understanding of the artist's reservations relating to the act of vision, depth, and movement during his work with his models. The main goal of the Swiss artist was to retrieve vision in its dawning state, where the human being is (con)fused with the world, where – after doing away with all mental corrections – perception regains its original significance, and the body regains its place as part of the creative process. The French philosopher probably saw Giacometti as Cézanne's contemporary heir, the coeval artist who continued his artistic legacy.[52]

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[45] Carbone, Mauro 2008, *Sullo schermo dell'estetica: la pittura, il cinema e la filosofia da fare*, Mimesis, Milano, p. 24.

[46] Merleau-Ponty, Maurice 1996, *Notes de cours. 1959–1961*, p. 154.

[47] See Carbone, Mauro 2003, "Introduzione" in Merleau-Ponty, Maurice 1996, *Notes de cours. 1959–1961*, pp. XVII–XVIII.

[48] See Dufrêne, Thierry 1991, *Giacometti. Portrait de Jean Genet: le scribe captif*, Adam Biro, Paris, p. 18.

[49] "It is astonishing to observe that while Merleau-Ponty was writing his most important work, *The Phenomenology of Perception*, in the years 1936–1945, sculptor Giacometti was striving to unveil the phenomenological image of the Other or of another man as it appeared to him from a distance", in Hohl, Reinhold 1971, *Alberto Giacometti*, La Guilde du Livre & Clairefontaine, Lausanne, p. 106.

[50] Ibidem.

[51] de Beauvoir, Simone 1960, *La Force de l'âge,* Gallimard, Paris; Italian translation by B. Fonzi, *L'età forte*, Einaudi, Torino 1961, p. 424.

[52] See Scacco, Lorella 2017, *Alberto Giacometti e Maurice Merleau-Ponty. Un dialogo sulla percezione,* Gangemi Editore, Roma.

Why was phenomenology so successful in Europe's post-war culture? One possible answer is that Husserl's ideas seem to match the need to condemn all forms of psychology that aim to alienate the individual, by denying subjectivity and inner consciousness, to reduce the human being to insignificance, as the events of the Second World War manifest. Conversely, post-war thinkers recognize that human authenticity resides in subjectivity and consciousness and set out to define the relationship between consciousness and experience, between the subject and reality, between the individual and the world.[53] Merleau-Ponty strives to find a primordial dimension, before the dualism between human being and the world and between subject and object, which lay the ground for the development of philosophy and science. Sartre merges phenomenological concerns with existential themes like freedom, anguish, responsibility, and authenticity, while de Beauvoir significantly contributes to the fields of ethics, politics, feminist theory, and to existential and phenomenological philosophy.[54] Historian Michael Gubser[55] observes that phenomenology should be called a 'social philosophy' for its contribution to the renewal of European societies after the crises of the twentieth century. For my argumentation, the aesthetical thought from Martin Heidegger to Jean-Paul Sartre and phenomenological thought from Husserl to Merleau-Ponty are vital because they helped to trace, after Friedrich Nietzsche and Søren Kierkegaard, the contours of an embodied identity.

It should also be noted that one of the most innovative aspects of Merleau-Ponty's thought is his re-elaboration of data from the *Gestalt* psychological theory, which emerged in the early twentieth century in Austria and Germany. Merleau-Ponty employs a wealth of observations from *Gestalt* psychologists to strengthen his critique of empiricists and rationalists. The *Gestalt* legacy can be summarised as emphasising the active role that the human intellect plays in perceptual activity. When faced with a chaotic aggregate of objects, human minds operate an essential organizational function that is to provide perception with its meaning. A consequence of this perceptual organization is that we perceive the world as a collection of sensations. In *The Structure of Behavior* (1942) Merleau-Ponty introduces the notion of form as a comprehensive situation to which the organism responds. In other words, form is a totality that is not obtained by adding the

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[53] Senofonte, Ciro 1972, *Sartre e Merleau-Ponty*, Libreria scientifica Edizioni, Napoli, pp. 258–259.

[54] See Sartre, Jean-Paul 1943, *L'Être et le néant. Essai d'ontologie phénoménologique*, Gallimard, Marseille; and Sartre, Jean-Paul 1946, "The Humanism of Existentialism", Les Editions Nagel, Paris. See also de Beauvoir, Simone 1947, *Pour une morale de l'ambiguité*, Gallimard, Paris.

[55] See Gubser, Michael 2014, *The Far Reaches: Phenomenology, Ethics, and Social Renewal in Central Europe*, Stanford University Press, Stanford, CA.

properties of the single parts.[56] Merleau-Ponty integrates *Gestalt* theory into a philosophy of life where the viewer's body is the primary conduit for the perception of the sensory realm. For Merleau-Ponty, perception is an embodied experience. This Merleau-Pontian insight will inspire the generations of artists from the 1960s onwards.

Starting from the phenomenological assumption that "every sensation is spatial",[57] artist Lucio Fontana's environments address the phenomenological aspect of full-body engagement in space through movement. Fontana's art practice proves how the mid-century's notions of painting, sculpture, and space change by transcending the two-dimensionality of the canvas, anticipating the artistic movements of the 1960s and 1970s, such as Arte Povera and Environmental Art. Fontana founded Spatialism, an artistic movement that emerged in Italy in the late 1940s. He dismissed the distinction between painting and sculpture by creating his notorious slashed and punctured canvases. His *Spatial Environments* are pioneering works in the field of installation and immersive art. (Fig. 5) These works comprise rooms and corridors flooded with lights and other elements that the artist started to design in the late 1940s. Once exhibitions ended, they were almost always dismantled, as they were regarded as having no value on the art market.[58]

In the 1960s, artist Michelangelo Pistoletto's mirror paintings constitute another interesting phenomenological approach. (Figs. 6–7) After a series of experiments, in 1962 he settles on his mirror work technique, consisting of life size cut-out images of people painted onto tissue paper on highly polished steel. *Standing Man* (1962) is an example of this type of work, which he continued until the 1980s. It shows a life-sized image of a man wearing a dark suit and standing with his back to the viewer. The work is intended to be placed flat on or slightly above the floor, intensifying its illusionistic peculiarities. The spectator is reflected within the frame, creating a sense of potential presence within the artwork, which encourages active engagement between the viewer and image, and may even create the impression of a face-to-face encounter. In an interview, Pistoletto explains:

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[56] See Merleau-Ponty, Maurice 1942, *La structure du comportement*, Presses Universitaires de France, Paris; English translation by A. L. Fischer, *The Structure of Behavior*, Beacon Press, Boston 1963. He refers several times to articles by M. Wertheimer and K. Koffka, two of the most representative thinkers of *Gestalt* psychology.

[57] Merleau-Ponty, Maurice 1945, *The Phenomenology of Perception*, p. 299.

[58] See *Lucio Fontana. Ambienti/Environments*, edited by M. Pugliese, B. Ferriani & V. Todolí, Mousse Publishing, Milano 2018. I examine Fontana's environments in Chapter 2.

"The *Mirror Paintings* could not live without an audience. They were created and re-created in accordance with the movement and the interventions they reproduced. The step from the *Mirror Paintings* to theater – everything is theater – seems simply natural to me. (…) It is less a matter of involving the audience, of letting it participate, as to act on its freedom and on its imagination, to trigger similar mechanisms of liberation in people".[59]

The mirror works can be seen in relation to Pistoletto's interest in performance art, which he first developed in the mid-1960s with solo performances. In 1967 he founded the group *The Zoo* with multidisciplinary collaborators.

It is interesting to note that Pistoletto mentions the term phenomenology many times in his last manifesto entitled *Hominitheism and Demopraxy* (2012–2016). For instance, "with the *Mirror Paintings* I was able to identify the image phenomenologically with space-time", and again:

"The act of blowing my photographic image up to life size, cutting it out and sticking it onto the mirror surface produced what in chemistry would be called a reaction and the end result was the discovery, or rather the recognition of my identity. I found my identity irrespective of my will. And I attained an identity that is not subjective but objective, and that goes well beyond my image and even beyond my own person. Thus the resulting work is totally phenomenological".[60]

A mirror painting by Pistoletto thus works as a phenomenological device par excellence, capable of integrating the reality of art with that of life itself, without a split between these two entities. This type of performativity in front of the mirror image exalts the relationship of mutual instantaneity between the viewer, his/her reflection, and the painted figure in a continuous movement, always 'present', which also concentrates past and future, accentuating the physical and metaphysical dimensions of time. This work responds directly to Merleau-Pontian thought, where the embodied, interactive perception in which the 'see-er' becomes one with what is seen, takes shape.

In 1969, three mirror paintings by Pistoletto, entitled *Seated Man* (1962–1964), *The Staircase*, and *Chassis* (1964), were exhibited in Finland at *ARS 69*, the second

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[59]   Pistoletto, Michelangelo 1969, "Interview with Guido Boursier" in *Sipario*, April 1969, Milano, p. 17. See: http://www.pistoletto.it/eng/crono07b.htm. Accessed 20 July 2021.

[60]   Pistoletto, Michelangelo 2012–2016, *Ominiteismo e demopraxia*, Cittadellarte Edizioni, Biella. English edition: Michelangelo Pistoletto, *Hominitheism and Demopraxy*, 2012–2016.

edition of an international exhibition of contemporary art organized by the Finnish National Gallery.[61] (Fig. 8) The main purpose of the ARS exhibitions was to show the current tendencies in international art and to develop a fruitful exchange of experiences and practices with the Finnish art scene.[62]

Pistoletto belongs to the Arte Povera movement (literally *poor art*),[63] which flourished between the late 1960s and the beginning of the 1970s in major Italian cities and above all in Turin when artists started to criticise the coeval values established by authorities, industry, and culture. If the art critic Germano Celant was the main voice of this artists' group, Umberto Eco's semiotics[64] and Merleau-Ponty's phenomenology[65] were at the basis of their theoretical orientation. It could be argued that Merleau-Ponty's thought on perception and the dynamic aspects of the body may serve as an ideal epistemological reference, directly or indirectly, for many artists who, at the turn of the 1960s and 1970s, worked on corporality, perception, and spatiality.

The Body Art movement reflects the importance of the body in Merleau-Ponty's philosophy, exemplified from his early books such as *Phenomenology of Perception* in which he gives a phenomenological definition of the living body. Many artists adopted the physical body as the main medium in the new social and political climate of the 1960s, opting to use themselves as living sculptures or canvases. This resulted in a direct dialogue between artist and audience, producing an unusually intimate new way to perceive art. One of Body Art's aims was to expand the definition of art to include situations in which time, space, the artist's presence and the relationship

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[61] First held in 1961 at the Ateneum Art Museum in Helsinki, then at the Museum of Modern Art in Tampere. The Commissioners of the exhibition were E. J. Vehmas and Salme Sarajas-Korte. See the exhibition catalogue *ARS 69 Helsinki. Kansainvälinen nykytaiteen näyttely*, edited by Art Museum of Ateneum, Helsinki.

[62] The first ARS exhibition included artworks from Spain, French, Italy and Finland, and Fontana exhibited two of his *Cuts*, a series of monochrome paintings he had systematically been slashing from 1958 up to 1968. See Saarikivi, Sakari 1961, "Om italiensk nutidskonst–Italian nykytaiteesta" in the catalogue *ARS 1961 Helsinki*, pp. 22–23.

[63] Other exponents of Arte Povera include Giovanni Anselmo, Alighiero Boetti, Jannis Kounellis, Luciano Fabro, Mario and Marisa Merz, Pino Pascali, Giuseppe Penone, Emilio Prini, and Gilberto Zorio.

[64] In the *Arte Povera Manifesto: Notes for a Guerrilla*, published in November 1967 in *Flash Art*, the art critic Celant highlighted Arte Povera's revolt against coeval ideas and art institutions. The clamorous reference to a "guerrilla" recalls Eco's "semiological guerrilla", an opposition strategy he proposed at a conference in New York in the same year. Celant collaborated with the magazine *Marcatré*, where Eco was one of the experts on the editorial committee.

[65] Some artists belonging to the Arte Povera movement explicitly referred to Merleau-Ponty in their texts.

between artist and viewer constituted an artwork. Yves Klein, with his *Anthropométrie* series in the 1960s, is one of the pioneers of this performing movement, covering nude women in blue paint, moving them slowly and laying them across canvases to generate bodily impressions. Phenomenological notions such as tactility, the embodied interaction in the art process, the phenomenon of reversibility, and the body's motion in space are critical to this practice. For Valie Export, Marina Abramović and Orlan among other performers in the 1960s and the 1970s, the theme of the body is central. After the avant-garde movements of the early twentieth century, for many artists the artwork ceased to exist as an object and became an experience to be lived in real-time. Performance, installation, and environments become new ways of making art. Here, it is worth recalling Abramović's recent mixed-reality performance, *The Life*, at the Serpentine Galleries in London (2019). In the press release, the performer states: "The fact that the project can be repeated anywhere in the world while I am not there is mind-blowing. I can be present in any spot on the planet".[66] Abramović's adoption of the augmented experience indicates her engagement with the broader social and historical constructs of our era.

But what about the reception of phenomenology in the Nordic Countries? In the early months of 1947, Merleau-Ponty "was invited to give a series of lectures in Scandinavia", as reported by the scholar Stephen A. Noble, and "this would appear to be the first occasion the young philosopher was called upon to present his work"[67] in a non-francophone country. Lectures were planned for Sweden, Norway, Denmark and possibly Finland. Unfortunately, there are no details of this Nordic tour of lectures.[68] In another source, the American scholar Kerry H. Whiteside mentions that Merleau-Ponty gave two lectures in Sweden and Norway in 1947 as part of a European tour to promote existential politics. Whiteside argues that the French philosopher's purpose in those years was to turn existentialism into the philosophical foundation of political thinking.[69]

Recently, the academic Michel Dalissier published one of the unpublished texts that Merleau-Ponty delivered most often in this series of lectures held in Scandinavia from 15 March to 15 April 1947. It is entitled "Problems of Yesterday and Today:

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[66]   Quoted in https://www.serpentinegalleries.org/exhibitions-events/marina-abramović-life. Accessed 17 February 2019.

[67]   See Noble, Stephen A. 2011, "Merleau-Ponty: Fifty Years After His Death" in *Chiasmi International*, Vol. 13, p. 82.

[68]   In an email conversation, Stephen A. Noble defined this Merleau-Pontian tour in the Nordic countries as "a black spot". Correspondence by email of the author with Stephen A. Noble, 7–12 August 2019.

[69]   Whiteside, Kerry H. 1988, *Merleau-Ponty and the Foundation of Existential Politics*, Princeton University Press, Princeton, p. 36.

From Gide to Sartre" (Problèmes d'hier et d'aujourd'hui: de Gide à Sartre)[70] and collects the author's concerns regarding the post-war years. For example, he reflects on the problematic meaning of history and literature, and on the contemporary moment in the philosophical field, focusing on a critical examination of Sartre's thought. French existentialism was a common thread in these Scandinavian lectures, structured as discussions on the work of Sartre, de Beauvoir, Gabriel Marcel, and Malraux. They mainly became a dialogue between French art and key literary figures, including the writers Maurice Blanchot and André Gide. In the post-war years, this interplay proved problematic for Merleau-Ponty because, as observed by Dalissier, "it has to do with thinking an unthought, engaging in an exercise of indirect philosophy, or even with hearing a muted appeal directed at philosophy from literary texts".[71]

Between the two World Wars, some Nordic academics showed an openness to phenomenology despite the strong presence of analytic philosophy, and in particular the work of Husserl, but it was only towards the end of the 1980s that a deeper interest in phenomenology emerged. In 2003 a group of Nordic scholars, formed by Sara Heinämaa, Hans Ruin and Dan Zahavi, summarised this shift:

> "The last decade has witnessed a notable turn in philosophical orientation in the Nordic countries. For the first time, the North has a generation of philosophers who are oriented to phenomenology. This means a vital rediscovery of the phenomenological tradition as a partly hidden conceptual and methodological resource for taking on contemporary philosophical problems".[72]

1.3 Harold Rosenberg and Merleau-Pontian Philosophy – Phenomenological Influence on Action Painting and Early Performances in the United States

Because of the central position gained by New York in the post-war art world, in this subchapter, I analyse the reception of phenomenology in the United States and of American artists in the 1960s and 1970s. First, many European artists moved to America during the 1930s to escape growing nationalist regimes and racism. New

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[70] Merleau-Ponty, Maurice 1947–1950, "Problèmes d'hier et d'aujourd'hui: de Gide à Sartre", English translation by Bryan Smith, "Problems of Yesterday and Today: From Gide to Sartre" in *Chiasmi International*, No. 22, 2020, pp. 41–49.

[71] Dalissier, Michel 2020, "Inedits: Introduction" in *Chiasmi International*, No. 22, p. 26.

[72] Zahavi, Dan; Heinämaa, Sara; Ruin, Hans 2003, "Introduction" in *Metaphysics, Facticity, Interpretation: Phenomenology in the Nordic Countries*, edited by D. Zahavi, S. Heinämaa & H. Ruin, Kluwer Academic Publishers, Dordrecht, p. XI.

York became a hub for modern artists, such as Marcel Duchamp, Salvador Dalí, Piet Mondrian, Arshile Gorky and Max Ernst. It is worth mentioning the presence of the scholar Panofsky, who moved to the United States in 1931 due to Nazi persecution. Therefore, these intellectuals paved the way for the American cultural milieu to develop a widespread knowledge of European artistic environments.

It is well-known that Merleau-Ponty's works were translated into English in 1962, and his approach to art and perception inspired many American artists and critics, especially those who were dealing with Minimalist Art, as emphasised by art theorist Rosalind Krauss. In her 1983 catalogue text for Richard Serra's exhibition at the National Museum of Modern Art in Paris, Krauss remarks that "the initial French reading of Merleau-Ponty's *Phenomenology of Perception* (1945) differs from the American understanding of it in the 1960s". Krauss specifies that soon after the publication of Merleau-Ponty's book, Giacometti's figures were adopted to illustrate the French philosopher's theories: "The reason for this is that they seem to be (…) forever caught in the aureole of the beholder's look, bearing forever the trace of what it means to be seen by another from the place from which he views".[73] This has also been observed by the scholar Robert Hobbs, "because Merleau-Ponty's work was not translated into English until 1962, Krauss assumed that an existential reading of his theories was unavailable to minimalists in the United States, consequently leaving them free to approach his pre-objective experience in a radical way".[74]

I would argue that Krauss' observations overlook the impact of the existentialist philosophy introduced via Sartre's text on Giacometti's much acclaimed solo show at the Pierre Matisse Gallery in New York in 1948.[75] Therefore, some awareness of existentialism, and therefore phenomenology, was already present in the United States before the 1960s. Secondly, in 2001 Hobbs discovered that in the mid-1940s a connection already existed between American art theory and Merleau-Pontian

[73] Krauss, Rosalind E. 1986, "Richard Serra: A Translation" in *Originality of the Avant-Garde and Other Modernist Myths*, The MIT Press, Cambridge, MA and London, p. 263.

[74] Hobbs, Robert 2001, "Merleau-Ponty's Phenomenology and Installation Art" in *Installations Mattress Factory 1990–1999*, edited by C. Giannini, University of Pittsburgh Press, Pittsburgh, p. 18.

[75] Sartre, Jean-Paul 1948, "La Recherche de l'absolu" in *Les Temps Modernes*, No. 28, January 1948, pp. 1153–63. The article, translated as "The Search for the Absolute" served as introduction to the catalogue of Giacometti's exhibition *Alberto Giacometti: Exhibition of Sculptures, Paintings, Drawings*, at the Pierre Matisse Gallery, New York, 10 January–14 February 1948. Sartre's book, *Existentialism and Humanism* (1946) was also published in English in 1948 (translated by P. Mairet).

thought.[76] In fact, Hobbs' research on the American post-World War II response to Merleau-Pontian philosophy reveals an important discussion and correspondence with art critic Harold Rosenberg. This dialogue shows that Merleau-Ponty's ideas were already circulating in American art before the first English version of his essays became available in 1962. Moreover, in 1956 Merleau-Ponty edited a publication entitled *The Famous Philosophers* (*Les philosophes célèbres*).[77] Rosenberg is included in this selection of writers and philosophers from Europe, Great Britain, and North America.[78] Starting with Rosenberg's influence, we can maintain that Merleau-Ponty and his phenomenological approach already had wide repercussions in the United States before the 1960s.

Harold Rosenberg was an American writer, philosopher, and art critic. Hobbs states: "Rosenberg read many of Merleau-Ponty's major phenomenological studies in French and used them in 1952 to develop his concept 'action painting', a special existential/phenomenological reading of abstract expressionism in terms of its improvisational means".[79] Rosenberg's famous essay, "The American Action Painters", in which he first develops the term 'action painting', was in fact written for the journal *Les Temps Modernes*, co-edited by Merleau-Ponty and Sartre. He continues to explain that "most likely Rosenberg did not submit it to them for publication because Merleau-Ponty had resigned from the editorial board at this time".[80] Moreover, Rosenberg's clear interest in continental philosophy can also be witnessed in his first major article in 1940 entitled "The Fall of Paris",[81] where he announces the demise of the French capital city as the leading centre of experimentation in visual arts, and raises hopes that New York can emerge as the new one. He reflects that "twentieth-century Paris was to the intellectual pioneer what nineteenth-century America had been to the economic one. This world beat a pathway to the door of inventor – not of mousetraps, but of perspectives".[82]

After discovering a relation between Merleau-Ponty's and Rosenberg's thought, Hobbs' article highlights their impact on the development of installation art in the late 1950s, thus demonstrating how the French philosopher's view was relevant to the New York art scene over a decade before the 1960s.

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[76] See Hobbs, Robert 2001, "Merleau-Ponty's Phenomenology and Installation Art", pp. 18–23.

[77] The book's frontispiece was designed by Alberto Giacometti and published by Éditions d'art Lucien Mazenod.

[78] See Noble, Stephen A. 2011, "Merleau-Ponty: Fifty Years After His Death" in *Chiasmi International*, Vol. 13, pp. 90–91.

[79] Hobbs, Robert 2001, "Merleau-Ponty's Phenomenology and Installation Art", p. 18.

[80] Ibidem.

[81] Rosenberg, Harold 1940, "The Fall of Paris" in *Partisan Review*, Vol. 7, No. 6, November–December 1940, pp. 440–448.

[82] Ibidem, p. 440.

During the 1940s and 1950s, the Abstract Expressionist movement, also known as Action Painting, dominated the New York arena for two decades with artists such as Jackson Pollock, Mark Rothko, Jasper Johns, Robert Rauschenberg, and Willem de Kooning. Action Painting refers to a mode of artmaking that resembles performance art, where the artist's body is included through action. This resonates with the concept of 'living body' in Merleau-Pontian thinking. One of Pollock's statements is worth mentioning here: "(…) the painting has a life of its own. I try to let it come through".[83] (Fig. 9) As Rosenberg writes, "at a certain moment the canvas began to appear to one American painter after another as an arena in which to act – rather than as a space in which to reproduce, redesign, analyze or 'express' an object, actual or imagined. What was to go on the canvas was not a picture but an event".[84] Immediately after, the American art critic states "the painter no longer approached his easel with an image in his mind; he went up to it with material in his hand to do something to that other piece of material in front of him. The image would be the result of this encounter".[85] Here, the concept of 'encounter' no doubt derives from Merleau-Ponty's philosophy. Moreover, the inclusion of the body is essential in the performance of Action Painting, which recalls the central role of the body in Merleau-Ponty's phenomenology.

In his paintings, artist Jasper Johns combines everyday objects and images, including American flags, targets, numbers, and beer cans with highly 'tactile' element such as newsprint and plaster casts. In 1961, he introduces the motif of the *Map* of the United States and the imprint of his body in his paintings. The scholar Barbara Rose describes how the pictorial uncertainty emanating from these maps creates a link with the multiple contours of the flickering objects in Cézanne's painting, indicating a condition of permanent doubt.[86] Later on, even when he abandons action painting, Johns continues to be fascinated by contours, colours, shapes, and their perception. Upon close observation, the painting *Flag* (1994), which represents the flag of the United States in both abstract and figurative ways, is not monochromatic but presents subtle variations of colours. In this intertwining of the familiar and the unknown, Johns pushes his audience to reconsider items that

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[83] Pollock, Jackson 1947, "My Painting" in *Possibilities: An Occasional Review*, Vol. 1, No. 1, Winter 1947–48, p. 79.

[84] Rosenberg, Harold 1952, "The American Action Painters" in *ARTnews* 51/8, December 1952. Reprinted in Rosenberg, Harold 1959, *The Tradition of the New,* Horizon Press, New York 1959, pp. 23–39.

[85] Ibidem.

[86] Rose, Barbara 2008, *Paradiso americano. Saggi sull'arte e l'anti-arte 1963–2008*, Libri Scheiwiller – Federico Motta, Milano, p. 216. To highlight this similarity, the author quotes Merleau-Ponty's essay *Cézanne's Doubt*. Additionally, Jasper Johns consistently focused on the 19th-century French Post-Impressionists.

the mind already knows. The inclusion of the body, the relation between reality and subjectivity, and the suspension of judgment in perception may denote a phenomenological influence on Johns' work.

The first experiments in installation art started to take place after the establishment of the New York School. As analysed by Hobbs, "while Merleau-Ponty's (and Rosenberg's) discussions are confined to painting, we do not need to look far afield to see how this philosopher's ideas could be interpreted by artists wishing to break away from painting's confines to environmentally-based art".[87] Indeed, Hobbs highlights the impact of both intellectuals on the development of installation art in the late 1950s, thus demonstrating how this French philosopher's thought was relevant to the New York art scene over a decade before the 1960s. In *Phenomenology of Perception*, Merleau-Ponty's observations will later become a source of inspiration for artists and performers. Beginning one section with the appealing analogy "Our own body is in the world as the heart is in the organism", Merleau-Ponty continues: "When I walk round my flat, the various aspects in which it presents itself to me could not possibly appear as views of one and the same thing if I did not know that each of them represents the flat seen from one spot or another, and if I were unaware of my own movements, and of my body as retaining its identity through the stages of those movements".[88] Hobbs notices this belief in the dynamics of the Merleau-Pontian body as a sensate organ: "although several steps ahead of our narrative, (…) [this] suggests at the outset the relevancy of Merleau-Ponty's thought for installation art".[89]

It is worth mentioning that artist Bruce Nauman rejected the long-established idea of a stable artwork in favour of an independent art form created from lived experience.[90] (Fig. 10) For instance, Nauman's performance entitled *Dance or Exercise on the Perimeter of the Square* (1967–1968) may remind us of Merleau-Ponty's speculation about the walk around his flat. In this piece, the American artist makes a square on the floor of his studio with scotch tape, marking its midpoints. Starting at one corner, Nauman walks methodically around the perimeter of the square, turning his gaze rhythmically inside and outside the line. In his closed-circuit installation *Live/Taped Video Corridor* (1970) the lived experience returns, spurring the viewer to walk along a corridor almost ten meters long with the goal of reaching two monitors located at each end. Whether through different media, such as video,

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[87]   Hobbs, Robert 2001, *Merleau-Ponty's Phenomenology and Installation Art*, p. 19.
[88]   Merleau-Ponty, Maurice 1945, *The Phenomenology of Perception*, p. 235.
[89]   Hobbs, Robert 2001, *Merleau-Ponty's Phenomenology and Installation Art*, p. 19.
[90]   The art collection of Kiasma Museum of Contemporary Art in Helsinki includes several video performances by Bruce Nauman, such as, *Program 5: Bouncing in the Corner No. 1*, 1968; and *Program 5: Revolving Upside Down*, 1968; *Walk with Contrapposto*, 1968.

performance, drawing or complex installations, Nauman investigates topics that consider the phenomenological experience of body, time, movement, and space.[91] Along with Nauman, other artists have embraced Merleau-Ponty's phenomenology, including Robert Morris in his early New York's Green Gallery installations in 1964,[92] as well as Robert Irwin with his series of acrylic disks realized between 1966 and 1969.[93] As pointed out by Hobbs, "what made his brand of phenomenology so seductive was its apparent ability to release artists from the stranglehold of feeling that was one of abstract expressionism's major legacies. It did this by dispelling the concept that sensations might reside in objects (like paintings)".[94]

Hobbs continues: "In addition, to undermining sensations, Merleau-Ponty's phenomenology promised a release from the twin pitfalls of empiricism and intellectualism that forced people to choose between a world that imposed its reality on them, making them its subject, and a world that was forced to accommodate itself to their thought".[95] Irwin and Morris both confirmed that they had read and assimilated the perceptual philosophy of Merleau-Ponty. They both explored the limits of perception, light, space, and multi-sensory perception.[96] As noted by the researcher and curator Simone Frangi, the return to phenomena advocated by Merleau-Pontian phenomenology in its perpetual dialogue with psychological and anthropological theories will be the key tool for Minimalism to relocate sculptural work within an expanded relational environment.[97].

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[91]   In 1970, the writer Marcia Tucker calls attention to the strong phenomenological approach of Bruce Nauman's work by titling her article in the art magazine *Artforum* "PheNAUMANology".

[92]   "Robert Morris exhibited a suite of large-scale polyhedron forms constructed from 2 x 4s and gray-painted plywood". Quotation from the Guggenheim Collection's website: https://www.guggenheim.org/artwork/3063. Accessed 20 November 2020.

[93]   "The disk series demonstrates an important moment in Robert Irwin's development as an artist, as he moved away from abstract expressionist painting to engage with light, space, and multisensory perception". Quotation from the Indianapolis Museum of Art's website: http://collection.imamuseum.org/artwork/37778/. Accessed 20 November 2020.

[94]   Ibidem, p. 20.

[95]   Ibidem.

[96]   See Colpitt, Francis 1990, *Minimal Art: The Critical Perspective*, University of Washington Press, Seattle; *Robert Morris: The Mind-Body Problem*, catalogue, Solomon R. Guggenheim Museum, New York, January–April 1994.

[97]   See Frangi, Simone 2013, "Fenomenologia dello spazio e teoria della Gestalt. L'influenza di Merleau-Ponty nell'estetica di Robert Morris e Robert Barry" in *Merleau-Ponty e l'estetica oggi*, edited by M. Carbone, A. C. Dalmasso & E. Franzini, Mimesis, Milano 2013, pp. 135–153.

1.4 The First Media Art Installations and New Challenges in Contemporary Art – The Convergence of Cinematic Art and Philosophy in Merleau-Ponty's Later Work

In 1963, two major events marked the birth of media art. Nam June Paik exhibited his first manipulated TV monitors in the Galerie Parnass in Wuppertal and in New York Wolf Vostell buried a television while broadcasting a programme.[98] With these two actions, Paik and Vostell launched a new way of considering the TV screen not just as a commercial object for domestic use but also a means of personal expression. The monitor became a sculptural object. This was part of a series of reactions to the increasingly intrusive 'presence' of televised information in the 1960s. Among the scholars engaging with the effects of the 'media boom', McLuhan became a reference point for many artists.

Starting from the mid-1960s, the Sony Portapak, the early portable video camera and recorder, provided an entire generation of artists with a tool for capturing live performance and producing videotape works that focused on the artist's body or the visitors' bodies in closed-circuit installations. This was the case with Vito Acconci and Nauman, who turned the camera on themselves in premeditated situations or while creating an artwork in their studio. This approach led the scholar Krauss to conclude that the video medium is narcissistic.[99]

New expressive possibilities are explored by Bill Viola in *The Reflecting Pool* (1977–1979), a single-channel video where a man stands on the edge of a swimming pool, looking at the water reflections, before jumping in the air. (Fig. 11) Upon reaching the crest of his jump, the man is frozen in space while the water beneath him continues to undulate. This still image of the man with the world running around him centres on time and memory, humankind and nature, merging different sources of inspiration in Viola's work: oriental philosophy, phenomenology and science with the theory of relativity.[100] Here, the American artist echoes Merleau-Ponty's description of a pool in *Eye and Mind*; the pool is everywhere perceptually – in the light on the surface, in the surrounding trees through its reflections.[101] *The Reflecting Pool* also seems to be influenced by Viola's experience as the technical director at

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[98]   See Rush, Michael 1999, *New Media in Late 20th-Century Art*, Thames & Hudson, London. Concurrently with his exhibition at Smolin Gallery, Vostell organized the happening *TV Burying* as part of the *Yam Festival* in New Jersey.

[99]   See Krauss, Rosalind 1976, "Video: The Aesthetics of Narcissism" in *October*, No. 1, pp. 50–64.

[100] See Viola, Bill 1995, *Reasons for Knocking at an Empty House: Writings 1973–1994*, edited by R. Violette, The MIT Press, Cambridge, MA and London.

[101] Fabbri, Paolo 2020, *Vedere ad arte. Iconico e icastico*, edited by T. Migliore, Mimesis, Milano and Udine, p. 242.

Art/tapes/22 in Florence (1974–1976), an Italian pioneering video studio, where he encountered a number of video artists researching the body and perception, such as Nauman, Paik and Acconci.

In the 1970s, in *Vidéo-phénoménologie* (1974) the philosopher and writer Vilém Flusser proposes the concept of the space-time continuum. Returning to Europe, due to the military dictatorship in Brazil, where he had emigrated in 1940 to escape Nazism, he mainly focused on media culture. In *Vidéo-phénoménologie*, Flusser describes how "video has virtual properties which are absent in other media: it is an audio-visual and space-time continuum. It is involved in the phenomenon which it shows. It can be immediately projected without having to be 'edited'. It is open to the dialogic process. It summarizes certain aspects of the printed word, and film; and the lecture".[102] Ten years later, Flusser returns to a phenomenological approach to analyse new technologies and images. In the chapter entitled "To Imagine", the scholar asserts that "each vision is subjective" and "the point of view is in continuous oscillation", applying a phenomenological model.[103]

In the 1980s, artists started seeking a comparison or a dialogue between the immateriality of electronic data and the materiality of reality. Video installations, as Gary Hill stated, can be perceived as explorations of the space outside the monitor.[104] Among contemporary artists, Tony Oursler was one of the first to grasp the limits of the television screen in showing video images, thus taking them out of their media frame and projecting them onto three-dimensional surfaces. (Fig. 12) During those years, as the media scholar Erkki Huhtamo asserts, "video was linked with the possibilities of the computer in the early works by interactive pioneers like Myron Krueger and Erkki Kurenniemi, leading to new ways of exploring the relationships between bodies, technology, and body images".[105] (Fig. 13)

Gradually, video art expands to 'inhabit' space. The Finnish curator Kati Kivinen explains how one of the leading tendencies "in both the video art and photography of the 1990s is related to spatial works of art rapidly becoming more common in both domestic [Finnish] and international contemporary art. In video art, the projected and multi-screen video installation quickly replaced earlier sculptural video

[102] Flusser, Vilém 1974, "Vidéo-phénoménologie" in *Flusseriana: An Intellectual Toolbox* edited by P. Weibel, S. Zielinski with the collaboration of D. Irrgang, ZKM Centre for Art and Media, Karlsruhe & Vilém Flusser Archive, Berlin 2015, p. 284 and p. 436.

[103] Flusser, Vilém 1985, *Ins Universum der technischen Bilder*, European Photography, Göttingen; Italian translation by S. Patriarca, Flusser, Vilém 1985, *Immagini. Come la tecnologia ha cambiato la nostra percezione del mondo*, Fazi, Roma 2009.

[104] Rush, Michael 1999, *New Media in Late 20th-Century Art*, p. 103.

[105] Huhtamo, Erkki 2007, "Twin-Touch-Test-Redux: Media Archeological Approach to Art, Interactivity, and Tactility", in *MediaArtHistories*, edited by O. Grau, The MIT Press, Cambridge, MA and London, p. 86.

installation art, which still depended on monitors as the image source".[106] In fact, video art moved closer to cinema aesthetics, thanks to the improvements in digital technology also discussed by Gene Youngblood in his book *Expanded Cinema* (1970). Here, he argues that a new and expanded cinema is required for a new consciousness, and describes methods of filmmaking that utilize new technology, such as computer art, video art, multimedia environments, special effects, and holography. According to Youngblood, moving images invade space, causing viewers to interact according to different perspectives, or urging them to turn the projection around to reveal new points of view.

Returning to cinema aesthetics from today's perspective, 3D visualization, and video art installations allow filmmakers to realise earlier aspirations, such as the methods of montage of Dziga Vertov and Sergej M. Ejzenstejn, the multiscreen Abel Gance attempted in *Napoleon* (1926), and the animation technique called the 'totalization' of the illusory solids of Alexandre Alexeieff.

In this respect, a new interpretation of Merleau-Ponty's thoughts on cinematic images recently came to light thanks to new translations, research, and readings. In his 1952–1953 course notes, the French philosopher diverges from his 1945 lecture and disagrees with Henri Bergson's evaluation of cinema as illusory movement. On the basis of this critique, for Merleau-Ponty "cinema, invented as a means of photographing objects in movement or as a representation of movement, has discovered in the process much more than change in location, namely a new way of symbolizing thoughts, a movement of representation".[107] In *Eye and Mind,* Merleau-Ponty had already compared various artistic expressions of movement, quoting Muybridge and Marey's photographs, the Cubists' studies, Duchamp's *La Mariée* and cinematic images, thus documenting his real interest in this topic. Carbone comments that "the discovery of the 'movement of representation', a discovery made by modern painting no less than by cinema, leads Merleau-Ponty to abandon the very notion of 'representation' for that of 'vision', which evidently cannot be understood as being independent from our bodily relationship with the world".[108]

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[106] Kivinen, Kati 2015, "From Monitor to Gallery Space: Spatialisation of the Moving Image in Finnish Video Art in the 1990s" in *FNG Research*, No. 2/2015, p. 1.

[107] Merleau-Ponty, Maurice, *Résumés de cours, Collège de France 1952–60*, Gallimard, Paris, 1968; English translation by J. O'Neill, Merleau-Ponty, Maurice, "Themes from the Lectures at the Collège de France, 1952–1960" in *In Praise of Philosophy and Other Essays*, Northwestern University Press, Evanston, 1988, p. 78.

[108] Carbone, Mauro 2014, "The Philosopher and the Moviemaker: Merleau-Ponty and Cinema between Historical Convergence and Ontological Novelty" in *Corporeity and Affectivity: Dedicated to Maurice Merleau-Ponty*, edited by K. Novotný, P. Rodrigo, J. Slatman & S. Stoller, Brill, Leiden, p. 229.

In addition, Merleau-Ponty only expresses an interest in André Bazin in his 1960–1961 lectures. Bazin, the founder of the journal *Cahiers du Cinéma*, was a theorist of the New Wave (Nouvelle Vague), a French film movement that emerged in the 1950s and 1960s. He called for objective reality, deep focus, and a lack of montage in filmmaking, as he believed that the interpretation of a film or scene should be left to the spectator.[109] The concept of reuniting the viewer and the viewed in the flesh of the universe is a later convergence for Merleau-Ponty's and Bazin's positions.[110] This consonance also indicates the increasing dissemination of phenomenological ideas in French society at the time.

A surprising Merleau-Pontian quotation, originating from the concluding sentence in one of his lectures, appears in the film *Masculin Féminin* by Jean-Luc Godard, distributed in 1966: "The philosopher and the moviemaker share a certain way of being, a certain view of the world which belongs to a generation".[111] Again in 1966, filmmaker Robert Bresson writes an article that is composed of 'collected statements' authored by Godard himself together with Merleau-Ponty. The article, "Le testament de Balthazar", was published in issue 177 of the *Cahiers du Cinéma* in connection with his new film *Au Hasard, Balthazar*. Sadly, it appeared five years after the death of the French philosopher.[112] All this would testify to the involvement of Merleau-Ponty in the experimental cultural milieu of his time enhancing his knowledge of the tools of the emerging cinematic arts and the new considerations they provoked.

Merleau-Ponty's statement about the generational convergence of the philosopher and the filmmaker positively impacted Godard, but it could be argued, it was also crucial for the development of video art. Hence, the Merleau-Pontian concept of perceptive experience expands to all fields of art, leading up to the present. Merleau-Ponty already sensed the potential of cinema as art and its future development remarking in a 1948 French radio broadcast: "Although cinema has not yet produced many works that are artworks through and through, (…) we still can glimpse what such a work would be, and we shall see that, as all works of art, it would be once more something we perceive".[113]

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[109]   This puts Bazin in opposition to the film theory of the 1920s and 1930s, which maintained that cinema could manipulate reality.

[110]   See Carbone, Mauro 2014, "The Philosopher and the Moviemaker", p. 229.

[111]   See Carbone, Mauro 2015, *The Flesh of Images: Merleau-Ponty between Painting and Cinema*, translated by M. Nijhuis, State University of New York, New York, pp. 48–49. This is based on the 1968 notes by the semiologist and cinema historian Christian Metz.

[112]   Ibidem, p. 49.

[113]   Ibidem, p. 55.

In 1995, Godard mentions a few passages from a page of *The Visible and The Invisible* and assembles them into a *montage* in the film *JLG/JLG: Self-Portrait in December.*[114] It is, of course, a tribute to Merleau-Ponty, who passed away too early, but it also signifies the importance of his thinking for the New Wave (Nouvelle Vague) movement.

Finally, apropos cinema and its connection with media art, in 2007 the scholar Ryszard W. Kluszczyński very accurately notes:

"Artistic realizations belonging to the domain of video art, or the diverse multimedia art, as well as popular computer games, draw on the resources of cinema. The film-specific codes of image construction, editing, narration, dramaturgy, character development, and plot structuring constitute the basic articulation system of contemporary media and multimedia audiovisuality".[115]

He expects virtual reality to transform into a pivotal continuation of cinema in the field of multimedia.[116]

1.5   Video Phenomenology in the 1990s

A further reading of Merleau-Ponty is motivated by a renewed interest in phenomenology in the visual arts starting in the 1990s and still ongoing. Video art installation as well as the current practices of environmental art, interactive art, participatory art, and immersive art, materialise a desire to incorporate the audience into the artwork, "thus cementing Merleau-Ponty's emphasis on the enmeshing of see-er and seen that constitutes preconscious perception, or what Merleau-Ponty refers to as pre-objective vision".[117] In addition, body movements are not merely a physical activity, but the enacting of meaningful projects passing across things and placing them significantly, as the French philosopher asserts.

Towards the beginning of the 1990s, the American scholar Margaret Morse analysed media art and attempted to identify the correct terms to define video installation art. She proposes:

"Aesthetic strategies for displacing that symmetrical and virtual relation between the body and the screen are at the heart of the closed-circuit video installations

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[114]   Ibidem, p. 57.
[115]   Kluszczyński, Ryszard W. 2007, "From Film to Interactive Art: Transformations in Media Arts" in *MediaArtHistories*, p. 212.
[116]   Ibidem, p. 213.
[117]   Hobbs, Robert 2001, "Merleau-Ponty's Phenomenology and Installation Art", p. 19.

of Bruce Nauman, Peter Campus, Dan Graham, and others. Single-channel videotapes by these artists as well as by Joan Jonas, Vito Acconci, and other artists of the period experiment with shifting relations between the body of the artist, the camera, and the monitor".[118]

Morse notes that video installations change the perceptual experience of art, creating a new relation between body and image. Morse makes several interesting observations: video installations give access to a "kinaesthetic experience"; the process of "being inside pictures" is a new type of learning and enjoying art; an art form is no longer about the visual, rather about the link between moving images and spectators' bodies, as well as the space-time continuum that she calls the *space-in-between* bodies and shapes. She continues: "The spectator thus enters a charged space-in-between, taking on an itinerary, a role in a set in which images move through different ontological levels with each shift in dimension, in a kinaesthetic art, a body art, an image art that is rather an embodied conceptual art".[119] As observed by Kivinen, the American scholar uses a sort of phenomenological method to classify the poetics of video installation.[120]

In the early 1990s, cinema and media theorist Vivian Sobchack also offered a reading of the filmic experience based on the philosophy of Merleau-Ponty in her *The Address of the Eye: A Phenomenology of Film Experience*. Here, Merleau-Pontian phenomenology, aesthetics and ontology are proposed as a new perspective for theorising cinema and the filmic experience. Thus, the author attempts to overcome the psychoanalytic and / or Marxist approach in film studies with their inability to grasp spectatorship in its dynamism and physicality.[121] In addition, in her Preface Sobchack contextualises the diminished interest in phenomenology in the years prior to her study. According to the film and media theorist, phenomenology had been limited to Husserl's thought, and/or restricted to existentialism and French Catholicism, which had greatly influenced the work of authors such as Bazin. Moreover, the phenomenological approach to film studies had been replaced, on the one hand, by the emergence of Freudian and Lacanian psychoanalysis, and, on the other, by Marxist theory in the area of critical studies on cinema, in particular starting

[118]   Morse, Margaret 1998, *Virtualities: Television, Media Art and Cyberculture,* Indiana University Press, Bloomington, pp. 171–172.
[119]   Morse, Margaret 1990, "Video Installation Art: The Body, the Image, and the Space-in-Between" in *Illuminating Video: An Essential Guide to Video Art*, edited by D. Hall & S. J. Fifer, Aperture, New York, p. 167.
[120]   Kivinen, Kati 2015, "From Monitor to Gallery Space", p. 7.
[121]   See Sobchack, Vivian 1992, *The Address of the Eye: A Phenomenology of Film Experience*, Princeton University Press, Princeton.

from the spread of feminist film theory.[122] Hence, Sobchack finds in Merleau-Ponty's phenomenology a new path for questioning the vision in general, and, in particular, the filmic media.

The American scholar Chrissie Iles, an expert in the history of the moving image, classifies three phases of this art practice: 1) the *performative phase,* during the early period of video art (the 1960s and early 1970s) with the copious use of real-time video images and surveillance cameras; 2) the *sculptural phase*, where TV monitors were typically standing or lying on the floor, also known as video sculpture or video wall; 3) the *new cinematic aesthetic in video*, the ongoing phase that began in the 1990s, where video increasingly adopted cinematic formal and narrative elements. In this current phase, moving images are often projected. Fragmented forms and content enabled by digital editing are commonplace, and the spectator is assigned the function of "the story's reorganizer".[123]

In Merleau-Pontian phenomenology, viewers are not abstract subjects, but embodied, physical entities, living proof of the whole they constitute with the artwork, and between the artwork and the universe. Thus, a phenomenological approach to media art challenges oculocentrism as well as the body-mind and subject-object dichotomies of Cartesian and post-Cartesian theories. Spectators find themselves implicated in a perception that is always a phenomenon of reciprocity. The perceptive experience becomes an embodied spectatorship.

From media art precursors, such as Vostell, Paik, Nauman, Acconci, Viola, the Vasulkas, Hill, Nan Hoover, Joan Jonas, and Dara Birnbaum to the generation of artists who explore the relationship between video, the environment and interactivity, including Oursler, Christa Sommerer & Laurent Mignonneau, Char Davies, Studio Azzurro, and Douglas Gordon, media art practices intrinsically produce a multi-sensorial, relational, and playful space that encourages the spectator to participate. Furthermore, these qualities seem to enhance the phenomena of reciprocity, encounter, and spectatorship discussed by Merleau-Ponty.

1.6   Phenomenological Developments in Aesthetics and Media Art

Starting from the second half of the twentieth century, the impact of Merleau-Pontian thought has resounded in philosophy, visual art, cinema, and other fields. According to an American expert on Merleau-Ponty, the philosopher Ted Toadvine, Merleau-

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[122]   Ibidem, pp. XIII–XIX.
[123]   Iles, Chrissie 2000, "Video and Film Space" in *Space, Site, Intervention: Situating Installation Art,* edited by E. Suderburg, University of Minnesota Press, Minneapolis, pp. 252–262.

Pontian ideas have been advanced by the generation of intellectuals who succeeded him, including Michel Foucault, Gilles Deleuze, Jacques Derrida, Luce Irigaray, and I would add Jean-Françoise Lyotard, who openly referred to the phenomenologist in his article titled "The Sublime and the Avant-Garde" (1991). According to Toadvine, Merleau-Ponty's philosophy has continued to affect new research "beyond the usual intellectual history and interpretive scholarship, especially in the areas of feminist philosophy, philosophy of mind and cognitive science, environmental philosophy and philosophy of nature, political philosophy, philosophy of art, philosophy of language, and phenomenological ontology".[124] His influence also extends to researchers of "anthropology, architecture, the arts, cognitive science, environmental theory, film studies, linguistics, literature, and political theory".[125]

The relevance given to embodiment in Merleau-Ponty's work is echoed in much writing from the 1990s about the relationship between the self and technology, such as the work on the cyborg by Donna Haraway and Sandy Stone. In the field of the philosophy of technology, the scholar Don Ihde, and later his pupil Peter-Paul Verbeek, develops a post-phenomenological approach in which perception is mediated by other media. In computer science, the British Stephen Robertson uses Merleau-Ponty's thought as the basis for his analysis of group activity. More recently, Paul Dourish's research crosses computer science and social science, tangible computing and social computing and analyses them as two different aspects of embodiment. Finally, the philosopher Alva Noë proposes an "enactive approach" to perception which is grounded in phenomenology.

As we have already investigated, in the field of contemporary art phenomenology is in dialogue with the birth of performance, installation, body art, video art, interactive art, and, lastly, immersive art. Body, space, movement, touch, and responsiveness, become increasingly important in visual art, culminating in the latest immersive art experiences. The tactile sense often emphasised by Merleau-Ponty is decisive for interactive art. As claimed by Huhtamo, "the idea of interactive art is intimately linked with touching. As it is usually understood, an interactive work is something that needs to be actuated by a 'user'. If the user 'does nothing', it remains unrealized *potential.* (…) An interactive work challenges one to undergo a transformation from an onlooker to an 'interactor', an active agent".[126] Thus, a physical body's action takes place in interactivity.

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[124]   Quoted from Toadvine, Ted 2016, "Maurice Merleau-Ponty" in *Stanford Encyclopedia of Philosophy*, edited by Edward N. Zalta et al. Available at: https://plato.stanford.edu/entries/merleau-ponty/ (First published Sep 14, 2016). Accessed 25 January 2019.

[125]   Ibidem.

[126]   Huhtamo, Erkki 2007, "Twin-Touch-Test-Redux", p. 71.

In *Eye and Mind* Merleau-Ponty states that movement is not decided by the mind but is the natural continuation and fulfilment of a vision.[127] This being said, can we interpret the motion and interaction of one visitor in an immersive art experience through this Merleau-Pontian statement? I believe that spectacular and poetic multimedia installations encourage the visitor to be in motion as he/she responds intensely to visual and auditory stimuli. Here, viewers are immersed in a range of sensory experiences. It could be argued that in multimedia installations, the role of the public is enhanced as never before, extending the importance of audience participation.

To interact means 'to act reciprocally', to cause and be affected at the same time. Firstly, the desire to actively involve the viewer in the inception, creation, and completion of the work of art is a phenomenon that has its roots in the historical avant-gardes. In Marcel Duchamp's *Bicycle Wheel* (1913), a wheel rotates on a painted stool, inviting the viewer to turn it, to interact with the ready-made. In the "Manifesto of Tactilism" (1921) Filippo Tommaso Marinetti encourages the public to engage in the art of touch through their interactions. Futurism wanted to renew culture by resorting to multi-sensory and synesthetic strategies. Gino Severini's *Dancer with Movable Parts* (1915) is an 'assembly' of cardboard shapes that can be moved by viewers thanks to a clever system of cords. These few examples show the desire of the artist to include the spectator, thus marking a new path which will culminate in interactive installations. Digital language increasingly allows artists to use powerful and engaging interactive devices that require the user's action to function, as is the case in artworks by Lynn Hershman, Perry Hoberman, and Jeffrey Shaw. It is safe to claim that interactivity will play a crucial role in the future development of multimedia art.

To summarize, I would argue that phenomenology encouraged a new turn in twentieth century culture, laying the foundations for what has been called post-modernism at the end of the 1970s. Phenomenological thought was crucial for many thinkers who proposed challenging paths. After five centuries of European canonized representation of the universe, phenomenology contributed to the break with the theory of perspective, as it questioned our relationship with reality and asserted the primacy of perception. In addition, this philosophical movement emphasised the importance of touch and the body in contrast with the primacy of sight, which had dominated the theory of perspective. At the beginning of the twentieth century, many artists showed precocious ideas that resonated with phenomenology, such as Cézanne, Klee, and Giacometti. In parallel, artists such as Manet, Picasso, and Duchamp, among others, contributed to the development of the "aesthetics of

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[127]   See Merleau-Ponty, Maurice 1964, *Eye and Mind*, p. 164.

rupture"[128] in different ways trying to change assumptions. It could be argued that phenomenology contributed to shifting social sensibility, and to enhancing the awareness and value of the human being, its pure perception and haptic experience. That said, the emphasis on bodily experience was instrumental in the birth of body art, performance and Action Painting, along with the influence of other movements and debates, such as feminism, and other political and social issues. Merleau-Ponty left behind a stimulating and rich legacy that continues to yield new ways of representing our own being-in-the-world.

During the 1990s, the spread of digitization enabled the automatic processing of information. Our computerized environment facilitates connections, coordination, and synergies between individuals. This fluidity of thought increasingly affects society thanks to the spread of social networks. Evolution today can be understood as co-evolution: we learn and grow through a variety of encounters and relationships, whether real and/or virtual. Ideas and actions are no longer governed by one sovereign principle, but rather by a phenomenon of reciprocity, a term which recalls Merleau-Ponty's phenomenology. Contemporary keywords are sharing and experiencing.

Interaction is also a part of art forms like participatory art, where social interactions prompted by the work become its content, and relational aesthetics, which depends on human interaction and their social context. In other words, those experiencing the artworks are also physically engaged with them. Different from interactive art and immersive art, participatory art and relational aesthetics do not necessarily depend on the use of technology.

To conclude, in Merleau-Ponty's view experience is transitive. In other words, what happens in me can pass onto the other. The philosopher evolved the notion of syncretic or sympathetic sociability from the "affective 'spatiality of adherence' that precedes imaginary and idealized space".[129] A powerful example of this mechanism of introjection is the bond between a child's body and the (m)other's expression, which for Merleau-Ponty is never entirely eliminated. The academic Suzanne L. Cataldi observes in her article on Merleau-Ponty's approach to the affective phenomena: "The experience of being without boundaries may reappear in adult love relationships; it grounds his discussion of jealousy, for example (…) It may also be brought to bear on Merleau-Ponty' s discussion of racial and other forms of prejudice, where one attributes or projects onto others".[130] This process of sympathy could be extended to a contemporary social life enriched by new fictional and virtual

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[128] See Paz, Octavio 1982, "Picasso: el cuerpo a cuerpo con la pintura", p. 238.
[129] Cataldi, Suzanne L. 2008, "Affect and Sensibility" in *Merleau-Ponty: Key Concepts*, p. 172.
[130] Ibidem.

experiences through technologies and social media. Thus, nowadays artists need to keep in consideration a new and expanded participant to sympathetic sociability: the virtual audience, who comments on their works in several ways and across various devices.

We have shifted from the natural world of phenomena to the media space and the domain of social media. According to media theorist Lev Manovich, "we moved from *media* to *social media*".[131] He continues:

> "the developments of the previous decade led to explosion of user-generated 'content' available in digital form: web sites, blogs, forum discussions, short messages, digital photo, video, maps, etc. responding to this explosion web 2.0 companies created powerful platforms designed to host this content. (…) what was ephemeral, transient, unmappable, and invisible became permanent, mappable and viewable. Social media platforms give users unlimited space for storage and plenty of tools to organize, promote, and broadcast their thoughts, opinions, behavior, and media (…) the trajectory towards constant capture and broadcasting of one's everyday life becomes clear".[132]

Hence, the artist's arena has become more complex, as it is composed of different layers of corporeality (real and virtual), of thoughts and, we might add, of parallel universes. Let me conclude this chapter with a statement by Merleau-Ponty: "We never cease living in the world of perception, but we go beyond it in critical thought – almost to the point of forgetting the contribution of perception to our idea of truth".[133]

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[131] Manovich, Lev 2009, "The Practice of Everyday (Media) Life: From Mass Consumption to Mass Cultural Production?" in *Critical Inquiry,* Vol. 35*,* No. 2, p. 319.

[132] Ibidem, p. 324.

[133] Merleau-Ponty, Maurice, "An Unpublished Text by Maurice Merleau-Ponty: A Prospectus of His Work" in M. Merleau-Ponty 1945, *The Primacy of Perception and Other Essays on Phenomenological Psychology, the Philosophy of Art, History and Politics*, p. 3.

CHAPTER 2
The Immersive Art Experience

Immersion, a word originating from the Latin *immergĕre*, has a double meaning: either becoming completely involved in something (a material or a place) or submerging something or someone in a liquid. Figuratively speaking, it extends to being absorbed by a situation. Moreover, the immersive experience is especially linked to the concept of spatiality, based on the technological tools that are available. In this context, the term immersion acquires to achieve a deep mental, emotional, and physical involvement.

In art history, the concepts of immersion and illusion are intertwined, and this often leads to unexpected overlaps. Several examples illustrate how each epoch has attempted to create the highest form of illusion using the technical means available, from perspective to trompe l'œil, quadraturism, and video projections, to virtual reality. However, does an illusion of reality necessarily mean immersion? I would argue that the concept of immersion is more closely linked to the concept of spatiality than to that of illusion. In a 360-degree environment, we are truly immersed because it recreates, in a concrete way, the conditions of our being-in-the-world.

Virtual reality can be said to include all immersive experiences and can refer to multimedia or computer-simulated reality. Virtual reality can replicate an environment that exists in the material world and, as such, evoke a physical presence in places within the real world or imagined realms. In addition, virtual realities often allow users to interact with the virtual world and other viewers. Computer science scholar Chen Zhang defines immersive art in a digital media environment as "the sensory and perceptual experience of being physically located in a non-physical, mediated, or simulated virtual environment".[134] However, this definition is incomplete, as it overlooks the immersive art environments constructed by

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[134]   Zhang, Chen 2020, "The Why, What, and How of Immersive Experience" in *IEEE Access*, Vol. 8, p. 90878.

contemporary artworks that are based on interactive and multiple video projections. Here, virtual and real environments merge.

I analyse immersive artistic experiences from several viewpoints, referring to art history, technology, and science. I examine the 'view of totality' in works such as the panoramas of the late eighteenth century, Claude Monet's *Water Lilies* at the Orangerie in Paris, where he evoked his 'water garden' of Giverny, and Lucio Fontana's *Spatial Environments*. These three examples predate and anticipate the spatial achievements and immersive environments of the 1960s. Although I explore the concept of 'expanded cinema', I also attempt to highlight the significant role that video art installations play in the 1990s as forerunners to immersive art environments. After examining aspects of immersive technologies, I address the transition from the monitor to the environment and the transformation of spectatorship by interrogating a selection of artworks that adopt interactivity and new technologies. Finally, I consider several types of immersive art environments and recent immersive exhibitions, prompting an inquiry into the values of representation in a post-production and post-truth era.

2.1 Space, Motion, Light: Case Studies in Art History

2.1.1 Towards the Active Role of the Observer

The idea of the immersive experience stretches back throughout the history of art. In painting, it often coincides with attempts to get closer to reality. For example, in *Art and Illusion: A Study in the Psychology of Pictorial Representation* (1960), art historian Ernst H. Gombrich recalls one of the earliest known examples of this citing Pliny the Elder's anecdote. In the anecdote Parrhasius and Zeuxis compete over the imitation of nature.[135] In the same section, Gombrich discusses in depth how knowledge and expectations contribute to what is truly perceived. The expectations of the beholder and the context of the figure both affect the meaning the viewer assigns to a work of art. Starting from the classical era, artists have created illusions that allow the observer to fill in the details to complete the image.[136] A piece of art can only be effective when it matches viewer expectations.

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[135] Pliny the Elder (AD 23/24–79) wrote the encyclopedic *Naturalis Historia* (*Natural History*). One of the earliest versions of the transcript is *Historia naturale tradocta di lingua latina in fiorentina per Christophoro Landino fiorentino*, Impresso in Venesia, per Bartolamio de Zani de Portesio, 1489 adi xii. di Septembre.

[136] See Part Three in Gombrich, Ernst H. 1956, *Art and Illusion: A Study in the Psychology of the Pictorial Representation*, Phaidon Press, London 1960.

Gombrich investigates how, over centuries, artists have developed formulas to represent the world in their artworks. He argues that the artist's intention is not to create a likeness, but to achieve something real.[137] During the Renaissance, a significant evolution took place due to the use of perspective. Gombrich highlights that this new formula rigorously represented the real. The subject of the artwork had to be presented to observers as if they were personally witnessing this imaginary event.[138] Gombrich also ascribes the creation of three-dimensional schemata across the use of perspective to architect Leon Battista Alberti. Later, Leonardo went on to add the sensation of atmosphere through his ability to use aerial perspective.[139] Two significant examples of the bold and unusual use of perspective, both in Italy, are Andrea Mantegna's frescoes in the *Bridal Chamber* in Mantua, (Fig. 14) and Antonio Allegri's (also known as Correggio) *Assumption of the Virgin* in Parma, where the painter anticipates solutions later adopted in baroque illusionistic painting.

During the Baroque period, the trompe l'œil became the preferred technique for artists when creating the illusion of three-dimensionality in painting. Between 1632 and 1639, Pietro da Cortona produced *The Triumph of Divine Providence*, one of the greatest Baroque works. It decorates the Great Hall in Palazzo Barberini in Rome with flying forms appearing to ascend through an illusory opening in the architecture. Here, the painting indeed involves the viewer. Although this fresco was designed to be observed from a specific angle, the spectator can barely make out the boundary between the real and the painted space. A similar effect takes place in the grandiose frescoes by Andrea Pozzo in the Church of St. Ignatius of Loyola in Rome. (Fig. 15) Between 1691–1694, Pozzo attempted to visually tear open, even to dissolve, the material surface of the nave's barrel vault to celebrate the triumph of Saint Ignatius and the Society of Jesus in the world. He created a perspectival projection to direct the observer's gaze into a vast, lofty cupola open towards the sky and filled with upward floating figures. A marble disk in the middle of the nave floor marks the ideal spot from which observers can fully experience this illusion. Another marking on the nave floor provides the ideal vantage point for the trompe l'œil canvas that covers the crossing and depicts a tall and coffered dome. The cupola that one would expect here was never built and, in its place, in 1685 Pozzo created a painting on canvas with a perspectival projection of a cupola. (Fig. 16) Among others, Andrea Pozzo, Paolo Veronese, and Giambattista Tiepolo, belong to the quadraturism school, a pictorial genre that replicates architectural perspectives (called "quadratures") to amplify an environment's internal space. This artistic genre made

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[137] See Part Two in Gombrich, Ernst H. 1956, *Art and Illusion: A Study in the Psychology of the Pictorial Representation*.
[138] Ibidem, Chapter V.
[139] Ibidem.

its first appearance in the sixteenth century, became a specialization in the seventeenth century, and was well disseminated throughout Europe in the eighteenth century, later inspiring the future devices named "panoramas". These historical examples illustrate how artists in different eras attempted to expand the spectator's spatial perception using the techniques of the period.

Understanding the central role of spatiality for immersing viewers into their artworks, artists tried to obtain a sense of depth through the illusion of three-dimensionality. Their purpose was to visually immerse observers using resemblance to a different physical space and to capture their attention. The notions of illusion and immersion often overlapped, but immersion occurs when one experiences an environment with all the senses and the entire body, while illusion is mainly an optical phenomenon where the body maintains a certain distance. One could argue, phenomenologically speaking, that when the observer's body is physically included in the perceptual experience, then we can talk of an immersive experience.

Studio Azzurro's video environment, *Miracle in Milan* (2016) at the Palazzo Reale in Milan, deals with the strategies of illusionistic baroque painting. (Fig. 17) The art group projected a luminous area onto the centre of a frescoed ceiling, where wavering figures disappear and reappear randomly. In the same room, large vertical mirrors turn into screens when viewers approach them and show homeless people narrating their life experiences. Inspired by Vittorio De Sica's film with the same title, the interactive environment turns marginalized inhabitants of the city into a visible chorus. This video environment and its dialogue with a frescoed setting show how the observer's role has changed over the years. While in Andrea Pozzo or Pietro da Cortona's paintings the viewer was forced to stand at a single specific point to enjoy the artwork at its fullest, in the video environment the observer is free to actively enjoy the whole art piece from several perspectives. Moreover, spatial perception is intentionally circular as well as vertical. The observer becomes a spectator when the art environment occupies the entire space of the room. If visitors wish to capture the full meaning of the work, they need to walk around it and examine it in its entirety. The perceptual experience is not only tied to the sense of sight from a certain distance but also to the full body participating with all the senses engaged in an immersive condition. The concept of resemblance to a different physical space, therefore, loses value while the idea of moving in space and sharing the artwork is strengthened.

The *camera obscura* is an optical device, used since the Renaissance, as an aid for studying perspective in drawing, painting, and architecture. (Fig. 18) It consists of a box, tent, or room with a small hole or lens through which a reversed and inverted image of a scene is projected. According to the scholar Crary, the *camera obscura* was not only an apparatus used to achieve a representation but a model of the knowledge of the world, establishing the position of the observer in relation to

the observed.[140] In fact, the *camera obscura* is an interface between the observer and the world that offers a space with defined distances, as conceived by Descartes, in which the senses are regarded as distrustful and the distinction between subject and object is clearly established. In the first half of the nineteenth century, the understanding of the spatiality of vision evolved from the Cartesian system to the possibility of an autonomous vision, of an optical experience embodied in the properties of the sensory organs, which were examined in a new light in physiology. Descartes and Diderot saw sight and touch as senses that referred to a superior interior eye, symbolised by the model of the *camera obscura*. In the nineteenth century, the sense of sight recovered its specificity with the stereoscope, where vision was conceived in terms of an analogy with touch, because the observer was finally integrated into the device. The stereoscope simultaneously presented two photographs side by side from slightly different angles in relief, showing the deception of the Cartesian vision. With his analysis, Crary demonstrates the subjectification of the modernity process and ascribes a prominent role to the observer. Later, scientific studies[141] have shown how perspective, camera obscura, and photography provide an illusory representation of what the human eye really sees. Similarly, the stereoscope provides the illusion of three-dimensionality.

It is noteworthy that during the first half of the twentieth century, many intellectuals were interested in the role of the viewer, and more generally, in the viewer's perception. Gombrich considered the beholder as an active participant in creating meaning in front of artworks, a point of view which is analysed in depth in *Art and Illusion*. In the 1950s, the debate about perspective and analysis of the perspectival system, suggested by Panofsky in his book *Perspective as Symbolic Form* (1927), continued with the publication of contributions by the British art historian John White (*The Birth and Rebirth of the Pictorial Space*, 1957) and French art historian Pierre Francastel (*Peinture et société. Naissance et destruction d'un espace plastique. De la renaissance au cubisme*, 1951), who in 1957 also edited an unpublished document by Robert Delaunay, *Du cubisme à l'art abstrait. Les cahiers*

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[140]   Crary, Jonathan 1990, *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century*, The MIT Press, Cambridge, MA and London, p. 8.

[141]   I refer to Jonathan Crary's analysis of scientists, physiologists, physicists, and psychologists, such as Charles Wheatstone, Gustav T. Fechner, Wilhelm Wundt, or Ernst Mach, in his book *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century*. See also Noë, Alva 2004, *Action in Perception*, The MIT Press, Cambridge, MA and London.

de R. Delaunay.[142] In fact, speculation about perspective was a subject discussed by Merleau-Ponty for much of his philosophical work. He describes perspective and the mirror as "tricks" that artists may use, where they recognize "the metamorphosis of seeing and seen which defines both our flesh and the painter's vocation".[143] Some years earlier, Merleau-Ponty had noticed a bizarre perspective in the portrait of Gustave Geffroy painted by Cézanne in 1895–1896.[144] The French philosopher concluded that the lived perspective, which concerns our perception, is neither geometric nor photographic. This is concurrent with the theoretical line by Panofsky, who underlines the difference between reality and the construction of perspective.[145] According to Panofsky, the use of perspective is the result of a schema balancing social, cognitive, and technical practices. Just as the perceptual outlook of every historical period or culture is dissimilar, every schema builds a different view of the universe.[146] Merleau-Ponty frequently refers to Panofsky, whose research inspired the development of his critical and philosophical thought regarding the concept of depth in *Eye and Mind.* In Merleau-Ponty's statements, one can read an uncritical recognition of Panofsky's conclusion, as in a later affirmation in *Eye and Mind* that we "do not look at [a painting] as I do at a thing [...] It is more accurate to say that I see according to it, or with it, than that I *see it*".[147]

Conversely, the position of Sartre always conflicted with this approach to vision. In his phenomenological reflections of the 1930s, Sartre spoke of an abyss between the world of images, which is the result of an independent vision, and the world of

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142 See Spinicci, Paolo 1998, "La visione e i linguaggi pittorici: una rilettura delle riflessioni di Merleau-Ponty sulla costruzione prospettica" in *Estetica fenomenologica. Atti del convegno 29–31 ottobre 1997*, Reggio Emilia, edited by R. Poli & G. Scaramuzza, Alinea Editrice, Firenze, pp. 216–217. Delaunay's essay was written in around 1913.

143 Merleau-Ponty, Maurice 1964, *L'oeil et l'esprit,* Gallimard, Paris; English translation by William Cobb, *Eye and Mind,* in M. Merleau-Ponty, *The Primacy of Perception and Other Essays on Phenomenological Psychology, the Philosophy of Art, History and Politics,* edited by J. Edie, Northwestern University Press, Evanston, p. 169.

144 See Merleau-Ponty, Maurice 1948, *Sens et non-sens*, Les editions Nagel, Paris; English translation by H. Dreyfus & P. Allen Dreyfus, *Sense and Nonsense*, Northwestern University Press, Evanston, 1964, p. 13.

145 Ibidem, p. 14.

146 See Panofsky, Erwin 1927, "Die Perspektive als 'symbolische Form'" in *Vorträge der Bibliothek Warburg 1924–1925*, Leipzig and Berlin, pp. 258–330; reprint edition in English, *Perspective as Symbolic Form*, Zone Books, New York, 1991.

147 Merleau-Ponty, Maurice 1964, *L'oeil et l'esprit,* Gallimard, Paris; English transl. *Eye and Mind,* in M. Merleau-Ponty, *The Primacy of Perception and Other Essays on Phenomenological Psychology, the Philosophy of Art, History and Politics,* p. 164.

thought, which is always undermined by images.[148] Concerning perspective, Sartre recognises in Tintoretto's paintings the end of the central perspective. This painter privileges material reality and the concreteness of objects, thus overturning the pictorial inventions of Titian and Veronese. Sartre became passionate about Tintoretto during his trip to Venice in 1951 and wrote several essays for a final book between 1951 and the early 1970s on the Venetian artist.[149] As noted by art historian Arturo Carlo Quintavalle, this project remained unfinished, probably because of his maturing Marxist outlook, which influenced his conception of art history. For Sartre, art history has to be analysed not only in aesthetic but also in sociological terms.[150] Sartre interprets the use of the perspective and the new density of shapes in Tintoretto as a way of bringing the viewer closer to the substance, the density of being, seeing Tintoretto as the painter who was closest to the people.

2.1.2   The Panoramic Gaze

Venice is also home to *The New World* (1791), a fresco by Giandomenico Tiepolo, which was preceded by a 1765 painting. (Fig. 19) This artwork portrays a group of people gathered around a Cosmorama, an optical device formed by a set of panels, mirrors, and projections that provides an enlarged panoramic view of various parts of the world via a small hole. This fresco also appears to usher in a new age in visual arts and society, because the crowd is seen from behind looking towards the painting. The characters in the painting no longer face the viewer, but lean away from the public, searching into the inner space of the picture. This is one of the first examples of figures viewed from the back (*Rückenfiguren*), which will become one of the main subjects of nineteenth century painting.[151] The scholar Wolfgang Kemp observes that this artwork shows how spectators are beginning to form the "society of the spectacle", and how the implicit spectator of the previous age is transformed into an explicit spectator.[152] In fact, here the viewer's position is identical to that of the painted group and everyone seems to be awaiting their turn, together, to partake of

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[148]   See Sartre, Jean-Paul 1940, *L'imaginaire*, Gallimard, Paris; Italian translation by R. Kirchmayr, *L'immaginario. Psicologia fenomenologica dell'immaginazione*, Einaudi, Torino, 2007.

[149]   Sartre, Jean-Paul 2005, *Tintoretto o il sequestrato di Venezia*, Christian Marinotti Edizioni, Milano.

[150]   Quintavalle, Arturo Carlo 2006, "Tintoretto e Tiziano. La scelta di Sartre" in *Corriere della Sera*, 22 February 2006.

[151]   Esposito, Luca 2020, "Giandomenico Tiepolo" in *L'ora dello spettatore. Come le immagini ci usano*, edited by M. Di Monte, Gallerie Nazionali Barberini Corsini, Campisano Editore, Roma, p. 130.

[152]   Kemp, Wolfgang 2020, "Lo spettatore dall'implicito all'esplicito" in *L'ora dello spettatore. Come le immagini ci usano*, pp. 40–59.

and enjoy the wonders. Suddenly, the observer becomes a subject in the painting. Viewers are no longer outside the image but immersed within it as a part of the crowd. The act of watching is the topic of the artwork, and Tiepolo had probably already grasped a distinct understanding of how he could capture audiences through new devices.

Cosmoramas belong to forms of entertainment generally called 'panoramas', which appeared in the eighteenth century and foreshadowed the new attitude of the spectator in an art space. In 1793, painter Robert Barker demonstrated his panorama invention in Leicester Square, London. (Fig. 20) The panorama was a circular representation hung onto the walls of a rotunda specifically built to show it. It surrounded viewers with painted or photographic images, to generate the effect of being in a real landscape or environment. A staircase usually led visitors to a platform erected in the centre of the room to make them feel immediately immersed in the landscape, as shown in the cross-section of Leicester Square's rotunda. An overlying structure hid the edges where the paintings ended to provide a sense of endless distance. As observed by the writer Bernard Comment: "The panoramas had to appear so plausible to reality that they could be confused with reality".[153] These panoramas often duplicated areas of a city or showed victorious battles. Barker was highly successful at creating panoramas and his invention was quickly and widely used in art, entertainment, education, and propaganda. From the middle of the nineteenth century, artists were able to project drawings directly onto the canvas. The production phases of the panorama were: photography–drawing–photography–projection–drawing–painting. According to Grau: "In the sense of an optical illusion, or trompe l'œil, the panorama is, instead, the most sophisticated form of a 360° illusion space created with the means of traditional painting".[154] Panoramas increasingly fascinated the middle classes between 1840 and 1870. Why was the panorama phenomenon so successful? Grau asserts that deception was its main attractiveness, "whether the observer was oblivious, as in the early years, or regarded it as a source of aesthetic pleasure, as later".[155] The sensory perception of being absorbed in an illusory realm was pursued through the presence of objects, sound effects, noises of battle, artificial wind, and smoke.

Despite their great success, panoramas were also criticized for evoking rejection and fear in some visitors due to the overly illusionistic effect of these

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[153]   Comment, Bernard 1999, *The Panorama*, Reaktion Books, London, p. 7.
[154]   Grau, Oliver 2003, *Virtual Art from Illusion to Immersion*, The MIT Press, Cambridge, MA and London, p. 62.
[155]   Ibidem, p. 70.

environments.[156] The philosopher Johann August Eberhard strongly criticized panoramas for the optical and psychological effects they had on viewers, and negatively perceived imitation and illusion in art.[157] In addition, the painter John Constable thought that panoramas disregarded the principles of art despite the high quality of their representation.[158] Panoramas, with their mimetic and captivating features, were tailored to the spectators rather than constituting independent works of art. They did not deploy allegories and metaphors, but intended to show images to replace reality, so much so that the rotunda itself became the 'place' and the 'event'.[159] These circular paintings became a global nineteenth-century attraction in tune with the bourgeois preference for illusory immersive pleasures. While this egalitarian panorama-viewing was in part the result of pricing policies, it also indicates that the role of the observer was evolving, anticipating the society of the spectacle with its shared enjoyment and entertainment. Grau continues:

> "The panorama demands special consideration for two reasons: first, this illusion space represented the highest developed form of illusionism and suggestive power of the problematical variety that used traditional methods of painting. The panorama is also exemplary in that this effect was an intended one, a precalculated outcome of the application of technological, physiological, and psychological knowledge. With the contemporary means at hand, the illusion space addressed the observer as directly as possible; this latter was 'implicit.' Second, the study of the panorama can help to lay the foundations of a systematic comparison, where the metamorphosis of image and art associated with computer-aided virtual reality emerges in a clearer light".[160]

Panoramas with subjects such as city views, natural environments and historic events led the audience to see unknown worlds, to familiarise themselves with industrial transformations and urban development, and to promote new possibilities for social interactions. For instance, audiences could experience being in the midst of a battle, a coronation, or an exotic landscape. In fact, panoramas created a deep

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[156] S. Oettermann reports that Queen Charlotte visited the Panorama of the Fleet in Spithead and suffered from seasickness. Other visitors to the immense spaces of this panorama were similarly affected. See Oettermann, Stephan 1980, *Das Panorama. Die Geschichte eines Massenmediums*, Verlagsgesellschaft, Frankfurt, in Bordini, Silvia 1984, *Storia del Panorama. La visione totale nella pittura del XIX secolo*, Officina, Roma; 2nd edition published by Edizioni Nuova Cultura, Roma 2006.

[157] Bordini, Silvia 1984, *Storia del Panorama. La visione totale nella pittura del XIX secolo*, p. 125.

[158] Ibidem, p. 121.

[159] Ibidem, p. 134.

[160] Ibidem.

sense of participation where the viewer could share a moment with other spectators. This attitude anticipates the sharing of spaces and actions in interactive and immersive environments. Given their haptic and acoustic elements, and their spatiality, panoramas can be seen as prototypes of video art environments. Panoramas also share the same aim as virtual reality, namely to become an immersive landscape. However, panoramas remain distant from the technological qualities of virtual reality and its head-mounted displays.

The circular panorama was one of the devices that represented the Second Industrial Revolution in the mid-nineteenth century. Huhtamo summarizes its significance:

"As various theorists have pointed out, the panorama can be read as a novelty on different levels: physical (the rotunda as an urban landmark), mental (new mode of virtual and immersive experience), commercial (capitalist enterprise), ideological (vehicle for nationalism and imperialism), communicative (panorama as a 'mass medium') and discursive (cultural metaphor). The panorama has thus become an emblem representing an entire era".[161]

Huhtamo also believes that "moving panorama equalized experiences, contributing to the democratization of culture. Besides, they prepared audiences for the sensory overloads of modern media culture".[162]

With regard to sensory overload, I would mention the first-hand account by the philosopher Walter Benjamin concerning the Kaiserpanorama, which was a type of stereoscopic entertainment medium used mainly in the nineteenth and early twentieth centuries. (Fig. 21) A Kaiserpanorama comprised a number of viewing stations through which people peered and, using a pair of lenses, observed a series of rotating stereoscopic glass slides. Benjamin tells of the suspended time in the succession of images in his autobiographical text, *Berlin Childhood around 1900*:

"There was no music in the Kaiserpanorama – in contrast to films, where music makes traveling so soporific. But there was a small, genuinely disturbing effect that seemed to me superior. This was the ringing of a little bell that sounded a few seconds before each picture moved off with a jolt, in order to make way first

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[161]   Huhtamo, Erkki 2002, "Global Glimpses for Local Realities: The Moving Panorama, a Forgotten Mass Medium of the 19th Century" in *Art Inquiry. Recherces sur les Arts*, Vol. 4, pp. 193–228.

[162]   Huhtamo, Erkki 2013, *Illusions in Motions: Media Archaeology of the Moving Panorama and Related Spectacles*, The MIT Press, Cambridge, MA and London, p. 367.

for an empty space and then for the next image. And every time it rang, the mountains with their humble foothills, the cities with their mirror-bright windows, the railroad stations with their clouds of dirty yellow smoke, the vineyards down to the smallest leaf, were suffused with the ache of departure".[163]

Thus, this optical device already familiarised observers with the succession of images as it will soon happen with the filmic language. A similar criterion appears to have been applied in the multiscreen installation by Robert Lepage with Volker Kuchelmeister, which was designed by Sarah Kenderdine and Jeffrey Shaw. *Fragmentation* (2011) is an excerpt from Lepage's nine-hour stage play *Lipsynch*, which uses the ReACTOR system to show recorded images from six distinct perspectives. The result is a stereoscopic multi-perspective video installation. (Fig. 22) Various viewpoints are offered here to the viewer, but motion is not reduced to a minimum, as in the case of the Kaiserpanorama, although it is necessary to fully enjoy the installation. The ability to move freely in the installation is again the main feature that distinguishes the recent work from the older one.

A vital issue here is that the moving image became the successor of the still image in some form to achieve an immersive experience. New optical devices were constructed for an increasingly curious audience, such as a new version of the Stereopticon in 1894, an apparatus with sixteen slide projectors working in rapid succession to project circular images.[164] Furthermore, the rotundas previously used for painted panoramas were repainted in white to host new solutions with projectors. Here, it is important to note the first progression from painting to projection tools. Another example is the Cyclorama in 1894, a type of panoramic image formed by a series of photographs projected by several devices suspended in the centre of a cylindrical platform. (Fig. 23) Cyclorama images were altered with fades, gradual disappearances, nocturnal effects or dawns and dusk.[165] Here, spectators were no longer relegated to the central platform (one of the fundamental points of the previous panoramas) but could move freely, in a similar way to the immersive environments of today.

In Paris in 1900 the Universal Exposition showed increasingly advanced technological uses of images. It included the Cinèorama Ballon, where ten synchronized projectors under a central elevated platform were aimed at the walls of the round structure. (Fig. 24) Engineer Raoul Grimoin-Sanson was able to

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[163] Benjamin, Walter 1932–1938, *Berlin Childhood around 1900*, English translation by H. Eiland, Belknap Press, Harvard University Press, Cambridge, MA, 2006.

[164] Grau, Oliver 2003, *Virtual Art from Illusion to Immersion*, p. 147.

[165] Bordini, Silvia 1984, *Storia del Panorama. La visione totale nella pittura del XIX secolo*, p. 311.

immerse viewers in a simulated balloon flight over Paris.[166] It was one of the most successful panoramas in overlapping real-time and space, representation, and experience.

In 1935, the first three-dimensional film appeared: *The Arrival of the Train* by Louis Lumière, a remake of a famous 1895 film. It employed the anaglyph system, which had become popular thanks to its simplicity, consisting of overlapping stereoscopic images coloured with complementary colours.[167] As observed by the film historian Ray Zone: "The impulse to capture life and replicate it with movement, color, sound and three dimensions was present at the dawn of photography and motion pictures".[168] Historian Wolfgang Schivelbusch considers the railway journey an important factor in the popularity of panoramas, as it empowered travellers to visit landscapes far from their location and not only nearby places. This caused a shift in perception that he calls the "panoramic gaze":

> "Panoramic perception, in contrast to traditional perception, no longer belonged to the same space as the perceived objects: the traveller saw the objects, landscapes, etc. through the apparatus which moved him through the world. That machine and the motion it created became integrated into his visual perception: thus, he could only see things in motion. That mobility of vision – for a traditional oriented sensorium [...], an agent for the dissolution of reality – became a prerequisite for the 'normality' of panoramic vision".[169]

The ability to tolerate and enjoy the passing landscape had to be gradually developed by travellers, but this mobility of vision became key to the emergence of the moving image.

2.1.3   Claude Monet at the Orangerie

Affected by the rapid progress of technology at the beginning of the twentieth century, some painters also felt the need to engage with the panorama and, subsequently, immersivity. Important examples are Giovanni Segantini's plan for the

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[166]   Ibidem, p. 312.
[167]   Zone, Ray 2007, *Stereoscopic Cinema and the Origins of 3-D Film, 1838–1952*, University Press of Kentucky, Lexington, p. 142.
[168]   Ibidem, p. 4.
[169]   See Schivelbusch, Wolfgang 1977, *Geschichte der Eisenbahnreise. Zur Industriealisierung von Raum und Zeit im 19. Jahrhundert*, Carl Hanser Verlag, München; English translation by A. Hollo, *The Railroad Journey, Trains and Travel in the 19th Century*, Urizen Books, New York 1979.

Universal Exposition in 1900[170] and the curved panels of the *Water Lilies* by Claude Monet for the huge oval rooms in the Orangerie des Tuileries in Paris. Monet began the work in 1914, and it was exhibited in 1927 a few months after his death. This concept of circularity showed both painters' desire to evoke in the spectator the perception of being immersed in a space with a 360-degree view. Starting from the phenomenological premise that "every sensation is spatial",[171] these earlier artworks already show a heightened attention to spectatorship and immersivity.[172]

It should be noted that Monet conceived the *Water Lilies* as artworks to be displayed in a public context and not as paintings for private collectors. In fact, from the outset, Monet designed them for a museum or a purpose-built, and possibly elliptical, space.[173] As reported by his patrons, Monet's idea consisted of an installation that conveyed the feeling of being "in the middle of the pond".[174] (Fig. 25) This aspiration was also attested by Monet's reluctance to separate the individual canvases because in the final stage of the work the paintings would have been harmonised to ensure unity and coherence.[175] Indeed, in the years between signing the agreement and setting up the paintings, the artist donated an increasing number of canvases to the French state to ensure that the viewer would be entirely enveloped in his work. Thus, on May 17, 1927, Monet's final installation was formed by 22 paintings. In a 1921 letter, Monet wrote that his panels should be installed "forever" in the chosen space. To realize this immovability, the artist glued the canvases to the walls using a technique called *marouflage*.[176] (Fig. 26)

According to art historian Claudio Zambianchi, Monet may have chosen an elliptical space so that he could distance himself from the circular shape, which reminded him of the circus and the pictorial illusionism of the panoramas.[177] The painter attempted to contrast the illusionistic effect of the panorama using three elements: the effect of a lived perspective, an indefinite area where objects and

[170]   Bordini, Silvia 1984, *Storia del Panorama. La visione totale nella pittura del XIX secolo*, pp. 111–112; Sbrilli, Antonella & Bottai, Maria Stella 2019, "Il cerchio con l'arte intorno" in *Nel cerchio dell'arte. Mostre multimediali al Centro Trevi di Bolzano dal 2012 al 2019*, edited by A. Sbrilli, M. S. Bottai, N. Mittempergher & P. Fenu, Mimesis Edizioni, Milano 2019.
[171]   Merleau-Ponty, Maurice 1945, *Phénomènologie de la perception,* Gallimard, Paris; English translation Merleau-Ponty, Maurice, *Phenomenology of Perception,* p. 256.
[172]   I focus mainly on Monet's artwork because Segantini's art project was not realized as planned.
[173]   Zambianchi, Claudio 2000, *La fin de son art. Claude Monet e le Ninfee dell'Orangerie*, Franco Masoero, Torino, pp. 34 and 47.
[174]   Ibidem, p. 36.
[175]   Ibidem, p. 41.
[176]   Ibidem, pp. 66–67.
[177]   Ibidem, p. 54. Zambianchi bases this approach on the observations of the art historian Michel Hoog.

reflections can overlap, and a pictorial technique with diversified and almost sensual thicknesses.[178] Together with *Water Lilies*, Zambianchi also provides a phenomenological reading of Monet's later works, which emphasise the impermanence of time. The art historian highlights that the work involves activity by both the artist and the spectator – the first to complete the work and the spectator to explore actively and visually the large, curved canvases surrounding them. Thus, here Zambianchi recalls Merleau-Ponty's "lived perspective" in *The Phenomenology of Perception* and employs it to interpret Monet's project at the Orangerie.[179]

Monet's intention to express his all-embracing experience of the pond at his home, near Giverny, can be retraced in the shape of the leaves and flowers. These are almost circular in the lower register, and gradually flatten as one moves towards the upper section of the painting. This seems to reproduce the motion of Monet's gaze, looking down at the closest objects and up to the those further away so that they appear foreshortened. Monet's visual perspective omits the horizon to focus on this part of the pond. Zambianchi maintains that "Monet therefore uses several points of view in the same canvas and gives the idea of a curved space, almost mirroring the convex arc that his eyes make in the act of a dynamic perception of a portion of the pond that cannot be fully grasped from the same point of view and at the same instant".[180] He also highlights how this lived perspective is a specific characteristic of the late Monet. It appeared in 1903, with his *Paysages d'eau*, and became a common trait from 1906 onwards, when Monet focused on the water surface in *Water Lilies* paintings in various sizes.[181] For Zambianchi, in the *Water Lilies* one perceives a phenomenological perspective, with Monet providing the viewer with as many viewpoints as there are moments of vision, offering to share the passage of time in an existential manner.[182] I would add that he also offers an opportunity to partake in his space through the elliptical extension of the entire art piece. His expanse of water, flora and the sky's reflections, devoid of a horizon, create an immersive effect. After all, in 1895 Monet asserted that he wanted to paint not so much the motif, but "what lies between him and the motif",[183] which seems close to the "space-in-between" perceived by a viewer in a video

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[178]   Ibidem.
[179]   Zambianchi quotes a long statement from M. Merleau-Ponty's *Phenomenology of the Perception*, p. 164.
[180]   Zambianchi, Claudio 2000, *La fin de son art. Claude Monet e le Ninfee dell'Orangerie*, p. 135. Translation mine.
[181]   Ibidem, p. 136.
[182]   Ibidem, p. 137.
[183]   Johnssen, Hjalmar 1895, "Claude Monet" in *Bergens Tidende*, 6 April, translated into French in the catalogue *Monet en Norvège*, Musée Rodin, Paris 1995, p. 191.

installation.[184] Thus, the *Water Lilies* at the Orangerie seems to inspire an immersive experience in the natural environment with many layers of space-time for the viewers, where the landscape becomes memorised, interior, and no longer descriptive. Monet wanted to paint on a scale that allowed the viewer to move around, immersed in a natural realm crossed by the endless flow of time. This is the only way for the artist to achieve the desired abolition of the distance between the observer and the painted realm to ensure total involvement in the pictorial space.[185]

In 2008, Espoo Museum of Modern Art (EMMA) organised the exhibition *12 x Claude Monet and Finnish Impressions*, which provided an overview of how Finnish artists of the early twentieth century had integrated Impressionism into their work.[186] The exhibition offered a chance to juxtapose the French painter's works with the achievements of Finnish artists close to Neo-Impressionism. In addition, the presence of twelve paintings by Monet also offered the local audience an opportunity to refresh their knowledge of the master. As asserted by Sylvie Patin, chief curator at the Musée d'Orsay in Paris, "*Water Lilies* have been a constant source of inspiration to several generations of artists".[187]

Monet's *Water Lilies* are close to the type of immersive environments that contemporary artists create using new technologies. His painting technique is considered a precursor of digital art, as exemplified by the exhibition *Claude Monet ... Up to Digital Impressionism* at the Beyeler Foundation Museum in Basel in 2002. Several paintings from Monet's Giverny garden series were exhibited, including those with blurring contours and no horizon. Markus Bruederlin, chief curator of the Beyeler Foundation, proposed the concept of Digital Impressionism, which brings "the painterly visions of this ancestor of modern art into the 21st century".[188] The pixel of electronic art is therefore associated with the vibration of the impressionist brushwork and above all with the late period of Monet. Bruederlin focuses above all

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[184] The term is employed by Morse to describe the spatial position of the spectator in the video installation. See Morse, Margaret 1990, "Video Installation Art: The Body, the Image, and the Space-in-Between" in *Illuminating Video: An Essential Guide to Video Art*, pp. 153–167.

[185] See Tassi, Roberto 1987, "L'atelier di Monet" in *Paragone*, No. 6 (454), December 1987, pp. 10–19.

[186] The exhibition was curated by Markku Valkonen, Heljä Delcos, and Hannele Savelainen. Period: 5 March–25 May 2008.

[187] Patin, Sylvie 2008, "Monet (1840–1926): From the Beginning to the *Water Lilies*" in the catalogue *12 x Claude Monet and Finnish Impressions*, edited by H. Delcos, H. Savelainen, T. Penttilä & T. Bodonyi, EMMA Publications, Espoo, p. 231.

[188] Bruederlin, Markus 2002, "From Analytical Painting to Digital Impressionism" in *Claude Monet… up to Digital Impressionism*, Fondation Beyeler & Prestel, Basel & Munich, pp. 215–220.

on the tools that he considers key to Digital Impressionism. A few works had a direct reference to Monet, such as the video installation *Oo Fifì: Five Days in Claude Monet's Garden* (1992) by Diana Thater and *Sip my Ocean* (1996) by Pipilotti Rist. Others offered more generic technical analogies. In general, digital artists often make implicit references to the tradition of painting. Art historian Silvia Bordini observes that for artists working with video and computers, this allusion seems to confirm the continuing inquiry into the layers of the recurrent dialectic between artifice and nature.[189]

Other painters tried to find alternatives to perspective. In the late nineteenth century, Manet attempted to reveal the artifice of perspective in *The Luncheon on the Grass* and *Olympia*, both painted in 1863, and later in *A Bar at the Folies-Bergère* (1881–1882). The philosopher Foucault observes that Manet breaks the illusionism of perspective both by highlighting the flatness of the painting and by introducing multiple viewpoints.[190] While illusionism was largely dismissed by artists in the twentieth century, illusionistic representations continued to be produced for entertainment.

2.1.4 Spatialism

For about twenty years after their launch, the *Water Lilies* were almost forgotten, primarily because of innovations introduced by the avant-garde movements. In the 1950s, thanks to the spread of Informalism in Europe and Abstract Expressionism in the United States, the *Water Lilies* were rediscovered by artists and critics. Owing to their capacity to create a vibrant atmosphere and to immerse viewers completely in the environment, they were highly appreciated.[191] In the same years that Monet's *Water Lilies* experienced this renewed interest, Lucio Fontana explored oval and elliptical spaces for his environmental works. However, he made no direct references to Monet.[192] In the late 1940s, he began to create his *Spatial Environments*, which are seminal works in the field of installation and immersive art. Fontana's labyrinths of rooms and corridors engulfed with light enhanced the motion of the body in space and the sensory experience.

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[189] Bordini, Silvia 2010, *Appunti sul paesaggio nell'arte mediale*, Postmedia Books, Milano, pp. 28–29.

[190] See Foucault, Michel 2004, *La Peinture de Manet*, Éditions du Seuil, Paris; Italian translation by S. Paolini, *La pittura di Manet*, edited by M. Saison, Abscondita, Milano 2005, p. 34 and pp. 64–72.

[191] Zambianchi, Claudio 2000, *La fin de son art. Claude Monet e le Ninfee dell'Orangerie*, p. 15.

[192] In a 1947 interview Lucio Fontana stated that the French painting of the nineteenth century had a lot of influence in Argentina. See Fontana, Lucio, *Manifesti, scritti, interviste*, edited by A. Sanna, Abscondita, Milano 2015, p. 82.

Fontana is considered the leading figure in the development of the artistic movement Spatialism in Milan in 1947.[193] He and his younger colleagues declared their disregard for illusionary representation and rejection of easel painting in their *White Manifesto* (1946), and elaborated ways to project form into real space by employing new technologies. In 1949 Fontana exhibited his first *Spatial Environment with Black Light* (1948–1949) at the Galleria del Naviglio in Milan. (Fig. 27) In this installation, a giant abstract shape with phosphorescent colours hangs from the ceiling of a dark room and is lit up by neon light.[194] The work exemplifies the intent described in the second *Manifesto of Spatialism* (1948): "We want the picture to break away from its frame and sculpture from its bell jar. An expression of aerial art for a minute is as if it were to endure a millennium, in eternity".[195] As observed by art historian Marina Pugliese, the 1948–1949 *Spatial Environment* was an immersive environment for surprising the audience and it remained the main prototype for Fontana's subsequent works.[196] The immersivity of the empty area, the intensity of monochrome and fluorescent colours, and the use of a distinct source of light return in the following environments, such as rooms, corridors and labyrinths lit up with Wood lamp, neon light or backlight in black, red or white colours.[197]

In his manifestos Fontana insists on artists becoming acquainted with the new tools provided by technological progress. His *Manifesto of the Spatial Movement for Television* issued on May 17, 1952, is a short bulletin that promoted the use of television as an artistic medium and a clear example of this approach.[198] It was followed in the same year by a television broadcast at RaiTv in Milan. On the TV screen, his work turns into an event; it shows the effects produced by radiating light through canvases that Fontana had perforated several times. The work is presented no longer as a result but rather as an ongoing process, tied to the ephemeral duration of the transmission. Artist and writer Eduardo Kac considers this broadcast "the true

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[193] The first *Manifesto of Spatialism* was signed by Fontana, Beniamino Joppolo, Giorgio Kaisserlian, and Milena Milani in 1947.

[194] On the opening day, a dancer moved in circles above the colourful assemblage in the void surrounded by the elements glowing in the black light.

[195] See Fontana, Lucio 1946, Manifiesto Blanco.

[196] Pugliese, Marina 2018, "Lucio Fontana. Ambienti/Environments" in *Lucio Fontana. Ambienti/Environments*, p. 20.

[197] Ibidem, p. 25.

[198] Fontana's television broadcast was highly innovative in Italy both because regular public broadcasts only started in 1954, and because the artist combined the formal aspects of the medium with the artistic concept of Spatialism. See Bordini, Silvia 2015, "Memoria del video: Italia anni Settanta" in *Rewind Italia: I primi anni della videoarte in Italia*, edited by L. Leuzzi & S. Partridge, John Libbey Publishing, Barnet, p. 38–39.

beginning of video art",[199] as Fontana used television not only to produce and transmit artwork, but, in a broader sense, to employ new technologies in art. He recognised the potential of the video technique to connect and elaborate other forms of visual arts.[200]

Fontana attended to two basic elements of immersive media: technology and spatiality. This interest pushed him beyond painting by removing the canvas and putting the beholder at the centre of the environment. In fact, from the 1930s, Fontana aimed to connect his polychrome sculptures to the surrounding empty space through the use of reflective paint or iridescent glazes, generating a relationship of reciprocity between the sculptural surface and the ambient lighting.[201] This approach is inspired by the avant-garde movements and their aim to disintegrate the boundary between artwork and space. After the end of the Second World War, Fontana approaches Futurism, and in particular the "Technical Manifesto of the Futurist Sculpture" by Umberto Boccioni, where he declares: "Let us open up the figure like a window and close within it the environment in which it lives", and where appeared the notion of 'environmental sculpture'.[202] The whole series of works by Fontana entitled *Spatial Concept* could be considered to belong to this legacy. Punctured and slashed paintings show what lies beyond the canvas: the real space, in contradiction with the conventional illusory space of painting.

Fontana also acknowledges that he is indebted to Boccioni for another key concept, namely the necessity to place the viewer at the centre of the work.[203] His spatial environments were spaces that invited viewers to walk into diffused light to palpably embrace the architecture and the spectator inside the room. As explained by Pugliese, when Fontana produced his first environment in 1949, he was aware that it was the most experimental part of his research. In his correspondence with various scholars, he specified that the presence of the audience should have had an active role, and that he had accounted for the emotional freedom of the viewer.[204]

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[199]   Kac, Eduardo 1992, "The Aesthetics of Telecommunications" in *Telepresence and Bio Art: Networking Humans, Rabbits and Robots*, foreword by J. Elkins, University of Michigan Press, Ann Arbor, 2005.

[200]   Bordini, Silvia 2015, "Memoria del video: Italia anni Settanta", p. 39.

[201]   "El temperamento en el arte argentino: Lucio Fontana" in *La Nacion*, 6 June 1943.

[202]   Boccioni, Umberto 1912, "Manifesto tecnico della scultura futurista" in *Archivi del futurismo*, edited by M. D. Gambillo & T. Fiori, De Luca Editore, Roma 1956–62, p. 72; "Technical Manifesto of Futurist Sculpture" in *Modern Artists on Art: Ten Unabridged Essays*, edited by R. L. Herbert, New Jersey, 1964, p. 54. In the sculpture *Development of a Bottle in Space* (1912) Boccioni engages with this issue by breaking the solid form of traditional sculpture.

[203]   Pugliese, Marina 2017, "Lucio Fontana. Ambienti/Environments" in *Lucio Fontana. Ambienti/Environments*, p. 22.

[204]   Ibidem, p. 24. The scholars included the architect and designer Giò Ponti and the art historian Enrico Crispolti.

But in the 1950s, when he wanted to create a second environment for the Venice Biennale, his proposals were rejected twice. In 1960, Fontana finally succeeded in realising a second environment at the Stedelijk Museum in Amsterdam.

There are considerable affinities between Fontana's research, existentialism, phenomenology, and in particular with Sartre and Merleau-Ponty. When Fontana proclaims the philosophy of nothing and the void, he seems to share the post-war tension and sense of emptiness detected by Sartre. Fontana was familiar with French culture as he participated in several exhibitions in Paris in the late 1930s. Here he met the art critics Pierre Restany and Michel Tapié, who may have been intermediaries between the artist and the two philosophers. In 1957, Tapié described affinities between Fontana's art research and the Gutai group and existentialism.[205] In fact, Fontana and the Japanese collective were in close contact, and were both looking for open structures to subvert the conditioned responses of the viewers and spur them to sense their own existence in a sort of empty space.[206]

Other aspects link Fontana to phenomenological thought. In a 1966 interview in French with Restany, the artist talks about the 'fold', a concept that had attracted Merleau-Ponty's interest in the same years.[207] Phenomenologically speaking, the fold is intended as the double movement of the human being between openness and veiling. Merleau-Ponty conceives the chiasm of visible and invisible in the configuration of a fold. This notion suits Fontana's spatial concept, when he makes holes and cuts in canvases in search of three-dimensionality. The fold is one part doubled or laid over another part, it is something that is folded together or that enfolds. According to Carbone, artistic expression digs into the folds of the human being, bringing out the unthinkable.[208] Considering Fontana's Argentinian roots and his continuous relation with his homeland, it is noteworthy that Merleau-Ponty was well received in Argentina and Mexico. As early as 1957, *The Phenomenology of*

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[205] See Rana, Anne 2018, "Materia spirituale: gli esperimenti del Gruppo Gutai e di Fontana" in *Lucio Fontana. Ambienti/Environments*, p. 75.

[206] Ibidem, pp. 80–81.

[207] Quoted in Whitefield, Sarah 1999, *Lucio Fontana*, in the catalogue, Hayward Gallery, London, p. 200. The artist explained to Restany: "I wanted to create a 'spatial environment,' by which I mean an environmental structure, a preliminary journey in which the twenty slits would be as if in a labyrinth containing blanks of the same shape and colour". The English version is slightly different from the original. It mentions the slashes, or slits, but it does not translate the term 'fold', which appears in French and may be read with a different meaning. (original interview in Pugliese, Marina 2017, "Lucio Fontana. Ambienti/Environments", p. 38 and p. 209)

[208] Carbone, Mauro 2008, *Sullo schermo dell'estetica. La pittura, il cinema e la filosofia da fare*, p. 14.

Perception was translated for the first time into Spanish by the philosopher Emilio Uranga and published in Mexico.[209]

Spatiality was also sought by Fontana in collaboration with architects and designers, including his close cooperation with Nanda Vigo. (Fig. 28) In his notebooks of the early 1950s, Fontana makes several attempts to clarify the term "spatialist art". He concludes that installations or sculptures are incomplete and illusory creations of spatial art because they still depended on gravity and occupied space. He wanted his works to float in the room, but technology was not ready for that. Hence, "no form can be spatial".[210] However, Fontana identified the idea of a non-illusionistic and dematerialized painting, because it was no longer necessary "to represent a man, a house, or nature, but to create spatial sensations with one's own imagination".[211] This shows how spatiality can be a way to neutralise the effects of illusionistic representation. Thanks to digital tools, immersive art environments have indeed made floating in space possible despite gravity.

Finally, the idea of 'tactile space' and of 'coloured ambience' within Fontana's environments is comparable to what Merleau-Ponty described in the same years as the spread of atmospheric colours and the radiation or ecstasy of sensitive qualities. In *The Phenomenology of Perception*, he argued: "At those times when we allow ourselves simply to be in the world without actively assuming it, (…) colours are no longer condensed into surface colours, but are diffused round about objects and become atmospheric colours".[212] This responsiveness and circulation between the individual and the environment is also interesting from the perspective of recent media art environments, where sensory involvement with coloured lights and projections continues to create immersivity.

Fontana's pupil, Gianni Colombo, will continue to study the invisible and elusive element of space to analyse the relationships between body and space. What is space? Is space invisible or are there different ways of seeing and perceiving it? How does the body relate to it? Colombo puts these questions into practice by applying meticulous mathematical studies to artworks as part of the Arte Programmata

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[209]   Ramírez Cobían, Mario T. 1999, "The Current Situation Regarding Merleau-Ponty in Mexico (and in Argentina)" in *Chiasmi International*, No. 1, p. 38.

[210]   Fontana, Lucio 1959, *Writings on Spatialism 1951–52*, Fontana Foundation Archive, Milan, p. 59. Translation mine.

[211]   Fontana, Lucio 1950, "Proposta di un regolamento del movimento spaziale" (2 April 1950). Translation mine.

[212]   Merleau-Ponty, Maurice 1945, *The Phenomenology of Perception,* p. 310.

movement.[213] His exemplary work *Elastic Space* (1967–1968) may be considered a hybrid between installation and performative action. This work emerged in the cultural milieu influenced by the book *The Open Work* (orig. *Opera aperta*, 1962) in which Eco stresses the significance of user participation to interpret and complete the work. Bringing a room into total darkness catapults the viewer into a non-space in which the only reference points are mobile elastic threads rendered phosphorescent with black light and moved by motors.[214] Colombo aims to turn the visitor into a co-author by constructing participatory environments with kinetic and interactive elements that nullify the distinction between painting, sculpture, and architecture. As observed by the art critic Paola Nicolin, "his research moved from an exploration of the phenomenological properties of paintings and objects to the creation of fluid and unsettling immersive environments".[215] Colombo continued to construct immersive and participatory environments, including *Topoestesia* (1977), in which the public can walk across several tunnels under the influence of a more effective topological distortion.

In 1969, Colombo exhibited a work in the international group exhibition *Light and Movement 2 – International Exhibition of Kinetic Art* in the old building of the Amos Anderson Museum in Helsinki. The exhibition was originally curated in Paris and went on tour to Helsinki and Copenhagen. In addition to well-known international artists from Kinetic art, the exhibition also featured the Finnish artists Eino Ruutsalo and Osmo Valtonen. As noted by the scholar Marko Home, "Ruutsalo played a key role in bringing to Finland the new kind of perspective that a work of art is not tied to any material or technique but may also be a spatial and temporal event shaped by the viewer's interpretation".[216] International exchanges and exhibitions were significant in crossing the boundaries between art forms and mediums, but Ruutsalo's pioneering multidisciplinary work, for instance, exerted an influence on Finnish artists only in the 1980s with the emergence of video installations.[217] Ideas, experiments, and information circulated in Europe, and later,

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[213]   Weibel observes that virtual and interactive art have their roots in Kinetic and Optical art, and in Arte programmata: "Polysensual environments with optical and kinetic effects were likewise constructed by Getulio Alviani, Gianni Colombo, Mario Balocco, Yaacov Agam" in the 1960s yet. See Weibel, Peter 2007, "It is Forbidden not to Touch: Some Remarks on the (Forgotten Parts of the) History of Interactivity and Virtuality" in *MediaArtHistories*, pp. 36–38.

[214]   Poli, Francesco 1995, *Minimalismo, Arte Povera, Arte Concettuale*, Editori Laterza, Bari, pp. 64–65.

[215]   Nicolin, Paola 2010, "Gianni Colombo" in *Artforum International*, Vol. 48, No. 6, February 2010, p. 194.

[216]   Home, Marko 2021, *"Pysähtymisessä vaanii kuolema". Eino Ruutsalon kokeellinen 1960-luku*, Doctoral dissertation, University of Helsinki, Helsinki, p. 3.

[217]   Ibidem.

would go on to form the field of media art. In fact, the Austrian media theorist Peter Weibel maintains that virtual and interactive art have roots in kinetic and optical art: "Kineticism produced elements which played an important role in the further development of art: virtuality, the environment, the active spectator and/or user. Everything that would later characterize computer art and the interactive virtual environment was there already, albeit in purely analogue or mechanical form".[218] I would add that kinetic art and moving image practices both depend on movement for their effect. It is no accident, for example, that Ruutsalo made use of kinetic elements and video simultaneously. (Fig. 29) Even his 1962 video entitled *Kinetic Pictures* merges kinetics, painting, and cinematic motion.[219]

Another significative exhibition, *Nul 1965* gathered, among others, Fontana, Colombo, and Japanese artist Yayoi Kusama at the Stedelijk Museum in Amsterdam in 1965. On this occasion, Kusama met Fontana, who would later assist her during her stay in Europe. In fact, in the early 1960s, she spent two months at Fontana's studio in Milan, while preparing a solo exhibition. In 1966, Kusama participated in the 33rd Venice Biennale. Although she did not receive an official invitation to exhibit, Kusama obtained support from Fontana and permission from the Director of the Biennale to stage 1,500 plastic silver globes in the garden near the Italian Pavilion. The installation, *Narcissus Garden*, created a wide reflective area in which the artist, the public and the surroundings were repeated, distorted, and projected by the mirroring spheres. Mirrored environments are one of her motifs, displayed repeatedly from the 1965 installation *Infinity Mirror Room – Phalli's Field* at Castellani Gallery in New York up to her retrospective *Infinity* at the Helsinki Art Museum (HAM) in 2016. The latter consisted of more than 200 art pieces, including paintings, sculptures, videos, and installations from her early career in the 1940s to the present. Evoking the concept of infinity through endless reflections in mirrors and water, Kusama's environments evoke immersive conditions where the self can dissolve and merge with the universe. The mirror questions one's position in space and connects it with the self phenomenologically. Additionally, *The Obliteration Room* invites visitors to place different coloured stickers throughout the space in an interactive manner. This exhibition was the first retrospective of Kusama's work in the Nordic countries between 2015 and 2017, and it was organized in cooperation with the Louisiana Museum of Modern Art in Humlebæk, Henie Onstad Kunstsenter in Oslo, and the Moderna Museet in Stockholm.

To conclude this subchapter, Fontana's spatial practice gives birth to the lineage of immersive and spatial achievements in art from the 1960s onwards that can be

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[218]   Weibel, Peter 2007, "It is Forbidden Not to Touch: Some Remarks on the (Forgotten Parts of the) History of Interactivity and Virtuality" in *MediaArtHistories*, pp. 36–38.
[219]   Ruutsalo's contribution to video art is investigated in Chapter 3.

identified in several categories: site-specific, such as the large landmarks wrapped in fabric by Christo and Jeanne-Claude; a sort of architecture (e.g. *Igloos* by Mario Merz); participatory installations, with the figure of Kusama as one of the best-known; light installations by Dan Flavin and James Turrell; and later on, video and media art environments. There are obviously multiple crossovers between these typologies, proving that at this point the artwork is an 'open work'.

2.2   Images in Motion

2.2.1   Expanded Cinema

In the 1960s, the desire to involve people and the spaces from everyday life in artworks led to performative actions. Artists and filmmakers began to question the conventions of spectatorship to enable new ways of experiencing film. 'Expanded cinema' eroded the traditional one-way relationship between spectator and screen and contributed to considering film as a possible experience instead of a mere narrative.

The term 'expanded cinema' was coined in 1966 by the American filmmaker Stan VanDerBeek in his Manifesto, where he asserts: "We are on the verge of a new world/new technology/a new art. When artists shall deal with the world as a work of art. When we shall make motion pictures into an emotional experience tool that shall move art and life closer together".[220] In the mid-1960s, artists and filmmakers preferred to show their works in art galleries, warehouses, and in the open air rather than in cinemas. They looked for new approaches to screening films such as multi-screen projections. *Labyrinthe*, an example of a multi-screen presentation, was conceived by the National Film Board of Canada's directors for Expo 67 in Montreal. According to Canadian cinema and media scholar Janine Marchessault, this represented a new visibility for expanded screens as an experience of simultaneity.[221] In Canada, theoretical concepts proposed by the media scholar McLuhan had been circulating since the early 1960s, when he proposed that media affect the evolution of society. His expressions 'the global village' and 'the medium is the message' became popular worldwide.[222]

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[220]   VanDerBeek, Stan 1966, "'CULTURE: Intercom' and Expanded Cinema: A Proposal and Manifesto" in *Film Culture*, No. 40, Spring, pp. 15–18.

[221]   Marchessault, Janine 2007, "Multi-Screens and Future Cinema: The Labyrinth Project at Expo 67" in *Fluid Screens, Expanded Cinema*, edited by J. Marchessault & S. Lord, University of Toronto Press, Toronto 2008, pp. 29–49.

[222]   This expression appeared for the first time in the media theorist's book *The Gutenberg Galaxy: The Making of Typographic Man* (1962). It is also the title of the first chapter of his book *Understanding Media: The Extensions of Man* (1964).

In 1970, Youngblood published his book *Expanded Cinema*. Here, the scholar highlights the need for technological extensions to the cinematic language by focusing on the emerging advanced image-making technologies of video, television, and computer. Referring to technologies such as graphics systems, holographic cinema, oscilloscopes, multiple-projection environments, as well as planetariums, sonar, and so forth, Youngblood demonstrates a profound interest in science. Moreover, he describes the use of multiple-projection environments, which dissolve cinema into a separate entity.[223] His pioneering book presents three qualities of digital screen culture: synaesthesia, intermediality, and a global audience. The book opens by explaining that expansion refers not to computer films, video phosphors or spherical projections, but to consciousness. This relation between mind and media is central and opens the perceptual experience to new dimensions. The spectator is no longer in front of the screen, but in a place that he defines as "intermedia", that is, "an environment whose elements are suffused in metamorphosis".[224] In the same year, in her Manifesto of performance entitled "Expanded Cinema: Free Form Recollections of New York", the artist Carolee Schneemann writes: "physicality 'sensory bombardment' (…) primitive freedom put your hands in put your body in".[225] Her statement shows the urgency of extending the visual context to the haptic, of enlarging the projection event to include bodily experience. The recurrence of the expression 'expanded cinema' in the examples above documents the need to enlarge, to expand the visual experience of cinematic language to physical spatiality.

Out of a desire to create the 'cinema of the future', Morton L. Heilig introduced 3D cinema including sensory elements such as taste, smell, and touch. In the 1960s, he combined 3D vision, stereophonic sound, and the other senses in his Sensorama simulator. Zone explains that in the 1970s, the large film format "led to the next era of stereoscopic cinema history", inaugurated in 1986 by the 3D film *Transitions* produced by Colin Low for the Vancouver Expo and projected onto a large screen.[226]

Cinéorama, stereoptic television, Sensorama, Expanded Cinema, 3D, Omnimax, and IMAX cinema are all technological efforts to integrate the image and the observer. All of these attempts to expand the projection screen demonstrate the

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[223] See Youngblood, Gene 1970, *Expanded Cinema*, Dutton, New York.
[224] Ibidem, p. 136.
[225] Schneeman, Carolee 1970, "Expanded Cinema: Free Form Recollections of New York" in the festival programme notes for the *International Underground Film Festival*, London, 92. Available at:
       https://monoskop.org/File:Schneemann_Carolee_1970_2011_Expanded_Cinema_Free_Form_Recollections_of_New_York.pdf. Accessed 30 October 2019.
[226] Zone, Ray 2007, *Stereoscopic Cinema and the Origins of 3-D Film, 1838–1952*, University Press of Kentucky, Lexington, p. 3.

cinema's desire to vary the static position of the spectators, which usually consists of an audience in front of the screen.

One of the first artists to combine contemporary art and cinema experimentation was Andy Warhol. Always tied to his aesthetics of seriality, he was initially attracted by staticity. His first film, *Sleep* (1963), presents six hours of footage of the poet and performer John Giorno sleeping. His most famous film, *Chelsea Girls* (1966), demonstrates his rejection of the correct cinematic language because of the use of two synchronised projections of sequences incorporating random camera movements, zooms, and blurred passages. His short films influence contemporary art by introducing the idea that the moving image can be used as if it were an object. The lack of editing or the dilation of time due to the excessive slowing down of the moving image invite the spectator to enjoy these works not as films that demand narrative attention, but as visual experiences, as 'moving paintings'. Some of Warhol's short films were shown in cinemas and others in art galleries. According to the scholar Amaducci, Warhol is an innovator because, unlike other filmmakers who were close to the art world, he makes films as an artist, creating a model of cinema that belongs to spaces beyond the movie house.[227]

2.2.2   The Mobility of Vision in Video Art

In the wake of Paik and his ground-breaking installations, several artists performed a plethora of video experiments in the 1970s and 1980s in the United States, such as Nauman,[228] Acconci, Graham, Birnbaum, and Hill. These decades also witnessed the establishment of several centres for video art in Europe. In Germany, Paik and Joseph Beuys became teachers at the Academy of Arts in Düsseldorf.[229] Together, they spread video art techniques with the multi-faceted video promoter and gallerist Gerry Schum. Italy saw a number of video art centres emerge: Art/Tapes/22 in Florence, Galleria del Cavallino in Venice and the Centre for Videoart in the Palazzo dei Diamanti in Ferrara.[230] In the Netherlands, the Jan Van Eyck Academy in Maastricht had video production facilities where it was possible to experiment with video and audio devices under the instructions of artists such as Elsa Stansfield,

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227   Amaducci, Alessandro 2014, *Videoarte. Storia, autori, linguaggi*, Edizioni Kaplan, Torino, pp. 46–47.

228   I describe Bruce Nauman's video performances in Chapter 1 of this dissertation.

229   In the 1970s and 1980s, Beuys made a range of videos which document his performances in collaboration with Douglas Davis, Willoughby Sharp, and Gianfranco Mantegna.

230   Bordini, Silvia 2006, "Videoarte in Italia" in *Ricerche di Storia dell'arte*, No. 88, pp. 5–24.

Abramović, and Jonas.[231] In Denmark and Sweden video art production and experimentation was also actively pursued, as I will examine in Chapter 3, but many Nordic artists preferred to study abroad. In Finland, on the other hand, electronic arts were embraced late, but international video art was decisive in bringing the concept of media art to Finland.[232] For instance, since the late 1960s Paik, with his pioneering research in performance and technology-based art, was very well received in Finland.[233]

The 1980s witnessed new dialogues emerging between traditional and new art forms: video-theatre, video-dance, video-poetry, video-sculpture, video-installation, and new forms of documentary. In the 1990s, with digital technology, televisions were replaced by flat screens. There was also a shift in format from the rectangular 3:4 Cathode Ray Tube (CRT) monitors to the anamorphic wider 16:9 ones. This is a crucial moment for single-channel video art, as many artists moved into video art installation, such as Viola, the Vasulkas, and Hill. The transition from analogue to digital in video art saw a shift from single-channel to video installation, which required a rethinking of shooting, design, and realization – in other words of the entire workflow. During this transitional stage, video installations still often featured varying numbers of television monitors or computer screens and were also named 'video sculpture'. The scholar Huhtamo among others also observes that "video art was born as installation art, even before video-taping and playback were available for artists".[234] In fact, single screen works were soon followed by multi-screen installations.

In the twentieth century, just as painters felt restricted by the canvas surface bounded by the frame, so video artists felt the need to project their moving images outside the boundaries of the monitor. A parallel can be established between the transition to the curved canvases in the panoramas,[235] and from the single-channel video to the multi-channel installation. Thanks to new technologies, video artists were able to project their works into and onto the surrounding space, directly onto

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[231] Steetskamp, Jennifer 2007, "Looking back: The Roots of Video Production at the Jan van Eyck Academie", online conference contribution, Jan van Eyck Academie, Maastricht, in *Jan van Eyck Video Weekend*, pp. 1–7. Available at: www.pure.uva.nl. Accessed 20 February 2020.

[232] Rastas, Perttu 1994, "Treasury: Finnish Media History" in *ART2 Journal of the University of Art and Design Helsinki*. Available at: http://www.uiah.fi/art2/art2_194/rastaslist.html. Accessed 12 September 2021.

[233] Ibidem.

[234] Huhtamo, Erkki 1990, "Twenty Fragmentary Thoughts about Video Installation" in *Interface: Nordic Video Art*, edited by P. Wrange, Stiftelsen Nordisk Videokonst, Stockholm, p. 22. Vittorio Fagone and Edith Decker-Phillips were among scholars participating in the discussion about video installation and video sculpture.

[235] I will examine this in the next section of this chapter.

the walls of the museums, and later outdoors. In the 1990s, many art biennials featured video installations documenting the international dissemination of the moving image in contemporary art. With the birth of high-definition digital video (or HD) and the desire to overcome the experimental approach of the early years, many video artists promoted a return to photo-cinematographic aesthetics.[236] This attention to the cinematic aspect of video art reintroduced the set, the crew, and even some genres, such as the documentary, as in the video pieces by Eija-Liisa Ahtila and Doug Aitken.

Viola was one of the first artists to create installations in which the television set remained a container of images for a dynamic space shared by the images and the viewer. For instance, in his earlier video experiment *An Instrument of Simple Sensation* (1983), Viola tried to expand the limits of the monitor by including the spatial dimension through sound and mirroring. The artist recognised the relevance of the moving image as a new and experimental language for contemporary art. He stated that the introduction of time to visual arts through video art represented a step that was as crucial as Brunelleschi's perspective and representation of three-dimensional pictorial space.[237] Indeed, the scholar Barbara London, on the occasion of Viola's solo exhibition in 1987 at the Museum of Modern Art in New York, observed that "although based on realistic images, his projects go beyond representation to challenge the viewer's preconditioned expectations and viewing patterns".[238] Video installations such as *The Sleep of Reason* (1988), *The City of Man* (1989), and *The Stopping Mind* (1991) document Viola's will to stretch the boundaries of the medium from the single monitor to video installation. His works fully play with spatiality in multi-channel installations such as *The Sleepers* (1992), *Stations* (1994), and *The Crossing* (1996), where screens or projections surround beholders. (Fig. 30)

Initially trained as a sculptor, Gary Hill started experimenting in video art in 1973. In an interview, he describes how his first experiments with the portable video camera and recorder were crucial in his career: "The fluidity of taping and viewing in real-time freed up my thinking in a very radical way. Suddenly the sculpture I had been doing for several years seemed overwhelmingly tedious and distant from this

[236] See Amaducci, Alessandro 2014, *Videoarte. Storia, autori, linguaggi*; Kivinen, Kati 2015, "From Monitor to Gallery Space: Spatialisation of the Moving Image in Finnish Video Art in the 1990s"; Sossai, Maria Rosa 2008, *Film d'artista. Percorsi e confronti tra arte e cinema*, Silvana Editoriale, Cinisello Balsamo, Milano.

[237] See the interview with Bill Viola by Jörg Zutter in *Bill Viola. Vedere con la mente e con il cuore*, edited by V. Valentini, Gangemi Editore, Roma 1993, p. 95.

[238] London, Barbara 1987, "Bill Viola: The Poetics of Light and Time" in *Bill Viola: Installations and Videotapes*, edited by B. London, Museum of Modern Art, New York, p. 9.

present-tense process. Video facilitated the ability to 'think out loud' as if with some 'other' self".[239] Recounting the development of his work, Hill explains how the passage from single-channel works to video installations in the 1980s can be attributed to his search for experience and contact with the audience: "*Around & About* and *Primarily Speaking* were an attempt to engage the 'positions' of the viewer and to treat images offhandedly, making their context and content susceptible to the utterances of speech".[240] His work is informed by post-structuralist thinking and issues of textuality, with a special reference to Blanchot and Derrida. Finally, in the interactive installation *Tall Ships* (1992) presented in Kassel at Documenta IX in 1992, sixteen 'low tech' video projectors sit in a corridor-like space. (Fig. 31) As visitors walk through the area, hidden motion sensors trigger video projections which activate a series of figures that emerge from the darkness at eye-level and grow to life-size.

Robert Cahen is one of the few video artists who since the 1970s has worked exclusively with single channel videos. In his work, the boundary between movement and stillness is a fundamental subject. The title of his work *Trompe l'œil* (1979) already clearly demonstrates his interest in connecting manipulated electronic images to the concept of painting. Cahen's educational background as a photographer probably influenced his decision to focus on experimenting with the image itself rather than its potential relation to space.[241] Only in the late 1990s, he experimented with video installations in *Tombe* (1997) and *Traverse* (2002), which are vertical video projections framed like paintings.

The extraordinariness of moving images, their relations with the places where they are projected and the possibility of interacting with them gives rise to new imaginaries and forms of involvement. For instance, the installation *Corps étranger* (1994) by Mona Hatoum simulates a walk inside her vital organs via a projection on the floor of a cylindrical room, accompanied by sounds of breathing and a heartbeat. The artist shows colour video images of an endoscopic probe that was inserted into her body to record the functioning of her digestive system. It is noteworthy that *Corps étranger* was shown in 2016 at Kiasma (Helsinki) in her first solo exhibition in Finland. Sakari observes that "*Corps étranger* is by nature associated with Hatoum's early performances, in which she used her own body as material. The artist was preoccupied with various forms of power and, for example, Western social

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239 Hill, Gary; Quasha, George & Stein, Charles 2000, "Liminal Performance: Gary Hill in Dialogue" in *Gary Hill*, edited by R.C. Morgan, Johns Hopkins University Press, Baltimore, pp. 243–270.

240 Hill, Gary 1986, "Artist Statement" in *The New American Filmmakers Series #30*, Whitney Museum of American Art, New York.

241 See Amaducci, Alessandro 2014, *Videoarte. Storia, autori, linguaggi*, p. 95.

control, which came to the fore as a plethora of surveillance cameras".[242] The subject of surveillance had already appeared in the early days of video art, for example with Nauman, Acconci, and Martha Rosler, and in the 1990s it returns as an attempt to investigate the complex relationship between surveillance, performance and power, and to understand the boundaries between the public and private sphere.

In the late 1990s, Eija-Liisa Ahtila started using multiple screens. She presented an acute and relevant analysis of the relationship between the inner world and external reality based on research into female psychosis. The artist's use of multiple screens accentuates the instability of mental space,[243] as in the 2002 video installations *The Wind* and *The House*. Her video installations relating to spatiality received widespread international appreciation.[244]

In the early 2000s, the influence of cinema and video art occurred reciprocally. For instance, British filmmaker Peter Greenaway's productions sit in between video art and cinema. In 1993, his exhibition *Watching Water* at Palazzo Fortuny in Venice anticipated immersive art environments with an exhibitive itinerary of video installations across the museum's rooms.

Moving image art practices also continue to reference art history as well as cinema. If cinema is a reference in his videos, Viola was also especially inspired by Early and High Renaissance paintings. Probably influenced by his earlier experiences in Italy, and in particular Florence, Viola often defined his video installations as "moving portraits" and made regular references to ancient subjects and formats.[245] For instance, *The Greeting* (1995) is inspired by Jacopo Pontormo's painting *The Visitation* (1528–1529). The video work represents a slow-motion version of the Virgin Mary's encounter with her cousin Elizabeth. Viola is certainly one of the video artists who most readily engaged in this comparison of themes and formats, but art history has always served as an archive for the artistic imaginary. For instance, the polyptychs, an ancient model for multi-screen projections, document the perennial desire to expand artistic expression by combining multiple

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[242]   See http://blog.kiasma.fi/blog/vieras-ruumis/ and https://kiasma.fi/en/exhibitions/mona-hatoum/. Accessed 10 October 2020. English translation mine.

[243]   See Chadwick, Whitney 2006, "Medium is Not the Message" in *BENT: Gender and Sexuality in Contemporary Scandinavian Art*, edited by W. Chadwick, International Center for the Arts, San Francisco State University, San Francisco, p. 14.

[244]   I extensively write about this topic in Chapter 3.

[245]   There are many references to Viola's interest in the Old Masters. See the following interview: Zutter, Jörg 1992, "Gespräch Mit Bill Viola – Interview with Bill Viola" in *Bill Viola: Unseen Images – Nie gesehene Bilder/Images jamais vues*, edited by M. L. Syring, Kunsthalle Düsseldorf & R. Meyer, Düsseldorf. This interest is also evident in the titles of two recent exhibitions: *Bill Viola: Electronic Renaissance*, Palazzo Strozzi, Florence, 10 March–23 July 2017; *Bill Viola: The Moving Portrait*, National Portrait Gallery, Washington D.C., 18 November 2016–7 May 2017.

pictures and surfaces. Triptych and polyptych also allow for ease of transport and installation in several places. This characteristic has certainly contributed to the fast dissemination of video artworks in an international arena, and the establishment of the medium as a genre of contemporary art.

I have quoted a few artists, but many others have worked in dialogue with spatiality and bystanders. Thanks to projection screens, images have been freed from within the monitors to float on walls or in environments filled with mirroring, transparent or rotating surfaces. The evolution of video art has also been interpreted in terms of the art market economy,[246] but I believe that a new way of relating to space and the public was undertaken by the artists predominantly for artistic reasons. Perhaps it would be more fitting to say that the art world is adapting to a new type of observer, more demanding and dynamic, given that large sections of the art market still struggle to invest in video art.

In a broader sense, a strong link emerges between video art and cinema from various critical texts, but the important role of video art installation in the transition from single screen to interactive and immersive environments is rarely highlighted. The technological possibilities to extend a video piece into an environment has changed the position of the viewer as well as the aesthetic perception of the work. It is necessary to distinguish the situational and mobile perception of the viewer in a video installation from that of the collective and static experience that cinema has adopted since its inception. If a dark room is shared by both moving and stationary viewers, they generate very different perceptual experiences. One could argue that panoramas are closer to video installations than cinema as they stimulate viewers to look around in an active way. In the cinema stillness is demanded to follow the film plot. Could we consider the video installation as an intermediate stage between panoramas and immersive/interactive environments?

ideo installations are accurately described by Morse as "an experiment in the redesign of the apparatus that represents our culture to itself: a new disposition of machines that project the imagination onto the world and that store, recirculate, and display images, and a fresh orientation of the body in space and a reformulation of visual and kinesthetic experience".[247] Video installations exceed two-dimensionality to become a real environment that increasingly invites viewers to actively participate.[248] The aesthetic potential of the video art installation resides in its ability to evoke, rather than solely describe, the continuum of experience by reacting to and interacting with particular conditions. Video art installations are, therefore, aligned with the phenomenological perception of bodily motion in space.

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[246] Amaducci, Alessandro 2014, *Videoarte. Storia, autori, linguaggi*, p. 151.
[247] Morse, Margaret 1998, *Virtualities: Television, Media Art and Cyberculture*, p. 158.
[248] I discuss this topic in Chapter 3.

2.2.3   Interactivity and Virtual Environments

From the late 1980s, but especially in the 1990s, many changes occurred in terms of virtuality: the dissemination of personal computers, the development of the World Wide Web, the use of live streaming, the spread of the video game industry and the growing interest by cinema and television industries in special effects.

Video artists have started experimenting with more ways to expand video art environments and use interactivity in their works to reinvigorate moving image practices with experiments in media art. The field of interactive installations, infused with digital aesthetics, first found its audience in special events and festivals, far from the contemporary art scene.[249] Initially, these two art fields worked in parallel realms instead of feeding each other.

What is interactivity? It is the active participation of the user in a transaction of data or images. The devices that perform this connective function are called 'interfaces'; they transform and convert movements, acoustic and visual signals. Interactivity allows users to participate in the construction or re-invention of the artwork. Participation takes place not only in the construction of meaning, but as a co-production of the work, since the viewer is often required to intervene directly to create a sequence of marks or events, as happens in the interactive installations by pioneering artists Myron Krueger and Jeffrey Shaw.

Several new devices support increasingly varied forms of interactivity, collaboration, and the exchange of information. For example, the *touchscreen* is a display that establishes a direct link between eyes and fingers. In the 1980s, Flusser had already written several pages about the movement of the hand in new technologies. If the eyes oversee digital functions, it is the hand that guides them. The hand grasps the images that it has chosen.[250] Interactive tables and walls are often used to expand user participation. Today, the sense of touch is often accompanied using speech to activate some digital functions. Additionally, *touchless* technology utilises motion sensors combined with content display devices, like video projectors or screens, to involve users by requiring body gestures detected remotely, without any physical contact. Viewers are getting used to manipulating what they are looking at.

In the 1990s, interactive installations were conceived as a setting where visitors could activate a reaction or modify the artwork through a gesture or a movement. Originally, interactive environments were especially appealing to the audience for their novelty and technological innovation. People were also unfamiliar with

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[249]   It is worth remembering in particular Ars Electronica in Linz from 1979 onwards, Videonale (first event in 1984 in Bonn), and Transmediale (from 1988 onwards) in Germany.

[250]   See Flusser, Vilém 1985, *Ins Universum der technischen Bilder*.

technological systems which led them to discover generative responses and, at the same time, to feel shy about the newness. The artist Laura Beloff noticed that the audience was more interested in the medium's options and oddities than the content of the artwork: "The question for an artist was at the time: how to overcome this 'triggering and pushing buttons' and still use interactivity somehow?".[251]

One key distinctive feature of interactive art is that artists do not create a final and complete artwork, but construct an area of activity for visitors, whose actions generate the artwork-event. Thus, the final shape of an interactive artwork will be the result of an encounter with users and their performances. The scholar Kluszczyński identifies eight strategies found in interactive art: strategy of instrument, game, archives, labyrinth, system, rhizome, network, and spectacle. He describes how interface, interactions, databases, data organization, software/hardware system, connection among participants, and performance/spectacle are common elements in all of these strategies. Depending on the core aim of the work, "in every strategy, a different factor takes a position superior to others and plays the basic role in the process of organizing interactive activities of the receivers".[252]

Interactivity occurs thanks to interfaces, which are devices that link users to machines. The media theorist Louise Poissant lists six main categories of interfaces in media art: sensors, recorders, actuators, transmitters, diffusers, integrators.[253] She writes that "each of these interfaces allows the articulation of a particular form of interactivity and the investing of the receptors as partners", and consequently, "some of them join or contribute to an aesthetic and cultural paradigm shift".[254]

In the second half of the twentieth century, computers, and information technology previously used only for military purposes became accessible to industry first, then to individuals. Soon, a number of artists embraced these new possibilities, including virtual reality.

Although virtual reality has long been tied to business uses, by the early to mid-1990s it was employed to evoke the experience of presence in mediated spaces. As noted by communication theorist Jonathan Steuer in the 1990s, virtual reality systems attempt to evoke a sense of presence in artificial or remote spaces through multisensory depth and interactivity.[255] The concept of virtual reality can therefore

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[251]   Laura Beloff, interview by L. Scacco. 25 September 2019.
[252]   Kluszczyński, Ryszard W. 2010, "Strategies of Interactive Art" in *Journal of Aesthetics & Culture*, Vol. 2, No. 1.
[253]   Poissant, Louise 2007, "The Passage from Material to Interface" in *MediaArtHistories*, pp. 236–239.
[254]   Ibidem, p. 240.
[255]   Steuer, Jonathan 1992, "Defining Virtual Reality: Dimensions Determining Telepresence" in *Journal of Communication*, Vol. 42, No. 4, pp. 73–93.

include those practices beyond the use of 'goggles and gloves', such as installations and performances in art. I am inclined to consider virtual reality practices not only as illusive or playful but charged with the value of performative presence. Here too, the body performs a series of actions, albeit shaped by the device or directed towards a purpose, which leave a trace in the user's experiential memory. This aspect of performativity was sensed by the computer scientist Krueger as early as the 1970s with his 'responsive environments' and, later, by the group of scholars who created the Cave Automatic Virtual Environment (CAVE) in 1991.

In the summer of 1969 Krueger developed a series of installations that would later become interactive environments. Initially, the responsive environment consisted of an empty room where a participant's actions were recognized by a computer that in turn reacted with visual and auditory displays. *Videoplace* (1969) brought together in the same projection the images of people in two separate rooms. (Fig. 32) In each room, a camera captured the image of the visitors, and a projector displayed their composite image. With this technology, users in different rooms could interact as if they were together, manipulate their own images and interact with virtual objects. In addition, Krueger's aim was to create an interactive environment devoid of the clutter of goggles, gloves, or other supports. About *Videoplace*, he explains: "The goal is to create an experience that the participant accepts as real – even if the world in which it occurs clearly is not. The success of illusion depends first on the speed of response, second on the naturalness of the movement permitted, and only when these requirements are satisfied on the realism of the portrayed world".[256] From his earliest interactive artworks to his experiments with hand-gesture interfaces in the 1990s, Krueger created responsive environments in the form of computer-mediated physical spaces. He aimed to build an embodied experience, rather than dedicating himself to the simulative potential of the image and the ocular centric model of immersion.

Krueger coined the term Artificial Reality to describe a new genre of work in which the computer perceives an action and responds in real-time with visual and audio displays.[257] His intensive research on interactivity led the Canadian scholar Derrick de Kerckhove to define Krueger as the father of virtual art.[258] In the book *Artificial Reality* (1983), Krueger describes his creative process explaining how each

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[256] Krueger, Myron W. 1992, "An Architecture for Artificial Realities" in *Digest of Papers: COMPCON*, Spring 1992, San Francisco & IEEE Computer Society, Washington D.C., p. 462.

[257] Krueger, Myron W. & Wilson, Stephen 1985, "VIDEOPLACE: A Report from the ARTIFICIAL REALITY Laboratory" in *Leonardo*, Vol. 18, No. 3, pp. 145–151.

[258] Sottocorona, Chiara 1996, "Intervista con Derrick de Kerckhove" in *Telèma*, Vol. 2, No. 6, p. 18.

environment grew from his experience of people interacting with a previous work.[259] He also predicted how in the future artists would be challenged to create total environments, or, in other words, artificial realities, because of the overwhelming stream of visual images of electronic media.

Digital technology and its ongoing improvements, particularly in virtual reality, support artists' desire to grasp the surrounding space and the viewers' attention. Today bystanders can literally be wrapped in virtual reality. One of the main early experiments in this context is CAVE (Cave Automatic Virtual Environment), created by the Electronic Visualization Laboratory at the University of Illinois in Chicago in 1992 and developed by Professor Daniel J. Sandin and computer scientists Thomas A. DeFanti and Carolina Cruz-Neira. It was presented for the first time in 1992 at SIGGRAPH (Special Interest Group on Graphics and Interactive Techniques), an annual international conference on computer graphics in the United States. The CAVE developers describe their installation as "a new virtual reality interface".[260]

CAVE is composed of opaque screens for projecting images to the rear. By wearing special glasses, spectators can achieve a feeling of being surrounded by three-dimensional objects. This would turn into mixed reality a few years later. According to the CAVE developers, the suspension of disbelief and the viewer-centred perspective are specific to the system. They highlight the expression "suspension of disbelief" that "arose from film criticism and is defined as the ability to give in to a simulation – to ignore its medium. (…) Suspension of disbelief is a fundamental part of the effective use of a virtual reality interface. Until we can ignore the interface and concentrate on the application, virtual reality will remain a novel experience instead of a serious visualization tool".[261]

Regarding the viewer-centred perspective, the CAVE developers referred to the Renaissance system of representation to ensure the correct perspective by using "a sensor that continuously reports the viewer's position to the simulation". The primacy of frontality is replaced here by a circular vision calculated according to the observer's location, to allow them the freedom to move in the space. They also state that "without this perspective, the viewer becomes less a part of the environment, and a full suspension of disbelief becomes increasingly difficult".[262] The name CAVE refers to the allegory of the cave in the sixth book of Plato's *Republic*, where the objects of perception are described as the shadows of real objects cast onto the

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[259] See Krueger, Myron 1983, *Artificial Reality,* Addison Wesley, Reading, MA.
[260] Cruz-Neira, Carolina; Sandin, Daniel J.; DeFanti, Thomas A.; Kenyon, Robert V. & Hart, John C. 1992, "The CAVE: Audio Visual Experience Automatic Virtual Environment" in *Communications of the ACM*, Vol. 35, No. 6, p. 65.
[261] Ibidem.
[262] Ibidem.

walls of the cave. The visitor is situated at the core of the virtual installation both physically and mentally. Virtual reality (VR) is based on a simulative type of immersion that visitors can interact with. It causes the viewer to act in a sort of parallel reality thanks to the viewer mounted on their head.

While developing perspective in their virtual environments, the creators of CAVE reflect on Renaissance theory and practice. In this construction of vision, there is clearly continuity. Weibel emphasises that "the sensual experience of the art of immersion is the actual peak of cinematographic imaginary because it is the art of performing in an almost perfectly simulated environment. The art of immersion describes the transition from the visual window, in all its historical formats, into a virtual environment".[263] In other words, the immersive experience provided by the VR headset displays the digital evolution of the viewer-centred perspective. However, video art, with its immersive and interactive environments, offers multiple opportunities to enter the visual space and employ other senses, since the spectatorial experience takes on the characteristics of an exploration rather than mere interpretation. Moreover, in virtual reality, some artists avoid positioning viewers at a distance, using hard-edged simulations of perspective, and aiming towards an objective, which for many represent the core of computer-based worlds.

In 1995, the painter and filmmaker Char Davies created *Osmose*, an interactive virtual-reality environment using 3D computer graphics and interactive 3D sound. (Fig. 33) Experienced in a head-mounted display, *Osmose* interactivity is activated via real-time motion tracking based on breathing and balance. According to Grau, this work "cultivates the user-interface – a central parameter of virtual art – at a level that is still unequalled".[264] According to Davies, the immersive installation is a suitable space for exploring the perceptual interplay between the self and the world. The experience has the potential to promote awareness of experiencing embodied consciousness in an enveloping space.[265] The artist achieves immersivity by passing from a natural scenario to the next smoothly and fluidly, with fragments of texts by Bachelard, Heidegger and Rilke. When Grau states that "*Osmose* is both a solid mineral and a fluid intangible sphere, a non-Cartesian space",[266] he seems to recall the phenomenological idea of the union between subjectivity and objectivity. In fact, the artist states that *Osmose* derives from the word 'Osmosis' in the sense of "the

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[263] Weibel, Peter 2017, "Preface" in *The Art of Immersion*, ZKM Zentrum für Kunst und Medientechnologie, Karlsruhe.

[264] Grau, Oliver 2003, *Virtual Art from Illusion to Immersion*, p. 193.

[265] From the artist's website: www.charlottedavis.com. Accessed 28 August 2020.

[266] Grau, Oliver 2003, *Virtual Art from Illusion to Immersion*, p. 195. He refers to the vocabulary employed by the artist in her description of the work.

transcendence of boundaries" in search for a "non-Cartesian sensibility of being in the world".[267]

Osmose could be considered one of the earliest experiences of immersivity in media art. Right from the initial phase of the project, Davies aims to create an innovative experience of space, not by transporting visitors to a different place but, inspired by Bachelard, by generating a fundamental sense of 'being-in-the-world' for them. After many years of research, she recognized that a visual aesthetic "of ambiguity – suggesting meaning rather than explicitly illustrating"[268] would be appropriate to build a space with a sense of envelopment. Unlike other virtual environments, grounded in photo-realistic representation, Davies uses two kinds of computer graphics to dissolve the edges between objects and space. To saturate the various worlds in *Osmose*, she uses a myriad of soft luminous particles to provide a sensation of being surrounded in an immersive environment. She stated that starting from a Cartesian space, which is basic to 3D computer graphics, "the transition to the non-Cartesian space in the rest of the work was therefore dramatic".[269] Departing from the common methods of VR navigation, such as a joystick or gloves, Davies and her team developed a technique based on balance and breathing inspired by Davies' scuba diving experiences. They aimed to create a sensation similar to that of gently floating in the air, while simultaneously feeling grounded in the body. Despite all of these difficulties, *Osmose* shows that virtual reality has the potential to realize spaces that are not rooted in physical reality "nor on our ingrained habitual responses to physical reality. *Osmose* demonstrates a space which, as Bachelard wrote, is unlike that of our usual sensibilities – and thus can become psychically innovating. As a result, we believe *Osmose* has shown VR's potential for exploring the subjective perception of consciousness, or embodied *being* (with all the attendant therapeutic and philosophical implications)".[270] Davies developed the research she started with *Osmose* in the interactive and immersive virtual artwork *Ephémère* (1998). This piece delves into the concepts of ephemerality, life and impermanence and is split into three levels: landscape, earth, and interior body.

Christa Sommerer and Laurent Mignonneau use artificial life and artificial intelligence to create intensely engaging and sensory experiences. Sommerer's background in botany, anthropology and sculpture complement Mignonneau's studies in video and modern art. The duo creates interfaces that generate open-ended,

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[267] O'Donoghue, Karl 1999, "The Real and the Virtual: Char Davies. Karl O'Donoghue Interviews Char Davies" in *Art Bulletin*, Vol. 16 (87), June/July 1999, pp. 22–24.
[268] Davies, Char & Harrison, John 1996, "Osmose: Towards Broadening the Aesthetics of Virtual Reality" in *Computer Graphics (ACM SIGGRAPH)*, Vol. 30, No. 4, pp. 25–28.
[269] Ibidem.
[270] Ibidem.

embodied encounters with living systems and science. Their interactive computer installation *Interactive Plant Growing* (1992) links growing virtual plants in computer 3D space to the real-time growing of living plants, which can be touched by the viewers. (Fig. 34) A slightly different version of this installation entitled *Interactive Garden* was exhibited at Galleria Otso in Espoo in 1993, curated by Huhtamo.[271] In fact, the artists apply Huhtamo's notion of the 'tactile gaze' to achieve both visual and physical interaction with the audience: visitors need to touch the real, living plants with their hands to trigger a projection of digital flora in the installation. In *Fly Simulator* and *Neuro Mirror* (2018), Sommerer and Mignonneau emphasize a similar type of visual feedback. Users activate a visual and audio response in the VR headset by gesturing in front of a video camera.

2.2.4 From Interactive Installations to Immersive Art Environments

In a 1996 article, the media critic and writer Cynthia Chris enquired about the evolution of video art or its end:

> "Whether video is a medium that will continue to evolve and define its territory as an artistic practice – or whether it will become an irrelevant, antique practice remains to be seen. Its special status as an art form so closely related to the mass commercial medium of television, the unique problems related to its exhibition and distribution, and its ambiguous status as a commodity were once its charm and may now be its Achilles' heel".[272]

Despite this weakness, video art evolved further thanks to digital language and its technical tools for shooting and editing. The image expanded out of the screen and interactivity energised it. Artists have been extending their projections to become video installations where viewers are invited to interact with their bodily senses. When interactive technology allowed it, video installations turned into immersive environments. We have seen how video art installations offer a spatial experience. In fact, video art installations can often be site specific or specifically conceived for the area where they will be exhibited. Sometimes the link with the environment is so binding that artists need to change the structure of their video installation more or less radically to exhibit it in different locations. This variability

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[271] From the artists' website: www.interface.ufg.ac.at. Accessed 30 August 2020.
[272] Chris, Cynthia 1996, "Video Art: Dead or Alive?" in *Afterimage*, Vol. 24, No. 3, November / December 1996.

means that the same work might never be installed in the same way as it moves from venue to venue. Environment is an essential attribute of immersive art.

Video art installations usually leave viewers to create their own path. Spectators and their actions can also be so deeply involved that they become an integral part of the work. A simple method for achieving this, technologically speaking, is the use of cameras filming the audience in real-time. Recently, technological developments in the field of interactivity have expanded the expressive possibilities of video art installations. Visual systems can react in various ways to the behaviour of viewers, who can be induced to perform a specific action, like touching an area, or simply moving into a space to activate a part or the entire video installation. Here, the video installation and interaction depend on each other, and the meaning of the work arises from the combination of the two. The result of this merging is designated as the "second interactivity",[273] where sensorimotor processes, embodiment and autonomy are at the core of the interaction.

In the United States, Peter Campus was one of the first video artists to interact with the space in the 1970s. He is known for his interactive closed-circuit video installations, such as *Interface* (1972) and *Shadow Projection* (1974), where the spectator encounters shadows, overlays, and double projections. Later, American media artist and performer Perry Hoberman and his stereoscopic installation *Out of the Picture* (1983) exemplified the strong relation between visual arts and cinema,[274] as well as the desire to leave the screen's frame. Here, spectators could walk into the image looking at their own 3D shadows merged with the filmed characters.[275] Hoberman combines interactivity, video installation, and cinema to extend the viewers' perceptual experience. His installation *Cathartic User Interface* (1995) is another work which focuses on the idea of interaction and can be employed by several users simultaneously.

Jeffrey Shaw has been a prominent artist in media art since it emerged in the 1960s. He has worked with performance, expanded cinema, installation, interactivity, and virtual and augmented reality. Among his best-known artworks, *The Legible City* (1989) is a pioneering interactive installation where the visitor rides a static bicycle through a description of a city. (Fig. 35) Lining the virtual streets, computer-generated three-dimensional letters compose sentences. The visitor crosses this city of words, selecting pathways and building spontaneous associations

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[273]   See Couchot, Edmond 2007, "The Automatization of Figurative Techniques: Toward the Autonomous Image" in *MediaArtHistories*, p. 185.

[274]   Hoberman took inspiration from the American science fiction film *The Invisible Man* (1933), which, in turn, was based on H. G. Wells' 1897 science fiction novel *The Invisible Man* and produced by Universal Pictures.

[275]   See the artist's website: https://perryhoberman.com/page15/index.html. Accessed 25 February 2020.

of meaning, "creating a kinesthetic conjunction of the active body in the virtual domain".[276] Here, again, the meaning of the work results from the combination of the work and the user's interaction.

Studio Azzurro is a Milan-based art collective[277] founded in 1982. Since its early years, it has focused on producing an interplay between digital images and physical space to accentuate the role of the viewer. In 1995, it created its first 'sensitive environment', an installation that derives its narratives from visitors' interactions. This interactivity is supported by interfaces technology activated by ordinary movements such as touching, stepping, and making sounds. Their video environment *The Swimmer* (1984) was first exhibited at Palazzo Fortuny in Venice in 1984 and lives on in the memory of many visitors. The collective has since experimented with interactive installations such as *Tables* (1995), where images are projected onto the surfaces of a set of tables in a room. (Fig. 36) Infusing the surfaces with energy, the images come alive and display temporary visual and acoustic events. In their long artistic career, it is easy to identify a transition from video art installations to interactive and immersive environments.

In the late 1980s and early 1990s, Tony Oursler was also a pioneer in video art in search of a three-dimensional aspect. He created video projections in three dimensions, often on spherical surfaces, accentuating the expressive form of the subject, usually a face in the act of speaking, observing, or screaming. By combining sculptural shapes, multimedia projections and recordings of the human voice, Oursler looked for interaction with the public based on psychological and philosophical layers within a dreamlike space, as in the video installation *The Watching* (1992), presented at Documenta 9 in Kassel (Germany) dealing with the themes of sex and violence.

Thanks to the progress of technology, video installations can now be set up outdoors, from media-facades on buildings to video installations in public spaces. A prime example, Oursler's *Tear of the Cloud* (2018), consists of a series of video projections on and around the Hudson River and Riverside Park in Manhattan. (Fig. 37) In a statement, the New York-based artist linked the visual and acoustic aspects of his multimedia work to the "mnemonic effect of the river and the many

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[276]   Quotation from the artist's website:
https://www.jeffreyshawcompendium.com/portfolio/legible-city/. Accessed 3 March 2020.

[277]   Studio Azzurro was founded by Fabio Cirifino, Paolo Rosa, and Leonardo Sangiorgi in 1982. Stefano Roveda, an expert in interactive systems, joined the group in 1995.

intertwined tropes associated with the Hudson Valley region".[278] This immersive multimedia environment was organized by the Public Art Fund in New York. In 2019, Oursler created the installation *Eclipse* in the garden of the Fondation Cartier in Paris, where video images were projected onto the trees. The latest technology enabled the artist to exhibit "more than three hours of materials compressed to form a densely layered experience for the visitor".[279]

Projection mapping is a technology in which images are projected directly onto architectural surfaces (both outdoor and indoor) or on objects. The term derives from computer graphics and generally identifies the projection of digital images on complex surfaces. Being like video mapping and spatial augmented reality, projection mapping can be included in the mixed reality category.

Projection mapping moves another step towards immersive art environments because the surface, moving image, and surrounding space are reciprocally interlinked. This form of expression can truly produce spectacular environments using buildings' facades or interiors as surfaces for projections. The scholar Nanna Verhoeff writes about the public screening in general as a "spectatorial territory", because "it produces not only a spectator but also the territory within which spectatorship can occur. The particular screening situation of each spectatorial territory is layered and porous: each territory is permeable and opens up to other spaces".[280]

An indoor experience of video mapping is provided by Hanna Haaslahti in *Habitus* (2014). (Fig. 38) Inspired by the tribal painting practices for communication in Argentina, she merges 3D sensing with video mapping to transmute light into a digital painting projected onto the visitors' bodies. A series of white dots projected onto viewers change and interact when people touch each other. Thus, the digital pattern of dots moves and connects in series when a 'live' contact occurs, inspiring interaction and liveliness, and consequently may "reveal various dynamic topographies appearing within a group of people".[281]

In the 1990s, the Swiss video artist Pipilotti Rist also played repeatedly with space on a variety of scales. For example, her single-channel video installation

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[278] Battaglia, Andy 2018, "Tony Oursler to Conjure Public Art in New York's Riverside Park This Fall" in *ARTnews*, 18 September 2018. Available at: https://www.artnews.com/art-news/news/tony-oursler-conjure-public-art-new-yorks-riverside-park-fall-11003/. Accessed 18 February 2020.

[279] See the Fondation Cartier webpage: https://www.fondationcartier.com/en/live-shows/soirees-nomades/tony-oursler. Accessed 14 March 2020.

[280] Verhoeff, Nanna 2019, "Sensing Screens: From Surface to Situation" in *Screens Genealogies: From Optical Devices to Environmental Medium*, edited by C. Buckley, R. Campe & F. Casetti, Amsterdam University Press, Amsterdam, p. 120.

[281] Quotation from the artist's website: https://www.hannahaaslahti.net/portfolio/habitus/. Accessed 26 January 2022.

Selfless in the Bath of Lava (*Selbstlos in Lavabad*, 1994) is a tiny video projection on the floor. In the video, the artist stands nude in a bath of lava, looking up at the camera and shouting out the statement: "I am a worm and you are a flower". A large part of her work revolves around clichés and prejudices, as in the work *Ever is Over All* (1997), where a young woman walks down the street and smashes the windows of parked cars under the approving gaze of a policewoman. (Fig. 39) The single-channel video has also been displayed across two walls in the corner of a room from floor to ceiling. The use of slow motion creates a hypnotic feeling. To capture the attention of the viewer, Rist often uses large video-audio installations and recently, she opted for immersive environments, where visitors can be surrounded by changing video scenes projected on walls and ceilings combined with sound. *Pixel Forest* (2016) allows viewers to take an immersive walk through a three-dimensional video. (Fig. 40) The tonality of the light changes the colours on the floor, creating an environment that is both reality and fantasy. Her transition from video art installations to immersive art environments also seems a natural progression.

Japanese art collective teamLab creates unique immersive environments. Founded in 2001, it is an interdisciplinary group consisting of artists, scientists, and experts in various fields. In their immersive environments they study human behaviour in the digital age and particularly the cognitive attitudes of young generations.[282] The group uses spatial recognition technology, interactivity, and video projections to create borderless three-dimensional artistic contexts where visitors can immerse themselves. In Odaiba, a large artificial island in Tokyo Bay, the teamLab collective has its permanent exhibition space of immersive environments displayed on two floors in the Mori Building and named Borderless. The museum has five areas, all dedicated to teamLab: *Borderless World*, which is the largest, *Athletics Forest*, *Future Park*, *Forest of Lamps*, and the *En Tea House*. *Athletics Forest* is a huge open space where a multimedia forest can be explored, played with, jumped on, and rolled around in by adults and children. Visitors can immerse themselves in digital nature in a continuous transformation because it is sensitive to the presence of people. In the Mori Building, the environments are constantly in motion. Within a few minutes, the spectator can encounter a variation of scenery even while standing in the same place. The Mori Building's ground floor presents a series of different media environments, from a waterfall in a forest to interactive dancing holograms and light sculptures. In this section, the body is not required to move as much, but the senses of sight, touch and hearing are activated by haptic sensations and sounds. These immersive installations could be referred as electronic panoramas.

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[282] See the group's statements on their website https://www.teamlab.art/concept/. Accessed 10 December 2019.

In Toyosu, a man-made island in Tokyo, teamLab's Planets is their second digital museum. Here, people can lie down in a doomed room and watch flowers fall from the sky, while another space is a sort of pool filled knee-deep with water with hundreds of projected koi carps. The Planets Museum is smaller than the building at Odaiba, but is more immersive.

Journalist Megan Wallace, among others, sees an affinity between Kusama and teamLab: "Many of teamLab's installations bear a striking resemblance to Kusama's. But the collective takes the ideas started by Kusama to new extremes: these rooms are not mirrored illusions, but actual dreamworlds you can walk around in".[283] Madeline Cash also observes how in both teamLab's work *Forest of Resonating Lamps* and Kusama's *Infinity Mirror Rooms*, lights and reflections amplify the space into infinity.[284] Kusama is, indeed, thought-provoking and her works can been seen as inspirational points for the latest generation of Japanese immersive artists, such as teamLab.

Even in the few examples above, we can identify a tendency on the part of the artists toward incorporating space in their visual exploration. From inside the monitor, video art moved into museum space and finally into the architectural and natural environment. In addition, technological advances support artists' research into spatiality and, consequently, of audience experiences.

2.3   Immersion and its Reception

2.3.1   Illusion and Immersion

The intertwining of immersion and illusion in art history often corresponds and overlaps. In fact, immersion is often interpreted in relation to its ability to deceive the observer. The superimposition of immersion and illusion, as noted by philosopher John Hyman, arises from the "ancient confusion between pictures and reflections"[285] from Plato's myth of the cave through Descartes, and "have cast a long shadow across the theory of art since then".[286] Descartes resumed Plato's

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[283]   Wallace, Megan 2019, "From Yayoi Kusama to teamLab: How Instagram Changed Art Forever" in *Sleek*, 15 August 2019. Available at: https://www.sleek-mag.com/article/instagram-changed-art/. Accessed 20 June 2021.

[284]   Cash, Madeline 2018, "A World First: Mori Building Digital Art Museum teamLab Borderless Opens in Tokyo" in *Tokyo Weekender*, 18 June 2018. Available at: https://www.tokyoweekender.com/2018/06/a-world-first-mori-building-digital-art-museum-team-lab-borderless-opens-in-tokyo/. Accessed 20 June 2021.

[285]   Hyman, John 2006, *The Objective Eye: Color, Form, and Reality in the Theory of Art*, The University of Chicago Press, Chicago and London, p. 126.

[286]   Ibidem, p. 238.

distinction between soul and body, truth and appearance, and the theory of imitation (or mimesis) according to which natural entities are mere imitations of their respective ideas.[287] In 2001, Manovich observed that the "available theories and histories of illusion in art and media, from Gombrich's *Art and Illusion* and Bazin's "The Myth of Total Cinema" to Stephen Bann's *The True Vine*, only deal with visual dimensions" and that new theories were necessary because "the reality effect in many areas of new media only partially depends on an image's appearance".[288] While Renaissance paintings and digital images use similar techniques to create an illusion of space by evoking depth, the real novelty of the digital world lies in introducing movement and interaction.[289]

Morse advocates that video installation is not theatrical or filmic and that its modality of expression distinguishes it from other more illusionistic arts. She observes: "In the proscenium arts – and one can begin them with Plato's 'simile of the Cave' – the spectator is carefully divided from the field to be contemplated (…) The visitor to an installation, on the other hand, is surrounded by a spatial here and now, enclosed within a construction that is grounded in actual (not illusionistic) space".[290] Unlike video installations, photography, and cinema operate a temporal and physical "separation from the realm of reception" by means of proscenium, frame or monitor.[291] In the early 1990s, Morse recognized the potential of video installation to project "the imagination onto the world", and in its "reformulation of the visual and kinesthetic experience".[292] She grasped the temporal and experiential shift in this form of electronic art. It is remarkable that she also directly rejects Platonism in the following words: "I would prefer not to adopt Plato's idealism or his hierarchy of values along with his simile".[293]

Artist Char Davies, one of the pioneers of virtual reality, also pursues a search for "an alternative sensibility to the Cartesian worldview".[294] She takes inspiration from her daily life to find non-Cartesian spatiality. In addition to her scuba diving activity, starting from the 1980s she has used her strong myopia to explore the world without wearing corrective lenses. After paintings and drawings, in which she blurs

[287]   Crapulli, Giovanni 1999, *Descartes*, Editori Laterza, Roma and Bari, pp. 53–54.
[288]   Manovich, Lev 2001, *The Language of New Media*, The MIT Press, Cambridge, MA, pp. 181–182.
[289]   Ibidem, p. 184.
[290]   Morse, Margaret 1990, "Video Installation Art: The Body, the Image, and the Space-in-Between" in *Illuminating Video: An Essential Guide to Video Art*, edited by D. Hall & S. J. Fifer, Aperture, New York, p. 156.
[291]   Ibidem, p. 157.
[292]   Ibidem, p. 155.
[293]   Ibidem, p. 165.
[294]   O'Donoghue, Karl 1999, "The Real and the Virtual: Char Davies" in *Art Bulletin*, Vol. 16 (87), June/July 1999, pp. 22–24.

the distinction between objects and surfaces, the perception of an enveloping and sensorial space brought her to the creation of virtual environments. In her immersive works *Osmose* (1995) and *Ephémère* (1998), an alternative to Cartesianism is expressed through a visual aesthetic of semi-transparency and indefinite spatial correlations, together with a user interface that depends on intuitive body activities, rather than on techno-devices. She clearly states:

> "My strategy has been to explore how the medium/technology can be used to 'de-automatize' perception (via use of semitransparency, seemingly floating through things etc.) in order that participants may begin to question their own habitual perceptions and assumptions about being in the world, thus facilitating a mental state whereby Cartesian boundaries between mind and body, self and world begin to slip".[295]

With regards to Cartesian dualism, the Finnish scholar Juho Hotanen notes that Merleau-Ponty does not abandon Descartes' line of thought but recognises the need for a new approach to duality. Hotanen states:

> "He does not reject, for example, the concepts of the reflection and the unreflected, but reformulates their relation as a non-contradiction. Reflection is of the unreflected. (…) Therefore, an 'object' of our perception, or of our thought, is never only an object, a plain and simple presence in front of our consciousness, but involves a depth-dimension that opens onto the world as a whole complex of relations".[296]

This new pathway devised by Merleau-Ponty by focusing on reciprocity, leads him to the concept of 'chiasm' and of 'flesh of the world', a philosophy of the flesh that makes the invisible visible. Even in the field of music, Merleau-Ponty engages in subject-object interrelation. Here the two opposites do not precede the relationship but exist solely for each other. Again, the concept that Merleau-Ponty finds in painters, namely that the world is around me and not in front of me, requires a re-interpretation of the subject-object polarity. The concepts of 'lived perspective', 'spatialisation of the visible', 'return to the things themselves', and 're-embodiment' of the perceived sensation allow the philosopher to successfully deal with the Cartesian system, which shaped the whole Western tradition. According to Merleau-

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[295]   Ibidem.
[296]   Hotanen, Juho 2019, *Merleau-Ponty's Reading of Descartes: From Cartesian Duality to the New Ontological Structure*, Doctoral dissertation, Department of Social Sciences and Philosophy, University of Jyväskylä, p. 322.

Ponty's philosophical approach, art does not replay the visibility of things in a mimetic manner but makes things visible in one of infinite possible ways, because "a picture is not a *trompe l'oeil*".[297] Referring to Cézanne's painting, Merleau-Ponty stated that "art is not imitation" but "it is a process of expression".[298]

The Finnish scholar of Aesthetics Harri Mäcklin cites the importance of phenomenology for bringing art to life, by overturning the viewpoint that art is distant from truth, emphasising instead that it is in continuity with the world.[299] It is worth noting that when phenomenology emerges, avant-garde artists, from Cubism and Futurism to Fluxus, to mention only a few, are attempting to achieve the same relationship between art and life. Art and philosophy often cross over, as philosophers frequently refer to artistic research to explain their thoughts, and Merleau-Ponty is one of the greatest examples of this. Mäcklin maintains that in the action of reconnecting art and truth, art is not just a moment of pleasure or magical transportation to another world, but an event that momentarily interrupts the ordinary flow of life to make room for new visions of the world.[300]

In his study of the phenomenology of aesthetic immersion, Mäcklin examines the peculiar "experience of *going elsewhere* in and through encounters with art".[301] He proposes that a "poetic complex" occurs in aesthetic immersion. He defines the poetic complex as "the complicated situation which is formed in the encounter between perceivers, their lifeworld, and the piece of art, and all the interactions they might have. I argue that when the poetic complex fulfils certain conditions, the encounter amounts to aesthetic immersion, that is, the opening up of the elsewhere and the perceiver's dislocation into this existential place".[302] He explains that a dislocation occurs in the spectator: "(…) being immersed in an artwork is to fall into an enigmatic *in-between*, which is not a transportation to another world, but a dislocation, where the constitution of the *there* is momentarily modulated".[303] His statements describe an encounter with artwork as a sort of absorption without specifying anything about the technique or the genre. In other words, it could be a painting, a sculpture, a media art installation, or any other artistic form, such as a concert, a book, or a theatre play. Although the notion of immersive experience

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[297] Merleau-Ponty, Maurice 1945, *Le doute de Cézanne,* in *Sens et non-sens*, Gallimard, Paris; English transl. *Cézanne's Doubt*, in *Sense and Non-Sense*, p. 17. Emphasis in original.

[298] Ibidem.

[299] Mäcklin, Harri 2019, *Going Elsewhere: A Phenomenology of Aesthetic Immersion*, Doctoral dissertation, Faculty of Arts, University of Helsinki, p. 135.

[300] Ibidem.

[301] Ibidem, p. 13. Emphasis mine.

[302] Ibidem, p. 37.

[303] Ibidem, p. 14. Emphasis in original.

opens the possibility of theorising spectatorship as a form of mental immersion in a static or cinematic image, I believe that true immersion occurs when the body acts, such as in a media art environment. For instance, a Surrealist work with unexpected juxtapositions could be convincingly related to the sort of displacement described by Mäcklin, but digital technology provides new means of expression that allow the artwork to be effectively experienced, both mentally and physically, in a reciprocal manner. In fact, Morse uses the expression "space-in-between" to describe an inherent trait of video installations, which stimulate the "capacities of the body itself and its senses to grasp the world visually, aurally, and kinesthetically".[304] In the digital era, artists and visitors deal with a representation that, according to Manovich, "goes beyond the old-style realism of the analog era"[305] in which "the subject completely accepts the illusion for as along [sic] as it lasts".[306] With the emergence of interactive media, the imaginary universe is subordinated to action, and therefore is based on the "oscillation between illusion and its destruction, between immersing a viewer in illusion and directly addressing her".[307] After centuries of proto-immersive practices, Kemp comments that "the viewer enters the image, in person".[308] Indeed, it is the body with its movement in the space of the artwork that makes an experience truly immersive. It is the spatialisation of the visible, as defined by Merleau-Ponty, that creates the conditions for a fully immersive experience joining mental and corporeal in a chiasmic way avoiding contraposition.

Grau also emphasises mental immersion, considering the encounter with media art a "mentally active process" and a "mental absorption". He also notes that mental immersion is characterised by a "diminished critical distance to what is represented and an emotional involvement in the same".[309] Although psychic activities are highlighted here, immersive perception is not limited to mental involvement, but presupposes a physical motion in the act of seeing. It is the body with its movement that makes an artwork fully immersive and diminishes the critical distance to what is manifested. Immersive installations engage visitor bodies in the depth of the existing space. Manovich writes that in virtual worlds: "The immobility of a subject guarantees a complete illusion; the slightest movement destroys it".[310] The

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[304] Morse, Margaret 1990, "Video Installation Art: The Body, the Image, and the Space-in-Between" in *Illuminating Video: An Essential Guide to Video Art*, edited by D. Hall & S. J. Fifer, Aperture, New York, p. 165.

[305] Manovich, Lev 2001, *The Language of New Media*, p. 208.

[306] Ibidem, p. 209.

[307] Ibidem.

[308] Kemp, Wolfgang 2020, "Lo spettatore dall'implicito all'esplicito" in *L'ora dello spettatore. Come le immagini ci usano*, p. 58. English translation mine.

[309] Grau, Oliver 2007, "Remember the Phantasmagoria! Illusion Politics of the Eighteenth Century and Its Multimedial Afterlife" in *MediaArtHistories*, pp. 154–155.

[310] Manovich, Lev 2001, *The Language of New Media*, p. 206.

immersive space is not a place dominated by a motionless gaze and one-way thoughts, but an environment where action is the prerequisite for directly affecting the sensory realm. A phenomenological approach that is based on multiple viewpoints and a chiasmic relation between body and mind is suitable for analysing this new type of art. Spatiality and motility are pivotal points in immersive experiences. The scholar Ariel Rogers discusses immersion in virtual reality and its long and variable relationship to ideas of illusion. She proposes the idea of spatial penetration as a characteristic sign of immersion. In her opinion, by making hidden connections and structures visible, multimedia devices do not work "as apertures, thresholds, or components of architecture but rather as a means of penetration". She continues:

> "In this regard, they are aligned less closely with objects such as windows, doors, or walls than with devices such as probes, x-rays, and scanners. Whereas x-rays provided a means of plunging into the body, the new screens uncover structures underpinning a space in which we already find ourselves immersed. This conceptualization of contemporary screen practices suggests a genealogy of immersive screens, supplementing those that trace concepts such as illusion and presence, tied instead to the notion of penetration".[311]

The historical case studies already investigated in the first section of this chapter may be considered examples of immersive art experiences. They show how the spatiality of the body is reconfigured in relation to what is 'in front of' or 'around' the beholders. For instance, Monet's *Water Lilies* with no horizon generate a sense of proximity, osmosis, and direct experience, which is also experienced in the *Spatial Environments* by Fontana, where the absence of figures opens the space to a tactile and colour filled space, encouraging new perceptions. In video art, the transition from a front-facing to a circular and pervasive encounter is clearly visible in the shift from the monitor to the space or, in other words, from single channel videos to multi-screen installations.

Distance is a value related to perspective, while proximity is an element of the video sphere. Video art can move away from the detached perspective of the vanishing point to offer a natural foreground or a close-up approach by zooming in to reveal the pixel. For perspective to work, viewers have to be placed in front of the image, while in multi-screen installations they are surrounded by a synaesthetic enveloping environment, which breaks the idea of a central perspective. Projection surface, moving image and surrounding space are no longer separate entities, but an

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[311]   Rogers, Ariel 2019, "'Taking the Plunge': The New Immersive Screens" in *Screens Genealogies: From Optical Devices to Environmental Medium*, pp. 152–153.

interrelated unity vital for completing the work and enveloping the audience in the existing space. This unit generates a new spatiotemporal dimension that one may call 'augmented space' where the spectator can freely take part. After centuries of optical deception to attract spectators, the present-day observer is no longer part of a full-frontal binary process, but immersed in a fluid, pervading, penetrating and reciprocal experience. In contemporary media discourse, another observation comes from Morse, who believes that immersion is broadly connected to digital technology where "principles of envelopment and temporal simultaneity" are contradicted by the "distance and sequential unfolding" of the cinematic structure.[312] This contradiction belongs to the concept of non-linearity and simultaneity in the perceptual experiences that characterizes current society and digital languages.[313]

To summarize, the perception of an artwork is constituted by a set of perceptive, cognitive, operational, and relational practices. Today, it differs entirely from the past centuries, when the viewer was an individual, whose perceptual experience was based on their detached relationships with perspective and the *camera obscura*. It is only since the nineteenth century that the body as a whole participates in this interaction.[314] Thus, today we consider perception *embedded*, or in other words, connected to numerous cultural, social, and technological factors that form the perceptive experience. Each historical period is shaped by its modes of representation, the spatial and temporal devices that arrange the creation and use of images, the collection of perceptive attitudes, and the network of socially shared interpretative practices. A new type of spectatorship is generated within each historical-cultural context and its visual system. Perception is *situated*, meaning that it takes place in specific physical and spatial contexts, and it is also *embodied*. Involvement with the artwork is expressed in a whole series of internal and external reactions in the spectator's body. In conclusion, phenomenologically speaking, the artwork realises its completion based on its relationship with the viewer[315] and, in the twentieth century, this aspect started to be amplified in expressive practices that actively involved the viewer (e.g., participatory, interactive, relational art, and immersive art).

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[312] Morse, Margaret 1999, "Body and Screen" in *Wide Angle*, Vol. 21, No. 1, p. 64.
[313] This concept will be analysed in Chapter 5 of this dissertation.
[314] See Crary, Jonathan 1990, *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century*.
[315] I refer to recent results of visual studies and post-phenomenology, such as the essays by W. J. T. Mitchell (e.g. "There are no Visual Media", 2005; "What do Pictures 'Really' Want?", 1996; "The Pictorial Turn", 1992); J. Rancière 2008, *Le spectateur émancipé*; A. Somaini 2000, "La cornice e il problema dei margini della rappresentazione".

2.3.2   Immersive Art

Nowadays, the term 'immersion' is largely used to refer to an enveloping and intimate experience that welcomes and involves the spectator from a sensorial, emotional, and cognitive point of view. The degree of immersion is a criterion that informs the classification of technologies based on the technical characteristics of the device and user experience. It could be argued that each immersive experience is made up of various stages, intensities, and directions.

In this subchapter, I analyse immersivity in media art. I identify two kinds of immersive experiences: immersive art environments and virtual reality. The former combines moving images, sound, and architecture. Immersive art environments often exploit darkness to view projections in space. But what does a dark space imply? It increases the feeling of being immersed in an ambient space. Visitors often share the physical space and the artistic experience with others in an immersive environment. This state of being together in space is close to the experience created by video art installations and different from previous media art experiences – net art and computer art are mainly based on online presentations accessed via individual monitors. Virtual reality usually requires a head-mounted display that isolates the user. In fact, by providing an enveloping space that affords an involvement and a sharing of experience, immersive art environments could be considered an evolution of video art installations. Spatiality and motion are solicited in the space that surrounds the spectator.

An immersive experience within virtual reality differs from that of the immersive art environment. To become immersed in a parallel reality, viewers need to wear virtual reality goggles. In fact, in virtual reality the interaction occurs in a fictional, computer-generated world. Although this type of technology predominantly relates to the video-game industry, it generally belongs to simulation. The wearer frequently experiences the work alone, and their spatial coordination is no longer anchored to a fixed point; instead, they can act in a large space. This state of immersion in virtual reality is closer to a state of absorption and differs from immersive art environments where spectators can walk freely in a wide space. Here, the site of interaction is the domain of the user, not that of the computing system. Although the environment may be imbued with computation, in this case "the computer itself takes a back seat", as noticed by the computer scientist Dourish.[316] Here lies the difference between the two types of immersive realities. In fact, from the artists' viewpoint, Lauri Astala affirms that "in my own work, I don't personally like the idea of using such an instrument (goggles) that interferes with the spatial experience and isolates the

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[316]   Dourish, Paul 2001, *Where the Action is: The Foundations of Embodied Interaction*, The MIT Press, Cambridge, MA and London, p. 38.

spectator out from the 'real' and present space. With the goggles, the spectator is drawn into a totally virtual space – while the point of my works is to play with the threshold between virtual and present reality".[317]

In addition, the immersive experience is conditioned by the VR displays in front of the eyes. Here, the idea of immersion suggested by virtual reality is close to the sensation that "there is no distance between you and the environment".[318] In fact, although immersive art environments suggest the extensiveness of the represented subject as well as the spectator's proximity to it, virtual reality, by contrast, pushes the sense of immersion to the eyes with the proximity of the screens inside the headsets and communicates a feeling of penetrating space.

Adopting a media archaeology methodology, I compare two kinds of immersive art with two optical devices dating from the eighteenth and nineteenth centuries. Immersive art environments and panoramas share similar purposes – to surround the viewers with images and to generate a sense of being in an environment but with digital technologies. On the other hand, immersive art with head-mounted displays can be associated with the stereoscope, a small-scale apparatus developed to create a three-dimensional illusion. According to Dourish, "users don head-mounted displays, which present slightly different computer-generated images to each eye, giving the illusion of a three-dimensional space".[319] There is also an analogous condition of solitude as head-mounted displays encumber sharing a view or interacting with others.

Other immersive experiences based on new technologies have also been developed, such as immersive videos, more recently known as 360° videos or 360-degree videos. These are filmed, real-world scenes where the view is simultaneously recorded in each direction. Computer-generated VR is another immersive experience produced entirely from computer-generated content. A hybrid between 360° video and computer-generated content can be considered as a third kind of virtual reality. It generates an immersive experience using a blend of both content types and is used in the film industry. Artist and teacher Bonnie Mitchell maintains that "through the definition, creation, and manipulation of both virtual and physical space, computer

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[317] Lauri Astala, interview by L. Scacco. 18 October 2019.
[318] Lelyveld, Philip 2015, "Virtual Reality Primer with an Emphasis on Camera-Captured VR" in *SMPTE Motion Imagining Journal*, Vol. 124, No. 6, September 2015, pp. 78–85.
[319] Dourish, Paul 2001, *Where the Action is: The Foundations of Embodied Interaction*, p. 37.

artists have created powerful aesthetic environments that enable audiences to experience alternative realities".[320]

Augmented reality (AR) is a live view of a real-world environment augmented by computer inputs such as sound, video, and graphics. Finally, mixed reality (MR) describes a merging of the real and the virtual to create unusual environments and visuals where physical and digital elements co-exist and interact in real-time. AR and MR can build digital experiences with flexible degrees of immersion and many levels of bodily participation and spatiality.

If different degrees of immersion exist, one question is how can the modality of immersion be identified in a perceptual experience? According to the scholar Rogers, the spatial relationship between an object and environment affected by the concept of immersion requires at least three aspects:

> "This relationship is marked, first, by a relative scale. In order to accommodate plunging or embedding, the environment must be construed as larger than the object it is to encompass. (…) Second, the notion of immersion implies proximity. Bodies cannot become immersed in a substance or environment from a distance; there must be contact, or the prospect of contact, between a body and its environment. Although we may apprehend a landscape in the distance, for instance, we are only immersed in that landscape if we conceive our bodily space as continuous with it. (…) Finally, the concept of immersion suggests a multidimensional relationship. To be immersed, a body must not only come into contact with a larger environment but be surrounded by it".[321]

Regarding the scale of the environment in relation to the body, Astala asserts that "the spatial arrangement and scale are imperative to achieve the immersive dimension".[322] In some of his video installations, such as *Small Spectacle about Image – Semblance* (2005 – Fig. 41) and *Apropos of Seeing* (2008), the spectator turns into part of the work thanks to the large scale of the installation. This characteristic is evidence that environmental size is employed to achieve a fully immersive experience. In Chapter 4, I analyse how this large scale that favours

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[320] Mitchell, Bonnie 2010, "The Immersive Artistic Experience and the Exploitation of Space", conference paper presented at *CAT 2010 London (Ideas Before Their Time: Connecting the Past and Present in Computer Art)*, 3 February 2010, p. 106. Available at: https://www.scienceopen.com/document?vid=c4e466db-9c88-4ba3-88bb-8d5f87cbd1fd. Accessed 21 February 2020.

[321] Rogers, Ariel 2019, "'Taking the Plunge': The New Immersive Screens" in *Screens Genealogies: From Optical Devices to Environmental Medium*, pp. 138–139.

[322] Lauri Astala, interview by L. Scacco. 18 October 2019.

immersion turns into a media space which appears to compete with the real environment.

Rogers proposes that the concept of spatial penetration emphasises how an immersive experience arises in and through "the act of plunging, an act that entails not only entry into an environment but also the formation of an environment as such".[323] She believes that virtual reality technologies will work on a new kind of screen assemblage oriented "less towards representation than to emergent forms of spatial penetration",[324] as observed by her colleagues in the same publication. In other words, it becomes clear how immersion is related to spatiality and experientiality, while illusion is related to representation. It is also pertinent that the notion of penetrating vision can be applied to virtual reality, in 360-degree videos and immersive art environments.

Applying the idea of spatial penetration in virtual environments to 360-degree videos, also called spherical and immersive videos, could be interesting. In 2017 VR artist and designer George Peaslee created 360-degree videos recreating three paintings by Modern Masters: *A Sunday on La Grand Jatte* by Georges Seurat, *The Starry Night*, where the spectator has the feeling of penetrating and freely walking across the landscape of the painting (Fig. 42), and *Bedroom in Arles* by Vincent van Gogh. Peaslee was invited to produce these recreations of well-known artworks for the 2016 Google Artist in Residence program for Tilt Brush in San Francisco. The project aimed to provide some insight into the expansive virtual world and the possibilities that lie within it. In the 3D creation platform of Brush, users can draw, sculpt and colour using special hand controllers similar to joysticks and a VR headset. Peaslee has been working as a VR artist in art and videogames for some years. Virtual reality painting is close to the sense of penetration and immersion that you have when playing videogames. It is impossible to know how this new tool will continue, but clearly the post-production of an artwork has no limits in the digital era.

Do the latest technological devices amplify the experience of perceiving art in an enveloping way? Today, immersive experiences are created with technology capable of perceptually enchanting the user by offering stimuli so intense and well-structured that they generate the subjective impression of being in an environment distinct from reality. Grau states that "immersion arises when artwork and technologically advanced apparatus, message, and medium, are perceived to merge inseparably".[325] How has the perceptive experience changed in recent years? For

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[323]   Ibidem, p. 153.
[324]   Buckley, Craig; Campe, Rüdiger & Casetti, Francesco 2019, "Introduction" in *Screens Genealogies: From Optical Devices to Environmental Medium*, p. 19.
[325]   Grau, Oliver 2003, *Virtual Art: From Illusion to Immersion*, p. 339.

instance, the contemporary spectator can now move freely within an immersive environment. Indeed, artists and scientists have been able to create a condition of autonomy for the audience of interactive art installations. This autonomy has changed the modes of perceiving artworks. If a painting, a print, or a single-channel video stimulates a state of contemplation, interactive artworks push the viewer toward motion and action. We could say that it is 'perception in action', where the dimension of spatiality is crucial. Video art installations may stimulate concentration, required by the video sequences, and motion at the same time. Spatiality is fundamental to multi-screens projections where viewers can move their gazes and change their bodily orientation from one screen to another.

Eija-Liisa Ahtila, for instance, describes how the spectators of her multiple screen works are unable to look at the entire video piece, but need to choose how to follow the plot.[326] In her six-screen installation *Where is Where* (2008), there are scenes where actors talk to each other across the space on various screens, and consequently the spectator needs to continuously shift attention, and is perhaps also forced to select. This form of autonomy in choosing one's own path of spectatorship is a thought-provoking experience, because "it changes their position as privileged viewers".[327] In her multiple-screen projections, Ahtila intends to deny "a singular perspective of things, or a specific order of how knowledge is acquired".[328] Her statement confirms that video art installation can offer new ways to engage viewers instead of the detached position in front of the image, and that there is no single or defined viewpoint from which to look at the sensory realm. When Ahtila declares that "there are several ways of seeing", she reveals that the spatiality of video art is not only a technique, but rather a novel way of approaching existence, of evading a human-centred attitude.

Immersive practices shift as they pass through the grid of traditional critical parameters. They demand that critics focus their attention on 'how' the work creates an interplay with viewers rather than on 'what' it represents.[329] Since inception, immersive art experiences have enhanced the role of spectators because they definitely become a part of the space and the artwork. Immersive environments move the attention from the subject of representation to spectatorship and its ways of activating experience. Immersion can be argued to be a special form of interaction with the public, often involving all the senses, motion, and subjectivity. In any event,

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[326]   Eija-Liisa Ahtila, interview by L. Scacco. 15 November 2018.

[327]   Langhammer, Florian 2017, "How Do We Picture the World Around Us? Eija-Liisa Ahtila in the Studio" in *Collectors Agenda*: https://www.collectorsagenda.com/in-the-studio/eija-liisa-ahtila. Accessed 3 February 2022.

[328]   Ibidem.

[329]   I refer to the essay by E. H. Gombrich "The 'What' and the 'How': Perspective Representation and the Phenomenal World" (1972).

the immersive experience undermines ordinary perceptual practices to develop new practices.

In an immersive experience, there is no precise location, no fixed site, because there is constant motion in the space of the installation. It is a fluid experience. In fact, immersion is also related to liquid substances, as is evident in the metaphors frequently used in electronic arts: source, navigation, flow, plunging. The aqueous element has often figured as a subject in electronic art because it highlights the rapid changes that the electronic image can achieve. Beginning with Viola's video works in the 1970s up to the recent installations conceived by Aitken, the representation of water is a common motif in electronic arts because it communicates a process in continuous transformation, as well as the special characteristics of the electronic image. This also resonates with Davies whose passion for diving and the underwater inspired her interactive and immersive installation *Osmose* (1995), one of the earliest immersive interactive virtual-reality environment installations.[330]

Sociologist Zygmunt Bauman coined the term 'liquid modernity' to describe the current phase in the history of modernity and capitalism. He points out that liquidity and fluidity are appropriate metaphors for the flexibility of the unfixed space and unbound time of the present.[331] The current fluidity of thought contradicts the dualistic way of thinking that created a hierarchical order in power relations. These are no longer regulated by a sovereign principle, rather by a phenomenon of 'reciprocity'. Evolution is increasingly replaced by coevolution: we know, grow, and adapt through a multiplicity of encounters and relationships. Indeed, I think we can understand immersion not only as becoming totally immersed in a project, but also as being permeable and porous to our surroundings. This means accentuating immanence over transcendence, immersion over objective detachment, which also opens to spatiality and the environment. Standing in an immersive environment is similar to being in a natural environment, when the world is all around. One could assert that immersive experiences are close to an experience of the sensory realm. Merleau-Ponty observes that depth is not simply the third dimension, but rather the *first* dimension, the enigma that gives rise to the link between things, between near and distant, before and after, the exteriority of things perceived in their reciprocal envelopment, "and their mutual dependence in their autonomy".[332]

To summarize, phenomenology can be considered as a tool for understanding what immersive art is. This kind of artistic experience tends to stretch the boundaries

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[330] From the artist's website: www.immersence.com. This information is also reported by Grau in *Virtual Art: From Illusion to Immersion*, p. 198.

[331] See Bauman, Zygmunt 2006, *Liquid Times: Living in an Age of Uncertainty*, Polity, Cambridge.

[332] Merleau-Ponty, Maurice 1964, *Eye and Mind*, p. 180.

between the physical and virtual realms. Visitors are able to walk inside and interact with the artwork, and to become part of the same installation in a continuous evolution. This approach, thanks to digital technology, creates the phenomenological idea of a perpetual and dynamic exchange between the viewer and the visible, and between the perceiver and the perceived. It also underlines the importance of the sensory and motional aspects of visual arts. Immersive art materialises the phenomenological concepts of spectatorship, corporeality, motility, porosity, chiasm, and encounter.

2.3.3 The Immersive Experience

In this subchapter, I investigate a new approach to introducing art history to the public using immersivity, occasionally supported by augmented reality. This innovation can be attributed to the digital transformation of art galleries and museums, which allows virtual exhibitions, without physical works, and highly engaging experiences for the public. Several immersive exhibitions have received vast audiences, based on a large circulation of artworks across different cultural areas. For example, the exhibitions usually focus on established Modern Masters, such as Gustav Klimt, Marc Chagall, and Vincent van Gogh. These exhibitions have resulted in remarkable economic returns and the development of multimedia organizations to set up them. Although this type of artistic dissemination might be considered a form of spectacularising art, the large number of enthusiastic visitors demonstrates that there is a desire to get close to art in the media space, where the boundary between real and virtual becomes blurred.

Having been presented in over fifty cities around the world, *Van Gogh Alive*, produced by Australian Grande Exhibitions, may be regarded as a prime example of an immersive art exhibition.[333] (Fig. 43) This travelling exhibition consists of a multimedia journey through the artistic and personal experience of van Gogh's last ten years in Paris, Arles, Saint-Rémy, and Auvers-sur-Oise in France. It does not include original paintings, and the works are projected large scale onto screens and surfaces. The extremely detailed high-resolution images are edited in continuous sequences and accompanied by background music associated with the Dutch artist. The company adapts the show to each exhibition space, while always maintaining the same features. The exhibition's unconventional, immersive, and dynamic style attracts a heterogeneous public comprised of different age groups.

In 2019, *Van Gogh Alive* had its Scandinavian debut in Sweden at the Castle of Kalmar, and almost simultaneously in Norway at the Hadeland Glassverks, in the

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[333] See: https://grandeexhibitions.com/van-gogh-alive/. Accessed 15 February 2020.

suburbs of Oslo. Although the exhibition did not reach Finland, the immersive art exhibition by teamLab at the Amos Rex Museum in Helsinki received a large audience that is perhaps indicative of an interest in experiences of this kind.

How can these exhibitions bring an enveloping experience to the viewer? In most venues, the projections are distributed over several rooms. Numerous works are projected on very high walls on several levels, and on the floor. In van Gogh's case, the visitor is enveloped and involved in the show through a succession of images, many of them presenting details, photographs and quotes taken from the painter's letters to his brother Theo. These images retrace the life of the artist, his artistic evolution, his illness, his family affections, and his friendships, as well as his ear injury and suicide. The onlookers can feel the subjects, colours, and brush strokes. Sometimes, the paintings are also awakened with special effects. The origin of this kind of exhibition can find its structural design in video art installations and immersive art environments.

Vincent van Gogh was the focus of another immersive exhibition titled *Van Gogh, Starry Night* at the Atelier des Lumières in Paris (22 February 2019 – 5 January 2020; Fig. 44).[334] This digital art museum in an ancient Parisian foundry offers immersion on a monumental scale. The Atelier des Lumières has two different spaces: La Halle is 1,500 square metres and Lo Studio is 160 square metres. One space hosts an extended program of digital exhibitions dedicated to Modern Masters and the other a shorter program dedicated to more contemporary artists. In the space, 120 video projectors with spatialised sound project images onto an area of 3,300 square metres of walls more than 10 metres high. Journalist Brìd Stenson reports that more than 1.2 million visitors attended the immersive van Gogh show in Paris.[335] Van Gogh's paintings are represented in their entirety and disseminated throughout the whole space, accompanied by information on his life, art, and the museum where his works are collected. Bruno Monnier, Director of Culturespaces,[336] explains that "van Gogh's colours and motifs are perfect for an immersive experience".[337] Thus, large blobs of bright-coloured paint are projected on the walls, floor, and ceiling, transforming the foundry into a multi-coloured space. The journalist writes that "brushstrokes spiralling light and darkness across the tall drying towers, bare walls

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[334] See: https://www.atelier-lumieres.com/en/van-gogh-starry-night. Accessed 7 March 2020.

[335] Stenson, Brìd 2019, "Immersive Van Gogh show opens in Paris – in pictures" in *The Guardian*, 5 March 2019. Available at: https://www.theguardian.com/travel/gallery/2019/mar/04/immersive-vincent-van-gogh-show-opens-paris-digital-art. Accessed 7 March 2020.

[336] Culturespaces is the organization who produced the multimedia show.

[337] See: https://www.theguardian.com/travel/gallery/2019/mar/04/immersive-vincent-van-gogh-show-opens-paris-digital-art. Accessed 7 March 2020.

and water tank below, transform into van Gogh's painting titled *Starry Night* (1889). It feels like standing in the moving water as the stars and lights of the town are reflected down on visitors".[338] The sensation of being in the middle of the painted space recalls Monet's long and laborious attempt to achieve an immersive experience for his viewers at the Orangerie that was analysed in a previous section.

This kind of immersive exhibition has been highly successful in terms of visitors. One reason seems to be that they are mainly monographic exhibitions of a single Modern Master, which attracts a large audience. Other exhibitions in Les Atelier des Lumières focused, amongst others, on the iconic works of twenty Modern Masters.[339] New technologies highlight artists that are already popular. This is a chance for people to become familiar with the original artworks while also ensuring that the works retain their likeness or poetry. For instance, van Gogh's *Starry Night* (1889) painting is in the permanent collection of the Museum of Modern Art (MOMA) in New York. Even if geographically distant from MOMA, amateurs or students can interact and explore the art pieces at each exhibition while hoping to see the original canvases. The press releases and media advertisements of these immersive art exhibitions promise a whole sensorial experience of the colours and artworks of the artist. Whether it is possible to have a complete experience of the art without seeing any authentic artwork is questionable, and there is a risk of merchandising visual art.[340] Why do these virtual experiences not include any original artworks? Are there logistical issues involved when art museums lend masterpieces? Are economic reasons at the base of this exhibitive choice? A few authentic paintings, drawings or sculptures should be included alongside the digital, immersive, and interactive experiences to provide a higher quality art historical experience.

Experience, show, and immersion are the keywords of these kinds of exhibition, but they tend to promote passive receptivity in viewers by offering a prepared selection of repeated, enlarged, cut, and manipulated images. Some art critics maintain that the success of these exhibitions documents a decrease in our perceptual

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[338]   Ibidem.
[339]   They included Renoir, Monet, Pissarro, Matisse, Signac, Derain, Vlaminck, Dufy, and Chagall. See the programme on the website: https://www.atelier-lumieres.com/en/events. Accessed 8 December 2020.
[340]   See Scudero, Domenico 2019, "Post-truth Art. Come mercificare l'artista" in *arte e oltre/art and beyond*, Vol. 6, No. 24. Available at: www.unclosed.eu. Accessed 3 March 2020.

abilities.[341] According to my analysis, there is a shift rather than a decrease in our perceptual skills, which I analyse in this section. What interests me next is comprehending how spectators can comfortably perceive the projected images of artworks. I would argue that audiences have become accustomed to perceiving in alternative sensorial ways, where true and false, fact and fiction, truth and lies are considered indistinct categories. I particularly refer to the phenomenon of the loss of distinction between 'reality' and simulacrum pointed out by Jean Baudrillard, and the crisis of the notion of truth that marks the end of modernity. The scholar maintains that in postmodern culture, individuals lose their ability to recognise the distinction between nature and artifice, and to elucidate this point he identifies three orders of simulacra that appear in chronological order. The third simulacrum, which belongs to the postmodern age, is the '*precession'* of simulacra: the representation '*precedes'* and '*determines' the* reality. There is no longer any separation between reality and its representation; there is only the simulacrum.[342] In visual art, this perceptive turn comes from leaving behind the past and juxtaposed concepts of reality and virtuality, truth and illusion, which were prominent in the 1990s during the dissemination of digital languages.[343] I would argue that phenomenology contributed to this 'bridging moment' stepping from the inclination to reconceive the habit of thinking in binary oppositions into a reciprocal and chiasmic one. With the digital revolution in this postmodern condition of post-truth, a new type of observer has emerged and is still evolving.

2.3.4   Post-production and Post-truth Dynamics

According to Flusser, the images provided by the media, which he defines as technical to distinguish them from traditional ones, no longer form testimonies of

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[341] In Italy the discussion about this topic has been lively for some years. I refer, for example, to Sancho-Arroyo, Marìa 2021, "Digitali, immersive e poco artistiche" in *Il Giornale dell'Arte*, 11 ottobre. Available at: https://www.ilgiornaledellarte.com/articoli/digitali-immersive-e-poco-artistiche/137162.html. Accessed 23 October 2021; and Montanari, Tomaso & Trione, Vincenzo 2017, *Contro le mostre*, Einaudi, Torino.

[342] See Baudrillard, Jean 1981, *Simulacres et simulation*, Editions Galilée, Paris; Italian translation by M. G. Brega, *Simulacri e impostura. Bestie Beaubourg, apparenze e altri oggetti*, Pgreco Edizioni, Roma 2008.

[343] Prominent examples are Jean Baudrillard, *Le crime parfait*, Editions Galilée, Paris, 1995; Derrick de Kerckhove, *The Skin of Culture: Investigating the New Electronic Reality*, Somerville House Books, Toronto, 1995; Pierre Lévy, *Qu'est-ce que le virtuel?*, Editions La découverte, Paris, 1995; Tomás Maldonado, *Reale e virtuale*, Feltrinelli Editore, Milano, 1992; and Paul Virilio, *The Vision Machine*, Indiana University Press, Bloomington, 1994.

events in a strict sense. The media show a reality that not only contains factual elements, but also and above all possible elements.[344] In the era of *morphing*, where each user can transform or mix anything together and simulations become reality, the question of the 'status of the visible' becomes central and introduces a shift. In this respect, technical images, although they can no longer be considered unequivocally true or false, nevertheless bring us closer to things.[345] Flusser had already envisaged in the 1980s that the concepts of true and false would become an unattainable horizon.

Insofar as art historians acknowledge the lack of original artworks in the 'corpus' of immersive exhibitions, those dedicated to Modern Masters, such as *Van Gogh Alive,* are alternative and attractive exhibition practices. Could these shows be termed post-truth exhibitions? It is emblematic that in 2016 the Oxford Dictionaries chose 'Post-truth' as the Word of the Year, describing it as "a term relating to or denoting circumstances in which objective facts are less influential in shaping public opinion than information that appeals to emotion and personal belief".[346] The concept of post-truth has been associated with politics and the media.[347] Philosopher Jacques Rancière observes that the increase in the number of media sources has created a space for the propagation of lies and rumours.[348] As established on the Oxford Languages website, "rather than simply referring to the time after a specified situation or event – as in *post-war* or *post-match* – the prefix in *post-truth* has a meaning more like belonging to a time in which the specified concept has become unimportant or irrelevant".[349] This meaning of post-truth can provide a key for reading the success of exhibitions with no authentic artworks. Today spectators are so used to dealing with hybrid, altered, or combined still and moving images that it is no longer important to see the original artwork at an exhibition. The concept of

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[344] See Flusser, Vilém 1985, *Ins Universum der technischen Bilder*, European Photography, Göttingen; Italian transl. *Immagini. Come la tecnologia ha cambiato la nostra percezione del mondo*, p. 22.

[345] Ibidem, p. 23.

[346] Quotation from the Oxford Languages website by Oxford University Press. Available at: https://languages.oup.com/word-of-the-year/2016/. Accessed 4 March 2020.

[347] For instance, the phenomenon of fake news is a critical aspect of the Post-truth era. See *Democracy and Fake News: Information Manipulation and Post-Truth Politics*, edited by S. Giusti & E. Piras, Routledge, London 2020; Rochlin, Nick 2017, "Fake News: Belief in Post-truth" in *Library Hi Tech*, Vol. 35, No. 3, pp. 368–392.

[348] Rancière, Jacques 2000, *Le Partage du sensible. Esthétique et politique*, La Fabrique-Éditions, Paris; English translation by G. Rockhill, *The Politics of Aesthetics: The Distribution of the Sensible*, Continuum, New York, 2004.

[349] Quotation from from the Oxford Languages website by Oxford University Press. Available at: https://languages.oup.com/word-of-the-year/2016/. Accessed 4 March 2020.

truth, authenticity, has become unnecessary and irrelevant. In my view, this emerges as a perceptive habitus.

After becoming familiar with the sensory combination between the real and the virtual worlds promoted by digital technologies, our perception has become acquainted with the phenomena of 'post-production' and 'appropriation culture'. Post-production is a technical process that occurs after shooting or recording, when the author edits the final version, or cut, through a selection of the filmed scenes, with the addition of a soundtrack and special effects. Thanks to digital tools, postproduction has become easier. Manovich observes that the emergence of a postmodern culture in the 1980s coincided with the development of the Graphical User Interface, which enabled 'cut and paste' actions in media manipulation.[350] This digital action allows artists to recombine and analyse material accumulated over the years and foster selection over creation. It affected photography and media art in the late 1980s and the 1990s,[351] where syncretism and hybridisation became the rule rather than the exception. Historian of art and technology Franck Popper argues for an 'art of appropriation' and philosopher Pierre Lévy confirms that "in cyberculture every image is potentially the raw material of another image".[352] The 'open source' model and its technologies contribute to this tendency thanks to the online availability of editorial content, such as texts, images, videos, and music. Indeed, the aims of the open-source movement tend towards the creation of a new open lifestyle with a focus on sharing knowledge. In the 1980s, several media theorists had already foreseen this tendency, among them Flusser, who wrote that electronic texts are "oriented towards creative recipients".[353] Also in the 1980s, a new and original figure appeared in music: the deejay, mixing at least two sources of recorded music to create a unique blend of songs.[354]

If examples of appropriation in art could be found in the twentieth century, such as in Marcel Duchamp's artworks, Dadaism, Surrealism, and the Situationist International, digital technologies have intensified this practice. For instance, video

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[350] See Manovich, Lev 2001, *The Language of New Media*, p. 131.

[351] Key examples are in video art, Matthew Barney and his *Cremaster Cycle* from the mid-90s, and in installation art, Jake & Dinos Chapman and their hybrid monsters. In photography, in the 1990s many artists practiced hybridization, including Inez van Lamsweerde, Aziz + Cucher, Janieta Eyre, and Robert Gligorov.

[352] Lévy, Pierre 1997, *Cyberculture*, Éditions Odile Jacob/Éditions du Conseil de l'Europe; translated by R. Bononno, University of Minnesota Press, Minneapolis, 2001, p. 131.

[353] Flusser, Vilém 1997, *Medienkultur*, edited by S. Bollmann, Fischer Taschenbuch, Frankfurt am Main; Italian transl. by A. Borsari, *La cultura dei media*, Mondadori, Milano, 2004, p. 54.

[354] Bourriaud, Nicolas 2002, *Postproduction. Culture as Screenplay: How Art Reprograms the World*, Lukas & Sternberg Press, New York, p. 35. In this essay, Bourriaud also finds similarities between the role of the deejay and that of the contemporary artist.

artists utilise 'found footage' by reworking images previously shot by other authors and in other contexts. Thanks to digital language, this practice has led to unprecedented post-production art, showing the proliferation of visual information in the culture of globalisation. According to art theorist and curator Nicolas Bourriaud, from the early 1990s, a myriad of artworks has been created on the basis of pre-existing pieces. An increasing number of artists interpret, imitate, re-exhibit or adopt works made by others or from accessible cultural products. He affirms: "These artists who insert their own work into that of others contribute to the eradication of the traditional distinction between production and consumption, creation and copy, readymade and original work. The material they manipulate is no longer *primary*".[355] There have been profound changes in the status of the artwork, and Bourriaud underlines the existential aspect of this artistic practice that he calls 'postproduction'. Referring to Deleuze, Michel de Certeau, Pierre Bourdieu, Louis Althusser and Debord, the French art critic claims that "each work may be inserted into different programs and used for multiple scenarios. The artwork is no longer an end point but a simple moment in an infinite chain of contributions".[356] Bourriaud mentions Duchamp as the initiator of this approach and cites many examples in contemporary art and, in particular, in video art,[357] for instance, Angela Bulloch and Douglas Gordon, who respectively exhibited *Solaris* (1993) and *24 Hour Psycho* (1997). These artists reused the films by Andrei Tarkovsky and Alfred Hitchcock by only changing the sound and the duration of the originals. Gordon states that he is "happy to be on the sidelines" in his *24 Hour Psycho* video piece, because "in appropriating extracts from films and music, we would say, actually, that we are creating time readymades, no longer out of daily objects but out of objects that are a part of our culture".[358] Bourriaud also mentions the 'cutting' of the artist Candice Breitz, who isolates fragments of films and edits them into a loop. The French art critic considers the act of using existing images as a demonstration of "the willingness to inscribe the work of art within a network of signs and significations, instead of considering it an autonomous or original form".[359]

To conclude we return to the key question: why are immersive exhibitions so attractive for visitors, despite no authentic artworks being included? If the concept of authenticity has decayed, or, at least, lost its importance in artistic practice, as a consequence it has also lost value in the reception of contemporary art. Moreover,

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[355]   Ibidem, p. 13.

[356]   Ibidem, p. 20.

[357]   Ibidem, p. 23 and pp. 14–15.

[358]   Van Assche, Christine 2000, "Douglas Gordon: A New Generation of Readymades" in *Art Press*, No. 255, March 2000.

[359]   Bourriaud, Nicolas 2002, *Postproduction. Culture as Screenplay: How Art Reprograms the World*, p. 16.

our sensory apparatus has become accustomed to the shifting boundary between real and virtual. Thus, visitors can enjoy an exhibition simply by viewing copies or substitutes of artworks. This phenomenon belongs to the history of technical reproduction, as Walter Benjamin argued in his well-known pioneering essay. The new attitude stems from the fact that we are no longer faced with an objective copy, as in the case of photos or prints, but with an unstable representation. In exhibitions such as *Van Gogh Alive*, the artwork itself is not altered; what changes is how it is (re)presented. In other cases, Grau warns about virtual realities because viewers are unaware of the extent to which they can be modified versions of the originals. It was much easier for the observer to appreciate and understand the trompe l'œil. Are people in danger of completely losing control of visual truth?[360] Or has the truth already taken a back seat? I would argue that immersivity, with its high level of interactivity and therefore experientiality, may be considered as a counterpart of this digital shift in the field of representation. In a time dominated by simulacra, the corporeal experience, with actions, movements, and sensations, brings observers back to the encounter they have with the world on a daily basis. This phenomenological approach, which will be analysed in the chapters that follow, can shed light on immersive experiences and their increasing diffusion in the present-day.

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[360] See Grau, Oliver 2003, *Virtual Art from Illusion to Immersion*.

CHAPTER 3

Media Art in the Nordic Countries With a Focus on Finland

Media art relates to artwork created using new media technologies. These can include interactive art, video art, computer animation, cyber performance, immersive art, sound art, net art, gif art, glitch art, nanoart and other types of visual art. Unlike traditional art categories, such as painting, sculpture, drawing, printmaking and ceramics, technology is a key feature of media art. Moreover, media art is now considered to include other disciplines, such as film studies, aesthetics, design, computer science and social sciences.

In the mid-1990s, the term 'new media' started to describe the emerging forms of interactive multimedia that complemented newspapers and television. In the same years, as explained in a publication by artist and scholar Mark Tribe and the art critic Reena Jana, the art world began using the expression 'new media art' to refer to artworks produced using digital technology.[361] Other expressions, such as digital art, computer art, multimedia art, and interactive art, were also employed interchangeably. In their publication, the authors draw compelling parallels between the historical-artistic field, such as new media art and video art. For example, Tribe and Jana parallel the novelty of the portable video camera for video artists with the birth of the Internet for media artists. They also demonstrate how tools ease access to investigating the relationship between technology and culture.[362] Later on, the spread of the Internet facilitated the formation of international communities leading to the globalisation of cultures and economies. Today the term 'media art' is most common in the art field and comprises video art.

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[361] Tribe, Mark & Jana, Reena 2006, *New Media Art*, Taschen, Cologne, pp. 6–7. Tribe and Jana chose the expression new media art to describe art projects that use media technologies and divided it into two large categories: Art and Technology (which includes Robotics, Electronic Art, and Genomic art), and Media Art (which includes Video art, Transmission art and Experimental film).

[362] Ibidem, p. 9.

Like looking through a magnifying glass, I develop this chapter by starting with an overview of Nordic innovators and several Finnish artists who have worked with new media technologies since the 1990s. I introduce a Nordic overview because Finland entered the electronic arts scene late. Moreover, from the late 1950s Stockholm, with its Moderna Museet, was one of the major sources of knowledge regarding the avant-gardes in the Nordic countries. One of my main motivations is to describe the critical phase when video art shifted from using monitors to focusing on the space surrounding the viewer. This enhanced and changed audience participation through motility and interaction, is concurrent with the dissemination of phenomenology in Finland. I also outline the diffusion of phenomenological thought in academic and artistic circles in Finland. The last two subchapters focus on Finland's immersive art environments and the beginnings of media archaeology. This branch of study provides the context for analysing the moving panoramas by Huhtamo, a Finnish scholar and enhancing the understanding of the spatial context in immersive art.

3.1   The Beginnings of Media Art in the Nordic Countries

In this section, I survey the most influential pioneers in media art in the Nordic countries, or even better, the artists, curators and institutions that promoted a shift from traditional to digital tools. This new direction started approximately in the mid-1960s when Nordic artists and curators "attempted to break down and reconfigure any established norms concerning art by questioning old techniques, dissolving and reconstructing images",[363] as stated by scholars Björn Norberg and Jonatan Habib Engqvist. Several groups and institutions were involved in this innovative art practice, and soon they became vital reference points for young media artists. One important influence in the Nordic field was the engineer Billy Klüver, who was raised in Sweden, where he completed his studies in Electrical Engineering at the Royal Institute of Technology in Stockholm. His non-profit organization, Experiments in Art and Technology (E.A.T.), was founded in 1966 by engineers and the artists Robert Rauschenberg and Robert Whitman to develop collaborative art projects and performances incorporating new technology. Based in New York, E.A.T. became a catalyst for stimulating the involvement of industry and technology in the arts. One of the best-known events by Klüver, *Nine Evenings*, included nine performances by artists and dancers in New York in 1966 and is considered an epochal episode in the growing convergence between art and science. From 1969,

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[363]   Norberg, Björn & Engqvist Jonatan Habib 2009, "The Nordic Pioneers of New Media Art" in *Ars Hypermedia*, p.1.

the organization had over 2,000 artists and engineers as members, receiving requests for technical assistance from all over the United States, Canada, Europe, Japan, and South America.[364] For instance, Klüver collaborated with Jean Tinguely, Robert Rauschenberg, and Moderna Museet in Stockholm. In the 1960s, again in Sweden, artist Öyvind Fahlström foresaw the changes approaching with the turn of the century, sharing the belief that "collaboration with technology is imminent",[365] as painting was lagging behind other art forms due to its limited opportunities for reaching a wider audience. Fahlström experimented with innovative art forms such as cinema, radio, and television, together with painting, drawing, poetry, and installation to guide the public "into a train of events".[366] The Swedish artist actively shared these new ideas in the media and in events held at the Moderna Museet.

The director of the Moderna Museet, Pontus Hultén, was an indefatigable art historian[367] who organized a range of exhibitions covering new directions in art and featuring internationally acclaimed artists such as Claes Oldenburg, Andy Warhol, and Niki de Saint Phalle. Hultén considered the museum a flexible open space for hosting a wide array of activities, such as lectures, film screenings, and concerts. Danish scholar Tania Ørum recounts that:

> "The Moderna Museet was a beacon for all the Nordic countries in Hultén's period [in 1950–1975], introducing cutting-edge European and American art to its local neighbours, establishing co-operation and networks and very often sharing its exhibitions with the Stedelijk Museum in Amsterdam and Scandinavian venues such as Kunstnernes hus in Oslo and the Louisiana Museum of Art in Humlebæk, Denmark".[368]

[364] Klüver, Billy 2000, *E.A.T. – Archive of Published Documents*, Fondation Daniel Langlois, Montreal. Available at: www.fondation-langlois.org. Accessed 15 February 2019.

[365] Fahlström, Öyvind 1960, "The Invisibile Painting", first published as "Den osynliga tavlan" in *Artesa*, No.1, February 1960, pp. 2–3.

[366] Hultberg, Teddy 1999, *Öyvind Fahlström On the Air – Manipulating the World: Birds in Sweden, The Holy Torsten Nilsson Pictures & Manuscripts*, Sveriges Radios Förlag, Stockholm, p. 226.

[367] Hultén (1924–2006) was also a filmmaker having made four filmic works. *En dag i staden* (*A Day in the Town,* 1955–1956), his second experimental film, was produced in collaboration with Hans Nordenström and inspired by Dadaism. It starts as a typical travelogue of Stockholm and ends in the city's total destruction by fire and dynamite. See *Pontus Hultén and Moderna Museet: The Formative Years*, edited by A. Tellgren, Koenig Books, Cologne, 2017.

[368] Ørum, Tania 2016, "The Post-War Avant-garde in the Nordic Countries" in *A Cultural History of the Avant-Garde in the Nordic Countries 1950–1975*, edited by T. Ørum & J. Olsson, Brill Rodopi, Leiden and Boston 2016, p. 22.

Because of the Moderna Museet, Stockholm represented a major engine for new artistic expressions in the Nordic countries from the late 1950s onwards. In 1967, for instance, it presented Lucio Fontana's spatial environment in the shape of a white oval space, where two *Spatial Concepts* from 1966 hung separately.[369] Later, works by video artists such as Viola, Oursler, Hill, and Gordon were frequently displayed across several venues in Sweden, attracting visitors from all over the Nordic countries. Prior to the 1990s, Finnish audience had to travel to Sweden to view larger media art exhibitions. For instance, the Moderna Museet hosted an exhibition of artworks by Viola in 1985, and again in 1992, with a traveling show entitled *Bill Viola: Unseen Images.* Another example is Oursler's exhibition in 1998 entitled *Videotapes, Dummies, Drawings, Photographs, Viruses, Heads, Eyes, & CD-ROM*, which concluded its tour at Malmö Konsthall in Sweden. Regarding video art, the Finnish artist Hakola states: "I spent quite a lot of time in Berlin and Stockholm in the early 1980s, which also gave me exposure and an important window to see what was going on internationally".[370] Additionally, Ørum explains:

> "In the 1960s, it was still quite expensive to cross the Atlantic, so many artists, not only from Sweden but also from other Nordic countries, who could not afford the trip to New York, and in an age prior to Internet, could only get an impression of American art from the rather small, often black-and-white illustrations in international art journals, were glad to have the opportunity to see new American art and to watch much-discussed but sparingly screened work, such as, for instance, Andy Warhol's films at the Moderna Museet in Stockholm".[371]

In Finland, the art institution ARS, already mentioned in Chapter 1, may be considered one of the oldest recurring events of international contemporary art in Finland. As described by journalist Anna Iltnere, "the idea for ARS began to take shape in the creative minds of Finland back in the late 1950s, during the Cold War, out of fear of living in isolation and remaining in a cultural vacuum. The Finnish painter Erkki Koponen (…) is considered the founder of ARS. Before then, Finnish society had minimal access to contemporary art". [372] The first ARS exhibition was held in 1961 and featured the works of one hundred and seventeen artists from Spain,

369   Pugliese, Marina 2017, "Lucio Fontana. Ambienti/Environments", p. 39.
370   Leuzzi, Laura 2016, "Interview with Marikki Hakola" in *EWVA: European Women's Video Art*, p. 3.
371   Ørum, Tania 2016, "The Post-War Avant-garde in the Nordic Countries" in *A Cultural History of the Avant-Garde in the Nordic Countries 1950-1975*, pp. 22–23.
372   Iltnere, Anna 2011, "The DNA of ARS" in *Arterritory*. Available at: https://arterritory.com/en/visual_arts/articles/209-the_dna_of_ars/.   See   also: https://fi.wikipedia.org/wiki/Ars-näyttelyt. Accessed 24 October 2021.

France, Italy, and Finland.[373] Iltnere continues: "The exhibit lasted only one month, but it was visited by 39,000 people. The goal had been achieved. The Finns had built a ventilation pane in the Iron Curtain".[374] ARS exhibitions have taken place at various intervals over the years and in different locations, and its curator and themes change every time.[375]

Founded in 1933, the organization Fylkingen continues to function as an artist-run venue in Sweden and a meaningful location for experimental art and music. Despite this long history, "it would take until the mid-1990s and the Internet boom for a larger movement of Nordic new media art when artists started to organize themselves to share expensive equipment".[376] In 1979, the Video Nu (Video Now) association was founded by the artists Ture Sjölander and Teresa Wennberg. However, for financial reasons, it became a sort of association for electronic visual arts, which in turn closed due to the suspension of public funding. In fact, in Sweden, the circulation of video art only started in the 1990s thanks to new organizations like Filmform and the Gallery Index.[377] Other cultural associations emerged over the years (e.g., Creative Room for Art and Computing – CRAC in Stockholm, Atelier Nord in Oslo, BEK in Bergen, i/o/lab in Stavanger, and MUU in Helsinki). Later, new organizations in media art were established to promote festivals and art projects, like Electrohype in Malmö, Motherboard in various Norwegian cities, Electra in Oslo, Lorna in Reykjavik, Pixelache in Helsinki. The latter is one of the oldest electronic and experimental art festivals in Europe. In 1987, a new organization called AVEK – the Promotion Centre for Audiovisual Culture – was launched in Helsinki, offering funding programmes for media artists from 1993. As Beloff confirms, "the official art scene of museums, galleries, etc., in the Nordic countries has been late in showing any interest in artworks with technological components, or perhaps found it difficult to exhibit. I see very little impact of the digital in the 'official' Nordic art scene. More is present in the subcultural art scene – and typically

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[373]   In Chapter 1, I report that Fontana exhibited two 'Cuts' in *ARS 61* at the Ateneum in Helsinki (1961).

[374]   Iltnere, Anna 2011, "The DNA of ARS" in *Arterritory*. Available at: https://arterritory.com/en/visual_arts/articles/209-the_dna_of_ars/.

[375]   ARS exhibitions have taken place in 1961, 1969, 1974, 1983, 1995, 2001, 2006, 2011, 2017, and 2022. Locations have included Helsinki, Turku, Tampere, Hämeenlinna, and Jyväskylä. In Helsinki, the venues were firstly Ateneum Art Museum and then Kiasma Museum of Contemporary Art. See: https://www.biennialfoundation.org/biennials/ars-finland/. Accessed 24 October 2021.

[376]   Norberg, Björn & Engqvist, Jonatan Habib 2009, "The Nordic Pioneers of New Media Art", p. 2.

[377]   Leuzzi, Laura 2016, "Interview with Antonie Frank Grahamsdaughter" in *EWVA: European Women's Video Art*, p. 6.

initiated with small-scale associations and organizations".[378] In fact, rather than museums and art galleries, international festivals, biennials, and non-profit contemporary art organizations were crucial venues for software-based art. Ars Electronica, ISEA, SIGGRAPH and Transmediale were, and continue to be, temporary events for the intersection of art, science and technology.

Owing to his innovative experimentation in video art and activity in Europe, Nam June Paik's work was well distributed in the Nordics. (Fig. 45) Between 1958 and 1963, the Korean media artist participated in the Fluxus events. Later, from 1979 to 1996, he taught at the Academy of Fine Arts in Düsseldorf despite also working and living in New York. Paik also crossed artistic paths with some Nordic artists. Perttu Rastas, a Finnish curator and pioneering archivist in Finnish media art, describes a significant encounter between Paik and the critic and artist Jan-Olof Mallander in Finland:

"A more internationally oriented interest in media art began with the correspondence between critic and artist Jan-Olof Mallander and Nam June Paik in 1968. Mallander introduced Paik to the Finnish public in 1970 on the pages of a special 'Intermedia' issue of the Iiris magazine. In 1971 an 'Intermedia' happening was organized by the Elonkorjaaja group at the old Student House in Helsinki, which was also the first occasion when video art was seen in our country. The works shown included tapes by Paik, a video installation by Philip von Knorring, and *Dimi-O* (1971) which was a combination of computer and video devised by Erkki Kurenniemi".[379]

In 1970, the group Elonkorjaajat (The Harvesters) emerged and included artists from the visual arts, electronic music, and architecture.[380] Inspired by Fluxus, this art collective was active until 1977 and gained international attention. In the 1970s, Jan-Olof Mallander, one of the founding members, launched Halvat huvit / Cheap Thrills, an alternative gallery in Helsinki featuring work by the Elonkorjaajat group and international artists.[381] In 1977, Philip von Knorring, another member

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[378] Beloff, Laura 2019, "Artist Testimonials" in *Digital Dynamics in Nordic Contemporary Art*, edited by T. Toft, Intellect, Bristol & Chicago, p. 87.

[379] Rastas, Perttu 1994, "Treasury: Finnish Media History" in *ART2: Journal of the University of Art and Design Helsinki*. *ART2* includes a selection of articles published in UIAH paperjournal *ARTTU* 4/94. See: http://www.uiah.fi/art2/art2_194/rastaslist.html. Accessed 29 November 2020.

[380] The group was formed by Jan-Olof Mallander, Pekka Airaksinen, Carolus Enckell, Antero Kare, Olli Lyytikäinen, Philip von Knorring, Leo Ruuskanen, Carl-Erik Ström, Stuart Wrede, and Ilkka-Juhani Takalo-Eskola.

[381] See: http://archivioconz.com/artist/jan-olof-mallander/. Accessed 1 February 2022.

of the Finnish collective, produced one of the very first video installations in Finland. The installation was entitled *Bevakat*, a Swedish word meaning to be watched or under surveillance. The title was fitting, as video surveillance was a popular topic at the time. In fact, the *Bevakat* video installation on display at the Moderna Museet in 1977, involved getting viewers to observe themselves through old surveillance cameras.

In the Finnish art scene, Kurenniemi was one of the most active artists in terms of contacting people and studios in other Nordic countries such as Sweden and Norway.[382] Huhtamo describes him as a techno-visionary whose creations anticipated interactive installation several years in advance. For instance, the 'video-organ' *Dimi-O* "uses a video camera attached to a computerized organ as an input device. A dancer can thus create an interactive soundscape by the movements of her body".[383] Scholar Joasia Krysa affirms that "considered an interactive sound installation, it precedes better-known works such as David Rokeby's *The Very Nervous System* (1982–1991)".[384] In the 1960s, after completing his studies in mathematics and theoretical physics, Kurenniemi got his first job at the Institute of Nuclear Physics, and programmed an analogue computer. In the same years, he realized his first 8 mm and 16 mm home movies based on everyday life, which he continued until the beginning of the 2000s.[385] In 1966 Kurenniemi, in collaboration with the Swedish composer Jan Bark, produced the computer animation *Spindrift*, which consists of images formed by differential equations. As in the case of Ture Sjölander and his video production *TIME* (1965–1966), the work was commissioned by the Swedish national broadcasting company, premiered at the 1967 Computer Music Seminar in Espoo, Finland, and later broadcast by Sveriges Television AB (SVT).[386] Between 1962 and 1974, Kurenniemi designed and built several electronic instruments; he also anticipated theories on the symbiotic relationship between man

[382] Krysa, Joasia & Parikka, Jussi, 2015, "Introduction" in *Writing and Unwriting (Media) Art History: Erkki Kurenniemi in 2048*, edited by J. Krysa & J. Parikka, Leonardo Series, The MIT Press, Cambridge, MA and London, p. XX.

[383] Huhtamo, Erkki 2003, "Kurenniemi, or the Life and Times of a Techno-visionary" in *dOCUMENTA* (13). Available at: www.d13.documenta.de/research/assets/Uploads/KurenniemiHuhtamo1.pdf. Accessed 15 September 2019.

[384] Krysa, Joasia 2015, "Foreword" in *Writing and Unwriting (Media) Art History: Erkki Kurenniemi in 2048*, pp. 85–86.

[385] Rastas, Perttu 2015, "I Archival Life: Foreword" in *Writing and Unwriting (Media) Art History: Erkki Kurenniemi in 2048*, p. 1.

[386] See Bang Larsen, Lars 2015, "The Unbearable Non-Artist from 'l'Homme machine' to Algorithmic Afterlife: Non-Cartesian Cybernetics and Aesthetic Embodiment in Erkki Kurenniemi" in *Writing and Unwriting (Media) Art History: Erkki Kurenniemi in 2048*, p. 121.

and machines, a central theme in his films *The Punch Tape of Life* (1964) and *Computer Music* (1966). He experimented with robotics and Artificial Intelligence building a swearing robot in 1982 for the 10th annual exhibition at Kunsthalle Helsinki. Kurenniemi describes his invention:

"It was a human-looking head rolling around the exhibition hall on two wheels, limited by an umbilical cable connected to the ceiling carrying power and serial data. It had four collision sensors at each corner of the base frame, and a limitless vocabulary speech synthetizer onboard. It performed a fractal-tree-shaped dance on the floor and every time it collided with a wall or a visitor's foot, it swore. The worst thing it said was something like: Oh, human fart".[387]

Moreover, Kurenniemi wrote three texts on merging artistic practices with technology: *Message is Massage* (1971), *Computer Eats Art* (1972–1982) and *Computer Integrated Arts* (ca. 1986). In the 1971 text, despite the title echoing McLuhan, he proposes that the multifaceted sensory realm recalls a phenomenological approach: "The truth has a thousand of faces […] Reality is continously dividing into all potential actualities, into who knows how many equally real alternative worlds completely ignorant of each other".[388] In fact, the Danish scholar and curator Lars Bang Larsen observes that "if we turn to his artistic activities, however, it is clear that Kurenniemi sides with a non-Cartesian line of thinking and resists a cybernetic 'teleology of disembodiment' in his music and films".[389] Bang Larsen connects the Foucauldian aesthetics of existence with Kurenniemi's lifestyle and his self-transformative process that comes to life as art material.[390]

Between the 1960s and the 1970s, Antero Takala was one the first artists to investigate the use of photography as a tool for expression in television. His work as a TV cameraman at YLE (the Finnish Broadcasting Company) from 1960 onwards encouraged him to create a video piece for television, *Romeo and Juliet* (1972), based completely on black-and-white photographs taken from the ballet performance. In order to add motion to the still images, this experimental work used the Video Colouring Agent produced by YLE engineers at YLE's design laboratory

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[387]   Kurenniemi, Erkki 2004, "Oh, Human Fart" in *Writing and Unwriting (Media) Art History: Erkki Kurenniemi in 2048*, pp. 7–8. First published in *Framework 2*, 2004, FrameFund, Helsinki.

[388]   Kurenniemi, Erkki 1971, "Message is Massage" in *Writing and Unwriting (Media) Art History: Erkki Kurenniemi in 2048*, p. 91.

[389]   Bang Larsen, Lars 2015, "The Unbearable Non-Artist" in *Writing and Unwriting (Media) Art History: Erkki Kurenniemi in 2048*, pp. 113–123.

[390]   Ibidem.

in 1971 in accordance with Takala's instructions.[391] Rastas observes that this technological experiment was simultaneous to Paik and Shuya Abe's video synthesizer.[392] In 1980, Takala created a second video artwork, *The Courtyard*, which technically repeated the same process as the previous one, and showed the backyards of Kruununhaka in Helsinki in the 1930s and their community. After these TV programme experiments, Takala mainly worked as a photographer in the field of contemporary art.

Rastas observes that "the debate around video remained rather lukewarm in Finnish art circles throughout the 1970s, notwithstanding a few prodding articles by Mallander, Kurenniemi and Antero Kare in the Taide [Art] Magazine".[393] Kurenniemi's versatile and experimental character infused energy and interest into coming generations. This is evident in video artist Mika Taanila's interview with Kurenniemi on April 15, 2002 for his documentary film *The Future Is Not What It Used to Be* (2002).[394] The recorded interview focuses on science, mathematics and computing and forms the core of Taanila's film. It also shows Kurenniemi's manic obsession for collecting and archiving by means of notes, objects, and recordings of his thoughts.

In the 1960s, Pasi Myllymäki and Eino Ruutsalo breathed some new inspiration into Finnish experimental cinema, stimulating generations of video artists through their film works. Myllymäki made about 40 DIY[395] 8 mm short films in collaboration with filmmaker Risto Laakkonen in the period 1976–1985. These shorts were only screened at informal events because Myllymäki strove to interact with the audience through film. In 1979, he stated in the Finnish magazine *Uuden ajan Aura*: "The age of direct cinema has begun. Right from the start, my aim has been to inject the independence and the wild, restless frenzy of punk on into film".[396] One of Myllymäki's most famous works, *3000 Cars* (1980), shows the same part of the chassis of different cars in several parking lots, while the headlights, thanks to a stop-motion animation technique, produce a special trembling impression reminiscent of a flash.

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[391] See: https://www.valokuvataiteenmuseo.fi/en/exhibitions/mindscapes-1960-2010. Accessed 31 June 2022.

[392] Perttu Rastas, interview by L. Scacco. 18 August 2022.

[393] Rastas, Perttu 1994, "Treasury: Finnish Media History" in *ART2: Journal of the University of Art and Design Helsinki*.

[394] See Taanila, Mika 2002, "Drifting Golf Balls in Monasteries: A Conversation with Erkki Kurenniemi" in *Writing and Unwriting (Media) Art History: Erkki Kurenniemi in 2048*, pp. 293–305.

[395] Read DIY as Do It Yourself.

[396] Taanila, Mika 2007, "Outsiders of the Seventh Art" in *Sähkömetsä. Videotaiteen ja kokeellisen elokuvan historiaa Suomessa*, edited by P. Rastas & K. Väkiparta, Valtion taidemuseo, Helsinki, p. 34.

Eino Ruutsalo was a cross-disciplinary artist who between 1962 and 1967 made several short films that he called 'experimentals'. He wrote, painted and etched directly onto the film frames, as in *Kinetic Pictures* (1962). He described how "the film, which because of my painting had remained rather in the background, came forward in a new light. Possibly because in the film the object of my strivings, movement, and depth, is in a way more complete, and thus possibly easier to attain than in painting. In the late 1950s I had begun to make films by drawing and painting straight onto film".[397] Thus, he engaged in filmmaking because it allowed him to overcome the static nature of painting. Some interesting aspects from Ruutsalo's practice include his out-of-focus filming technique, his kinetic and optical works, and his innovative use of electronic music in his soundtracks. The scholars Krysa and Parikka report that Ruutsalo collaborated with Kurenniemi to create a composition with the musician and composer Henrik Otto Donner for his short film *Hyppy* (*The Jump*, 1965).[398] In 1964, Ruutsalo shot his third film in Paris with a French cast. *Les Siffleurs* won the Finnish State Cinema Award[399] and demonstrates his propensity for international artistic collaboration.

Ruutsalo was also involved with Fluxus, a 1960s international network of artists, composers and designers known for combining artistic media and disciplines, from performance to sound, from visual arts to design and literature. The term 'intermedia', proposed by Dick Higgins, is often used to describe Fluxus and explain its interdisciplinary activities. Intermedia refers to artworks that no longer fit a specific category, as in the case of a painting that leads to a video art piece or a performance. This approach was already employed by Ruutsalo in Finland before his correspondence with Higgins, which began from the mid-1980s.[400] Home reports that Ruutsalo's short films were also screened with Fluxus films in the United States in the 1960s and '70s.[401]

In 1987, a Fluxus art collection was initiated in Finland by the American artist Ken Friedman at the Pori Art Museum. While working at the Arabia factory in Helsinki, Friedman established an association of Nordic art museums[402] and

[397]   Ruutsalo, Eino 1984, "Eino Ruutsalo" in *Eino Ruutsalo*, Swedish Museum, Philadelphia, 1 November – 30 December 1984.

[398]   Krysa, Joasia & Parikka, Jussi 2015, "Introduction" in *Writing and Unwriting (Media) Art History: Erkki Kurenniemi in 2048*, p. XX.

[399]   Home, Marko 2022, "'I Wish to Be a Field of Constant Transformation' – Eino Ruutsalo's Experimental Approaches in the 1960s" in *FNG Research*, No. 1/2022, p. 5.

[400]   Ibidem, p. 7.

[401]   Ibidem.

[402]   Among others, the association included the Henie-Onstad Art Centre in Oslo and Kjarvalsstadir in Reykjavik. See: http://www.poriartmuseum.fi/eng/collections_archives/collections.php. Accessed 12 March 2022.

organized donations of works from Fluxus artists including his own works. Starting in the 1990s, the Pori Art Museum, with its collection of 131 works and archival documents, became the Finnish hub for familiarising with the Fluxus movement and its artists with their innovative ideas.[403] For instance, the Fluxus concept of intermedia will lead some artists, such as Nam June Paik and Wolf Vostell, to experiment with the means of television and to develop video art, and the art theoretician Youngblood to declare a "global intermedia network" in his *Expanded Cinema*.[404]

3.2 The Adoption of Video Art by Nordic Artists

Video technology allowed artists from different fields to increase their means of artistic creation and represent their ideas more efficiently. In addition, video cameras were more portable and easier to use, which allowed artists to record their performances or actions in an unprecedented way. While the earliest videos originated from countries where they first became commercially available, such as the United States, this new artistic tool quickly spread to Northern Europe. In Finland, for instance, as advocated by Rastas, "video art was instrumental in introducing the concept of media art in Finland, at the same time when performances and spatio-temporal art forms flourished in the productions of the Jack Helen Brut and Homo S groups".[405]

According to Finnish curator and editor Tiina Erkintalo, it is impossible to assert the existence of video art in Finland before the mid-1980s. In an interview, she states: "I don't think that you can really speak of a video environment in Finland before '87. We are a small country, and thus it was a very small group that was involved, Marikki Hakola, for one. […] It is usually said that Finnish video history dates from that event". Erkintalo refers to a group of young artists, called the Turppi Group, formed by Marikki Hakola, Lea and Pekka Kantonen, Jarmo Vellonen, and Martti Kukkonen. They created their first piece of video art, *Earth Contacts* (1982), for the Lehtimäki International Land Art symposium (1982).[406] The group recorded the

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[403] The collection includes works from artists such as Eric Andersen, Henning Christiansen, Philip Corner, Jean Dupuy, Ken Friedman, Geoffrey Hendricks, Dick Higgins, Alice Hutchins, George Maciunas, and Jack Ox. See: http://www.poriartmuseum.fi/eng/collections_archives/collections.php. Accessed 12 March 2022.

[404] See Youngblood, Gene 1970, *Expanded Cinema*, p. 53.

[405] Rastas, Perttu 1994, "Treasury: Finnish Media History" in *ART2: Journal of the University of Art and Design Helsinki*.

[406] Her statement is reported in Movin, Lars & Christensen, Torben 1996, *Art & Video in Europe,* Statens Museum for Kunst & Det Kongelige Danske Kunstakademi, Copenhagen, p. 155.

video "with VHS equipment borrowed from abroad".[407] (Fig. 46) It combines video recordings of the spatial details of an original land artwork with the performative sequences associated with it. This chiasmic relationship between humankind and the natural environment portrays an increasingly technological and industrial society, as shown by the sequence of intertwined hands emerging from the earth. The group split up in 1983 after making their second video, *Deadline*, which laments demolishing old buildings in Helsinki to replace them with new shopping malls.

Rastas claims that the first Finnish video artist was Mervi Kytösalmi-Buhl, who studied video art in 1977 at the Düsseldorf Art Academy. The teaching staff included eminent artists such as Joseph Beuys, Nan Hoover and Paik.[408] Between 1978 and 1984, Kytösalmi-Buhl created several videos. Despite being produced in Germany, where they received some awards, these videos can be considered the first Finnish video artworks. Kytösalmi-Buhl demonstrates an affinity with Body Art in her video performances, such as *Head Movements* in 1978, *Rot und Weiss* and *Body* in 1979. The Finnish scholar Riikka Niemelä has noted a phenomenological approach in her video-performances *Rosa* (1980) and *Trip* (1982), where concepts such as motion, space and time are central. Kytösalmi-Buhl's studies in Germany may have brought her in contact with phenomenology as early as the 1980s.[409] According to Niemelä, the video-performances *Rosa* and *Trip* are also related to feminist ideas through the concept of the limited movement of a woman's body and the narrowness of the framework of action.[410] She also noted a phenomenological aspect in Kytösalmi-Buhl works in her focus "on the moving body and the embodied experience",[411] such as in the videotape *Kreisel* (*Spinning Top*, 1978). Kytösalmi-Buhl's work was first presented in Finland in 1979 in an article in *Taide* art magazine. It was also successively shown at the Old Student House in Helsinki in 1981 and 1982.

Another pioneering media artist is Anneli Nygren. From the late 1970s, she made videos and films first using a ciné film camera, and later using a video camera to

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[407] See Rastas, Perttu 1994, "Treasury: Finnish Media History" in *ART2: Journal of the University of Art and Design Helsinki*.

[408] See Rastas, Perttu, *Mervi Kytösalmi special*. Available at: https://www.av-arkki.fi/artists/mervi-kytosalmi-buhl/. Accessed 20 November 2019.

[409] Riikka Niemelä's paper "Archival research, Phenomenology and Video Art" was presented at the Conference *Connoisseurship in Contemporary Art Research*, organized by the University of the Arts in Helsinki, University of Helsinki, and University of Turku at the auditorium on the Harakka Island, 30 November 2018.

[410] See Niemelä, Riikka 2019, *Performatiiviset jäljet. Teos ja tallenne esityslähtöisessä mediataiteessa*, Doctoral dissertation, Annales Universitatis Turkuensis C 467, University of Turku, Turku.

[411] Niemelä, Riikka 2014, "Tracing Out Space in Video Performance" in *Art Theory as Visual Epistemology*, edited by H. Klinke, Cambridge Scholars Publishing, Newcastle upon Tyne, p. 29.

record and carnivalize popular culture with a camp attitude.[412] Based in Turku, her first video piece *Tytti Tyttelin in Christmasland* is dated 1977 but she became more widely known from 1989 owing to her participation in festivals and exhibitions. Her films are characterised by imagery of pop and television stars and their fans, like *In Love with a Rockstar* (1982) and *Rendez-Vous with Destiny* (1989). In some videos from the 1980s and '90s she also addresses feminist subjects, like *Woman's Work Never Ends* (1997), centred on a housewife forever setting and clearing the table, and *Miss Inflandia* (2001) focused on a beauty contest. *Laundry Piece* (1992), an homage to Yoko Ono, shows "the conceptual art idea to entertain your guests by explaining to them each item of your laundry".[413] Here, the performer is Nygren's aunt, who was the same age as Yoko Ono. Lacking a formal art education, her documentary style is characterized by a poetic, ironic and "compulsive repetition", in which "artistic originality becomes an issue (…)" – as described by the scholar Harri Kalha – "precisely because one realizes so quickly that this is not the (in itself rare) case of an artist who achieves authenticity, but the (even rarer) case of an authentic who achieves art".[414] Nygren's work includes magazines with minimal circulation,[415] fiction films, documentaries, animations and music videos. Indeed, single-channel video was a genre particularly influenced by the music video. In 1981, the launch of MTV (originally standing for Music Television), an American cable channel airing music videos presented by TV personalities, had a major impact on video art. Later, it became increasingly easy to create and improvise live images in performative contexts. As a result, the video artist transformed into a performer of images, and, in some cases, also of sound, described as a video jockey (VJ). The scholar Alessandro Amaducci contends that live video is a sort of transformation of the concept of video installation in a live audiovisual performance.[416] From 1997, the duo Pink Twins was highly active in Finland. They described themselves as a group of computer musicians and visual artists, and produced improvised digital soundscapes, often combined with video screening.[417]

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[412]   Information from http://www.wam.fi/en/news/2020-03-19_anneli-nygren-fan-academy. Accessed 25 October 2020.

[413]   Nygren, Anneli 2009, "Anneli nygren on Anneli Nygren" in *Anneli Nygren: Pursuit of Happiness – Film and Video Works 1977–2005*, AV-Arkki, Helsinki.

[414]   Kalha, Harri 2009, "An Utterly Romantic Art" in *Anneli Nygren: Pursuit of Happiness – Film and Video Works 1977–2005*, AV-Arkki, Helsinki.

[415]   Ibidem.

[416]   Amaducci, Alessandro 2014, *Videoarte. Storia, autori, linguaggi*, p. 14.

[417]   Kanninen, Mikko 2006, "Pink Twins as an Architectural Dimension in the World" in the catalogue *Pink Twins*, Helsinki.

In Denmark, the Haslev College of Education started offering video art workshops in 1968, with Torben Søborg among the teachers.[418] Nevertheless, many Nordic artists felt the need to head abroad to study at academies and other educational institutions. Finnish artists Kytösalmi-Buhl and Marjatta Oja chose Germany and Italy respectively, while Swedish artists Teresa Wennberg and Antonie Frank Grahamsdaughter studied in France and the Netherlands. From Norway, Marianne Heske worked at a number of European cities.

Teresa Wennberg is considered one of the pioneers of Swedish video art. Based in Stockholm, in 1974 she travelled to Paris to study and practice video. Here, she was one of the first female artists whose video work was archived at the Pompidou Centre.[419] She collaborated with John Cage and Paik on art, sound, and video productions.[420] In 1978, in collaboration with the performer Suzanne Nessim, she created *Nothing*, a videotape produced by the Moderna Museet showing alternate scenes of a solitary traveller on the underground. Wennberg was also a pioneer in the use of 3D animation techniques. She introduced computers to her research in 1983 and studied 2D computers at the University of Paris and in the Vasulkas' Studio in Santa Fé, United States. From 1997, she was a guest artist at the Royal Institute of Technology in Stockholm, where she worked with virtual reality and computers. In 2020, she developed the virtual environment for the portable eyewear *Mind Cathedral*, which centres on how the brain reacts to spatial provocation and unrecognized surroundings.

From 1962, Antonie Frank Grahamsdaughter produced experimental video works with poetic accompaniments in Sweden. She also performed and used the technique of solarization as in *Transit* (1986). In her work, Frank Grahamsdaughter split video signals between seven monitors located in different areas of the room. This new approach of breaking the video stream into multiple displays was influenced by her educational background. During her art studies at the Jan Van Eyck Academy in Maastricht, she had the opportunity to attend seminars and workshops with artists such as Abramović, Jonas, Oursler, and Viola.[421] In 1984, she visited *The Luminous Image*, an international exhibition of video installations hosted by the Stedelijk Museum in Amsterdam. This was a significant step toward the potential of moving images. Thus, the Canadian-Swedish artist started "to create different rooms

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[418] See Movin, Lars & Christensen, Torben 1996, *Art & Video in Europe*; "The Danish Video Art Data Bank" at http://www.videokunst-danmark.dk/torben/videobank/index.htm. Accessed 28 November 2020.

[419] See *Konst som rörlig bild – från Diagonalsymfonin till Whiteout*, edited by A. Söderbergh Widding, SAK Bokförlaget Langenskiöld & Stiftelsen Filmform, Stockholm 2006, p. 135.

[420] See the artist's website: www.teresawennberg.art. Accessed 10 December 2019.

[421] Leuzzi, Laura 2016, "Interview with Antonie Frank Grahamsdaughter", p. 2.

with video media and create a conversation with the different elements" and to use her body in various performances and installations,[422] like in *Metamorforce* (1985) and *The Zone* (1986; Fig. 47). In the late 1980s she also started making video-installations and in the 1990s she promoted video art by coordinating festivals at the Fylkingen in Stockholm. In her approach to video art, she shows a sort of phenomenological sensitivity when she states: "I want a work to be a journey and an adventure in itself, an exploration of our living conditions with the camera, a dialogue between myself and our living existence. I let the movie sequences come to me, shoot them and lead me ahead and during that time I worked unconditionally out of the subconscious".[423]

Ture Sjölander was another pioneer of media art who experimented with distortions on TV-screens. From 1965, he worked for the Swedish Television station AB (SVT) and created a TV-production in collaboration with the artist Bror Wikström. The artists worked with engineers from the Swedish television station to perform unusual experiments in a piece entitled *TIME* (1965–1966), which was probably the first video artwork televised in the Nordic countries.[424] In 1966, Sjölander teamed up with the journalist Lars Weck and created *Monument*, which resulted in the electronic paintings being televised on five European TV channels, and later in the United States and Asia. An estimated audience of more than 150 million[425] watched the broadcast and it was described in *Expanded Cinema* (1970) by Gene Youngblood: "After the videotape was completed from various film clips, a kinescope was made, which was edited by Sjölander and Weck into its final form. The result is an oddly beautiful collection of image sequences unlike any other video art. We see the Beatles, Charlie Chaplin, Picasso, the *Mona Lisa*, the King of Sweden, and other famous figures distorted with a kind of insane electronic disease".[426]

In the 1990s, video art in Sweden was well-distributed and finally engaging artists from a new generation including Johanna Billing, Jonas Dahlberg, Maria

[422]   Ibidem.
[423]   Ibidem, p. 3.
[424]   See: www.experimentaltvcenter.org/sites/default/files/pdfs/Sjolander_Ture_CV.pdf. Accessed 2 November 2019.
[425]   See Norberg, Björn & Engqvist, Jonatan Habib 2009, "The Nordic Pioneers of New Media Art", p. 3. Available at: http://www.experimentaltvcenter.org/selected-articles-concerning-works-ture-sjolander. Accessed 29 November 2020.
[426]   See Youngblood, Gene, 1970, *Expanded Cinema*, E.P. Dutton & Co., New York, pp. 331–332.

Friberg, Henrik Håkansson, Annika Larsson, Ann-Sofi Sidén, and Magnus Wallin.[427] In addition, the Interactive Institute in Stockholm was established in 1998 and supported the artistic field with new technologies. This large research organization with several departments for technology development, is still active.[428] In media art, we can recall Peter Hagdahl, Ola Pehrson and Ulla West.

Peter Hagdahl influenced the Nordic new media scene from the early 1990s as an artist and as a professor in media art at the Royal University College of Fine Arts in Stockholm (1999–2009). Later, he became a research fellow at the Department of Computer and Systems Sciences at the University of Stockholm. In 2006, he is among the founders of the cultural organization CRAC and of the media laboratory Mejan Labs. His research focuses "on the complexity of actions and interactions in society between people and technology and in different virtual spaces".[429] His public project for the University College for Teachers in Stockholm, *Dream Generator* includes a large number of sensors that "pick up the activity inside the school and the information generated is used as data input for a 3D-animation which starts to move according to the data".[430] His key concepts are influence, change and transformation, investigating fields like cultural theory, informatics, urbanism, and science.

Swedish artists Ola Pehrson and Ulla West are also important figures in interactive art. In 1999, Pehrson developed *Yucca Invest Trading Plant*, a piece comprising a yucca palm linked to a computer via electrodes. This piece attracted considerable attention at the group exhibition *Best Before* at Tensta Konsthall in Stockholm. Pehrson's interest in interactivity led him to collaborate with the Interactive Institute in Stockholm. Ulla West, a multidisciplinary artist, worked as a project manager at CRAC in Stockholm from 1999–2003. Her work investigates "elaborations on everyday existence, growing in rhizome-like ways often relating to the digital, and technology in a human context".[431] Among West's noteworthy works, *Pixel Express* (2003) is based on email, SMS, and internet chats, and *O#X The Inexorable* (2004), is a robot-sculpture that is both man and woman, or neither.

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[427] Wallin often used 3D video to investigate notions of physical beauty in Western culture. His 3D videos are the outcome of meticulous preliminary studies, where each character is designed and developed as a model in his atelier, while the final animation is developed in collaboration with professional animators.

[428] For instance, the Interactive Institute hosted the artist residency of Arijana Kajfes, who developed her *Ocular Witness* project focused on aspects of light seen from a physicist's point of view. It received an honorary mention at Ars Electronica in 2006 along with another Swedish art project, *Sobject*, by Alberto Frigo.

[429] Norberg, Björn & Engqvist, Jonatan Habib 2009, "The Nordic Pioneers of New Media Art", p. 5.

[430] Ibidem.

[431] See the artist's website: www.ullawest.com. Accessed 9 August 2019.

In Denmark during the first half of the 1960s, several artists started experimenting with video art.[432] One of the pioneers, Niels Lomholt, created experimental films by mixing documentary and artistic statement, such as *Drain (Gentle Tourism I)* in 1988. From 1969 onwards, other pioneers of Danish video art, Carsten Schmidt-Olsen, William Louis Sørensen, and Torben Søborg, organised a video art workshop at Haslev Teacher's College. From the mid-1980s, Svend Thomsen managed the production department and Copenhagen's Trekanten projection centre.[433] Another key figure from the avant-garde scene of the 1960s was Kirsten Justesen. She included her own body as artistic material in many expressive languages, such as video art, performance, body art and installation. In 1971, she collaborated with Jytte Rex to make *Sleeping Beauty*, a film charting the desires of seven women of different ages.[434]

In the 1980s, video art gained an independent status in the Danish art scene and was openly celebrated in the 1986 exhibition *Video Marathon* at Huset in Copenhagen.[435] This success was accompanied by a system of seminars on technical, theoretical, critical, and economic subjects, which distinguished the Danish art arena from other Nordic countries. Several noteworthy institutional venues supported video production in the 1980s as well as Copenhagen's Danish Film Workshop and Haderslev's Danish Video Workshop, both funded by the Danish Film Institute. Moreover, in 1984, Trekanten opened in Copenhagen. It was the first private art gallery directed by a group of artists who produced videos using their own equipment.[436] In the same period, Jørgen Michaelsen, Søren Andreasen, Jakob Jakobsen, and Jan Bäcklund formed the artist group Koncern. In 1989, upon the initiative of Torben Christensen, the Royal Academy of Fine Arts in Copenhagen established a new media art department. The members of Koncern, together with Joachim Koester, Lars Bent Petersen and Ann-Kristin Lislegaard, became its first students, and later, in 1994, Torben Christensen a media art teacher there.[437] From the 1990s onwards, video art became the medium of choice for many artists such as Eva Koch, Peter Land and Jeannette Land-Schou.

Between 1993 and 1995, the renowned Danish Net art pioneer Mogens Jacobsen gained three honorary mentions at Ars Electronica, one of the main festivals for art and technology based in Linz (Austria) from 1979. Two of these mentions were for

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[432]   See Movin, Lars & Christensen, Torben 1996, *Art & Video in Europe,* p. 78.

[433]   Ibidem, p. 79.

[434]   See Anderberg, Birgitte 2015, "What's Happening? Art between Experiment and Feminism" in the catalogue *What's Happening? Danish Avant-Garde and Feminism 1965–1975*, Statens Museum for Kunst, Copenhagen, pp. 8–96.

[435]   See Movin, Lars & Christensen, Torben 1996, *Art & Video in Europe,* p. 78.

[436]   Ibidem, p. 84.

[437]   Ibidem, p. 66.

the 1993 and 1994 category 'computer graphics' and the third mention was for the 1995 category 'interactive art'. Through his installation *The Entropy Machine* (1994–1995), the artist successfully freed the computer from reproducing traditional art forms (painting, print, and sculpture). (Fig. 48) Jacobsen belongs to the first generation of artists to acknowledge that computers could create entirely new and self-sufficient forms of art, without the need to print an image or to produce an artistic outcome in a stable media. Thus, in contrast to 1994 when the machine *The Entropy Machine* was exhibited at the Kunsthal Charlottenborg in Copenhagen with five large digital prints on the wall behind it, in 1995 no prints were included. Instead, slides of *The Entropy Machine* images were displayed in Petri dishes.[438] *The Entropy Machine* deals with the concepts of cloning, hormone therapy and DNA, themes that emerged during the biotechnological progress of the late 1980s. In 2001, however, Jacobsen renounced the monitor and the computer as tools of expression, considering them to be overly inhibiting, and dedicated himself to realizing objects and installations within electronic and algorithmic fields.[439] For example, his environmental installation *Hörbar / Audiobar* (2006) at the Museum of Contemporary Art in Roskilde involves sound, installation, interactivity, and participation. At the art museum, visitors can explore a large collection of sounds through social interaction and physical objects. In fact, in the audio-bar visitors can interact with sound via a tangible interface operated by moving a bottle on a table. In 1995, Jacobsen was also one of the founders of Artnode, an organization for new media in Denmark that became a propeller centre for experimental art.

Nowadays, the artworks of the Icelandic artist Steina Vasulka *All Visions* and *Machine Vision* are considered a significant breakthrough in the field of media art. (Fig. 49) In 1965 she moved to New York with her spouse Woody Vasulka, where they started to experiment with electronic images and sound. In 1971 they started The Kitchen, which became the main location for experimental video, music, performance and talks in New York, including video artists such as Birnbaum, Cahen, Hill, Mary Lucier, and Viola. In the mid-1970s, the duo began to collaborate with programmers to develop digital tools such as *Digital Image Articulator (Imager)*. From the 1980s, they used this hybrid device in many multimedia installations to perform different processes (e.g. simultaneity, sequence, passages, and displacements), including the MIDI system to generate sounds, interactive tables and a technique known as morphing. The Vasulkas developed methods that manipulated the same electromagnetic frequency to produce a sound or an image.

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[438] A petri dish is a small and transparent dish, usually filled with a specific gelatine, used in scientific tests to grow micro-organisms.
[439] See Jacobsen, Mogens 2008, email interview by Anne Sophie Spanner Witzke and Anne Sophie Warber Løssing. See: www.glemsel.net. Accessed 10 January 2017.

By distorting the frequency appropriately, it is possible to perceive the threshold between sound and image. As such, for the first time in the history of moving image art, it was practical to create audio-visual works where sound and image truly merged.[440] The Vasulkas referred to their videos as 'environments' to emphasise the concept of immersing spectators in sound and image.[441] They also created emblematic examples of digital video metamorphosis using a succession of images. Two notable examples are Woody Vasulka's sinusoidal transformations of *Hybrid Hand Studies* (1973) that was produced by blending analogical and digital technologies, and the series of fascinating processing operations in *Organizational Models of the Electronic Image* (1975–1976). Most of the processes developed by these artists have become an integral part of the basic effects available to any competent professional video mixer and are also present in the most advanced digital editing systems. The Vasulkas participated in several group exhibitions, solo shows, and festivals. It is relevant to remember that Steina's very first participation in an exhibition in Iceland was in 1984 at the group show *10 Gestir* at the Reykjavík Art Museum.[442] However, it was only in 1992 that a solo exhibition of her work took place at the city's National Gallery. The Vasulkas' pioneering work in video and media art inspired many international artists.[443]

In Norway, the most significant video art experiments took place around 1970, when a small group of artists including Marianne Heske and Kjell Bjørgeengen produced their first independent videos. Based in Oslo, Heske had a long international art education, and lived in many European cities including London, Maastricht, Paris, and Prague. In her video *Relating to TV* (1977), Heske criticises the influence of television on the audience, a concern she shared with her friend Paik. (Fig. 50) This video shows a group of people watching TV; their faces are concealed behind doll masks to symbolise their standardisation and homogeneity. In *Video Dialogue* (1981), Heske raised questions about the concept of art. She then used video both in performances, as in *Phrenological Self-portrait* (1979), realised by placing herself between the camera and the monitor, and in installations, as in *Petrified Video* (1993), where a series of video monitors on the remains of a landslide

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[440] See Gazzano, Marco Maria 1995, *Steina e Woody Vasulka*, Fahrenheit 451, Roma.

[441] See Schoen, Christian 2005, "Being an Icelander… an Incurable Disease. Interview with Steina Vasulka" in www.interviewstream.zkm.de.

[442] Arnfinnur Einarsson is also considered one of the Icelandic pioneers in video art and net art. See Ólafsdóttir, Margrét Elísabet 2003, "Iceland: Lost Opportunities?" in *Nordic Media Culture: Actors and Practices*, edited by M. Tarkka & M. Martevo, m-cult, Centre for New Media Culture, Helsinki, p. 69. In Iceland, Páll Thayer and Ragnar Helgi Ólafsson also produced a number of net art pieces. See Norberg, Björn & Engqvist, Jonatan Habib, "The Nordic Pioneers of New Media Art", p. 6.

[443] Among others, Egill Sæbjörnsson experimented with multiple and interactive video projections.

created an original installation in the landscape.[444] Heske was very involved in international video art and was invited by Hoover to teach at the Art Academy of Düsseldorf as a visiting professor.[445] In 1988, she exhibited her series of video-paintings on canvas, *Mountain of the Mind*, at the Clocktower Gallery in New York, which at the time housed PS1. In an interview with the art critic Marit Paasche, Heske comments on McLuhan's theory that video is a cold medium and film a hot one, but she prefers to consider video as a "tautological medium", because "it's like a sensory apparatus; it captures and displays".[446] Bjørgeengen, with his interest in philosophy, music and photography, explored the electronic media of the 1980s to create two-channel video installations. He generally filmed, composed, and manipulated images using a video editing system and finally displayed them on projectors or monitors.[447]

Stahl Stenslie is another important pioneer in media and interactive art in Norway. His 1993 *Cyber SM* project aimed to create a system for real-time, visual, audio and tactile communication over telephone lines. Stenslie produced two 'stimulator suits' for two users to physically touch each other at a distance. The first application of this work took place in 1993 and connected two people in Paris and Cologne. Another interesting artwork is *Virtual Touch* (2010), which is a computer-based environment that emphasises the haptic experience.[448]

Norwegian electronic sound experimentation started at the end of the 1960s at the Henie-Onstad Centre, which also developed links to the French sound institution IRCAM.[449] In addition, many organizations focusing on sound research, such as Atelier Nord, PNEK, NoTAM (the Norwegian Network for Technology, Acoustic and Music), BEK (Bergen Centre for Electronic Art) and TEKS (Trondheim Electronic Art Center) began to operate in the field of media art between the mid-1990s and the early 2000s. This vitality in media art was enabled thanks to the economic support provided by the Norwegian state.

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[444] See Veiteberg, Jorunn 2002, *To Whom It May Concern: Marianne Heske*, The National Museum of Contemporary Art, Oslo.

[445] Hoover was professor for video and film at the Art Academy of Düsseldorf from 1987 till 1997. See the artist's website: https://www.nanhooverfoundation.com/hoover.html. Accessed 3 February 2022.

[446] Paasche, Marit 2013, "Marianne Heske # Samtaler med norske videokunstnere" in *Videokunstarkivet*. Translation mine. See: https://www.videokunstarkivet.org/marianne-heske/. Accessed 3 February 2022.

[447] See Dahl, Janne S. 2003, "Norway: Networking Nodes" in *Nordic Media Culture: Actors and Practices*, edited by M. Tarkka & M. Martevo, m-cult, Centre for New Media Culture, Helsinki, p. 38.

[448] See: www.stenslie.net. Accessed 15 June 2019.

[449] Dahl, Janne S. 2003, "Norway: Networking Nodes" in *Nordic Media Culture: Actors and Practices*, p. 38.

Throughout this subchapter I have examined the context for the beginnings of media art in the Nordics. Since the 1960s, Stockholm with the Moderna Museet assumed a prominent role in Nordic and international art, while Denmark was active in spreading the language of new media. Curator and museum director John Peter Nilsson explains that in the early 1980s an informal network of Nordic artists and curators emerged as a reaction to their failure, with a few exceptions, and went on to achieve international visibility independently.[450] One might ask why to consider all the Nordic innovators when the focus of this research is on Finland with a broad international scope? The answer to this is that the 'Northern' area was closely knitted during the emergence of new media, so much so that Nordicness became a common thematic in Nordic and international books, journals, and seminars during the 1990s and in the early 2000s.[451] Handling the new digital languages united the small group of Nordic artists and institutions. As a group, they became increasingly cohesive during the process of seeking and offering technical and economic support, as well exchanging information.[452] For instance, in 2003 the Finnish curator Minna Tarkka observed that "activist and community-oriented media practice is quite scarce in Scandinavia, compared to the international scene",[453] giving credit to the Nordic welfare system. In 2000, a competition for Nordic multimedia arts, the Prix Möbius Nordica, was launched. It aimed to exhibit the most fascinating recent interactive media art projects in the Nordic countries.[454] The competition was organised for the

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[450] Nilsson, John Peter 1998, "The Nordic Miracle: Rethinking the Past" in *Nuit blanche. Scènes nordiques: les années 90* (White Night: Nordic Scenes, the 1990s), Musée d'art moderne de la Ville de Paris, Paris, p. 32.

[451] Some examples: Nilsson, John Peter 2009, "What is Nordic" in www.modernamuseet.se; Seppälä, Marketta 2007, "The North on the Horizon" in *Framework*, No. 7, p. 77; Sederholm, Helena 2007, "When the World is Not Enough" in *Framework*, No. 7, p. 60; Birnbaum, Daniel 1998, "Northern Line and the Post-Authentic Stress Syndrome", in the catalogue *Nuit blanche*, Musée d'Art Moderne de la Ville de Paris (the exhibition toured to Bergen, Gothenburg, and Pori). See also the following exhibitions and/or catalogues: *Empathy: Beyond the Horizon*, Pori Art Museum, Finland, 2003; *Beyond Paradise: Nordic Artists Travel East,* various venues, 2002–2003; *Scandinavian Design: Beyond the Myth*, 2003.

[452] See the publication *Nordic Media Culture: Actors and Practices*, edited by M. Tarkka & M. Martevo, m-cult, Centre for New Media Culture, Helsinki 2003, in collaboration with CRAC, Creative Room for Art and Computing, Stockholm; CultureNet Denmark, Copenhagen; Lorna, Reykjavík; PNEK, Production Network for Electronic Art, Oslo. This is the report of a research project (2002–03) on the protagonists and practices of Nordic media culture funded by the Nordic Council of Ministers and the Nordic Cultural Fund.

[453] Tarkka, Minna 2003, "Notes in Nordic Media Culture" in *Nordic Media Culture: Actors and Practices*, p. 17.

[454] See: https://pixelache.ac/posts/prix-mobius-nordica-deadline-18-jan-2008. Accessed 28 December 2020.

first time in 2003 and was divided into three categories: science and communication, educational, and children, culture, and art. A research network called Nordic Interactive (NI) started its activity with representatives from universities, research institutes and industry.[455] Among other Nordic projects in media culture, one can recall New Media Air, a residency programme organized by the Nordic Institute for Contemporary Art (NIFCA) and RAM. Between 2002–2003, the programme comprised a series of six workshops between Nordic and Baltic media art associations.[456] What emerges is a dynamic group of artists and researchers keen on the latest developments in new technologies and ready to open up to the cultural phenomena beyond their homelands. The Internet and inexpensive flights facilitated this, but new media also catalyses openness and change in the field of art. In addition, the desire to be known outside the Nordic borders was also increasing, as illustrated by the 1998 exhibition *Nordic Miracle* in Paris, which resulted from a growing international network. In the 1990s, residencies and study visits by art professionals from abroad spread to the Nordic countries,[457] and Nordic art magazines emerged that were published in English, such as *NU: The Nordic Art Review*, launched in 1999 in Stockholm.[458] In 1992 FRAME, a cultural organization promoting Finnish art abroad, was launched in Helsinki by the Ministry of Education. On their 10th Anniversary, Frame's director Marketta Seppälä stated: "This recent period in Finland has been marked above all by the internalisation of the art scene. Cultural interaction with the rest of the world is in a completely new situation compared with the 80s".[459] In addition, student-exchange programmes, such as Erasmus – the European programme to support education, training, youth, and sport – gave young Finnish and Nordic artists the opportunity to study in other European countries. In the Finnish context, organizations such as HIAP – Helsinki International Artist-in-

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[455] In Finland, the main hubs were UIAH Media Lab in Helsinki and University of Lapland in Rovaniemi. Started as transdisciplinary node, today the Hypermedia lab is a department at the Tampere University. See Tarkka, Minna 2003, "Notes in Nordic Media Culture" in *Nordic Media Culture: Actors and Practices*, p. 16.

[456] See: https://monoskop.org. Accessed 28 December 2020.

[457] Several Nordic visual art organizations started their activities to promote local art internationally: in 1996, IASPIS: International Programme for Visual and Applied Artists, based in Stockholm; OCA: Office for Contemporary Art in Oslo; in 2005, The Icelandic Art Center in Reykjavík. They usually support international art experts' visits and residencies.

[458] A statement by the editorial team: "We will broaden the international art community with information and in-depth analyzes of the Northern European art scene, parallel to a selection of the most interesting artists or practices from all continents of the world". See: https://www.e-flux.com/announcements/43268/nu-the-nordic-art-review/. Accessed 30 September 2020.

[459] Seppälä, Marketta 2002, "Ten Years" in *FRAMEnews*, No. 2, 2002, p. 1.

residence Programme, facilitated contacts and interactions with the Finnish contemporary art scene.

In conclusion, the 1990s was a fertile decade that witnessed great synergy between art and new technologies in the Nordic nations, and in the 2000s media art studies increasingly appeared as a subject in Fine Art Academies. [460] In the 2000s, m-cult started their activity aiming to increase cooperation between Nordic practitioners in the field of media culture,[461] and in 2008 the Bioart Society was launched, both in Finland. Media art, with its multi-disciplinarity and fusion of culture, technology, and science, found its place in the Nordic countries due to the endeavours of all of these organizations, universities, and research labs. The 'techno-euphoria'[462] of cultural practitioners and 'utopian entrepreneurs'[463] in the media industry gained solid recognition in the late 1990s.

3.3   The Finnish Media Art Scene in the 1980s – 1990s

This subchapter offers an overview of the people and institutions that contributed to the vitality of the Finnish media art scene in the 1980s and the 1990s. In the previous subchapter, I mentioned Marikki Hakola, Mervi Kytösalmi-Buhl and Anneli Nygren as earlier artists in the field of video art. Nonetheless, other video experiments and exhibitions also occurred. For instance, from 1981–1982, the curator Asko Mäkelä showed videos by international and Finnish artists in the art gallery of the Old Student House in Helsinki and at the Sara Hildén Art Museum in Tampere,[464] as described by Rastas:

"Mäkelä organised an exhibition at the Sara Hildén Art Museum in Tampere, where the works exhibited included Earth Contacts and Juhani Tirkkonen's video recording of a street performance titled 'Money' by a group called '™'. An article by the German curator Wulf Herzogenrath in the exhibition catalogue was the first general review of video art published in Finnish. A wider public

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[460]   Also, the Media Centre Lume at the University of Art and Design in Helsinki. Inaugurated in 2000, it provided facilities for research and education on new media, film, and design.

[461]   See: https://monoskop.org/M-cult.net. Accessed 28 December 2020.

[462]   Dahl, Janne S. 2003, "Norway: Networking Nodes" in *Nordic Media Culture: Actors and Practices*, p. 40.

[463]   Tarkka, Minna 2003, "Introduction" in *Nordic Media Culture: Actors and Practices*, p. 24.

[464]   Rastas, Perttu 1994, "Treasury: Finnish Media History" in *ART2: Journal of the University of Art and Design Helsinki*. Available at: http://www.uiah.fi/art2/art2_194/rastaslist.html. Accessed 12 September 2021.

exposure of video art took place the following year in connection with the ARS 83 Exhibition, where the performers included some prominent international names (Dara Birnbaum, Bill Viola)".[465]

In 1983, during *ARS 83*, an extensive exhibition at the Ateneum in Helsinki presented video works by Robert Ashley, Dara Birnbaum, Gilbert & George, Joan Jonas, Martha Rosler, Michael Smith, Bill Viola, and Laurence Wiener.[466] The exhibition was organized by Barbara London, curator at the Museum of Modern Art in New York, who also wrote a text in the *ARS 83* catalogue about the role of video art in the international art scene. Thus, in the mid-1980s, exhibitions and video workshops slowly started to disseminate video art in Finland, attracting an increasing number of followers.[467]

Ruutsalo and Myllymäki's legacy in experimental films influenced a group of young artists, who in 1989 established the Helsinki Filmmakers' Co-op or Helsinki Film Workshop (HEP).[468] Seppo Renvall and Sami van Ingen were the founding members of this collective, which was active from 1989–1996. As a meeting place for video, film and sound artists, its other members included Marjatta Oja, Juha van Ingen and Mikko Maasalo, who produced short films edited in the camera and hand developed. Renvall used found footage in his black and white experimental films and built non-linear narrative using sound for the rhythmic stream of images. In 1993, he created the video triptych *Nonstoppampam*, in which three parallel screens show armed citizens of a suburb of Helsinki mixed with footage from old western or crime films.[469]

In 1987, a group of artists and art theorists founded the MUU artists' association,[470] which continues to promote new forms of artistic expression. In 1989, MUU produced the first International Video Festival in Kuopio, leading to a "second international wave of video art" in Finland.[471] In 1991, the event was renamed MUU Media Festival and moved to Helsinki, where it expanded into the whole domain of

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[465]   Ibidem. The German video art exhibition curated by Wulf Herzogenrath included works by Nam June Paik, Wolf Vostel, and other artists from Germany. Screenings took place in Helsinki and Tampere in collaboration with the Goethe Institute. Information from the interview of Perttu Rastas with L. Scacco. 18 August 2022.
[466]   See: https://fi.wikipedia.org/wiki/Ars-näyttelyt. Accessed 18 August 2022.
[467]   Rastas, Perttu 1994, "Treasury: Finnish Media History".
[468]   Helsingin Elokuvapaja is the Finnish name of this group.
[469]   See: https://www.av-arkki.fi/artists/seppo-renvall/. Accessed 2 February 2022.
[470]   The Finnish word "muu" means "other". The MUU Association, based in Helsinki, is part of the Artists' Association of Finland.
[471]   See Rastas, Perttu 1994, "Treasury: Finnish Media History" in *ART2: Journal of the University of Art and Design Helsinki*. Available at: http://www.uiah.fi/art2/art2_194/rastaslist.html. Accessed 12 September 2021.

new media, from experimental cinema to video and interactive art. Other organizations and festivals promoting media art were Katastro.fi, Pixelache, m–cult, and Avanto festival. This vitality was also facilitated by public and private support from the state, foundations, and companies. Today, this economic support remains crucial because in a nation limited to five and half million people, the Finnish audience does not generate enough income.

In 1990, the travelling exhibition *Interface – Nordic Video Art* was hosted at The Nordic Arts Centre in Suomenlinna, Helsinki, showing works by Peter Svedberg, Marika af Trolle, Kjell Bjørgesen, Finn Mickelborg, Marjatta Oja, Fredrik Ceson, Marikki Hakola, and Mikael Lindgen. In 1991, the exhibition toured to the Moderna Museet and Kulturhuset in Stockholm.[472] In the exhibition catalogue, Huhtamo analyses several aspects of the practice of video installations and cites several international video artists: Acconci, Birnbaum, Campus, Paik, Plessi and Vostell. Additionally, he introduces the names of relevant art critics, demonstrating his awareness of the international debate surrounding the new medium.[473] Huhtamo's essay also underlines that these topics were already circulating among the Nordic public. He observes that "the video cassette is small, pocket-size and distant; video installation is big, public and close",[474] already anticipating the future broad developments of video environments.

Beloff highlights that in the 1990s, "in the Nordic countries – specifically in Finland and Norway – there have been many females involved in the developing and experimental visual art field".[475] These artists and producers include Eija-Liisa Ahtila, Hanna Haaslahti, Marikki Hakola, Marita Liulia, Minna Långström, Mia Mäkelä, Anneli Nygren, Marjatta Oja, Merja Puustinen, Minna Tarkka, and Pia Tikka. Electronic art provided new opportunities for women to become established in the art world, detaching themselves from traditional techniques practised for centuries almost exclusively by men.[476] The Stockholm-based artist Antonie Frank

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[472] *Interface* took place at The Nordic Arts Centre in Helsinki (13 November–9 December 1990), then at Moderna Museet and Kulturhuset in Stockholm (22 January–6 February 1991). It continued its tour to Frölunda Kulturhus in Gothenburg (April 1991). It was organized by Stiftelsen Nordisk Videokonst (The Nordic Video Art Foundation).

[473] Among others, he mentions Edith Decker, Vittorio Fagone, and Rosalind Krauss.

[474] Huhtamo, Erkki 1990, "Twenty Fragmentary Thoughts about Video Installation" in *Interface. Nordic Video Art*, edited by P. Wrange, Stiftelsen Nordisk Videokonst, Stockholm, p. 21.

[475] Beloff, Laura 2019, "The Intertwining of the Digital and the Biological in Artistic Practice" in *Digital Dynamics in Nordic Contemporary Art*, p. 215.

[476] More information on the topic of Nordic women artists in Scacco, Lorella 2019, "Early Female Video Experiments in Nordic Countries in the 1970s and 1980s" in *EWVA: European Women's Video Art in the 70s and 80s*, edited by L. Leuzzi, S. Partridge & E. Shemilt, John Libbey Publishing, Barnet, pp. 195–208.

Grahamsdaughter stated in 2016: "Video art was in some way free from the history of art and we female artists felt a great freedom".[477]

After working with video in 1981 as part of the Turppi Group, Marikki Hakola, who had studied painting at the Academy of Fine Arts in Helsinki between 1980–1984, moved on to realize multimedia projects, independent productions, and experimental television productions. Along with Tarkka and Rastas, she founded AV-Arkki, a video production and distribution organization committed to gathering and archiving Finnish films and increasing their circulation in the art world. One of her first video pieces, *Milena-Distanz* (1992), is inspired by the correspondence between Franz Kafka and Milena Jesenskà. It was realised both as single channel video work and as a video-wall with sixteen monitors. In those years, the practice of installating video monitors mounted on top and next to each other became quite common. Named video sculpture, this practice reflects early attempts by video artists to expand their vision.

In the 1990s, multimedia art pioneer Marita Liulia (b. 1957) created enough interactive works to be named "The Queen of Multimedia".[478] Starting from collaborations in video and documentary productions for TV programmes and theatre, she then focused entirely on interactive art, producing mainly works for CD-ROM. As the artist explains:

"In installations (since the early 1980s) I started to combine philosophical ideas, visual art forms with theatre technology. When the first computers arrived to the customer market I realized the computer is like a theatre where anything can happen and I can combine all my skills and professional passions into multimedia. I started to create digital, interactive art programs in which I combined art, research and technology and invite my audience into an interactive adventure".[479]

Liulia's first interactive large-scale installation *Jackpot* (1991) explores the process of identification in commercials. (Fig. 51) This interactive game was exhibited at thirteen international museums with a collective 20,000 registered users[480] and evolved into a sort of "sociological study". The curator and museum director Pauli Sivonen describes *Jackpot*: "Users could think of their own choices

477   Leuzzi, Laura 2016, "Interview with Antonie Frank Grahamsdaughter", p. 2.
478   The artist was dubbed with this name by the magazine *Vogue* in 1996 after the launch of *Ambitious Bitch*. See Liulia, Marita 2009, *Choosing my Religion*, Maahenki, Helsinki, p. 187.
479   Marita Liulia, interview by L. Scacco. 12 November 2019.
480   Liulia, Marita 2009, *Choosing my Religion*, p. 184.

and those of others, seeking to understand the values of advertising and the impact of the consumer society on the identity of people. This was a crossroads of art, technology, entertainment, and sociology, where the interaction of art and advertising was applied while utilizing sociological studies of popular culture".[481]

Liulia's produced a series of CD–ROMs. For example, *Ambitious Bitch* (1996) was described as "software for girls" because it deals with womanhood and femininity. The series won some relevant awards, including the Prix Ars Electronica. *Son of a Bitch* (1999) investigates contemporary men and masculinity through a four-hour-long interactive journey in the film-like fictional world of a psychoanalyst. (Fig. 52) *Tarot* (2000) is a technological version of the Tarot game. The CD–ROM is based on 78 tarot cards obtained by digitally editing photographs taken by the artist during her journeys. Liulia also created a web platform where people can interact and ask the cards to answer their questions. In the 2000s, the digital image became part of her live performances, such as her collaboration with Kimmo Pohjonen for *Golden Age* (2016–2017).

Andy Best & Merja Puustinen were amongst the first online web artists in Finland. With educational backgrounds in sculpture, video, and installation art, they started to collaborate in 1993. From the mid-1990s, they worked with virtual multiuser 3D platforms on virtual pets for mobile phones. One of their well-known works is *Conversations with Angels* (1996–1998), a 3D multiuser interactive online environment that uses an expressive style from popular imagery and video games. It was a co-production with the Banff Center for the Arts in Canada and the Kiasma Museum of Contemporary Art in Helsinki.

Taking a broad view, Finnish art was part of the 'Nordic Miracle' of the 1990s, when in the Nordic Countries art started to open up towards Europe and America, drawing attention from international audiences and critics alike.[482] As I analysed in a previous book, the expression 'Nordic miracle' was first employed by Laurence Bossé and Hans-Ulrich Obrist in the exhibition catalogue for *Nuit blanche* held at the City of Paris Museum of Modern Art in 1998. The exhibition included about thirty young Nordic artists.[483] Art curator and theoretician Daniel Birnbaum writes in the same catalogue: "Today, however, in a world brimming with digital information, Nordic culture seems less obsessed by authentic self-expression, and

[481] Sivonen, Pauli 2017, "Marita Liulia's Long Journey to the Golden Age" in *Marita Liulia,* edited by A. Maunuksela & P. Sivonen, Parvs, Helsinki, p. 32.
[482] Among the artists involved were the photographer Esko Männikkö and the video artist Eija-Liisa Ahtila from Finland.
[483] See Scacco, Lorella 2009, *Northwave: A Survey of Video Art in Nordic Countries*, Silvana Editoriale, Cinisello Balsamo, Milano, p. 59.

more with imagery from the semi-world of the media".[484] Finland joined the European Union in 1995 and this changed some internal perspectives.[485] Curator Seppälä observes that "for Finnish art the Euro connection has clearly already opened up new opportunities. The wider circle has shattered the smug self-satisfaction and cliquishness. Also, standards of practice have automatically risen, since the quality criteria have improved to match that broader scale".[486]

The international debuts of Finnish artists also meant an increase in exhibitions for international artists in Finland, creating space for new ideas and incentives. In 1992, the Museum of Contemporary Art in Helsinki hosted the first retrospective exhibition of the Vasulkas in Finland. The catalogue includes texts by Huhtamo and by the American scholar Youngblood.[487] In 1995, the exhibition *ARS 95* aimed to survey international multimedia art in Finland. It included multimedia artists such as Hill, Nauman, Acconci, Hatoum, and Oursler, and was an occasion for seeing media art from outside Finland under the umbrella theme "public/private."[488] In 1998, Kiasma opened in Helsinki (the same year as the Interactive Institute in Stockholm) and was the ideal location for hosting media art,[489] such as the solo touring exhibition *Bruce Nauman: image / texte 1966–1996* in October 1998 – January 1999.[490] The MUU Media Festival was an annual Nordic media arts meeting organized by the cultural association AV-Arkki in Helsinki between 1989 and 1998 and another venue to view the most recent works of electronic arts in Finland.[491] In 1995–1996, the Finnish Museum of Photography hosted *Photography after Photography*, an important exhibition on media art and digital manipulation in photography, which

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[484] Birnbaum, Daniel 1998, "Northern Line and the Post-Authentic Stress Syndrome" in *Nuit blanche. Scènes nordiques: les années 90* (White Night: Nordic Scenes, the 1990s), p. 1.

[485] Sweden entered the European Union in the same year.

[486] Seppälä, Marketta 2002, "Finland and the Rest of the World", interview between M. Seppälä and Markku Valkonen in the editorial of *Ten Years*, in *FRAMEnews*, No. 2/2002, p. 3.

[487] In 1991, Gene Youngblood visited Turku as a guest researcher, together with the artist Claudia Schillinger, for the festival dedicated to the 1980s' German experimental movies, organized by the University of Turku, Varsinais-Suomen Elokuvakeskus, and Goethe-Institut. Information from the interview of Perttu Rastas with L. Scacco. 18 August 2022.

[488] *ARS 95* was curated by Tuula Arkio and Maaretta Jaukkuri. Asko Mäkelä curated the section "Artificial Reality".

[489] Before the opening of Kiasma, exhibitions of contemporary art were held at the Museum of Contemporary Art in Helsinki (at that time still located in the Ateneum building).

[490] Nauman's work was first shown in 1971 in Helsinki in the exhibition *Expo Stedelijk* at the Ateneum Art Museum, then in *ARS 74* and *ARS 95*. Kiasma holds nine works by Nauman in its art collection, mainly multimedia or video works from 1968–1969.

[491] See: https://monoskop.org/Muu_Media_Festival.

travelled in nine countries starting from Munich in Germany.[492] Finally, in 2005, the solo traveling exhibition of Oursler's works *Dispositifs* took place at the Helsinki City Art Museum.[493] Regarding Finnish media art abroad, the exhibition *F2F: New Media Art from Finland* toured the United States and Canada between 2000 and 2002. It showcased artworks, mostly networked and participatory installations, by Beloff, Best & Puustinen, Haaslahti, Juha Huuskonen, Liulia, Teijo Pellinen, Kristian Simolin, Heidi Tikka and Tuomo Tammenpää.

In the years 1990–1995, a number of academic institutions established media art departments, such as the Hypermedia Lab at the Tampere University, the Media Lab at the University of Art and Design in Helsinki and the Media Studies Department at the University of Lapland in Rovaniemi. Tarkka notes that "all of them signalled a cultural turn for technology in that they were established in the context of art and humanities faculties".[494] In the early 1990s, the Academy of Fine Arts in Helsinki (today a unit of the University of the Arts Helsinki) played an important role. This was especially true for the study programme on time and space arts, which was initiated by the artist and professor Lauri Anttila. Due to his innovative course, new forms of art were created, such as environmental art and processual art. In addition, Anttila's course shaped the Finnish moving image art scene due to the many media artists who studied there and worked at the Academy.

In the 1990s, a number of private art galleries in Helsinki became interested in media art too, including Pelin, Kaj Forsblom, Mikkola, Rislakki, and later Kari Kenetti and Leena Kuumola.[495] Starting in 1997, Galleria Leena Kuumola organized regular film evenings in the basement including works by Juha van Ingen, Renvall, Pekka Sassi and Marko Vuokola.[496] Moreover, outside of Helsinki, the Pori Art Museum in Pori became an active museum in international contemporary art while the Sara Hildén Art Museum in Tampere hosted exhibitions of international modern art.[497]

Exhibitions in Finland also included works by emergent media artists. For instance, the above-mentioned *Jackpot* (1991), an interactive installation by Liulia, appeared at various art venues and festivals in Finland and Sweden; in 1992, *Milena–*

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[492] See Gunti, Claus 2020, *Digital Image Systems: Photography and New Technologies at the Düsseldorf School*, Transcript Verlag, Bielefeld, pp. 100–102.

[493] In addition, there were two solo exhibitions of Tony Oursler in Galerie Forsblom, Helsinki in 2007 and in 2011.

[494] Tarkka, Minna 2003, "Finland: Manufacturing Content?" in *Nordic Media Culture*, p. 97.

[495] Information from the interview of Asko Mäkelä with L. Scacco. 20 March 2020.

[496] See the statement by Denise Ziegler in the "10th Anniversary Supplement" in *FRAMEnews*, No. 2/2002, p. 15.

[497] Information from the interview of Asko Mäkelä with L. Scacco. 20 March 2020.

Distanz, a video wall installation and a single tape by Hakola appeared at the Ateneum Theatre in Helsinki and at the Alvar Aalto Museum in Jyväskylä. In the spring of 1992, the group show *Exhibition of the Interactive Art* at Galleria Otso in Espoo included Simon Biggs, Paul Garrin, Ken Feingold, the trio Liulia – Kovski – Kallela, Paul Sermon and the Vivid Group. The exhibition catalogue included Huhtamo's text "I am interactive, therefore am I?". Huhtamo co-curated a series of retrospective exhibitions dedicated to pioneering international media artists, such as Perry Hoberman in 1997 and Paul DeMarinis in 2000 at the Otso Gallery, as well as artists from the younger generation, such as Sommerer and Mignonneau, who exhibited the interactive installation *Interactive Garden* in 1993. Even in these few examples, we can see the relevance of interactivity and media art in Finland during those years.

In 1994, the 5th International Symposium on Electronic Art (ISEA '94) transformed the city of Helsinki into a hub for the international media art community, which strengthened international networks. The symposium was coordinated by Tarkka and held at the Museum of Contemporary Art in Helsinki (at the time still functioning in the Ateneum building). It included Finnish artists such as Kurenniemi and Liulia, and international art by the Japanese media artist Toshio Iwai. The exhibition committee comprised Mäkelä, Päivi Talasmaa, Jukka Mallinen, Maija Elo, and Huhtamo.[498]

The Museum of Contemporary Art Kiasma opened its doors to Finnish multimedia experiments in 1998. Kati Kivinen notes that "a number of expectations were directed at the new Kiasma museum as arena for media art".[499] In fact, in 2000, Huhtamo curated the large media art exhibition *Outoäly / Alien Intelligence* with works by media artists like Ken Feingold, David Rokeby and Hoberman. Some new interactive media art installations were produced with the museum's support for this exhibition, such as *The Giver of Names* by Rokeby, *Head* by Feingold, which was acquired for Kiasma's collection, and *Autopoiesis* by Kenneth Rinaldo. The exhibition was part of the Helsinki European Capital of Culture programme.

Up to this point, I have provided an overview of the vitality of the Finnish media art scene in the 1990s as a possible starting point to develop a historiography of art. Art historians Maia Wellington Gahtan and Donatella Pegazzano observe that "comparing monographic exhibitions and their by-products such as exhibition

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[498]   See: http://www.isea-archives.org/symposia/isea94/. Accessed 29 November 2020.
[499]   Kivinen, Kati 2015, "From Monitor to Gallery Space", p. 3.

catalogues and reviews affords us a singular opportunity to analyse what each epoch saw when it viewed the works of a given artist".[500]

3.4 The Dissemination of Phenomenology in Finland

In this subchapter, I attempt to answer the research question of what kickstarted the dissemination of phenomenology in Finland. Earlier, I delineated the contributions by Finnish phenomenological philosophers and then Merleau-Ponty, tracing the historical and cultural context that began with and developed around the philosopher. Merleau-Ponty's legacy cannot be interpreted univocally, but rather as a bridge that led to new viewpoints in dialogue with other philosophical, scientific, artistic, and ethical approaches. Therefore, I will outline phenomenology's liveliness in Finland in the 1990s, when this philosophical thought returned to relevance. After analysing the contributors to phenomenology before the 1990s, I will connect phenomenological issues with artistic events and artists' testimonials in the 1990s and the beginning of the 2000s in Finland.

The earliest phenomenological influence in Finland date to Eino Kaila, one of the leading personalities in Finnish philosophy and psychology. Kaila acted as the first Professor of Philosophy at the University of Turku between 1921–1930, and later as a Professor of Theoretical Philosophy at the University of Helsinki between 1930–1948.[501] The scholar Mikko Salmela notes how his academic legacy formed a whole generation of Finnish scholars, both in science and in the humanities. He continues: "As an outstanding scholar and a most accomplished lecturer Kaila conveyed fresh ideas and approaches to Finland. These included experimental psychology, Gestalt theory, the psychology of personality, philosophical and mathematical logic, and logical empiricism, all of which merged with the broader mainstream of analytic philosophy after World War II".[502] Salmela also identifies the limited homogeneous background of Finnish moral philosophy in the first half on the twentieth century: "the influence of the classics, Plato, Aristotle, and Kant,

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[500]   Gahtan, Maia Wellington & Pegazzano, Donatella 2018, "Introductory: Monographic Exhibitions and the History of Art" in *Monographic Exhibitions and the History of Art*, edited by M. W. Gahtan & D. Pegazzano, Routledge, New York, p. 6.

[501]   Salmela, Mikko 2004, "Finnish Philosophy in the First Half of the 20th Century" in *Trains of Thought: Finnish Philosophers in the World – the World's Philosophers in Finland*, edited by I. Pitkäranta, Finnish National Library, Helsinki; published online at: www.filosofia.fi. Accessed 24 March 2020.

[502]   Salmela, Mikko 2003, "Analytic Moral Philosophy in Finland" in *Analytic Philosophy in Finland*, edited by L. Haaparanta & I. Niiniluoto, Rodopi, Amsterdam & New York, p. 421.

has been immense, together with the German tradition: Nietzsche, neo-Kantianism, and phenomenological ethics of value".[503] Eino Kaila was influenced by the phenomenological insight derived especially from Max Scheler, a major German phenomenologist along with Husserl.

Eino Kaila's approach continued with Eino Krohn, a Finnish literature researcher and Professor of Literature and Aesthetics at the University of Turku, and his brother, Sven Krohn, a Professor of Theoretical Philosophy at the same University from 1960 to 1970. Sven Krohn's teaching period "proved to be a vital research period for phenomenologico-hermeneutical and Marxist philosophy".[504] In fact, continental philosophy was strongest at the University of Turku until the 1970s. For the philosopher Leila Haaparanta, Eino Krohn "was known as a central representative of the phenomenological tradition in Finland" with a particular interest in Husserl and Scheler.[505] Being interested in parapsychology, Sven Krohn allowed other perspectives to contribute to philosophy, and even to analytic philosophy, in Finland in the 1960s and 1970s. For instance, he had a singular vision of analytic philosophy including Husserl as one of its founders,[506] and was critical of logical empiricism.[507] Salmela also observes:

> "Krohn's conception of philosophy is predominantly phenomenological and hermeneutical. He maintains that philosophy analyses the contents and relations of fundamental concepts that are given to us in a primal condition of human existence. This method is supplemented with the disclosing hermeneutics that Krohn attributes to Immanuel Kant's and Heidegger's thinking."[508]

During his professorship, Sven Krohn formed a phenomenological-hermeneutics school, whose philosophical thinking differed broadly from the analytical school led by the philosopher Jaakko Hintikka, a prolific author in the field of language theory, the philosophy of science and epistemology.[509] One of Sven Krohn's pupils, Lauri Olavi Routila, worked at the University of Turku in various positions between 1960–

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[503]   Ibidem, p. 441.
[504]   Salmela, Mikko 2004, "Finnish Philosophy in the First Half of the 20th Century". Accessed 24 March 2020.
[505]   Haaparanta, Leila 2003, "Finnish Studies in Phenomenology and Phenomenological Studies in Finland: Interfaces of Analytic Philosophy and Phenomenology" in *Analytic Philosophy in Finland*, pp. 492–494.
[506]   Ibidem, p. 492.
[507]   Ibidem. p. 494.
[508]   Salmela, Mikko 2004, "Finnish Philosophy in the First Half of the 20th Century". Accessed 24 March 2020.
[509]   See Toivonen, Timo 2011, "Kamppailu filosofian suunnasta Turun yliopistossa 1960–1970-lukujen taitteessa" in *Agon*, No. 31, p. 14.

1980.[510] He was broadly interested in the history of philosophy and in phenomenology, particularly in Husserl and Heidegger.[511] However, with Hintikka's pupil Risto Hilpinen chosen for the position of professor,[512] analytic philosophy prevailed at the Department of Philosophy at the University of Turku.

Erik Ahlman was another Finnish philosopher interested in phenomenology. He started as Docent of Philosophy at the University of Helsinki in 1926, then acted as the first Professor of Philosophy and Theoretical Pedagogics in 1935 at the recently founded Jyväskylä Institute of Pedagogics (later the University of Jyväskylä), and in 1948 returned to Helsinki. Ahlman was the author of seven books and a prolific writer of articles on philosophy, mainly on ethics, the philosophy of culture and philosophical anthropology.[513] Salmela believes that Ahlman's critical intuitionism "combines elements from phenomenological, existentialist, emotivist, and even postmodern ethics".[514]

For historical reasons, the spread of phenomenology started to slow down in Finland. The philosopher Heinämaa explains:

> "After the Second World War, the cultural situation in Finland was dramatically changed. Before the war, scholarly contacts to and collaboration with German and Austrian philosophers were strong. For example, professors Eino Kaila and Yrjö Reenpää were well-known in Central European universities. But after the war such contacts were not supported by official authorities in Finland, and instead collaboration with USA and USSR became the new standard at philosophy departments. The dominant topics were in analytical philosophy of science, philosophical semantics and formal logic. This paradigm lasted quite long, till the late 1980s".

She continues by describing how "phenomenology was subordinated to analytical philosophical approaches, Fregean, Wittgensteinian, Rylean and postpragmatic approaches".[515] The philosopher Ilkka Niiniluoto describes a similar condition:

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[510]   Salmela, Mikko 2004, "Finnish Philosophy in the First Half of the 20th Century".
[511]   See Routila, Lauri 1970, "Husserl ja Heidegger" in *Filosofian tila ja tulevaisuus*, edited by J. Hintikka & L. Routila, Weilin+Göös, Helsinki, pp. 77–96.
[512]   The decision was taken on December 16, 1971, after many internal struggles. See Toivonen, Timo 2011, "Kamppailu filosofian suunnasta Turun yliopistossa 1960–1970-lukujen taitteessa" in *Agon*, No. 31, pp. 14–17.
[513]   Salmela, Mikko 2003, "Analytic Moral Philosophy in Finland", p. 416.
[514]   Ibidem, p. 417.
[515]   Sara Heinämaa, interview by L. Scacco. 7 November 2018.

"Kaila was an appreciated member of a new international philosophical movement in the 1930s, and he is still mentioned in the histories of the Vienna Circle, but after World War II he lost his contacts to the analytic philosophy that had moved to Anglo-Saxon countries. In the latter half of the twentieth century, Finnish philosophy has been in the forefront of analytic philosophy thanks to Kaila's students G. H. von Wright and Erik Stenius (1911–1990), von Wright's student Jaakko Hintikka, who has been mostly active in the United States, and their students".[516]

Lauri Rauhala promoted Husserl's and Heidegger's thinking in psychotherapy and philosophical antropology in several publications.[517] Before becoming a Professor of Psychology at the University of Helsinki, he "stressed the specific nature of the humanities and has opposed all efforts to reduce psychology to neurophysiology".[518] In addition, from the 1970s, Matti Juntunen and Lauri Mehtonen were the most active Finnish teachers in the field of phenomenology.[519]

In Tampere, the "Tampere Circle of Phenomenology" gathered around the scholar Juha Varto from the late 1980s to the early 1990s. Varto studied Husserl and Heidegger and was influenced by the Merleau-Pontian phenomenology of the body.[520] In 1993, this group of thinkers, formed by Varto and his students, launched the philosophical journal *Niin & Näin*. From 1994, the journal was published by the European Philosophy Society (Eurooppalaisen filosofian seura ry), which started out originally as the Finnish Institute of Phenomenology (Suomen Fenomenologinen Instituutti) in Tampere in 1992. In the 1990s, *Niin & Näin* published many articles related to phenomenology and to phenomenologists such as Husserl and Merleau-Ponty. Among the authors one can recall Juha Varto, Daniel Birnbaum, and Kimmo

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[516]   Niiniluoto, Ilkka 2004, "Philosophy in Finland: International Currents and National Debates" in *Trains of Thought: Finnish Philosophers in the World – the World's Philosophers in Finland*, edited by I. Pitkäranta, National Library Helsinki; published online at: www.filosofia.fi.
[517]   Lauri Rauhala wrote *Intentionality and the problem of the unconscious* (1969) and *Eksistentiaalinen fenomenologia hermeneuttisen tieteenfilosofian menetelmänä. Maailmankuvan kokonaisrakenteen erittelyä ihmistä koskevien tieteiden kysymyksissä* (1993).
[518]   Haaparanta, Leila 2003, "Finnish Studies in Phenomenology and Phenomenological Studies in Finland: Interfaces of Analytic Philosophy and Phenomenology", p. 504.
[519]   In 1986 Matti Juntunen authored a monograph on Edmund Husserl titled *Edmund Husserlin filosofia*, published by Gaudeamus, Helsinki.
[520]   Haaparanta, Leila 2003, "Finnish Studies in Phenomenology and Phenomenological Studies in Finland: Interfaces of Analytic Philosophy and Phenomenology", p. 504.

Jylhämö.[521] When Varto moved to Helsinki to teach at the University of Art and Design (today Aalto University) in 1999,[522] phenomenological discussions continued at the University of Tampere, but in the context of a broader interest in continental philosophy.

In Helsinki, several groups were dedicated to philosophy, including the "Heidegger Circle of Helsinki" (1990–1996). The "Lacan Circle of Helsinki" started as a reading circle in 1988,[523] and counted among its members Ari Hirvonen and Hannu Sivenius.

Also in Helsinki, the scholar Leila Haaparanta has been interested in phenomenology since the 1980s, especially the relation between logic and phenomenology, and cognitive science and phenomenological thought. She analysed phenomenological studies in Finland from the beginning of the twentieth century to the late 1990s, highlighting the complex relations between phenomenology and analytic philosophy.[524] From 1998 to 2020, she was a Professor of Philosophy at the University of Tampere. Haaparanta observes how phenomenology influenced Finnish society in the later years, and in particular that "the humanities, theology, education, cognitive science, arts, and nursing are maybe the most important fields, but I would also say that most of the social sciences have benefited from phenomenological influences". In recent decades, "the interest has perhaps been medium, but the impact on some fields has been very strong".[525]

Heinämaa and Martina Reuter contributed to spreading Merleau-Ponty's phenomenology of the body in the context of feminist philosophy in Finland. In particular, Heinämaa, who has been a Professor of Philosophy at the University of Jyväskylä since 2013, wrote many articles in the multidisciplinary journal *Tiede & Edistys*, including one where the scholar approaches de Beauvoir from the perspective of Merleau-Ponty's philosophy of the body, instead of that of Judith

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[521] Varto, Juha 1994, "Ajatteleva silmä näkee paremmin" in *Niin & Näin* 1/94; Jylhämö, Kimmo 1996, "Edmund Husserl ja fenomenologian idea" in *Niin & Näin* 2/96; Birnbaum, Daniel 1997, "Läpitunkeva katse" in *Niin & Näin* 4/97.

[522] Juha Varto retired in 2017.

[523] Häntsch, Carola 2004, "Philosophische Umorientierungen in Finnland in den 90er Jahren des 20. Jahrhunderts. Ein Literatur- und Forschungsbericht" in *Philosophieren im Ostseeraum. Beiträge des Nord- und osteuropäischen Forums für Philosophie Greifswald*, edited by C. Häntsch, Harrassowitz Verlag, Wiesbaden, pp. 181–207.

[524] See Haaparanta, Leila 2003, "Finnish Studies in Phenomenology and Phenomenological Studies in Finland: Interfaces of Analytic Philosophy and Phenomenology".

[525] Leila Haaparanta, interview by L. Scacco. 26 April 2020. She also notes that "Husserl, Heidegger, and Merleau-Ponty are widely read, and their works have also been translated into Finnish".

Butler who was often cited within Finnish gender studies.[526] Heinämaa's interest in de Beauvoir stems from her doctoral dissertation, published in 1996 in Finnish as a book, also used as course book.[527] De Beauvior is a thinker that strongly influenced the second half of the twentieth century with her book *The Second Sex* (1949), where her goal is to allow women to experience freedom.[528] As noted by Heinämaa, the book is a description of sexual difference within the frame of phenomenology of corporeity started by Husserl and continued by Merleau-Ponty, [529] rather than a theory of gender.[530] Another book by Heinämaa, in Finnish, *Ihmetys ja rakkaus. Esseitä ruumiin ja sukupuolen fenomenologiasta* (Wonder and Love: Essays in the Phenomenology of Body and Sexual Difference, 2000), focuses on the interdisciplinary thinker Luce Irigaray read through Merleau-Pontian philosophy. A recent example of her interest in developing a feminist philosophy with a phenomenological perspective is documented in an essay on Tove Jansson's artwork.[531] Heinämaa published several essays on the philosophical significance of art, particularly from a phenomenological perspective, like her recent contribution, along with other Finnish and international philosophers, to the volume *Chiasmatic Encounters: Art, Ethics, Politics* (2018), which revolves around the concept of chiasm and its relevance to contemporary cultural theory.

A closer look at *Tiede & Edistys*, the scientific journal published in 1976, provides a view of the vital activity of this journal. In the 1990s, it included a reasonable number of articles referring to phenomenology.[532] For example, a

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[526] Heinämaa, Sara 1995, "Sex, Choice and Style: Remarks on the Relations between Butler's and de Beauvoir's Problem Setting" in *Tiede & Edistys*, No. 1/1995, pp. 30–44.

[527] I refer to her book *Ele, tyyli ja sukupuoli. Merleau-Pontyn ja Beauvoirin ruumiinfenomenologia ja sen merkitys sukupuolikysymykselle* (Gesture, Style and Sex: Merleau-Ponty's and Beauvoir's Phenomenology of the Body and its Relevance to the Problem of Gender), published by Gaudeamus, Helsinki.

[528] The theme of freedom was always present in her philosophical thought.

[529] Heinämaa, Sara 1999, "Simone de Beauvoir's Phenomenology of Sexual Difference" in *Hypatia*, Vol. 14, No. 4, pp. 114–132. Starting from 1996, Heinämaa wrote many articles about the phenomenology of sexual difference.

[530] Heinämaa, Sara 2008, "What is a Woman? Butler and Beauvoir on the Foundations of the Sexual Difference" in *Hypatia*, Vol. 12, No. 1, pp. 20–39.

[531] Heinämaa, Sara 2018, "Strange vegetation: Emotional undercurrents of Tove Jansson's Moominvalley in November" in *SATS: Northern European Journal of Philosophy*, Vol. 19, No. 1, pp. 41–67.

[532] Some examples in chronological order: Vähämäki, Jussi 1992, "Hermeneutiikka, humanismi ja ihmistieteet"; Kauppinen, Jari 1994, "Haamut, aaveet, messias, vallankumous! (Jacques Derrida: Spectres de Marx. L'état de la dette, le travail du deuil et la nouvelle internationale)"; Saarikangas, Kirsi 1996, "Katseita, kohtaamisia, kosketuksia. Tilassa muodostuvat merkitykset"; Seppä, Anita 1999, "The Ethics of Body and Speech in the Thinking of Jean-Paul Sartre and Emmanuel Levinas".

translation of Merleau-Ponty's "Preface to the Phenomenology of Perception" was published in issue 3 in 2000 to make his thoughts accessible to Finnish readers.

Finnish art historian and museum director Marja Sakari contributes an interesting perspective: "During the 1990s there was a shift in Finland of methods. Phenomenology was like a new tool to open a different way to experience art". She adds that "phenomenology has been brought to the Finnish culture through Postmodernism with authors such as Jacques Derrida and Michel Foucault".[533] On his part, architect and theorist Juhani Pallasmaa states: "Finnish philosophy, as well as teaching in architecture have been dominated by positivist thinking. Phenomenology has not been a strong line in the academic tradition in my country. Besides myself there are only a few architects and teachers who have explored the phenomenological tradition and perspective",[534] documenting again the weak position of phenomenology in Finland before the 1990s.

The concept of space, as formulated within philosophical inquiry, arts, and cultural studies in the Nordic countries, was also influenced by phenomenology, for instance, in the theories of 'space-time' and 'interpenetration' in the architectural theory of Swedish philosopher Sven-Olov Wallenstein.[535] Norwegian architect Christian Norberg-Schulz develops a theory of 'genius loci', a phenomenology of space that emphasises architecture as a way to turn articulations inspired by nature into structures that reflect a human sense of order.[536] Wallenstein also investigates the influence of technology on art. He recognizes that technology has the potential to transform both art and subjectivity. Not only does this transformation represent a loss of unity or coherence, it can also represent the discovery of a new space-time.[537] As a notion, for instance, it could be conceived as connected to the dissemination of video installations in all Nordic countries.[538]

As mentioned above, Pallasmaa expressed a strong interest in Merleau-Pontian thought in Finland. Some of his essays instantly reveal this: *The Eyes of the Skin: Architecture and the Senses* (1996) and *Encounters: Architectural Essays* (2005). In "Hapticity and Time" (2000), he quotes Merleau-Ponty directly to illustrate the multisensory experience of architecture: "Every significant experience of architecture is multi-sensory; qualities of matter, space and scale are measured by

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[533] Marja Sakari, in conversation with L. Scacco, Helsinki. 6 April 2018. To these names I would like to add that of the philosopher Jean-Luc Nancy, who published several books in those years, some of which were translated into Finnish.
[534] Juhani Pallasmaa, interview by L. Scacco. 16 June 2019.
[535] Wallenstein*, Sven-Olof 2010, *Nihilism, Art, and Technology*, Stockholm University, Stockholm, p. 1.
[536] Ibidem, p. 64.
[537] See Wallenstein*, Sven-Olof 2010, *Nihilism, Art, and Technology*, p. 2.
[538] This topic will be analysed in subchapter 2.6.

the eye, ear, nose, skin, tongue, skeleton and muscle. Maurice Merleau-Ponty emphasizes the simultaneity of experience and sensory interaction".[539] He explains: "The task of architecture is to make visible 'how the world touches us', as Merleau-Ponty wrote of the paintings of Paul Cézanne. Paraphrasing another notion of Merleau-Ponty's: architecture concretizes and frames human existence in the 'flesh of the world'".[540] Owing to Pallasmaa's multidisciplinary interests, spanning psychology, psychoanalysis, and sociology, he adopted a multifaceted approach to designing architecture. He asserts that "the window frame is not an architectural unit, whereas looking out through the window or daylight coming through it, are authentic architectural encounters".[541] Pallasmaa's phenomenological stance probably influenced his choices and aims as Associate Architect to the Holl's project and constructions of Kiasma, such as the diffusion of daylight by translucent glass windows and the fluid aspect of the space.[542] Pallasmaa also refers to visual art, quoting artists such as René Magritte and Vincent van Gogh in his speculation on the essence of a home. He states: "The description of home seems to belong more to the realms of poetry, the novel, film, and painting than to architecture".[543] While analysing the creative process for artists, he regards them as phenomenologists immediately from the outset:

"The poet and the artist are naturally phenomenologists, as the Dutch phenomenologist van den Bergh argues. All true artists are bound to be engaged in their experiences, in articulating how they encounter the world, and that naturally leads to a phenomenological position, regardless of whether the person is conscious of his/her philosophical orientation, or even without the need to call it that way".[544]

Finally, Pallasmaa quotes contemporary artists, such as Jannis Kounellis, Anselm Kiefer and Richard Serra to explain contemporary sensibilities and questions. He claims that "artists set an example for architects"[545] referring to the ecological approaches of Richard Long and Hamish Fulton in their poetic artworks.

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[539]   Pallasmaa, Juhani 2000, "Hapticity and Time: Notes on Fragile Architecture" in *The Architectural Review*, Vol. 207, fasc. 1239, London, p. 78. Quotation from M. Merleau-Ponty's essay *The Film and the New Psychology*.

[540]   Ibidem. Quotation from M. Merleau-Ponty's essay *Cézanne's Doubt*.

[541]   Pallasmaa, Juhani 1999, *Hapticity and Time,* RIBA Discourse lecture.

[542]   Lecuyer, Annette 1998, "Iconic Kiasma" in *The Architectural Review*, 204/1218, August 1, 1998, pp. 46–53.

[543]   Pallasmaa, Juhani, *Identity, Intimacy and Domicile: Notes on the Phenomenology of Home*.

[544]   Juhani Pallasmaa, interview by L. Scacco. 16 June 2019.

[545]   Pallasmaa, Juhani 1999, *Hapticity and Time,* RIBA Discourse lecture.

In this regard, he continues to collaborate with artists, including Rachel Whiteread for the Snow Show in 2004 in Lapland.

Although phenomenology never disappeared in Finland, new phenomenological inputs only re-emerged in the 1990s. This renewed attention to phenomenology resulted from Nordic cooperation in the field of philosophy, similar to what happened in the visual arts in the same decade. The three Nordic experts Zahavi, Heinämaa, and Ruin stated in 2003:

"The past decade has witnessed a notable turn in philosophical orientation in the Nordic countries. For the first time, the North has a generation of philosophers who are oriented to phenomenology. This means a vital rediscovery of the phenomenological tradition as a partly hidden conceptual and methodological resource for taking on contemporary philosophical problems. Today phenomenological approaches and the study of phenomenological thinkers are found in many different institutions, not just in philosophy departments, but also, e.g., in the fields of aesthetics, mathematics, theology, psychology and psychiatry. In addition, phenomenological and post-phenomenological theory is used and studied in art and architecture schools".[546]

In architectural history and spatial theory, art historian Kirsi Saarikangas employs phenomenology for her multidisciplinary research on gender and space, suburbs and modern architecture, housing and the relationship between the natural and built environment. In her book *Eletyt tilat ja sukupuoli. Asukkaiden ja ympäristön kulttuurisia kohtaamisia* (*Living spaces and gender: cultural encounters between residents and the environment*, 2006) Saarikangas refers to the many thinkers influenced by phenomenology such as de Beauvoir, Foucault, Heidegger and Merleau-Ponty. Recently, in an article entitled "Sandboxes and Heavenly Dwellings", she also refers to *The Phenomenology of Perception* by Merleau-Ponty to investigate "the located embodied meanings of lived suburban space where architecture, landscape, and residents come together".[547]

Art historian Asko Mäkelä comments on the limited dissemination of phenomenology in Finland, confirming that analytic philosophy was the main strand of thinking. He states: "Pauline von Bonsdorff's dissertation *The Human Habitat* in 1998 on architecture and Sara Heinämaa's writings were central in the late 1990s.

[546] Zahavi, Dan; Heinämaa, Sara; Ruin, Hans 2003, "Introduction" in *Metaphysics, Facticity, Interpretation: Phenomenology in the Nordic Countries*, p. XI.

[547] Saarikangas, Kirsi 2014, "Sandboxes and Heavenly Dwellings: Gender, Agency, and Modernity in Lived Suburban Spaces in the Helsinki Metropolitan Area in the 1950s and 1960s" in *Home Cultures*, Vol. 11, No. 1, pp. 33–64.

Everything was about phenomenology after the millennium".[548] Mäkelä also reports on his own experience: "When I started to write my dissertation 1989: *Phenomenological Thoughts in Abstract Expressionist Paintings* – which was finished as a licentiate thesis in 1996, since I started my work in the Finnish Museum of Photography – everybody asked me: what is that? Or: why are you interested in such a marginal and unimportant strand of thinking?". As a curator since the early 1980s,[549] he testifies that the principal topics in Finnish contemporary art during the 1990s were identity, feminism and media.

If phenomenological developments in Finland marked the 1990s, then the birth of the *Nordic Society for Phenomenology* (NoSP) in the early 2000s marked a giant leap towards disseminating phenomenology and continental philosophy in the Nordics. As mentioned earlier, three philosophers, Zahavi, Heinämaa and Ruin, were instrumental in creating this scholarly association. Nowadays the society has become an international scientific community comprising several hundred members who contribute papers to annual meetings.[550] As a result of these endeavours towards Nordic cooperation in the philosophical field, phenomenology has become firmly rooted in the Nordic countries. Heinämaa continues by explaining:

> "In the 2000s, phenomenology has developed vigorously and equally strongly in the three core countries, Finland, Sweden and Denmark, but also Norway and Iceland have witnessed strong developments. So, there is no quantitative difference between Finland, Sweden and Denmark, but one can notice differences in thematic directions and methodic orientations. In Sweden, phenomenology has mainly developed in collaboration with history of philosophy and art studies; in Denmark, it has developed in alliance with psychiatry and cognitive science; and in Finland, it has had a strong critical and political-philosophical orientation from the very start. So, there are differences in content even if not differences in strength".[551]

The artist Oja confirms that at the end of the 1990s, even the Academy of Fine Arts in Helsinki invited visiting professors from the Department of Philosophy of the University of Helsinki to lecture on phenomenology and Merleau-Ponty.[552]

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[548] Asko Mäkelä, interview by L. Scacco. 20 February 2020.
[549] Vidgrén, Mirkka 2019, "The curator's angle: An interview with Asko Mäkelä". See: https://www.alvaraalto.fi/content/uploads/2019/04/The-Curators-angle-An-interview-with-Asko-Mäkelä-05-2019.pdf.
[550] Sara Heinämaa, interview by L. Scacco. 7 November 2018.
[551] Ibidem.
[552] Conversation of L. Scacco with Marjatta Oja, Helsinki. 8 October 2019.

In 2008 the symposium "Merleau-Ponty and the Arts" (Merleau-Ponty ja taiteet) was organized by The Finnish Society for Aesthetics to mark the centenary of the philosopher's birth. The symposium was hosted at the Cable Factory in Helsinki on May 9, 2008, in collaboration with the French Cultural Centre. It included the following visiting lecturers: Pauline von Bonsdorff, Leena Rouhiainen, Marjatta Oja, Hanna Johansson, Juho Hotanen and Saara Hacklin.[553] Owing to the symposium, in 2009, the first issue of a Finnish journal for transdisciplinary arts studies, *Synteesi*, was dedicated to the symposium theme. It included contributions from the participating lecturers and the scholars Alla Ablova and Carl-Johan Holmlund. The issue also included a brief text and an experimental project by the artist Oja, who collaborated with the art historian Johansson. For the art project, Oja superimposed images taken at the seminar to produce an interesting video work. Her practice is close to the Merleau-Pontian philosophical theme of overlapping,[554] so much so that in 2009 Oja called one of her books *Overlapping Images and Returning Situations*.

Phenomenology also exerted influence in the field of aesthetics.[555] For instance, the 2001 anthology *Elämys, taide, totuus. Kirjoituksia fenomenologisesta estetiikasta* edited by Arto Haapala and Markku Lehtinen represents a significant contribution to the dissemination of phenomenology in the academic communities.[556] In the introductory part, Haapala and Lehtinen chronologically detail the main phenomenologists as well as the philosophers influenced by phenomenology, with their principal concepts and works.[557] Selected essays on phenomenological aesthetics follow this first part.[558] Haapala, who has been Professor of Aesthetics at the University of Helsinki since 2000, and is one of the editors in chief of *The Journal of Aesthetics and Phenomenology*, is also active in the Finnish Society for Aesthetics.

In the 1990s, alongside the research at Finnish universities, translated phenomenological essays contributed to the increasing dissemination of phenomenology in Finland. Merleau-Ponty's essay *Eye and Mind* was translated in 1993 by Kimmo Pasanen, a philosopher and artist who has been living in Paris since the 1990s. Pasanen was so impressed by Merleau-Pontian thought that he included

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[553] See: http://www.estetiikka.fi/events. Accessed 28 September 2019.
[554] See Merleau-Ponty, Maurice 1964, *Le Visible et l'invisible,* Gallimard, Paris.
[555] It is also described as practical philosophy.
[556] See *Elämys, taide, totuus. Kirjoituksia fenomenologisesta estetiikasta*, edited by A. Haapala & M. Lehtinen,Yliopistopaino / Helsinki University Press, Helsinki 2001.
[557] Haapala analyses the positions of the following phenomenologists: E. Husserl, R. Ingarden, M. Heidegger, H.-G. Gadamer. Lehtinen focuses on the philosophers E. Levinas, J.-P. Sartre, M. Merleau-Ponty, M. Dufrenne, M. Blanchot, J. Derrida.
[558] A series of articles by R. Ingarden, M. Dufrenne, H.-G. Gadamer, M. Lehtinen, M. Luoto, A. Haapala, A. Seppä, P. von Bonsdorff, O. Alanko, J. Kauppinen.

some phenomenological points in his book *The Black Square: The Secrets of Abstract Art* (Taide, Helsinki 2004), where he describes the historical evolution of visual art from the Middle Ages.[559]

The Merleau-Pontian essay "Cézanne's Doubt" (1945) was translated by Irmeli Hautamäki and published in 1993 by *Taide*, an art magazine that continues to be distributed to members of the Artists' Association of Finland as well as to wider art audiences. Taide, the publishing house of the association, also published the translation of *Eye and Mind* mentioned above. Therefore, it is likely that Merleau-Ponty's thought became more accessible to experts and art audience alike in the 1990s. Many of Sartre's essays had already been translated into Finnish from the 1960s and were therefore accessible to Finnish audiences by the 1990s. However, in the early 2000s, the only essay translated by Sartre was *The Transcendence of the Ego* (1934).[560] The period 1990–1991 saw the publication of a translation of de Beauvoir's book *La force des choses* (1963), where the author discusses phenomenological issues and postwar intellectuals.[561] In 1996, *La folie du jour* (1986) by Maurice Blanchot, a French writer and philosopher close to phenomenology was published as a Finnish translation.[562] Other phenomenological authors were translated in the 1990s, such as the younger Jean-Luc Nancy, whose *Corpus* (1992) was available in Finnish from 1996, and *L'éthique originaire de Heidegger* (1996) in 1998.[563] In the 1990s Nancy was prolific in publishing essays,[564] drawing considerable attention to himself and to phenomenology. Nancy considered Merleau-Ponty's approach to the body that simultaneously touches and feels, as the last great attempt to consider the body in a new light in Western society.[565]

To summarize, in the 1990s many essays were translated into Finnish documenting the high interest in phenomenology and its thinkers during this decade.

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[559] Kimmo Pasanen in email conversation with L. Scacco. 11 June 2019.

[560] In 2004, J.-P. Sartre's *La transcendance de l'ego* (1934) was translated by A. Kauppinen and published by Tutkijaliitto with the title *Minän ulkoisuus. Fenomenologisen kuvauksen hahmotelma*.

[561] Translations' details: *Ajan haasteet* (*La force des choses I*, 1963), translated by A.-M. Viitanen, Kirjayhtymä, Helsinki, 1990; *Maailman meno* (*La force des choses II*, 1963), translated by A.-M. Viitanen, Kirjayhtymä, Helsinki, 1991.

[562] *Päivän hulluus*, translated by H. Sinervo, Ai-ai, Helsinki, 1996.

[563] *Corpus* was translated by S. Lindberg and published by Gaudeamus, Helsinki; *Heideggerin "alkuperäinen etiikka"* was translated by K. Sivenius, and published by Loki-kirjat, Helsinki.

[564] In the 1990s, J.-L. Nancy also published: *Le sens du monde* (Galilée, Paris 1993). It is noteworthy that in 2007, the philosopher Martta Heikkilä defended her doctoral dissertation *At the Limits of Presentation: Coming-into-Presence and its Aesthetic Relevance in Jean-Luc Nancy's Philosophy* (published by Peter Lang in 2008).

[565] This consideration comes from the "Interview with Jean-Luc Nancy" in the Italian newspaper *L'Unità*, 4 March, 1996.

As a result, an increasing number of experts and amateurs supported its dissemination in Finland. In the late 2000s, the role of phenomenology in Finnish society exerted a powerful and influential effect on several fields. In dance, artists like Jaana Parviainen and Leena Rouhiainen contributed to the phenomenology of dance through their experience; in theatre, the scholar Esa Kirkkopelto strengthened the phenomenology of embodiment; in poetry, Lassi Nummi focused on existentialism; [566] and visual art saw developments in video art and interactive art that will be investigated in the following subchapters.

Media art benefited from the vital Finnish translations of articles by Debord, *The Society of the Spectacle* (1967), and by Foucault, *The Archaeology of Knowledge* (1969), both in 2005.[567] These translations prepared the ground for theories on spectatorship and media archaeology.

3.5 Chiasmatic Echoes in the Finnish Culture of the 1990s

An important stimulus to the spread of phenomenology was the opening of the Museum of Contemporary Art Kiasma in Helsinki in 1998, after an international architectural competition launched in 1992–1993. Art historian and museum director Tuula Arkio explains that "the competition was an open call to Baltic and Nordic architects with four invited international architects namely Kazuo Shinohara from Japan, Alvaro Siza from Portugal, Coop Himmelbau from Austria and Steven Holl from the USA".[568] The list of invited architects covered different approaches to architecture. Arkio continues by explaining:

> "Steven Holl's proposal Chiasma was one of its kind among the 514 proposals we received. I still remember clearly the moment I found his (then still anonymous) project among the competitors. I was taken by it by the first sight. To my mind we here had a proposal by someone who deeply understood visual arts and the needs and spaces to show it in a comprehensive way. At the end the whole working group gave a unanimous recommendation to put Chiasma as the number one".[569]

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[566]   Sara Heinämaa, interview by L. Scacco. 7 November 2018.
[567]   Debord, Guy 1967, *La société du spectacle,* Éditions Buchet-Chastel Paris, translated by T. Uschanov, *Spektaakkelin yhteiskunta*, Summa, Helsinki 2005; Foucault, Michael 1969, *L'archéologie du savoir*, translated by T. Kilpeläinen, *Tiedon arkeologia*, Vastapaino, Tampere 2005.
[568]   Tuula Arkio, interview by L. Scacco. 3 March 2020.
[569]   Ibidem.

American architect Steven Holl won the competition with "Chiasma", which is reminiscent of Merleau-Ponty's notion of chiasm in his late essays. In his text "The Crisscrossing", Holl argues that he was largely inspired by the essay "The Intertwining – The Chiasm" in the French philosopher's book *The Visible and the Invisible*.[570] Impressed by the Merleau-Pontian observations, Holl "wanted a series of spaces which would all have some slice of natural light in this museum. There are 25 galleries, all of which have a different type of natural light (…). The Museum itself is made up of two intertwined geometries – the gently curved half and the straight half which intersects. The main entry ramp and lobby is the space between these two interlocked geometries".[571] (Figs. 53–54) It is worth noting that Holl tried to materialise in architectural terms the phenomenon of reciprocity described by Merleau-Ponty and therefore highlighted the importance of spectatorship. Holl states that "like Merleau-Ponty's 'double and crossed situation of the visible and the tangible…', as one crosses the big spaces a distant spatial view replaces the close-up art view and then reverses again. The idea of the visitors suddenly seen by another visitor (myself seen from without) occurs on the crisscrossing and ramped path".[572] Moreover, the architectural concept of Kiasma implies that the building becomes woven into the geometry of the city (Finlandia Hall) and back landscape (Töölö Bay), which are reflected in the shape of the museum. This interweaving of environments and vistas echoes the Merleau-Pontian notions of porosity and chiasm.

The scholar João Figueira reflects on the notions of "chiasm, intertwining, hands" borrowed by Holl from Merleau-Ponty and attached to a particular cultural reference.[573] The concept of 'hands' is linked to a new visual image that Holl proposed in an earlier presentation: "The geometry has both an interior mystery and an exterior horizon which, like two hands clasping each other, form the architectonic equivalent of a public invitation".[574] This recalls the prolific human perception described by Merleau-Ponty in *Signs*: "There is a relation of my body to itself which makes it the vinculum of the self and things. When my right hand touches my left, I am aware of it as a 'physical thing.' But at the same moment, if I wish, an

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[570] Holl, Steven 2007, "The Crisscrossing" in *Chiasmi International*, No. 9, 2014, p. 21. A revised version of a paper presented at the Congress "Chiasmatic Encounters", organized by the International Association for Philosophy and Literature, and the University of Helsinki, and held at the Museum of Contemporary Art Kiasma in June 2005.

[571] Ibidem.

[572] Ibidem.

[573] See Figueira, João Francisco 2009, *Images at Work: Holl's Entry for Kiasma and Lordi, the Works of Two Over-Determined Images*, pp. 151–152.

[574] Holl, Steven 1993, "Chiasma: Notes on Design" in *Arkkitehti*, 4/5, p. 31.

extraordinary event takes place: here is my left hand as well, starting to perceive my right".[575]

During his visit to Helsinki in 2000, the architect and academic Scott Drake observed that in the Kiasma building the visitor seems to be placed between two intertwining hands – a strong phenomenological reference.[576] According to Drake, Holl translated Merleau-Ponty's theories into architecture. The circulation of visitors through the galleries continuously shifts direction, which encourages bodies to interact with the rooms and the various degrees of daylight. Drake also notes that "in each gallery, the openings are slightly different as doorways cut diagonally, switch from side to side, push into walls, or break open corners".[577] These changes highlight the sense of proprioception in the visitors' bodies, shaping the visit to the museum in terms of a "heightened sensory experience", which is also essential to phenomenology: "the result is a space of heightened sensory experience, a space that can almost be touched".[578]

For the 29th conference of the International Association of Philosophy and Literature in Helsinki in 2005, Holl presented the lecture "Porosity" informed by Merleau-Ponty's book *The Visible and the Invisible*. In it, the French philosopher considers the perceptual horizon as "a new type of being, a being by porosity, pregnancy, or generality, and he before whom the horizon opens is caught up, included within it".[579] He describes the human being as an architecture of many layers, a complex of phenomena.[580] Inspired by the Merleau-Pontian universe, Holl transforms the philosopher's concepts into his own architectural language.

Arkio also believes that "there was no intention to find architects whose main emphasis was in phenomenology. There was no strong interest in it in architecture in Finland in the 1990s. Nordic modernism was the leading phenomenon with some exceptions. Of course, it was clear that Steven Holl's approach to architecture was different from the other invited architects".[581] One could raise the following questions: did Holl's success happen only by chance, or did it mean an openness to internationalization? Or did it occur as a concrete example of the 'marriage' of a

[575] Merleau-Ponty, Maurice 1960, *Signes*, Gallimard, Paris; English translation by R. McCleary, *Signs*, Nortwestern University Press, Evanston, 1964, p. 166.
[576] Drake, Scott 2003, "Philosophy into Architecture: Museum of Contemporary Art, Helsinki", conference paper in *91st ACSA International Conference*, Helsinki, July 27–30, p. 391.
[577] Drake, Scott 2005, "The 'Chiasm' and the Experience of Space: Steven's Holl Museum of Contemporary Art, Helsinki" in *Journal of Architectural Education*, Vol. 59, No. 2, November 2005, p. 57.
[578] Ibidem, p. 58.
[579] Merleau-Ponty, Maurice 1964, *The Visible and The Invisible*, p.149.
[580] Ibidem, p. 114.
[581] Tuula Arkio, interview by L. Scacco. 3 March 2020.

cultural phenomenon and philosophical phenomenology in Finland? Why did the jury select a project called "Chiasma"? The term chiasm derives from chiasmus or chiasm (a Latin term from the Greek work for 'crosspiece', or the 'x-shaped structure') and refers to the use of a criss-crossing rhetorical structure to cause an overlapping of meanings. In a broader sense, the notion of chiasm is related to the encounter and the interchange of elements, sensations, and ideas. The Kiasma building materialises this concept with its numerous large and vertical glass windows, which seem to merge into the daily life of the city, owing to its location on Mannerheimintie – one of the main streets of Helsinki. Additionally, a chiasmic encounter can occur between new technologies and audiences, as this is a goal for the art museum, and symbolically, between Finland and the European Community.[582]

In 2000, just two years after the museum's opening, Helsinki became the European Capital of Culture. Phenomenology has been central to the tradition of continental European philosophy throughout the twentieth century, differing from the Anglo-American tradition of analytic philosophy. Husserl and Scheler analyse Europe and the European cultural tradition in between the two World Wars and reinterpret the experience of the West.[583] Since the first phase of the dissemination of phenomenology in Finland, ideas from Husserl and Scheler had been circulating in the academic environment, especially through Eino Kaila and Eino Krohn. It is plausible that phenomenology was reconsidered and relaunched in Finland in the 1990s due to translations and studies aiming to become closer to Continental Europe.

One could argue that the architectural project "Chiasma" by Holl found propitious historical and cultural conditions in Helsinki. Starting with its name, the influence of Kiasma was central to the development of phenomenology in Finnish culture from the mid-1990s. In fact, the philosopher Haaparanta notes that "the very name Kiasma and Merleau-Ponty's thoughts have certainly raised significant interest in Finland. The new understanding of the body, the senses, and the movement, have been quite important in the Finnish culture in general". Arkio also observes that "for sure, the lively and then almost furious discussions around Kiasma (which handled in many cases the statue of Marshal Mannerheim) spread the notion of phenomenology among the Finnish architects and also the general public to some extent".[584] Collectively, these comments suggest that Kiasma is a distinct, prominent sign of the return of phenomenology in Finland from the 1990s.

[582] In 1 January 1995 Finland entered the European Community.
[583] See Lenoci, Michele 2014, "Crisi e rinascita dell'Europa: echi del dibattito fenomenologico" in *Trans/Form/Ação*, Vol. 37, SciELO, pp. 219–244.
[584] Tuula Arkio, interview by L. Scacco. 3 March 2020.

Many of the museum's activities also exerted a phenomenological imprint. Firstly, the video installation[585] *Triad* is significant. This dance performance took place on June 5, 1998, when the museum opened. (Fig. 55) It was conceived by artist Marikki Hakola, executed by the artists Molissa Fenley and Akeno, and streamed, with some delay due to the technologies of the period, from Helsinki, Tokyo, and New York onto three monitors in the Kiasma Theatre. *Triad* is a phenomenological video piece in its concept, script, and display. It has two main aspects: *Triad Netdance*, the real-time live Internet streamed performance, and *Triad Hyperdance*, the interactive work online, based on the video and audio recording of *Netdance*. Hakola writes in her website, "with the Hyperdance, the work expands into three dimensions and the viewer can freely move from one virtual space to another having a possibility to combine the choreographic and audiovisual elements interactively".[586] Each of the three parts of *Triad* has a separate title: Memory Tracks, Dream, and Encounter. The concept of three virtual, parallel, and intertwining stages is close to a chiasmic approach, leading Hakola to the following statement: "The montage of *Triad* is phenomenological".[587] Being an artist mostly engaged in semiotics and pragmatism, I assume that the phenomenological imprint of the new museum powerfully inspired Hakola's artistic practice on this occasion. Moreover, the third part of *Triad* is entitled "Encounter", a word that refers to Merleau-Ponty. As the artist describes, "based on 14 different one-minute concepts, dancers perform the same piece by perceiving each other on the virtual stage of *Triad* at Internet. Slowly changing, gigantic black & white images of the female body grow up from the darkness and form a virtual interface of the encounters of the two dancers".[588] Here, perception and bodily experience are the main goals in this streaming event. It is also worth noting her use of the term "interface of the encounters" to highlight the interactive experiments of those years. Indeed, there is a link between the notion of perception in phenomenology and interaction in media art.

Bruce Nauman's retrospective was organized in Kiasma in 1998–1999 with an interesting article by Marcia Tucker in the catalogue. *PheNAUMANology* had originally been published in 1970 in the magazine *Artforum*. In her title, Tucker highlights the affinities of Nauman's practice with concepts from Merleau-Ponty, quoting his book *The Structure of Behavior* (1942). This republished contribution by Tucker at Nauman's exhibition is an additional example of the presence of phenomenology in Finnish culture. With his work embracing the notion of identity, Nauman appealed to Finnish audiences. In fact, since the mid-60s, he had been

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[585]   Marikki Hakola, in conversation with L. Scacco, Helsinki. 7 October 2019.
[586]   Quotation from the artist's website: www.kroma.fi. Accessed 18 October 2019.
[587]   Marikki Hakola, in conversation with L. Scacco, Helsinki. 7 October 2019.
[588]   Quotation from the artist's website.

examining the body as an object identity by recordings his own gestures, actions, traces, texts and spoken sounds. In the 1990s, Mäkelä, who worked at Kiasma as a curator, stated that in Finland "the issues of identity were most central in art. And in those you can see phenomenological thoughts through identity issues. But they were not so central as such compared to the growing feminist thinking".[589]

Liulia was a highly active artist on the international multimedia scene of those years. She reports that in Finland phenomenological ideas had "strong influence, especially among intellectuals, philosophers, and sociologists. In the 1990s I was personally interested in contemporary sociology, postmodern theories, post-feminism, gender studies, and psychology". Liulia also states that Merleau-Ponty, with his anti-Cartesian ideas about the inseparability of the mind and the body, represented an alternative position in the media art milieu in Finland and internationally, because "on the contrary, during the 1990s, especially in international media art and digital culture, the ideas and visions of human being as a sort of (man) machine inspired by René Descartes were popular".[590] In fact, Donna Haraway and her *Cyborg Manifesto* (1985)[591] along with Stelarc and his performances in the 1980s and 1990s, as *Third Hand* and *Exoskeleton*,[592] were also inspirational, claiming the separation of the mind from the body due to information technology that put the human body in question. In 1992–1993, the exhibition *Post Human* curated by Jeffrey Deitch, received considerable attention from the artworld.[593] The curator invited a group of artists[594] to represent the quest for body perfection imposed by the media, and improved by surgical technology in the 1990s.[595] In this framework, phenomenology must have appeared as a fresh approach to reunite what technology had separated, as an alternative to the hybrid human-machine, reintroducing the unity of mind and body in a fertile way.

Given their educational backgrounds, the staff of the Museum of Contemporary Art Kiasma also contributed to the dissemination of phenomenology in Finland, from Maaretta Jaukkuri, Marja Sakari, and Kati Kivinen to Saara Hacklin. The *ARS 95* catalogue includes the essay "Image-Language" by curator Jaukkuri, who mentions

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[589] Asko Mäkelä, interview by L. Scacco. 20 February 2020.

[590] Marita Liulia, interview by L. Scacco. 12 November 2019.

[591] See: https://en.wikipedia.org/wiki/A_Cyborg_Manifesto. Accessed 18 March 2020.

[592] See the artist's website: http://stelarc.org/testForFlash.html. Accessed 18 March 2020.

[593] It toured five venues: FAE Musée d'Art Contemporain, Lausanne; Castello di Rivoli, Turin; Deichtorhallen, Hamburg; Deste Foundation, Athens; Israel Museum, Jerusalem.

[594] The artists' group was formed by Janine Antoni, Ashley Bickerton, Paul McCarthy, Clegg & Guttmann, Sylvie Fleurie, Robert Gober, Felix Gonzalez-Torres, Jeff Koons, Charles Ray, Thomas Ruff, Cindy Sherman, Kiki Smith, and Pia Stadtbäumer.

[595] See Deitch, Jeffrey 1992, "Post Human" in *Post Human*, Hatje Cantz, Stuttgart / Deste Foundation for Contemporary Art, Athens.

Merleau-Ponty and his statements. She adopts Merleau-Ponty's approach to perceptive experience to explicate "the conflict between the optical and the conceptual image"[596] and quotes two books by Merleau-Ponty in her bibliography: *Eye and Mind* (Finnish translation 1993) and *The Primacy of Perception* (English translation 1964). Merleau-Ponty also inspired the curators Marja Sakari and Otso Kantokorpi's exhibition at the Kiasma in May–September 2004: *Vision and Mind*. The exhibition investigated the role of the artist of art making from initial observation to the realization of an artwork via sketchbooks, diary entries, filmed work environments and photographs. In her article in the exhibition catalogue, Sakari highlights the importance of the relationship between the artist and the phenomenal world by using artworks based on Merleau-Pontian thought. She quotes several statements by Merleau-Ponty, in particular, when she describes the artist's condition as their 'being-in-the-world', as each artwork is traversed by its author's own experiences.[597] The *Vision and Mind* exhibition gathered artists of different generations, including Annette Arlander, who showed the three parallel projections *The Shores*, and Jaakko Niemelä, who realized *Slow Performance* in which he built and later broke down a wall.

Currently, phenomenology is fully integrated into Finnish curatorial practices. The curator Hacklin explains her starting point in the planning of an exhibition that included some art pieces from the Kiasma art collection in 2016.[598] She privileges embodied spectatorship with the involvement of multiple senses, along with the emotional and affective flow as the fundamental elements of an immersive art experience. With respect to the current affective turn, she directly declares that her perspective is deeply rooted in Merleau-Ponty's thought and legacy in continental philosophy.[599] Hacklin uses five artworks from Kiasma's permanent collection as examples of how art can get under the skin in a sort of chiasmic encounter of 'to touch and to be touched'. Finnish artist Hanna Saarikoski illustrates her preference for a multisensory experience in her video *See Paris and Die* (2012). Here, the public

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[596] Jaukkuri, Maaretta 1995, "Image–Language" in *ARS 95: Yksityinen/julkinen = Private/Public*, edited by M. Jaukkuri, translated by M. Garner, Finnish National Gallery Ateneum, Helsinki, p. 37.

[597] *Silmä ja mieli – taiteilijana olemisesta* (Vision and Mind: The Role of the Artist), edited by O. Kantokorpi & M. Sakari, published by Kustannus Oy Taide / Museum of Contemporary Art Kiasma, Helsinki 2004 (exhibition period: 29 May–26 Sep 2004), pp. 7–20.

[598] Hacklin, Saara 2016, "To Touch and Be Touched: Affective, Immersive and Critical Contemporary Art?" in *Stedelijk Studies*, No. 4/2016, Amsterdam.

[599] Ibidem, p. 2. Saara Hacklin also employs a clear phenomenological approach in her doctoral dissertation titled *Divergencies of Perception: The Possibilities of Merleau-Pontian Phenomenology in Analyses of Contemporary Art,* defended in 2012 at the University of Helsinki.

can follow her first visit to Paris, but the artist's eyes are tightly shut. Instead of the hegemony of sight, she favours other senses, such as smell, taste, and hearing while strolling around the city. As explained by Hacklin: "Saarikoski refuses the position of an active seer, the role of the tourist or flaneur that 'takes' the city, and instead exposes herself to the looks of others".[600] In fact, at the end of the video piece, visitors at the Louvre start to photograph her like other artworks in the museum, and "the 'blind' artist becomes a spectacle for others".[601] The video piece by Saarikoski blends Debordian and Merleau-Pontian thematics in correspondence with contemporary society. Hacklin also stresses how the affective turn represents a "counterreaction to the previous theoretical emphasis on language and meaning in poststructuralism and deconstruction", and how the phenomenological approach had a significant role in this turn with its focus on embodiment and perception.[602] In addition, a phenomenological approach resonates with recent studies of participation and receptivity in art museums. In the Nordic area, it has recently been noted that phenomenology can help to avoid the risk of overlooking visitors' experiences in art museums. Curatorial work should take into consideration the phenomenology of aesthetic experience.[603]

3.6   A New Spatiality of the Moving Image in Finnish Art in the 1990s – Spectatorship in the Work of Eija-Liisa Ahtila and Marjatta Oja

Throughout this section, I will connect phenomenological ideas with the large-scale projection of video art and viewer involvement in video installations in Finland from the mid-1990s. On the one hand, the fast evolution and improved access to technology helped to develop artists' tools. On the other hand, new approaches to the creation of artworks and its relationship with or impact on the perceiver became a central issue in art making. The new possibilities of freeing the moving image from the circumscribed TV screen gave artists a new way of communicating with the public through space. The relationship between artist and spectator became central in art criticism and studies, suggesting a new aesthetics of the moving image. In Finland, this stage in video art coincides with the renewed interest in phenomenological ideas. Considering these premises, it is necessary to investigate

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[600]   Ibidem, p. 8.
[601]   Ibidem.
[602]   Ibidem, p. 2.
[603]   See Høffding, S., Rung, M. & Roald, T. 2020, "Participation and Receptivity in the Art Museum: A Phenomenological Exposition" in *Curator*, Vol. 63, No. 1, pp. 69–81. See: https://doi.org/10.1111/cura.12344. Accessed 16 October 2021. I will examine the role of the museums and their curatorial approach in Chapter 5.

the artists' backgrounds. Curator Kati Kivinen, who carefully analysed the spatialisation of Finnish video art, considers four pioneers in video art and video installation: Ahtila, Hakola, Oja, and Heli Rekula.[604]

During her long career, Marikki Hakola (b. 1960) created many interactive artworks. Being interested in semiotics and pragmatism, she was especially attracted to questioning identity and language. At the beginning of the 2000s, her other philosophical interests were Husserl and Gadamer together with the French film theorist Christian Metz,[605] who applied semiotics and phenomenology to film.[606] In the 1990s, Hakola realised many different types of video works, such as *Telephone* (1990), *Milena-Distanz* (1992), *TransVersum* (1993), *Mediascape – Matka mediamaisemaan* (1996), *Continuum* (1999), attempting to enhance the spatiality of their displays. In her article, Kivinen quotes *Milena-Distanz*, which is spatialised as a videowall.[607] It is necessary to observe that an interest in spatiality had already emerged in her first independent video work, *The Time is Right for ...* (1984), as it was originally an installation. Hakola explains: "I was interested in combining space aspects together with the moving picture. The next step was the idea of using a compilation of several monitors as a kind of visual orchestra, where monitors formed a visual and aural unity. The video installation *PRE* for 10 monitors, 6 video tapes and a separate audio soundtrack, premiered in August 1984".[608] Some years later, Hakola's interest in music and dance prompted her to collaborate with choreographers. In the context of this research, as already analysed in the previous subchapter, the live video installation *Triad*, on view on June 5, 1998, at the Kiasma Theatre, is significant in terms of phenomenology.

Marjatta Oja (b. 1962) studied painting at the Finnish Academy of Fine Arts and at Brera Academy of Fine Arts in Milan during the 1980s–1990s, and she has been producing and exhibiting videotapes and installation since. Curator Kivinen asserts: "Oja's discreet and unassuming moving image installations – or situational sculptures, as she calls them – are normally composed of images projected on elements placed in a space or on different surfaces in a space, creating a situation where the moving image, the space, and the viewer meet".[609] She was one of the

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[604]   See Kivinen, Kati 2015, "From Monitor to Gallery Space: Spatialisation of the Moving Image in Finnish Video Art in the 1990s", p. 8.

[605]   Marikki Hakola, in conversation with L. Scacco, Helsinki. 7 October 2019.

[606]   In recently uncovered unpublished writings, Metz characterized the article "Imaginary Signifier" as a work of 'psychoanalytical phenomenology'. See Chateau, Dominique & Lefevbre, Martin 2013, "Christian Metz et la phénoménologie" in *1895: Revue de l'association française de recherche sur l'histoire du cinéma*, No. 70, pp. 82–119.

[607]   Kivinen, Kati 2015, "From Monitor to Gallery Space", p. 8.

[608]   Leuzzi, Laura 2016, "Interview with Marikki Hakola" in *EWVA: European Women's Video Art*, p. 2.

[609]   Kivinen, Kati 2015, "From Monitor to Gallery Space", p. 8.

earlier Finnish artists to use video art spatially, as in *Bath* (1990), a video installation where a projected human body enters a sort of bathtub with a running tap. (Fig. 56) *Table* (1989) and *Standing* (1990) are two more video installations that deal with space. *Table* and *Bath* attempt to reach the third dimension through the video projection. In her situational sculptures, Oja creates a sort of overlap between moving images, the given space, and the objects. Projections and reflections are at the basis of this process of intersection. Johansson explains:

"Oja has a predilection for visual technology apparatuses, both archaic and advanced: cameras, projectors, reflecting mirrors, tripods, free-standing projection screens. These are accompanied by structures that belong to the 'subject' of the moving image: cubes, curtains and fans. The objects are combined into a whole where the space of cinematic narrative and the space of the performance form a continuous or at least a contiguous whole".[610]

Indeed, her video installations could be considered interactive but without the use of technological interactivity.[611] They activate the spectator's imagination or reminiscence to complement the narrative during the perceptual experience.

In *Tests* (2006), Oja tried to create depth in a moving image without resorting to narrative. She stated that painting was incomplete for her to represent the rhythm of life. She wanted to depart from the frame because the two-dimensionality of painting was insufficient for her purposes, as transpires in one of her early works, *Landscape* (1992), a nonstop video projection onto a painting in a glass box.[612] In those years, cinema aesthetics affected Oja in her *Cinema IV* series (1998), which consists of videos, projections, objects and a curtain that seek to dismantle the linear plot of the movie. The video installation *Conversations* (2004) is formed by two overlapping videos projected on rectangular screens on the wall, creating separate spaces for the two characters of the film.

From the film *Membrane XI* (1990) through *Object* (2007) to *Seeing Through* (2006), her video installations recall, in their titles as well as their contents, an analysis of perception of the sensuous realm. Johansson observes:

"Oja's work is about connections between images, the vagrancy of images and their endless process of transformation, as well as the relationship between reality and visual representation. Her work demonstrates that visuality is far from

[610] Johansson, Hanna 2009, "Making a Landscape" in *Marjatta Oja: Overlapping Images and Returning Situations,* edited by H. Johansson & M. Oja, Markprint, Lahti, p. 11.
[611] Marjatta Oja, interview by L. Scacco. 1 October 2019.
[612] Marjatta Oja, in conversation with L. Scacco. Helsinki, 8 October 2019.

being an independent sphere of representation. On the contrary, Oja's art underlines the materiality of the image and also its emergence in different types of support and in joints".[613]

This statement could be illustrated by the video installation *The Candle* (2012), where Oja balances reality and vision, experience and representation through the silent dialogue created by the projection of a real candle in front of a virtual person. (Fig. 57) Here, one may find a parallel to Paik[614] and his *Candle T.V.*, a mixed media sculpture created by the Korean video artist in various editions from 1975, where the inside of a TV set is replaced by a lit candle. (Fig. 45) While Paik replaces the artificial light emitted by the electric monitor with the physical one of the candles, in Oja's video installation the light of the candle is challenged by a virtual breath. They both show a poetic interplay between objects and devices, environment, and technology. Using a candle, one of the oldest sources of artificial light, they also share the aim of humanizing technology and slowing down the speed of media images.

In 2011 Oja completed her monograph *Three-Dimensional Projection – Situation Sculpture between the Artist and the Viewer* from her doctoral dissertation at the Academy of Fine Arts in Helsinki. Here she investigates the relationship between artist and viewer and tries to map the spatial boundaries of the moving image. Many phenomenological concerns appear in her art practice. She states that she has been largely influenced by phenomenology since attending theoretical lectures in the 1990s at the Academy of Fine Arts. In particular, she states that "there was one text, though, which opened to me how Merleau-Ponty saw the artist's perception and it became remarkable for me. The text about Cézanne (translated by Irmeli Hautamäki)".[615] Accordingly, this text is one of the key references in her doctoral publication.

A phenomenological influence may also indirectly have originated from her academic studies in Milan with Luciano Fabro, who was part of the Arte Povera movement. As I examined in Chapter 1, Arte Povera was also nourished by phenomenological propositions, and in particular by Merleau-Ponty. In a recent book dedicated to Fabro and his long teaching activity at the Brera Academy of Fine Arts, it clearly emerges that his sensory approach to art was prompted by

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[613]   Johansson, Hanna 2009, "Making a Landscape", p. 12.

[614]   Paik has been well received in Finland since the late 1960s. See Rastas, Perttu 1994, "Treasury: Finnish Media History".

[615]   She refers to "The Cézanne's Doubt" (1945) by Maurice Merleau-Ponty. Marjatta Oja, interview by L. Scacco. 1 October 2019.

phenomenological considerations.[616] In the 1980s and '90s, Fabro held several lectures in which he highlighted that the sensory experience was consistently central to his work. Fabro stated that "everything we touch, see, feel is surface. All our senses intervene on the surface (…) When we feel internal pain, we touch the skin: we feel through the surface",[617] which evokes Merleau-Ponty's chiasmic encounter of the sensible and the sentient. The phenomenological exploration of space can be identified in several of Fabro's installations. Spatiality is not built on isolated objects, but on their relationship with the artists' and / or viewers' presence.[618] This investigation of spatiality in phenomenological terms is present in Oja's situational sculptures, where the overlapping between moving images, the given space and the objects creates new sensory experiences for the audience. In her work, in fact, the boundary between space and object blurs as it dialogues with the video projection. Sculpture becomes a temporalised, impermanent space, because it is open to encounter and reciprocity. In Fabro, a body-shaped sheet, drapery or curtain, deprived of mass, forms a trace of absence that seems to recur in the subtractions operated by Oja in her situational sculptures, thanks to the intersection of projections, reflections and objects.

In the 1990s, the work of Heli Rekula (b. 1963) was also interesting in terms of new ways of presenting video art. She realized the video installation *Hotel* (1991/2005) by placing two large video projections side by side. Rekula first developed *Hotel* as a photographic work, but later changed it into a moving image to enhance the elements of time and waiting.[619] As Kivinen noted, "this technique allows for the simultaneous portrayal of two or more events or spaces. The split image enables the building of tension by showing simultaneous events occurring in different places".[620] She created other installations for two video projectors, such as *Pilgrimage* (1996–1998) and *Skein* (2000). Rekula is mainly known for her staged and landscape photographs. In the same years, Ahtila was developing the concept of collateral subjects in a range of video installations. In the 1990s, Eija-Liisa Ahtila (b. 1959) was instrumental in Finland achieving a prominent place in the international video art scene. Her early works focused on the study and the

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[616] Pulejo, Raffaella 2013, "'Teoria è un atto'. La storia dell'arte di Luciano Fabro" in *Luciano Fabro. Maestro torna Maestro*, edited by L. Cherubini & R. Pulejo, Silvana Editoriale, Cinisello Balsamo, Milano, p. 31.

[617] Fabro, Luciano 1999, *Lezioni e conferenze 1981–1997*, Einaudi, Torino, pp. 121–122.

[618] Zambianchi, Claudio 2014, "'Oltre l'oggetto': qualche considerazione su Arte Povera e performance" in *Ricerche di storia dell'arte*, 3/ 2014, pp. 35–45.

[619] See the interview by Kivinen, Kati 2004, "Thoughts and Notes" in the catalogue *Heli Rekula. Desert: Works from 1989–2004*, edited by P. Nyberg, Kiasma Museum of Contemporary Art, Helsinki 2004, p.17.

[620] Kivinen, Kati 2015, "From Monitor to Gallery Space", p. 9.

construction of the language of filmmaking. She then created videos as 'human dramas', investigating issues of human and sexual relationships, psychoses, communication problems and personal identity. In Ahtila's work, observers are invited to look into the psyche of fragile human beings. Recently, she investigated perception from other viewpoints, such as in non-human organisms.

Ahtila's early installation *Tender Trap* (1991) explores space and time in film and performance. It consists of five parallel projected images, an audio tape, a dialogue text, elements hung on the walls and coloured stripes around the room. Ahtila explains that "the theme of the work is an attempt to reconstruct for presentation something that has happened. It enters into a dialogue of a real event and the possibilities of presenting it – the presence of fiction, emotions, the aesthetic, and truth in outlining meanings".[621]

A few years later, she realized her first video-triptych as three synchronized and adjacent screens entitled *If 6 Was 9* (1995; Fig. 58). The storyline is a reinterpretation of the thoughts, by three teenagers, on sex. The work is displayed in three autonomous parts linked by some affinities and reactions. Ahtila explains that "occasionally the three images appear to create a simultaneous event, e.g., when a sequence in which girls address monologues to camera in different shots is edited to give a feel of dialogue".[622] From a phenomenological point of view, the wide composite projection, formed by three synchronized and contiguous images, suggests an encounter, or even better, it shows a reciprocity in visual terms. The installation *Today* (1996–1997) explores another way of constructing a multiscreen installation by using three screens on three sides of a rectangular and dark arena, where three events run in an endless loop. (Fig. 59) In the plot, Ahtila deals with notions of temporality:

"The concept of time is broken down and the chronology of the events is disrupted by the positioning of the members of the family in the narrative and the repetition of the elements of the story. The work explores narrative structures and the construction of time in a story, and the formation of an idea of the self, while seeing one's own movements in the gestures of other family members".[623]

She challenges spatiality by means of reciprocity, or even better, by activating a sort of chiasmic relationship in interwoven haptic perceptions.

[621] Ahtila, Eija-Liisa 2002, "Presentation of Works" in *Eija-Liisa Ahtila: Fantasized Persons and Taped Conversations,* edited by M. Hirvi, Crystal Eye & Kiasma Museum of Contemporary Art, Helsinki, p. 26.
[622] Ibidem, p. 60.
[623] Ibidem, p. 76.

Art critic and scholar Birnbaum recognises phenomenological themes in Ahtila's work. He observes that Ahtila's artwork activate "past, present, future in the blinking of an eye. Ahtila's works are full of such dense and temporally complex crystal images".[624] Commenting on these condensed cinematic minutes, the Swedish art critic quotes Deleuze and temporality in Henri Bergson's terms.[625] In the same essay Birnbaum also quotes Husserlian phenomenology to depict the concept of time-consciousness and the many flows of awareness in the structure of subjectivity,[626] such as Ahtila's videos seem to show, when she investigates "the richness of temporal experience and the complexity of the experiencing subject".[627] She delves into how works mobilise memory and perception as temporal extensions. Finally, in the following statement, Birnbaum speculates on Ahtila's relation with phenomenology:

"The simultaneity of several flows of moving imagery grants the possibility not only of crystal-images, but also of more intricate constellations and juxtapositions. Is it this phenomenology of the experiencing subject that interests Ahtila, or is the multidimensionality only a means to an end that must be described in quite different terms? Clearly there are recurring themes that create the strange atmosphere and poetry in Ahtila's work. But it seems that the phenomenological issues are also of great importance to her".[628]

Ahtila often projects onto several simultaneous screens. For example, she does so in *The Wind* (2002; Fig. 60) and *The House* (2002), which stage the development of psychosis in two women. The artist states that "breaking up the moving image onto several screens had a definite effect on the narrative, its planning, and the way in which the work was perceived".[629] Multiple screens first appeared in Los Angeles, where Ahtila lived and studied from 1994–1995. She was impressed by the enormous billboards lining the roads, showing five separate parts that formed a whole. In 1994, an exhibition of Hill at the Museum of Contemporary Art in Los Angeles was another significant stimulus for her creativity. Ahtila explains how "one of the

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[624] Birnbaum, Daniel 2002, "Crystals of Time: Eija-Liisa Ahtila's Extended Cinema" in *Eija-Liisa Ahtila: Fantasized Persons and Taped Conversations*, p. 201.

[625] Merleau-Ponty and Deleuze were both interested in Bergson's philosophy. See Wambacq, Judith 2017, *Thinking between Deleuze and Merleau-Ponty,* Ohio University Press, Athens, OH. In this recent book, the scholar convincingly argues that the differences between the two philosophers are mainly stylistic.

[626] Birnbaum, Daniel 2002, "Crystals of Time: Eija-Liisa Ahtila's Extended Cinema" in *Eija-Liisa Ahtila: Fantasized Persons and Taped Conversations*, p. 202.

[627] Ibidem.

[628] Ibidem, p. 202–203.

[629] Ahtila, Eija-Liisa 2002, "Presentation of Works", p. 172.

artworks was put together with different, separate moving images so that it looked like a wall with several wide stripes of about 50 cm. Seeing those two examples made me think, if it would be possible to make a piece which would consist of several screens and tell a story unfolding on those screens simultaneously".[630]

In fact, the large-scale 'cinematic projection practice' had started to appear at the beginning of the 1990s in the United States,[631] and Hill was one of the major experimenters. In 1995, Ahtila showed her first multi-screen installation *If 6 Was 9* at the Galleri Index in Stockholm. Later, video installations such as *The Hour of Prayer* (2005) and *Where Is Where?* (2008) embrace existential issues and establish connections between psychology and space, text and image, a realistic narrative and surreal special effects. In both works, Ahtila's multi-screen setting seems to incorporate viewers in the cinematic narrative in a sort of reciprocal encounter, to allow spectators to become part of the installation, as if they are attending a live show. Ahtila's use of multiple screens represents one of the earlier experiments with immersivity in the Nordic art scene.

Over the years, the viewers' position becomes increasingly critical in her multi-screen installations. The artist explains: "A more complex situation is created when the screens surround the viewer. This means that the story unfolds around the viewer and – although the sounds, images and editing will guide her/ him – the viewer will not see all but s/he will need to choose how to follow the story".[632] As I already argued in Chapter 2, multiple-screens setting become a way to play with linear perspective and its perceptual limits. The possibility to create simultaneous action, and continuity among screens enriches the spectators experience, immersing them in multiplied vantage points to "avoid a human-centered approach".[633] I would also suggest that the intrinsic quality of video installations, 'the space-in-between', as delineated by film and video scholar Morse,[634] is really made tangible in Ahtila's works. In fact, she is able to generate a situation where viewers are placed in the middle of the installation space and experience being in the centre of the space on screen and of the plot's events. This creates a situation of immersivity for the

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[630] Eija-Liisa Ahtila, interview by L. Scacco. 15 November 2018.
[631] See Kotz, Liz 2005, "Video Projection: The Space between Screens" in *Theory in Contemporary Art Since* 1985, edited by Z. Kocur & S. Leung, Blackwell Publishing, Malden and Oxford, pp. 101–115; Kivinen, Kati 2015, "From Monitor to Gallery Space", p. 2.
[632] Eija-Liisa Ahtila, interview by L. Scacco. 15 November 2018.
[633] Langhammer, Florian 2017, "How Do We Picture the World Around Us? Eija-Liisa Ahtila in the Studio" in *Collectors Agenda*. See: https://www.collectorsagenda.com/in-the-studio/eija-liisa-ahtila. Accessed 4 February 2022.
[634] Morse, Margaret 1990, "Video Installation Art: The Body, the Image, and the Space-in-Between" in *Illuminating Video: An Essential Guide to Video Art*, p. 154.

spectator. On the other hand, this means painstaking attention to details and meticulous visual planning by the artist.

Ahtila's sculpture *The Tent House* (2004) also revolves around spectatorship but with a different dynamic. (Fig. 61) Built mainly with wood, canvas, and ceramic tiles, this house sculpture has a steel pedestal with a hole and a stool where visitors can place their head and sit in the middle of the art piece as if inhabiting the house. Ahtila allows viewers to enter inside her artwork's space, anticipating the immersivity of her 6-channel projected installation video *Where is Where?* (2008). Being positioned in the middle of the sculpture house, spectators become part of the work as they look out from the interior of the building. Being inside and outside simultaneously, and the different perspectives allow the spectator to plunge into the art piece.

Is there a phenomenological basis in her educational background? Ahtila admits that she read Merleau-Ponty's essays in the 1980s, but she also states:

> "If we are still talking about the installations and their form and the way of narrating, all that rose actually from the tradition of filmic storytelling and personal negotiations with that, as well as trying to find a way to give more space for the means of expression of moving images when creating a narrative. I was very involved in creating a new way of experiencing a story spatially – which then had influences on all different levels of filmic narration".[635]

In general, video installations use the narrative techniques of cinema, although they allow some freedom for viewers in terms of contents and reactions. Kivinen observes how "they create a free-narrative time-space, which, by nature, allows the viewer to have greater autonomy; in the space, the viewer meets a work that is in progress, not yet ready, not predetermined, but a suggestion or a framework for the event and the encounter".[636] The spatialisation of video art seems to be the focus of many Finnish artists in the early 2000s, like Lauri Astala, who states "for me the most important feature (or effect) of video installations is spatiality".[637] Annette Arlander also showed her video trilogy *The Shore* as a video installation with three parallel projections in the group exhibition *Vision and Mind* in Kiasma in 2004.

I would also like to recall an interesting video experiment conducted by Liisa Lounila (b. 1976) about perception and spectatorship at the beginning 2000. She created her films using a homemade device, a sort of pinhole camera that produced a bullet-time effect, where viewers have the impression of moving around a scene at

[635]   Ibidem.
[636]   Kivinen, Kati 2015, "From Monitor to Gallery Space", p. 10.
[637]   Lauri Astala, interview by L. Scacco. 18 October 2019.

normal speed while surrounding events seem to slow down or even freeze. This cinematic special effect appears in one of Lounila's earliest videos, *Popcorn* (2001), where the artist shows the playful relationships of a group of teenagers. This increases the sense of visual spatiality, giving viewers the feeling that they are included in the video piece, or, at least, that they are retracing a lived memory. Lounila creates this experience of suspension of time again in the videos *Play>>* (2003) and *GIG* (2007). From the few examples just mentioned, it is clear that the Finnish artists were looking for new ways to involve and immerse viewers in their video installations.

In Finland, some objections targeted the spatialisation of the moving image, such as that of the artist Teemu Mäki reported in the programme book of the MUU Media Festival.[638] Kivinen notes "the evolution of moving image forms towards space was partly considered an unwanted and populist development that did not seem to develop the audio-visual language of video art as part of the fine arts scene".[639] However, the 1990s were characterised by a large number of Finnish video artists' notable video works, most of them in the form of installation, such as Veli Granö, Laura Horelli, Petra Lindholm, Pekka Niskanen, Anu Pennanen, Seppo Renvall, Jani Ruscica, Pekka Sassi, Santeri Tuori and Salla Tykkä.

3.7 The Experience of Intersubjectivity in the Work of Lauri Astala, Laura Beloff and Hanna Haaslahti

Lauri Astala, Laura Beloff and Hanna Haaslahti are Finnish artists whose work I will examine more closely in the context of intersubjectivity, because they deal with perception and interaction through new media in different ways from the end of the 1990s. In this section, I will highlight the affinities between phenomenology and their artistic practices.

Born in Valkeakoski (Finland) in 1958, Lauri Astala examines the relation between space and vision, and the boundary between the real and the virtual. One of his first works, *Self Seeking – Journey to the Center Point of the Universe* (1999), is a series of digitally manipulated photographs depicting a walk towards the centre of the universe. In those years, Astala was mainly interested in cognitive analysis, but the experience of inside out curved space achieved in his 1999 digital works – "where

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638 See Mäki, Teemu 1998, in "Videotaiteen puolesta" in *MMF X, MuuMediaFestival 98*, 9.10.–18.10.1998, programme book edited by P. Kantonen & H. Tikka, AV-arkki, Helsinki, p. 8.

639 Kivinen, Kati 2015, "From Monitor to Gallery Space", p. 3.

what is outside becomes the inside, and infinity becomes a single point in space"[640] – seems already to foreshadow the phenomenological idea of intertwining or, even better, of chiasm. It appears to combine subjective experience and objective existence. Johansson notes how in this work "from the cosmological world we move into space and time, into the lived, phenomenological space".[641] The idea of circularity of time and space reappears in his first video *As Though Time Was All Around* (2002). Shot between Helsinki and Chicago, it evokes the process of adapting to a place where feelings such as detachment, lightness and complexity arise in the protagonist. Here, Astala looks into presence as a spatial concept. Moreover, the notion of spatiality will become even more important in his art practice in the following years. In 1999–2001, Astala studied at the Department of Experimental Film and Art and Technology Studies at the Chicago Art Institute, which provided him with "a unique platform for learning video/media art (in a historical, theoretical, conceptual, practical and technical context)".[642] After his studies in the United States, the video installation became his favourite medium for exploring the viewer's proximity and participation.

Astala's focus on how visual culture shapes the idea of spatiality continues in his video environments, where the visitor's presence is central, as in *Small Spectacle* (2005–2010), a series of installations where video is the medium through which spectators encounter and face reality. The two installations *Small Spectacle about Nearness* (2005) and *Small Spectacle about Lightness* (2005) focus on the viewers' perceptual experience. The artist plays with the ability of the image to evoke the presence of something that is not there. In particular, he exploits the potential of electronic images, creating a sense of instability and uncertainty in the spectators. In 2005, the art critic Timo Valjakka reports his personal impressions of Astala's installations: "It was simply impossible to look at the works passively and at a distance. They made me conscious of not only my body, but of my perceptions, of the event of viewing in me".[643]

Small Spectacle about Encountering (2005) is a video installation where viewers are reflected in a semi-transparent mirror. (Fig. 62) After a few seconds, a figure appears in the mirror and merges entirely with the spectator's reflection. The artist outlines how "the features of this new hybrid figure are bewildering – the spectator

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640 See *Lauri Astala: As Though Time was all Around. Works 1989–2010*, exhibition catalogue edited by T. Kuutti & L. Astala, Helsinki Art Museum Meilahti, Helsinki, 2010, p. 70.
641 Johansson, Hanna 2010, "Spheres: Apropos of Lauri Astala's Art" in *Lauri Astala: As Though Time was all Around. Works 1989–2010*, p. 34.
642 Lauri Astala, interview by L. Scacco. 18 October 2019.
643 Valjakka, Timo 2010, "Small Text about Lauri Astala" in *Lauri Astala: As Though Time was all Around. Works 1989–*2010, p. 17.

recognizes in them partly him/herself and partly a stranger. Identities melt when identification is hampered".[644] His video installation therefore encourages a feeling of intersubjectivity in visitor experiences. The seated figure in the video becomes a narrator stimulating a relationship between the two identities (the video figure and the real spectator). This monologue is built out of quotations from Blanchot's book *The Last Man* (1957).[645] This immersive video installation emphasizes the variations and contradictions in the perception of the self and in the idea of mirroring in the other. The choice of the term 'encountering' recalls a phenomenological notion and terminology, as does the word 'spectacle', linked to vision and representation, that Merleau-Ponty employs many times in his essays. His philosophical formulations include, for instance, "the spectacle of the world in which relations are found"[646] and "the artist is the one who arrests the spectacle in which most men take part without really seeing it and who make it visible to the most 'human' among them".[647] Astala examines the etymology of the word 'spectacle' in his own articles,[648] demonstrating a deep interest in this concept. Astala's repeated references to the spectator's presence in space seems comparable with both Merleau-Ponty's determination to emphasise the subject as part of the spectacle, and Debord's critique of the passivity and alienation of individuals. According to Merleau-Ponty, the body keeps the spectacle visible, in the sense that in the body one identifies the broad process of perception through which the subject makes sense of reality.[649] The term 'spectacle' is also used by Guy Debord in his well-known essay, *The Society of the Spectacle* (1967), in which the philosopher elaborates on this concept in terms of social critique. If Debord depicts the evolution of a society in which social life has been replaced with its image, Astala, with his *Small Spectacles*, seems to seek human interaction. He is able to create an immersive experience in multi-channel video installations by carefully positioning viewers, without asking them to follow any technical instructions or wear 3D goggles, as in *On Disappearance* (2012), *Apropos of Seeing* (2008), *Small Spectacle about Encountering* (2005) and *Small Spectacle about Image-Semblance* (2005). He reverses the role of the passive and frontal

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[644] Quotation from the artist's website: www.lauriastala.com. Accessed 20 October 2019.
[645] In March 1944, the French intellectual Maurice Blanchot (1907–2003) participated in the "Discussion on Sin" organized by G. Bataille, and attended by A. Camus, M. Merleau-Ponty, J.-P. Sartre, and P. Klossowski, among others.
[646] See Merleau-Ponty, Maurice 1945, *Phénomènologie de la perception,* Gallimard, Paris; Merleau-Ponty, Maurice, *Phenomenology of Perception*, p. X.
[647] See Merleau-Ponty, Maurice 1945, "Le doute de Cézanne" in *Sens et non-sens*, Gallimard, Paris; English transl. "Cézanne's Doubt" in *Sense and Non-Sense*, p. 69.
[648] See Astala, Lauri 2004, "Space, Place, and Presence" in *PTAH*, No. 1/04; Astala, Lauri, "Small Spectacle: A Post-script for the Exhibition", available at: www.lauriastala.com. Accessed 16 November 2019.
[649] See Merleau-Ponty, Maurice, *Phenomenology of Perception*, pp. 235–237.

spectator that is synonymous with the cinema into an active and sentient participant. In addition, the use of the adjective 'small' in his titles brings the 'spectacle' down to an intimate dimension, without denying the centrality of the image in contemporary society.

A reciprocity returns in *Apropos of Seeing* (2008), a computer-aided video installation in which spectators interact with the film narrative as if they were actors. (Fig. 63) Astala explains that "this is done by mixing real-time video images from the viewer's space with a film shot previously. In this way, the spectator is no longer a passive outside observer. The artist deconstructs the traditional notion of cinematic production, where reality is always mediated and has no tangible point of reference".[650] From its title, the work seems to question the enigma of visibility and its dual nature in a contemporary key, because in order to see, the seer must in turn be capable of being seen. In this immersive work, Astala's intention is "to break the reality of traditional cinematic black cube, in which reality is mediated and an absent reference, and where the role of spectator is limited to an outside and passive observer".[651] Once more, the viewer's interaction with representation is enhanced. Astala seems to contrast Debord's idea of the passive spectator with the interactive possibilities of media art, but also to refer to the embodied spectatorship of Merleau-Pontian thought. Phenomenology enables us to attend to the intertwined relationship between spectators and the artwork through the phenomenon of reciprocity. In my interview, Astala confirms his affinity to this Merleau-Pontian concept with the following words:

"I think that reciprocity is a key aspect of this and many of my other immersive installations. *Apropos of Seeing* creates a mirror-like setting (…) perhaps transforming the spectator to the position of being simultaneously the 'other'. In *On Disappearance* or *Small Spectacle about Encountering* the reciprocity is even more underlined with the monologue referring to and questioning their mutual position and shared situation".[652]

In *Phenomenology of Perception*, Merleau-Ponty dedicates a chapter to the life of human beings, [653] in which he highlights the dialogical experience as a "shared operation" and a "dual being".[654] With his interactive environments, Astala tries to materialise this world of interrelationships.

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[650]   Scacco, Lorella, 2009, *Northwave: A Survey of Video Art in Nordic Countries*, p. 203.
[651]   Quotation from the artist's website: www.lauriastala.com. Accessed 25 October 2019.
[652]   Lauri Astala, interview by L. Scacco. 18 October 2019.
[653]   I refer to the chapter titled "Other Selves and the Human World" (pp. 403–425).
[654]   Merleau-Ponty, Maurice 1945, *Phenomenology of Perception*, p. 413.

In the early 2000s, the artist became familiar with some parts of Merleau-Ponty's *Eye and Mind* and several articles about his philosophy. He states that phenomenology "was a strong topic in Finland (…) Nevertheless, I think that it became more relevant for me after returning from Chicago, where I studied 1999–2001".[655] Generally speaking, Astala has many links with French culture, perhaps underpinned by spending many months in France every year.

Spatiality had been another important issue for Astala from the earlier years of his activity. Multimedia technology enabled him to abandon cartography with its flat maps or spherical globes, and to find new ways to represent the varied spatial relationships with the environment. In one of his articles, Astala explains:

> "My art has always dealt with notions of space, especially in the relation of spaces or images. Earlier I was fascinated with modelling of space cartographic and cosmological models as abstractions of physical reality. However, the perspective of the *Small Spectacle e*xhibition is rather based, physically and reflectively, in how we experience space. On one hand, the theme of the exhibition grew from a need to contemplate the concept of *image-semblance* of space. By this I mean the *image-like* characteristics of spatial experience in phenomenological sense. On the other hand, the works deal with the issue of presence vs. absence, both as spatial concern and as a question of confronting *the other*".[656]

However, Astala's fascination for geographical maps and cosmological models resonates with the circularity of some media art environments. In terms of spatiality, as I analyse in Chapter 4, 360-degree visions are indeed linked to planetariums and the spatial idea of the cosmos. In the next chapter, I will describe other artworks by Astala related to this theme.

Astala analyses perception in relation to new technologies in his article "Space, Place, and Presence", where he mentions the philosophers Benjamin, Virilio, and Foucault, testifying his careful consideration of philosophical issues. In this article, Astala pays attention to changes in the notion of visual perception, from a static to that of a panoramic gaze, via the railroad travel as perceptual preconditions of cinema. These observations document his constant interest in human perception and in the evolution of technologies.

Laura Beloff (b. 1964) is an artist and researcher who works between academic teaching and research. She realizes wearable objects, programmed structures and

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[655] Lauri Astala, interview by L. Scacco. 18 October 2019.
[656] Astala, Lauri, "Small Spectacle: A Post-script for the Exhibition", p. 2, in the artist's website: www.lauriastala.com. Accessed 18 November 2019.

participatory, networked installations, by combining technology with several mediums. These range from video and sound to sculptural and organic materials, from mobile technologies to textile.

In the first years of her research, Beloff focused on the responsiveness of a system in real-time, on interrogating how an individual moves in an online environment and their presence in the universe. These aspects are present in her wearable works *Heart Donor*, *Seven Mile Boots*, and *Appendix*. Wearable technologies are sophisticated electronic devices increasingly present in everyday life. They interact directly with the human body, with which they usually are in contact, and enable the detection, storage and exchange of data via wireless network system or Bluetooth technology. These technologies have evolved out of digital tools, new materials, and the miniaturisation of components.

Heart Donor (2007), a wearable work Beloff created in collaboration with Erich Berger and Elina Mitrunen, demonstrates some phenomenological features. (Fig. 64) Custom built hard/software, textile, and a mobile phone form an interactive vest, which ironically resembles a life jacket. When viewers wear it, the vest records and stores their heartbeats. This artwork deals with concepts such as intimacy, sensitivity, memory, and awareness. *Heart Donor* invites the visitor to be a performer awakening his/her consciousness. This wearable work metaphorically recalls the telematic embrace proposed by media artist Roy Ascott[657] in his paper "Is There Love in the Telematic Embrace?" (1990). At the time, this article addressed the art critics afraid that technology would dehumanize visual art.[658] Instead, wearable technology in art seems to convey and amplify perceptions and emotions synonymous with daily life.

Seven Mile Boots (2004) is another work between digital and physical. (Fig. 65) The user who is wearing the boots, designed by Beloff in collaboration with Berger and Martin Pichlmair, can walk in the physical world and around the Internet whilst listening to various chats. The work brings together real people in real-time, or rather, in 'real life'. Her wearable artworks link the sensory realm with a wirelessly networked body that has regained its mobility. Here, Beloff clearly shows her interest in the concept of real-time. In addition, these two wearable artworks seem to function like the blind man's stick, as Merleau-Ponty describes in *Phenomenology of Perception*: "The blind man's stick has ceased to be an object for him, and is no

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[657] Ascott was one of Beloff's supervisors for her doctoral research at the University of Plymouth. Since the 1960s, Ascott has been researching interactive computer art and telematic art.

[658] Ascott, Roy 1990, "Is There Love in the Telematic Embrace?" in *Art Journal*, Vol. 49, No. 3, pp. 241–247. In the same years, Nam June Paik was promoting a similar purpose. These may be symptoms of the resistance of the humanities in encompassing electronic arts.

longer perceived for itself; its point has become an area of sensitivity, extending the scope and active radius of touch, and providing a parallel to sight".[659] She captured this Merleau-Pontian topic through the post-phenomenologist Don Ihde, who argues about extension of the body with technology.[660] Essentially, Beloff's networked works demonstrate how new technologies may amplify possibilities in the digital and the physical world. A digital artefact is not merely an extension of a human, but it merges with the body enhancing our awareness and knowledge of the environment in a networked world.

In *Appendix* (2011) the artist again attempted to modify the user's experience. The work is a networked tail designed and realized for a human being. In it, Beloff creates connections that may not make sense to the user, creating instability and raising questions. The movements of the tail are caused by real-time data from the Helsinki transport system. Beloff explains that "although this technological device will become part of the users' physiological body, the control of its movement is triggered by natural phenomenon and by a human-constructed artificial system. This networked wearable device is both part of the user's body and part of the environment".[661] The lack of purposes and the fortuity of these connections may push the user towards new horizons in terms of significance and use. With her wearable works, she alters the user's perspective from an ordinary to an extraordinary one. Beloff investigates how wearability affects our perception and relation to technology and reality. In these three networked works, Beloff activates the haptic sense and motility.

Referring to Merleau-Ponty's notion of flesh in the context of wearable technologies, the scholar Suzan Kozel notes: "With wearables we can connect with ourselves, with another, or with a wider group of people. This poses the question of whether they fall into the domain of locative media and invites debate from geographers as well as locative media artists and designers".[662] Beloff's wearable technology touches on design, topography, mobile media, and psychology. The artist's research takes place at the crossover of art, technology, and science. In the artist's words: "My art practice belongs to the domains of experimental art titled art & science – in the nexus of art – science – technology. My work challenges the borders of traditional art genres but also explores methods, mediums and

[659]   Merleau-Ponty, Maurice 1945, *The Phenomenology of Perception*, p. 165.
[660]   Laura Beloff, interview by L. Scacco. 25 September 2019.
[661]   Beloff, Laura 2012, *The Hybronaut and The Umwelt: Wearable Technology as Artistic Strategy*, University of Plymouth, Doctoral dissertation, April 2012, pp. 16–17. Available at: https://pearl.plymouth.ac.uk/handle/10026.1/1247. Accessed 15 February 2020.
[662]   Kozel, Suzan 2008, *Closer: Performance, Technologies, Phenomenology*, The MIT Press, Cambridge, MA, p. XIX.

technologies that are sometimes developed within sciences".[663] Beloff's idea to expand and share encounters in art and science returns in *Fruit Fly Farm* (2006), a work that connects audience, the user of the work and non-human organisms – fruit flies. Beloff explains that "all of these parts affect each other and form a system within the context of the hybrid environment".[664] In recent times, her interest focuses on combining digital/technological and biological matter "with a development of ideas that explore technologically formed relations to physical/biological environments and also to non-human organisms. This interest also includes biotechnologies".[665]

Beloff asserts that she encountered phenomenology in the late 1990s, but only engaged with it at the beginning of the 2000s. She states: "Merleau-Ponty was obviously interesting to anyone who worked with human body, behaviour and technology. However, I was never really directly referencing him within my works".[666] Her wearable artworks definitely show links with phenomenology, like the emphasis of the haptic sense, the participation of the body, the phenomenon of reciprocity and the sense of otherness. In an interview, Beloff explains that she grew close to phenomenology thanks to the post-phenomenologists, and that her major inspirators in the field of philosophy are Virilio, Ihde, John Dewey and Peter-Paul Verbeek.[667]

Beloff is particularly interested in Verbeek's ideas on 'technological intentionality'. The Dutch philosopher has been inspired by Ihde's work on the relations between people and technological artifacts and has developed Ihde's notion of 'mediated intentionality'. After a brief introduction of the concept of intentionality in phenomenology, Verbeek identifies three kinds of "cyborg intentionality" that imply a combination of the human and the technological. He affirms: "Technological development has reached a stage in which technology has started to interfere explicitly with the nature of human beings. Intentionality used to be one of these concepts which belonged to the realm of the exclusively human, but by now it has become clear that it needs to be extended to the realm of technology – and to the realm of human – technology amalgams".[668] Verbeek's statement very closely

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[663] Beloff, Laura 2019, "Artist Testimonials" in *Digital Dynamics in Nordic Contemporary Art*, p. 61.
[664] Beloff, Laura 2012, *The Hybronaut and The Umwelt: Wearable Technology as Artistic Strategy*, p. 44.
[665] Beloff, Laura 2019, "Artist Testimonials" in *Digital Dynamics in Nordic Contemporary Art*, p. 51.
[666] Laura Beloff, interview by L. Scacco. 25 September 2019.
[667] Ibidem.
[668] Verbeek, Peter Paul 2008, "Cyborg Intentionality: Rethinking the Phenomenology of Human-Technology Relations" in *Phenomenology and the Cognitive Sciences*, Vol. 7, No. 3, p. 394.

relates to Beloff's late research, which investigates "technologically formed relations to physical/biological environments and also to non-human organisms"[669] and which also includes biotechnologies. Phenomenological concepts are once again re-elaborated according to contemporary needs.

Hanna Haaslahti (b. 1969) is a media artist who has worked with interaction since the early 1990s to comprehend how computers shape social relations. She states: "Scientific research on perception, vision and machine learning/artificial intelligence inspires me, as well as everyday observations about human life in the age of machines".[670] She was one of the first to study the new discipline of media art at the Lahti Institute of Fine Arts.[671] She travelled to Chicago for further studies in computer-aided design. Her familiarity with digital media led her to create interactive installations, which she prefers to realize devoid of sound because the soundscape may change the reception of the image.[672]

Haaslahti's early interactive works include *White Square*, displayed at Kiasma in 2002, which focuses on the duality of the human body. The scholar and art critic Maria Hirvi-Ijäs describes how "it gave viewers a chance to step into a white square and, by moving around, to develop a spatial interaction with the shadows they created. Despite their immateriality, the shadows began to live a life of their own, with the viewer, and the experience transcended the technology both physically and spatially".[673] For Haaslahti the shadow represents simultaneously presence and absence, the real and the virtual, key topics of the latest media generation.

In 2013, *Sincere Lies*, an exhibition project produced with the Sinebrychoff Art Museum in Helsinki, engaged the visitors in many ways. (Fig. 66) Being in a museum specialized in Old Masters of European art, the artist selected some paintings from the historical collection to light with video projections. Haaslahti chose forgotten and rejected artworks, onto which she projected overlapping episodes and bodies imbued with stories. This mixed perception discloses hidden meanings in the various visual layers. One could consider this a sort of semi-immersive space,[674] because viewers are the key factor. Through these projections, Haaslahti stimulated unfamiliar physical and psychological relations between the perceivers and paintings. This encounter with an unusual scenario encourages the

[669]   Laura Beloff, interview by L. Scacco. 25 September 2019.
[670]   From the artist's website: www.hannahaaslahti.net. Accessed 12 October 2019.
[671]   Hirvi-Ijäs, Maria 2014, *22 Ways: On Artistic Thinking in Finnish Contemporary Art*, Parvs, Helsinki, p. 34.
[672]   See Toppila, Paula 2008, "Discussion with Paula Toppila and Hanna Haaslahti" in the catalogue *Phenomena,* Pori Art Museum, Pori, p. 127.
[673]   Hirvi-Ijäs, Maria 2014, *22 Ways: On Artistic Thinking in Finnish Contemporary Art*, p. 34.
[674]   Hanna Haaslahti, in conversation with L. Scacco. 7 October 2019.

creation of personal narratives in the interactor. Even the space of the museum rooms seems to expand with the appearance of these interactive projections.

These interactions, that could function like a chiasm, an overlapping, resonate with a Merleau-Pontian approach. Haaslahti states: "I am interested in the phenomenological human body and the incorporation of the physical person into the process of understanding and meaning attribution".[675] She asserts that Merleau-Ponty was her first philosophical focal point, discovered via a friend in the 1990s, when the translation of *Eye and Mind* in Finnish had just been published. She states that Merleau-Ponty stimulated the idea of crossed double, of the position of the audience and of the workings of the perceptual experience. Other interesting sources for her research were the study of Gestalt psychology, the American psychoanalyst Jessica Benjamin and the notion of 'holon' used by the writer Arthur Koestler in his book *The Ghost in the Machine* (1967). Her reading choices demonstrate her focus on intersubjectivity and unity that she tries to reproduce with real-time.[676]

In her latest participatory installation, *Captured* (2019), Haaslahti creates artificial worlds where viewers become actors and spectators simultaneously. (Fig. 67) Here, spectatorship has a dual aspect, because the viewer is simultaneously spectator and participant. This work probes new narrative platforms by capturing the viewers' faces and creating new identities for them in a collective and virtual storyline. With this narrative simulation, Haaslahti aims her attention targets bullish and racist attitudes to represent social injustice. She explains that "*Captured* enables people to step into a virtual world as a digital double, making them actors and spectators at the same time. The doubles participate in a simulation depicting an unsettling cyclical performance of social humiliation, each becoming a character in one of the groups composing together the bullying triangle, the Bully, the Target or the Bystander". This work deals with real-time simulation, influenced by videogames and tutorials. The artist pays attention to the lifestyle of children and teenagers. She expands on this: "*Captured* is an on-going research project about inhabiting the image, extending our physical likeness in virtual realities and simulations. The project explores new ways of telling stories, hyper-realistic capturing and 3D modelling technologies and their effects and social implications on human relationships". [677]

The question of self-representation had already been investigated by Haaslahti in 2004 with the installation *Scramble Suit*, exhibited in the group exhibition *Wireless Experience* at Kiasma for the annual International Symposium on Electronic Art (ISEA). Here, users encountered their own image in a real-time

[675]   See Toppila, Paula 2008, "Discussion with Paula Toppila and Hanna Haaslahti", p. 128.
[676]   Hanna Haaslahti, in conversation with L. Scacco. 7 October 2019.
[677]   Quotes from the artist's website: www.hannahaaslahti.net. Accessed 19 October 2019.

projection and are attacked by a digital figure who tries to take control of the entire scenario.[678] It focuses on the vulnerability of our self-representation, which could be pulverized quickly by an external personality.

Haaslahti's 2006 *Space of Two Categories* also examines issues of control and domination. (Fig. 68) In this case, interactivity happens on the projection screen when shadows diffused by visitors function as containers holding the figure of a child playing in the dark. The visitor appears to control the child's movements. Although shadows have generally been disregarded in Western art from the Renaissance to the seventeenth century, they are a recurring topic in Haaslahti's artworks. Gombrich observes that cast shadows could be linked to modern art, because in Romantic, Impressionist, and Surrealist paintings shadows are used to increase the effect of tragedy in their artworks.[679] Being a contemporary artist, Haaslahti problematizes the shadow in an unusual way when she explains:

"Shadows are a universal phenomenon, a basic element. Everyone recognises a shadow, and the fact that it is open to so many interpretations makes it easy to work with. Shadows echo the double-identities we live with today, as we have extended our existence beyond our physical selves to virtual entities. I think it's important to remember that the two worlds are interconnected, that cyberspace is not just a mirror world. Things that happen in the bit-world influence the physical world".[680]

Just like cast shadows appear in the material world, so the digital sphere influences the human environment. The shadow gains therefore a new metaphorical meaning in contemporary art practices.

Haaslahti often sets up scenes for the people to enter and interact with. In *Time Experiment* (2007) she played with the concept of real-time generating a temporal delay in the space. As she describes:

"One wall of the space is converted into rear projection screen, which reflects the events in the space in real-time and with delay. People see themselves walking in the space, but at the same time they are memorized in short sequences which remain looping in the space. The flow of reality is spliced into short random loops, which can be seen as a keyframes. The loops become tools for

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[678]   See *ISEA 2004: Wireless Experience,* edited by P. Rastas, Museum of Contemporary Art Kiasma, Helsinki.

[679]   See Gombrich, Ernst H. 1995, *Shadows: The Depiction of Cast Shadows in Western Art*, National Gallery, London.

[680]   Pentikäinen, Matti 2011, "What's Your Shadow Up To" in *Framer*, No. 1/2011, p. 70.

ephemeral social play. Our past swarms around us and becomes a three-dimensional space, where other people can walk through".[681]

She explores the possibility of a real-time installation in the cityscape too. *Air Hunger* (2010) was displayed in Helsinki, Brussels, and Linz on the occasion of media art festivals. Haaslahti used the plinths of public statues as projection surfaces. Normally used to elevate monuments above the human level in public spaces, in *Air Hunger* they became sites of interplay. The interactive projections of a real-time landscape were generated by breathing patterns of people wearing wireless belts made by the artist. Haaslahti describes how the work functions:

"The principle of breathing landscape is simple. Inhaling creates rising contours and exhaling descending contours on the landscape. The breath generated landscape carries a lonely walker that proceeds along the slopes and hills created by people. In each city, the walker is different, depicting something absent from that particular location. Instead of being identified with the character, people create conditions for his ephemeral journey".[682]

The severe and monumental profile of contemporary cities turns into a surface where audience can overlap private, vital, and invisible human functions. In general, her approach to technology is in line with the activity of media ecology in analysing how media and technology affect society. Haaslahti deals with the structure and the content of the human environment and creates interactive storytelling to increase this human-machine collaboration.

Investigating the art practices of Ahtila, Oja, Astala, Beloff, Haaslahti and other artists show how visitors have been immersed in a range of sensory experiences in Finland since the 1990s. The advent of digital technologies changed viewing practices, and consequently perception. Artists were increasingly interested in staging an embodied spectatorship. How influential was phenomenology on this shift? The American aesthetic experience of expanded cinema together with a renewed interest in phenomenology in the 1990s in the Northern area affected Finnish, or more generally, Nordic artists. Video art installations became a cross-system of relationships: the encounter between the viewer's gaze and the moving images, the notion of space-time, and the experience of a surrounding space shaped by the context. Moreover, the post-modernist generation of philosophers, especially those who grew up in France, spread phenomenological ideas, translated

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[681] Quotation from the artist's website: www.hannahaaslahti.net. Accessed 20 October 2019.
[682] Ibidem.

phenomenological texts and new studies in Finland. It could be said that the phenomenological endeavour was broadly used as an alternative model, interacting with other theoretical paths, to examine how to study video art and film experiences and the nature of spectatorship in video environments. In Finland, even in painting, in 2006 Silja Rantanen entitled a series of her paintings *Artist and Spectator* (Taiteilija ja katsoja), and only five years later, in the theoretical publication *Three-Dimensional Projection – Situation Sculpture between the Artist and the Viewer* (2011), Oja analysed the relationship between the artist and the viewer trying to map the spatial boundaries of the moving image. Astala and Haaslahti very carefully positioned the spectator in their video installations. Despite the critical observation of the artist and independent curator Roi Vaara, who sheds light on the delayed assimilation of phenomenology in Finland in comparison to other nations,[683] these artistic examples show how a phenomenological interpretation of spectatorship was widespread in the 2000s in Finland.

3.8   Ambience of Porous Perception: Tuomas A. Laitinen, Erkka Nissinen

In this subchapter, I describe the art research of the Finnish artists Tuomas A. Laitinen (b. 1976) and Erkka Nissinen (b. 1975) into immersive environments in Finland.

   Born in 1976 in Riihimäki (Finland), Tuomas A. Laitinen works with a range of media such as 3D animation, moving images, augmented reality, sound, light, glass, and chemical and microbial processes, which he fuses together in installations. The Finnish artist is also interested in artificial intelligence to investigate "human and more-than-human-coexistence".[684] His creations have led him to collaborate with several experts, from neural network researchers to glass artists.

   Since the beginning of his artistic practice, Laitinen attempted to avoid Western dualistic thinking in search of unusual models of diversity, with the notion of the interrelation of beings at their core. The artist affirms: "I've been using the concept of porosity as a kind of counter-argument against binary thinking, where things are

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[683]   Based in Helsinki, Roi Vaara is one of Finland's most internationally recognized performance artists. Starting from the early 1980s, he frequently travelled internationally to present his performances. I quote a part of Vaara's statement published in the "10th Anniversary Supplement" in *FRAMEnews*, No. 2/2002, p. 7: "Art discussions of the last ten years have focused on addressing questions about the viewer's viewpoint and about the viewer as participant. These fundamental issues were already investigated and demonstrated in the 1960s."
[684]   From the artist's website: http://www.tuomasalaitinen.com. Accessed 20 November 2019.

typically put into clearly defined categories".[685] His approach is closer to the Merleau-Pontian aim of dismantling the Cartesian duality of subject and object, and, more generally, to the phenomenological *epoché*, a suspension of judgement in opening up to diversity. Laitinen extends this concept to include the exploration of the non-human agencies. The artist defines his approach to artistic research as 'phenomenological'.[686] He focuses on embodied relationships, porosity and osmosis to underline the absence of boundaries between body and language.[687] This attitude recalls the concepts of intertwining and chiasm that Merleau-Ponty describes in *The Visible and the Invisible*.[688] One paradigmatic example of a chiasmic relationship is the body's doubling into sensible and sentient during self-touching.[689]

Working in this sensitive direction, Laitinen's installations evoke a chiasmic encounter, such as *Conductor*, *Receptor* and *Contamination*. Laitinen affirms: "I'm interested in how things and their relationships can be treated so that they freely flow and filter into each other, thus building entanglements between different topics and substances".[690] The four-channel film installation *Conductor* (2014–2015) investigates the transformation of substances and the shifts in the power structures of the universe. (Fig. 69) The subject of the piece is copper, a conductor of basic energy and a sign of economic development. Copper has a long history in alchemical traditions but is also a basic material in our communities. *Conductor* is accompanied by the ultrasonic sound piece *Sweet Spot of No Escape* (2014). Two performers interact with the audience in the space via waves of pre-recorded sound. The result is a compilation of reconstructed electronic messages on the topic of copper mining and the presence of the element in an organism. Laitinen describes a "phenomenological environment with performer, an open possibility, the notions of participation and movement" because "there are no boundaries or frames between body and language".[691] Indeed, Laitinen often uses horizontal and vertical layers to project his videos to evoke associations with fluidity.

The video installation *Receptor* (2016–2017) explores the haptic interaction with materials or the transmission that takes place whenever people touch something. The curator and art writer Jenni Nurmenniemi comments that "this multi-part, immersive

[685] See: https://helsinkicontemporary.com/artist/tuomas-a-laitinen. Accessed 3 February 2020.
[686] Tuomas A. Laitinen, in conversation with L. Scacco. Helsinki, 6 April 2018.
[687] Ibidem.
[688] See Merleau-Ponty, Maurice 1964, *Le Visible et l'invisible*, Gallimard, Paris; English transl. *The Visible and The Invisible*, Northern University Press, Evanston 1968.
[689] Ibidem. See Chapter 4, "The Intertwining – The Chiasm".
[690] See: https://helsinkicontemporary.com/artist/tuomas-a-laitinen. Accessed 3 February 2020.
[691] Tuomas A. Laitinen, in conversation with L.Scacco. Helsinki, 6 April 2018.

video installation is presented as a modular architecture exploring the relationship between touch and knowledge and the various ideas associated with different kinds of haptic experience".[692] The artist explores this hybrid field because in the future "haptic-based technologies may one day even enable us to experience things that would otherwise remain beyond our realm of capability".[693] This is reminiscent of Merleau-Ponty's "the Blind Man's Stick" as an extension of human faculties, and its re-interpretation by post-phenomenology, but it promises hybrid developments and cutting-edge practices in visual art. Moreover, the porous interconnectedness of body, language, and substance within morphing ecosystems in his artistic practice reminds of the Merleau-Pontian notions of the chiasm and the phenomenon of reciprocity. The latter is also emphasised in the work's title, which refers to reception, acceptance, and encounter.

The video piece *Azure Dunes (for J. G. Ballard)* from 2015 revolves around ecological themes. Laitinen created a blend of desert scenery and the textures of azurite – one of the minerals from which copper can be extracted. The spectator is invited to dive into a blue landscape. Dedicated to the author James Graham Ballard and his post-apocalyptic novels, the video animation highlights the changes to ecosystems and the exploitation of natural resources caused by human activities. *Contamination* (2015) is a 3D animation and video installation that also deals once with the problems of air pollution, climate change and the consequent transformations in our bodies.

Sensory Adaptation Devices (2015) is a series of works including sculpture, video, installation, and sound. Here, the artist speculates on the circulation of knowledge, resources, and raw materials in the course of human history. He analyses how the use of certain materials transforms the human sensorial experience of the universe and affects the perceptual relationship with the environment. If one material catalysed a certain form of sensory alliance, as in a kind of intentionality in nature, then "human civilisations have evolved along with the constant introduction of new technologies based on particular materialities".[694] The notion of transition is conveyed again in *Dossier of Osmosis* (2018), a multifaceted installation that was exhibited at the 21st Sidney Biennial. This work recalls the shape and functions of a games table,[695] where many layers, perspectives and micronarratives are triggered by various biochemical processes, ultrasonic sounds, and forms of language.

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[692]   Nurmenniemi, Jenni 2017, "Tuomas A. Laitinen" in the catalogue *ARS 17: Hello World! Art After the Internet*, edited by L. Haapala, E. Aarnio & J.-P. Vanhala, Finnish National Gallery / Museum of Contemporary Art Kiasma, Helsinki, p. 117.

[693]   Ibidem, p. 118.

[694]   From the artist's website: http://www.tuomasalaitinen.com. Accessed 22 February 2020.

[695]   Tuomas A. Laitinen, in conversation with L. Scacco. Helsinki, 6 April 2018.

In 2016, Laitinen turned his attention to non-human minds and to the 'habitat cascade', an expression that alludes to the shaping of a habitat by one species that in turn produces the living requirements for another life form. The artist seeks to create a situation where such an interaction can take place. The video *Dossier of Tentacular* (2018) and the cycle of works *Proposal for an Octopus* (2019) extend the artist's interest and exploration of interactions to the non-human domain. He observes how an octopus interacts with a transparent structure, delving into its interstices and inhabiting its glass mass. Laitinen explains his research in progress: "into the mythological associations and material properties of copper, an element found in octopus blood due to the presence of the eponymous protein instead of haemoglobin, giving it a blueish hue".[696] The octopus symbolises the notion of flexibility, adaptability and creativity and so does water as it takes on the form of whatever container holds it. Laitinen was interested in the octopus because it moves skilfully around a realm in perpetual motion. This mollusc has the ideal requisites to be studied by the artist in relation to cognition and consciousness. The glass objects made for octopuses and other related video and audio works are the result of his research into this mollusc and its flexible arms. Glass is also a metaphor for different states because glass is liquified sand.

Laitinen's research has also been inspired by the feminist phenomenology of Donna Haraway[697] and her criticism of anthropocentrism. She addresses the self-organizing qualities of nonhuman processes and investigates the discordant relationships between those and cultural practices, thus rethinking the sources of ethics.[698] Another important reference for Laitinen is the American theorist Karen Barad and her book *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (2007). The theoretical physicist Barad proposed the notion of entanglements, and of specific intra-activities between 'social' and 'natural' agencies. This inexhaustible dynamism continuously reconfigures new relationships between space, time, and matter. Barad questions how these intra-actions change nature and culture over time.[699] Laitinen's research aligns with entanglement, transition, transformation, and phenomenal learning,[700] which were inspirational for *A Proposal for an Octopus* (2019). In a recent interview, he stated that "this series of works emerged from a trajectory of intra-active and

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[696] Watson, Mike 2019, "Tuomas A. Laitinen: Habitat Cascade" in *ArtReview*, September 2019, p. 95

[697] Tuomas A. Laitinen, in conversation with L. Scacco. Helsinki, 6 April 2018.

[698] See Connolly, William E. 2013, "The 'New Materialism' and the Fragility of Things" in *Millennium: Journal of International Studies*, No. 41, June 7.

[699] See Barad, Karen 2007, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*, Duke University Press, Durham, NC.

[700] Tuomas A. Laitinen, in conversation with L. Scacco. Helsinki, 6 April 2018.

diffractive research (taking clues from the concept of theorist Barad), going toward layered ecosystems of knowledge, where matter and language exist in a constant symbiosis".[701]

Born in Jyväskylä (Finland) in 1975, Erkka Nissinen creates video installations, performances, paintings, and drawings. Nissinen studied at the Slade School of Fine Art in London and in 2001 completed an MFA at the Academy of Fine Arts in Helsinki. He now lives and works between Helsinki, New York and Amsterdam. His peculiar surreal films have been shown throughout the world and have received wide attention. In Finland, he won the AVEK Prize for media art in 2013. He also represented Finland at the Venice Biennale in 2017 together with English artist Nathaniel Mellors (b. 1974).

In the video piece titled *Material Conditions of Inner Spaces* (2013), Nissinen uses high-definition video images combined with digital animation with a DIY aesthetics. (Fig. 79) He uses sound and language from musicals, soap-operas, and slapstick comedies. The writer and editor Harry Thorne notes that "the characters are broadly recognisable – a wealthy American, his bored wife – but the dialogue is strange and stilted. Throughout, Nissinen sings childish songs in English, with his strong Finnish accent".[702] The artist demands that viewers playfully contemplate the non-existent line between tasteful and tasteless. His unpredictable sense of humour and excess challenge viewers' preconceptions as well as their ideas of good and bad taste. This approach shows that the concept of spectatorship has been critically considered by the artist.

Nissinen created the multimedia installation *Aalto Natives* (2017) with Nathaniel Mellors. (Fig. 70) It is a sort of amplified example of involvement with spectators and was exhibited to represent Finland at the 2017 Venice Biennial. Here, the immersive environment generated an overwhelming sensory experience throughout the entire space. The pavilion, designed by the architect Alvar Aalto, contained two animatronic puppets: a talking head called Geb and the box-headed Atum. A video showed a version of Finnish history in four parts: creation and prehistory; Atum's arrival in Finland; his quest to investigate 'the real Finland' and an encounter between Atum and Muta, a Neanderthal who lived in Finland. Nissinen and Mellors indirectly referenced the Finnish national epic poem Kalevala and a formula for a Social Democratic welfare state. Within this framework, the artistic duo critiques human nature, religion and the fetishization of progress. Thorne noted that "with

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[701] Ramos, Filipa 2020, "'Haemocyanin:' Interview with Tuomas A. Laitinen" in *Vdrome*, 17–31 March 2020. Accessed 20 April 2020.

[702] Thorne, Harry 2017, "57th Venice Biennale: Giardini Part 1" in *Frieze*, 10 May 2017. Available at: https://frieze.com/article/57th-venice-biennale-giardini-part-1. Accessed 12 April 2020.

their hallucinatory dream-sequence, Mellors and Nissinen reframe concepts such as religion and cultural production and reveal the ludicrous principles upon which they are based".[703] They immersed the public in a visual spectacle, in an immersive theatrical experience by a synchronizing analogue and digital tool – such as HD videos of Muppet-style puppeteering, 3D computer-generated imagery (CGI), and hand-drawn stop-motion animation. They also merged methods and allegories borrowed from theatre, TV situation comedy and science fiction. For both artists, comedy is an extremely valuable artistic genre for communicating with an audience. Nissinen states: "I'm naturally drawn into comedy, to a grotesque humour. It's a very clear indication if something is working or not. I want people to have some kind of response to my work – if it's funny then you know it's doing something".[704] While showing different Finnish stereotypes, the artists approach to exploring the concept of identity and nationality is bizarre. Mellors asserts: "We're interested in making room for some kind of cognitive dissonance, or ridiculousness, or being politically incorrect".[705] Visiting the installation at Aalto pavilion, the audience experiences an ambience of porous perception, because the whole installation is constructed on different projections, dialogues and motions in the same environment.

An interesting parallel could be drawn between cinéorama projections and the *Aalto Natives* (2017) installation. The video installation, with the sculptural egghead Geb talking to the projected box headed Atum, recalls the projection scheme of the cinéorama, an early experiment film technique from the end of the nineteenth century. (Fig. 71) It combined panoramic paintings and the technology of cinema. With a similar intent, artists combine multi-projections with sculptures and installations in a room. Using an approach inspired by media archaeology, one could state that there are historical layers of media that intertwine in contemporary artworks.

In 2017–2018, the duo's installation *Transcendental Accidents (The Aalto Natives)* dealt once more with themes such as social interaction, violence, media and cultural systems. It is a single channel video, where the characters Geb and Atum return to see how civilization had developed and are placed in weird and mysterious backgrounds reminiscent of surrealist landscapes populated by automatons. The visionary and irreverent imagery of Nissinen and Mellors, who mix several figurative registers including drawn animation and 3D representation, is a caustic

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[703] Ibidem.
[704] Jeffreys, Tom 2017, "The Aalto Natives: An Interview with Erkka Nissinen and Nathaniel Mellors" in *FRAMEnews*, 23 February 2017. Available at: https://frame-finland.fi/en/2017/02/23/the-aalto-natives-an-interview-with-erkka-nissinen-and-nathaniel-mellors/. Accessed 19 February 2020.
[705] Ibidem.

comment on the political, social, and ethical aspects of contemporary human society. (Fig. 72)

3.9   Media Archaeology and Immersiveness in the Finnish Art Scene

In 1990, the Finnish media historian and theorist Huhtamo described the interactive nature of video installations, as they require visitors to experience them.[706] Today the audience can be involved so that they become an integral part of the work. In the last two decades, interactive technologies have indeed radically enriched the expressive possibilities of video installations, activating different kinds of responses to the specific behaviours of spectators. The viewer can be induced to perform a specific action (e.g., touching one area of the installation) or, simply by moving in the space, unknowingly activate the process of a part of a video installation or of an immersive art environment. In these cases, the presence of the visitor is a prerequisite for the work "to exist". In 2018, the inauguration of the new Amos Rex Museum in Helsinki, a new venue at the forefront of immersive exhibitions in Finland, documented the growing success of interactive media art, which Huhtamo supported and curated in his early career.

A parallel can be drawn between immersive art environments and the concepts that ground the Cabinets of Wonder, also known as Wunderkammer, that emerged in the sixteenth century. The word 'cabinet' originally defined a room rather than a piece of furniture where objects belonging to geology, ethnography, archaeology, botany, historical relics, artworks and antiquities were accumulated by collectors and experts of science and showed as collections to their guests. The 1599 engraving by the apothecary Ferrante Imperato shows such a cabinet containing many objects of different kinds, from the vaulted ceiling to the walls, to impress and fascinate visitors with an 'immersion' in elements. (Fig. 73) Huhtamo also employs an approach similar to that of the cabinet of curiosities, where tactility was encouraged, to illustrate a story of interactivity and the anti-tactile tradition of the museums.[707] The last two observations legitimise adopting media archaeology and its approach to interpret new and emerging media through a close analysis of the past.

Erkki Huhtamo is one of the founders of the innovative field of media archaeology,[708] which attempts to interpret current media through their past,

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[706]   Huhtamo, Erkki 1990, "Twenty Fragmentary Thoughts about Video Installation" in *Interface: Nordic Video Art*, pp. 18–23.

[707]   Huhtamo, Erkki 2007, "Twin-Touch-Test-Redux: Media Archaeological Approach to Art, Interactivity and Tactility" in *MediaArtHistories*, pp. 75–79.

[708]   In addition to Huhtamo, Thomas Elsaesser, Siegfried Zielinski, and Wolfang Ernst were among the first scholars to propose theories and notions of media archaeology.

especially through the study of forms of entertainment and popular commercial media such as film and television. Researching digital culture through the past uncovers the sedimented layers of contemporary media culture, as examined by Jussi Parikka, a younger Finnish media theorist, in his book *What is Media Archaeology?* (2012).[709]

In an interview, Huhtamo speaks about the development of his interest in media art after completing his studies in the cultural history of the early modern period at the University of Turku:

"The first wave of virtual reality around 1990 was the point where I began to make links between the current media enthusiasm and the 16th century travelogues I had studied in Rome. (…) This led to a series of research projects that I conducted as an independent scholar in Finland in the 1990s. I basically tried to trace the genealogy of virtual reality from a topos-theoretical perspective. These historical studies were dynamically related works that I was doing as a curator of digital media art in exhibitions as well as in television. *Archaeology of the Moving Image* was a TV series I both wrote and directed for YLE, the Finnish Broadcasting Company, in the mid-1990s, including an accompanying book".[710]

YLE's programme and the numerous media art events and exhibitions that took place in Finland in the 1990s show that this art form was becoming more and more widespread and gathering audience in Finnish society. Huhtamo explains that "[t]he first time I referred to my historical studies explicitly as 'media archaeology' in a major context was in a keynote lecture that I gave at the International Symposium of Electronic Art in Helsinki in 1994".[711] In 1999 he moved to the United States and is currently a professor at the University of California, Los Angeles, in the Departments of Design Media Arts and Film, Television and Digital Media.

In *Illusions in Motion: Media Archaeology of the Moving Panorama and Related Spectacles* (2013), Huhtamo analyses the cultural and material history of panoramas, which became central to the visual culture of the nineteenth century. This seminal book proposes a new methodology to approach visual culture and recovers the widely forgotten history of nineteenth century practices, from panoramas and dioramas to peepshow boxes. In an endorsement to Huhtamo's publication, the

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[709]   Parikka, Jussi 2012, *What is Media Archaeology?*, Polity Press, Cambridge.
[710]   Ganahl, Simon 2016, "From Media Archaeology to Media Genealogy: An Interview with Erkki Huhtamo" in *Le foucaldien*, Vol. 2, No. 1, p. 3. Available at: https://doi.org/10.16995/lefou.17.
[711]   Ibidem.

scholar Tom Gunning states: "This panorama opened up a new conception of the relation between art and perception that immersive new media are only now catching up".[712] Here, video installations with their multi-projections are a significant stage before the appearance of immersive environments. Video art installations led viewers to the idea of being confronted with several simultaneous views and with spatiality. I would prefer to say that panoramas (both static and moving) introduced a new approach to visual culture before the emergence of the moving image. In addition, Huhtamo's study on panoramas enhanced the concept of interaction and immersion.

As an art historian, I am interested in correlating panoramas with recent video installations and immersive environments in the Finnish art scene. (Figs. 74–75–76–77) The video installations of Ahtila, Astala and Oja clearly demonstrate how artists use new technologies to enlarge and to improve as much as possible the field of vision. The similarity of the representational aims of panoramas and video art installations is quite evident. There is an analogous idea of giving continuity to the representation, of satisfying the panoramic gaze of the observer, which led to new solutions realised with the means at hand. For instance, Oja's *Floating* (2004) is a video installation formed by six video projections on the walls and on the floor. Astala's recent video installation *Sketch for the Last Map* (2021) overlaps several panoramic views of indoor and outdoor spaces. The work examines perception in relation to augmented reality, but the panoramic gaze and its potential to expand vision could be considered as its main starting point. The installation consists of a single-channel video, but the artist still succeeds in giving viewers the feeling of observing multiple spaces at the same time.

Some video artworks manifest the difficulties artists find in attempting to represent the world at scale, such as Ahtila's *Horizontal* (2011), a six-channel moving image work of a living spruce tree. (Fig. 78) It presents an extended stream of moving images structured as a video polyptych. The artist explains:

"The idea of the work is to show the tree in its entirety, as far as possible retaining its natural size and shape. Because a life-size tree does not fit in a standard-sized human space, the tree is presented horizontally in the form of successive projected images. The work is a portrait of the tree. It is a record of its existence as a living organism, or perhaps more to the point, a presentation of

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[712] See: https://www.amazon.com/Illusions-Motion-Archaeology-Panorama-Spectacles/dp/0262018519. Accessed 3 March 2020.

the difficulty of perceiving and recording a spruce tree with the methods of visual documentation invented by humans".[713]

In her video installations, Ahtila often breaks up the linear narrative to expand and enrich the content. In *Horizontal*, she leaves it to the viewers to compose their perceptual experience avoiding an anthropocentric attitude and, at the same time, she encourages them to focus their exploratory modality on perception.

Using the methodology of media archaeology to analyse Nissinen's video installation *Material Conditions for Inner Spaces*, exhibited at the Helsinki Art Museum in 2013, the overlap of two different words and colours recalls the effects of the stereogram. (Figs. 79–80) As in the case of stereoscopy,[714] Nissinen uses a technique to enhance the illusion of depth. If the two-dimensional images (stereograms) are combined in the brain to give the perception of a tridimensional depth, Nissinen uses the vibration of colour to provide movement both to the environment and to the content of the inner space. Both are powerful optical experiences.

The layering and superimposition occurring in media art recalls the ancient practice of the palimpsest, where many levels of meaning, styles, and textures are layered over each other, and could be associated with the intertwining of events in perception suggested by phenomenology. In *Eye and Mind*, Merleau-Ponty writes that the water of the pool is also present through the tiles and across the garden, in a way that is illustrative of this:

> "When through the water's thickness I see the tiling at the bottom of a pool, I do not see it *despite* the water and the reflections there; I see it through them and because of them. (…) and if I raise my eyes toward the screen of cypresses where the web of reflections is playing, I cannot gainsay the fact that the water visits it, too, or at least sends into it, upon it, its active and living essence".[715]

This also finds affinities in the perceptive and cognitive approach that Huhtamo adopts in his essay on moving panoramas and related spectacles. He affirms his non-adherence to the vein of positivism and explains: "The moving panorama never had an unchanging and clearly delineated identity; giving it one a posteriori would be an

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[713] From the artist's website: https://crystaleye.fi/eija-liisa_ahtila/installations/horizontal/synopsis. Accessed 23 August 2020.
[714] The stereoscope was invented by Charles Wheatstone in 1838 and improved in 1843 by David Brewster. It was widespread and largely present in the homes of the nascent bourgeoisie in the following decades.
[715] Merleau-Ponty, Maurice 1964, *Eye and Mind*, p. 182.

act of falsification. At any moment, it was influenced by its surroundings and influenced them in its turn; its 'identity' resided in this ever-changing tension and interplay".[716] Huhtamo's description of the interactivity and remediation of the moving panorama with its environment reminds of the Merleau-Pontian concept of depth as a phenomenon of dispersal and reciprocity through the layering or overlapping of planes and textures.

Huhtamo and Parikka note that media archaeology has its roots in Michel Foucault's methodology and in particular in *The Archaeology of Knowledge* (1972).[717] Why then speculate on phenomenology in relation to media archaeology? Foucault attended philosophy and psychology courses at the École normale supérieure in Paris, where he studied with, among others, Merleau-Ponty. Several scholars wrote about Husserl, Merleau-Ponty and Sartre's influence in Foucault's articles from the 1960s.[718] The scholar Judith Revel maintains that the Merleau-Pontian concept of chiasm is key to interpreting the strong link Foucault sees between historical determinations and the opening of the present to what it does not contain, or to its surpluses. In other words, the link between the weight and the structuring effects of a "history already made" and the permanent capacity for invention that may introduce a *difference* in history are chiasmic. In the last chapter of her book, "The Chiasma of History", the comparison between the two intellectuals becomes even stronger, focusing on chiasm and the possibility of considering the two polarities jointly and not separately. Similarly, for Foucault, power and resistance should – paradoxically – be thought of together, since one cannot exist without the other, as they always function in relation to each other.[719] Hence, these affinities show, albeit indirectly, how phenomenology informs media archaeology.

To summarise, in the Finnish art scene, a renovated interest in phenomenology, the appearance of media archaeology and the diffusion of media art from the mid-

[716]   Huhtamo, Erkki 2013, *Illusions in Motion: Media Archaeology of the Moving Panorama and Related Spectacles,* The MIT Press, Cambridge, MA, p. 17.

[717]   See *Media Archaeology: Approaches, Applications, and Implications*, edited by E. Huhtamo & J. Parikka, University of California Press, Berkeley et al., 2011.

[718]   See Perego, Vittorio 2020, "Il problema dell'origine in Foucault" in *Rivista di Filosofia Neo-Scolastica*, No. 1/2020, pp. 1–17; Revel, Judith 2004, "Michel Foucault: discontinuité de la pensée ou pensée du discontinu?" in *Le Portique. Revue de philosophie et de sciences humaines*, No. 13–14, 15 June 2007, p. 5. Available at: http://journals.openedition.org/leportique/635. Accessed 27 January 2022.

[719]   Revel compares Foucault's concepts of production, *ethos*, attitude, and experimentation of possible difference, to Merleau-Ponty's notion of expression, and finds direct correspondences. Expression allows one to overcome a conventional use of language by engaging in an inventive process. Expression is, therefore, the very possibility of making innovation and tradition compatible. See Revel, Judith 2015, *Foucault avec Merleau-Ponty. Ontologie politique, présentisme et histoire*, Vrin, Paris.

90s intersected and affected the artworks of those years. As already discussed in this chapter, in Finland the emergence of immersivity and the spatialisation of video art coincided with the spread of phenomenology in the late 1990s and the beginning of 2000s. In addition, the international experiences of Finnish artists, the exhibitions of international artists in Finnish museums and the study of new media in Finnish academies and art institutes formed a fertile milieu for the development of new forms of media art.

After the years of intense Nordic collaboration in the arts, in the mid-90s a strong interest in European culture, continental philosophy and American media art emerged in Finland. In the 1990s, Ahtila and Astala travelled to the United States to study and found in Gary Hill one of their main references.[720] During the years 1994–1995 in Los Angeles, where she trained at the University of California (UCLA) and the American Film Institute, Ahtila was inspired by Hill's video installations for one of her first multiscreen works, *If 6 was 9* (1995), in which three images have identical dimensions and are projected side by side.[721] Similarly, during the years 1999–2001, in Chicago Astala developed a new perspective on the experience of space affected by electronic media. When he returned to Finland, the moving image expanded into sculpture and installation to explore the viewer's proximity and participation.[722] Astala also mentions Bruce Nauman and James Turrell as his references.[723] Haaslahti too travelled to the United States to learn computer-aided design. In the years 1996–1997, she was an exchange student in the Arts & Technology department in the School of the Art Institute in Chicago. In 2013, her background in computer vision and interactive storytelling led her to produce one of the earliest semi-immersive spaces for the exhibition in Sinebrychoff Art Museum. In 1996–1998, Laura Beloff stayed in California to fulfil a Fulbright grant for an MFA in Critical Studies & Integrated Medias at the California Institute of the Arts. These American academic experiences exemplify how media art practices were avant-garde in the United States, and how stimulating they were for Finnish artists. On the other hand, as I already illustrated in Chapter 2, video art in the United States had been developing since the early 1960s with the launch of the Portapak camera, and Paik, who is considered one of the main pioneers of video art, firstly attracted attention not only in Finland but in all Nordic countries. Finally, the chief example of the bridge between European and American culture is the construction of the Kiasma Museum of Contemporary Art in Helsinki, which brought together an American architect and

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[720]   In the 1990s, Gary Hill and Bruce Nauman were the focus of several exhibitions in Finland, as I analysed in the previous subchapters.
[721]   Eija-Liisa Ahtila, interview by L. Scacco. 15 November 2018.
[722]   Lauri Astala, interview by L. Scacco. 18 October 2019.
[723]   Lauri Astala, in conversation with L. Scacco. Helsinki, 22 April 2021.

a French phenomenologist for a building dedicated to contemporary art and especially media art.

The 2017 and 2022 ARS exhibitions at Kiasma demonstrate that immersive technologies have fully entered the Finnish art scene. Under the title *Hello World!*, *ARS 17* was dedicated to the significant phenomenon named 'digital turn' and showcased 35 artists with a new approach of the global digital revolution, among Ed Atkins, Tuomas A. Laitinen, Jaakko Pallasvuo, and Jon Rafman. The exhibition also provided theoretical reading for media arts in the new millennium in Finland and abroad, in which the art experience is expanded into the online realm too. A large number of the artists who participated in *ARS 17* were indeed digital natives from their date of birth, and for them, the material and virtual worlds are entangled elements of the same merged reality. *ARS 22*, entitled *Living Encounters* with a phenomenological touch, referred to concepts such as participation, shared experience, community, and corporeal encounters in exhibition spaces. The artists' works revolved around our relationship with the universe, with nature and technology. Among the many participating artists, one recalls Mervi Kytösalmi-Buhl, Arthur Jafa, Anna Estarriola, and Jenna Sutela.

Pioneers in media art such as Hakola and Liulia use projection in a spatial and immersive way as a virtual scenography in performative and filmic works. In 2021, Hakola worked as the director and producer of *Mirages*, an interdisciplinary experience that merged performing arts and virtual technology. (Fig. 81) The visual universe of *Mirages* is built "using real-time virtual technology, wherein performers interact with motion-capture animations".[724] From 2002, Liulia has been collaborating with Tero Saarinen's dance company, and recently, she contributed to the development of the new multimedia version of their iconic *Hunt* with two new dancers. The premiere was held in spring 2022 at the Tanssin Talo (Dance House) in Helsinki, inaugurating, at the same time, the new public building. The dancer Saarinen explains that Liulia, with her multimedia artist background, contributes to the spectacle "a live virtual level to the performance. The collaboration also added new themes, which to me, now seem more relevant than ever: the effects of the continuous flood of information and technological advances."[725]

Despite their late entry into the world of electronic arts, Finnish artists seem to have caught up rather quickly. Beloff, for instance, is interested in biotechnology and the metaverse, and Haaslahti in machine learning and artificial intelligence. From video art installations to media art environments, several immersive installations have been realized by Finnish artists. The younger generation is skilled in the use of technologies such as AR and VR, 360-degree videos, projection

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[724] See: https://www.kroma.fi/mirages/. Accessed 19 May 2022.
[725] See: https://terosaarinen.com/en/creation/hunt/. Accessed 19 May 2022.

mapping and live simulation. Ecological themes are increasingly present and attract different generations of artists in Finland, as well as in many other countries.

Lastly, immersive art experiences that digitally display the artworks of Modern Masters are widespread in Europe – especially in France, Italy and Spain – in Australia, Japan, China and, more recently and rather strongly, in the United States. Yet, they do not seem to be catching on so much in Northern Europe, particularly in Finland. *Van Gogh Alive*, hosted in several Scandinavian venues in 2019 but not in Finland, seems to be a unique case. An exception is the immersive exhibition of teamLab in Amos Rex, which was very successful in terms of the number of visitors. This exhibition cannot be compared to *Van Gogh Alive*, but they both feature a high level of spectacularisation. Does the success of the teamLab's exhibition point to a demand for more entertainment in the Finnish audience? Can it be a temporary moment of curiosity for new tools, or does it conceal a more structured necessity in Finland? These immersive exhibitions require large budgets and, being nations with a small population, financial considerations may play a decisive role in Nordic countries. The question may perhaps be resolved in the next few years, but the concept of spectacularisation originating from Debord's literature, with its two-edged sword, is certainly well known to Finnish artists, and Astala with his *Small Spectacles* is revelatory in this respect.

In recent years, two immersive exhibitions of American artists Bill Viola at the Amos Rex (2021; Fig. 82) and Doug Aitken at Kiasma (2020) could be seen as a step forward in the direction of immersivity, because they were both first solo exhibitions in Finland. While Viola presented large immersive projections in the Amos Rex's underground exhibition halls, Aitken, who belongs to a younger generation, created an immersive video environment on a large, circular double-sided screen. In these two immersive exhibitions, it is evident how the passivity of the spectator has been overcome thanks to an amplification of sensitivity and responsiveness to a specific environment. In general, spectacularized and media aesthetic immersion form a complex experience in which electronic, mediated images overlap to reality, a topic that will be analysed in the next chapter.

Between Images and Spatiality

Notions such as experience, non-linearity, and multi-sensoriality are on the front line of contemporary culture. The American artist Lonnie Hanzon encapsulated this at the opening of the Denver Immersive Summit at the University of Colorado in 2019: "We are now in the experience economy. People want to buy experiences, not things".[726] Although this notion probably relates to business, it discloses a particular aspect of our times: experientiality. Experience informs many art installations that comprise interactive and participatory features, with or without technology. Olafur Eliasson called his book *Experience* (2018) because he believes that the potential of art lies in the visitor's participatory experience. Random International,[727] an art studio based in London and Berlin, explicitly defines itself as a collaborative team for experimental practice in contemporary art in search of active participation. Experientiality is also significant in the preservation of media art, as the media conservator Patrícia Falcão states: "One important aspect of preservation is to maintain, as much as possible, the experience of an artwork. This requires that we understand what an artwork does and how it is meant to be displayed".[728] The concept of experientiality therefore indicates that current artistic practices develop between representation and experience.

In this chapter, I analyse the importance of experience as a tool for vision and perception in spatiality and connect it to Merleau-Ponty's theories and post-phenomenological views in the context of mixed media art practices. I start from the

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[726] Ostrow, Joanne 2019, "There's a lot of buzz around 'immersive' experiences in art, theater and entertainment. But is it art?" in online news *The Colorado Sun*, 18 January 2019. Available at: https://coloradosun.com/2019/01/18/immersive-experiences-are-they-art/. Accessed 30 August 2020.

[727] Founded in 2005 by Hannes Koch and Florian Ortkrass.

[728] Falcão, Patrícia 2019, "Preservation of Software-based Art at the Tate" in *Digital Art through the Looking Glass: New Strategies for Archiving, Collecting and Preserving in Digital Humanities*, edited by O. Grau, J. Hoth & E. Wandl-Vogt, Edition Donau-Universität, Donau, p. 278.

assumption that art mediums are not simple tools to communicate and interact, and that mixed media art practices implicate all the senses. Moreover, I link the phenomenon of reciprocity with the process of interactivity. Finally, I digress and provide examples from contemporary art that adopt circular and spherical environments and aim to recreate small worlds. In addition, I delineate some immersive prototypes which correspond with the cohesive and dynamic systems adopted in media environments that catalyse new types of spectatorship.

4.1   Mixed Media

Nowadays experience is embedded in interactive, participatory, immersive and virtual activities. Concepts of experience have recently diversified into practices that revolve around technology. In the past few decades, scholars have considered the medium as the driving force and the nature of perceptual experience. For example, Friedrich Kittler saw technological sciences as largely autonomous from the humanities,[729] and Marshall McLuhan, who coined the expression "the medium is the message", determined the division between "hot and cool media".[730] The latter has recently been re-considered in a new light. In short, a number of scholars maintain that McLuhan highlights the unusual function of media in informing experience. In other words, the medium becomes a shaper of experience.[731] Furthermore, in recent years, a more flexible and embodied concept for the medium has become more accepted. The scholar Francesco Casetti observes that referring to the centrality of experience can reverse perspectives that hinge on a medium: the core of a medium is the way it mobilises senses, reflexivity and practices.[732] He writes: "In fact, one thing is the material basis of a medium, another one the way in which it organizes our experiences".[733] Moreover, Casetti notes the experiential

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[729]   This concept does not reflect McLuhan's interpretation of the media as extensions of humankind. See Kittler, Friedrich 2014, *The Truth of the Technological World: Essays on the Genealogy of Presence,* Stanford University Press, Redwood City.

[730]   See McLuhan, Marshall 1964, *Understanding Media: The Extensions of Man*, McGraw Hill, New York. In another book, McLuhan explains that a medium is frequently more significant than its content. He uses the example of the effects of the printing press on access to books. See McLuhan, Marshall 1962, *The Gutenberg Galaxy: The Making of Typographic Man*, University of Toronto Press, Toronto.

[731]   See Strate, Lance 2008, "Studying Media as Media: Marshall McLuhan and the Media Ecology" in *MediaTropes*, No. 1, pp. 127–142; Codeluppi, Vanni 2011, *Il ritorno del medium*, Franco Angeli, Milano; Perniola, Mario 2011, *L'estetica contemporanea*, Il Mulino, Bologna; Granata, Paolo 2012, *Mediabilia. L'arte e l'estetica nell'ecologia dei media*, Fausto Lupetti, Milano.

[732]   See Casetti, Francesco 2015, *La Galassia Lumière*, Bompiani, Milano, p. 13.

[733]   Ibidem, p. 37. Translation mine.

approach adopted by scholars such as Benjamin, Sigfried Kracauer, and later Bazin and Edgar Morin, in their reassessment of phenomenology, psychology, and anthropology.[734] Casetti takes films as an example of the multiple ways they can be watched i.e., in the cinema, on the computer screen, on a mobile phone, projected onto a building, and so on. Despite the content remaining identical, by changing the location, device or medium specificity, the experience also slightly differs. Casetti describes a 're-location of the medium', highlighting the role of the experience and its surroundings.[735] The implication of this statement for video art is the diversity between the perceptual experience of a single-screen video and an installation. The latter is no longer flat and framed, but could be installed on a concave screen, or in a multi-screen projection, providing different perceptions to audiences. According to the theory of the 're-location of the medium', the immersive art environment could be considered a relocated experience of video art, because it uses video projections in a spatial way, with or without interactive systems. Being spatial practices, video and immersive art offer a distinct mode of reception by problematising the position of the viewer.

Concerning medium, Sobchack argues that "technology is never merely used, never simply instrumental. It is always also incorporated and lived by the human beings who create and engage it within a structure of meanings and metaphors in which subject-object relations are not only cooperative and co-constitutive but are also dynamic and reversible".[736] Phenomenological practices and the re-location of the medium share a similar attitude to the significance of experience and spatiality which often merge in perception. For instance, synesthetic perception, how the senses interact, and how the body inhabits the space are governing principles in the Merleau-Pontian phenomenology of perception.

Elizabeth Edwards and Kaushik Bhaumik noticed a recent increase in the number of studies that link vision to the other senses, and how this "has destabilised the Western five-sense model in general"[737] and the nature of ocularcentrism. Scholars highlight that comprehending complex cultural processes needs different sensory modes, including vision. Thus, they propose widening investigation into the "strand of anthropology of the senses rather than visual studies",[738] to integrate experiences of space and time across histories and cultures. Their idea of a 'sensory turn' seems to counterbalance that of the 'pictorial turn' initiated by the academic W. J. T.

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[734] Ibidem, p. 44.
[735] Ibidem, pp. 49–51.
[736] Sobchack, Vivian 2004, *Carnal Thoughts: Embodiment and Moving Image Culture*, University of California Press, Berkeley, p. 111.
[737] *Visual Sense: A Cultural Reader*, edited by E. Edwards & K. Bhaumik, Berg, Oxford 2008, p. 5.
[738] Ibidem, p. 7.

Mitchell in the 1990s.[739] Later on, in the article "There Are No Visual Media" (2005) questioning the dominance of visual culture, he emphasises that "all the so-called visual media turn out, on closer inspection, to involve other senses (especially touch and hearing). All media are, from the standpoint of sensory modality, 'mixed media'".[740] In phenomenological terms, there is a recognition of how vision is as porous as other senses. The American visual studies scholar also states that a medium is a "material social practice",[741] and not a specific essence "dictated by some basic materiality (paint, stone, metal) or by technique or technology". Thus, materials and technologies converge into a medium, but "so do skills, habits, social spaces, institutions, and markets".[742] To summarise, all media are mixed media, without losing the notion of medium specificity. In fact, medium specificity is a complex phenomenon to be understood under a sensory label such as visual, auditory, and tactile. Mitchell continues: "It is, rather, a question of specific sensory ratios that are embedded in practice, experience, tradition, and technical inventions".[743] This statement by Mitchell reflects the convergence of cultural life and practice, technology and science, and could offer a phenomenological understanding of contemporary complexity. In fact, Mitchell's statement that "natural vision itself is a braiding and nesting of the optical and tactile"[744] resonates with the enactive approach of American philosopher Alva Noë, who firmly refers to phenomenology in his theories of perception. Noë considers perception as a skill of the body as a whole.[745]

4.2   Experience in Vision

For Vivian Sobchack, "the cinematic has something more to do with life and with the *accumulation of experience* – not its loss".[746] She adds that "the intentional temporal and spatial fluidity of the cinema expresses and makes visible as well – and for the first time – the non-linear and multi-directional movements of *subjectivity* as

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[739] In 1992, in an article published in *Artforum*, Mitchell proposes a "pictorial turn" in the humanities, based on a renewed interest in and prevalence of pictures and images in the age of simulation.
[740] See Mitchell, W. J. T. 2005, "There are no Visual Media" in *Journal of Visual Culture*, Vol. 4, No. 2, pp. 257–266.
[741] W. J. T. Mitchell refers to the definition by Raymond Williams in *Marxism and Literature*, Oxford University Press, New York, 1977, p. 158.
[742] Mitchell, W. J. T. 2005, "There are no Visual Media", p. 259.
[743] Ibidem, p. 261.
[744] Ibidem, p. 263.
[745] See Noë, Alva 2004, *Action in Perception*.
[746] Sobchack, Vivian 2004, *Carnal Thoughts: Embodiment and Moving Image Culture*, p. 117. Emphasis in original.

it imagines, remembers, projects forward".[747] Why is filmic language so close to life experience? Because the moving image includes the experience of successiveness, which is an empirical condition of perception on the audio-visual and space-time continuum. According to Beloff, an immersive art environment, with its spatiality and mobility, adds further depth to the experience of the moving image: "In a sense one can see them as extensions of the environment rather than creating a totally new environment".[748] Thus, immersive environments are similar to our surroundings, with the added satisfying element of performativity. Noë's enactive approach to perception is imbued with Merleau-Pontian phenomenology and can help to comprehend the spatial relations of human beings.

Noë's phenomenology of perception is based on a range of scientific studies, including some on total and partial blindness. Noë challenges the idea of having a detailed vision, such as a photographic snapshot, as illusory. Consequently, the general idea of representation is wrong, and its history should be rewritten. He takes the well-known example of Austrian physicist and philosopher Ernst Mach's drawing, published in his book *Analysis of the Sensations* (orig. *Die Analyse der Empfindungen und das Verhältnis des Physischen zum Psychischen*, 1886), where the author's visual field is depicted as seen through one eye to include his nose, moustache, eyelashes, and a part of the lower body.[749] (Fig. 83) Throughout his life, Mach took an exceptionally non-dualist position regarding the data on physiological experience, considering them crucial for demonstrating the interpenetration of the physical and psychic spheres of human beings.[750] Crary notes:

"Classical representation, from Alberti onward, defines itself by the fundamental subtraction of the body from the constitution of a visual field and by the related intellectual distinction between observer and object. Mach was trying to highlight how certain visual habits correspond to particular philosophical prejudices, and in his enduring attacks on philosophical dualism he sought to

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[747]   Ibidem, p. 120.

[748]   Laura Beloff, interview by L. Scacco. 25 September 2019.

[749]   Noë, Alva 2004, *Action in Perception*, pp. 35–36.

[750]   See Hintikka, Jaakko 2001, "Ernst Mach at the Crossroads of Twentieth Century Philosophy" in *Future Pasts: The Analytic Tradition in Twentieth-Century Philosophy*, edited by J. Floyd & S. Shieh, Oxford University Press, New York; Fisette, Denis 2012, "Phenomenology and Phenomenalism: Ernst Mach and the Genesis of Husserl's phenomenology" in *Axiomathes*, No. 22, pp. 53–74.

overcome classical distinctions between 'inner' and 'outer' phenomena, between the physical and the psychic".[751]

Despite the originality of Mach's illustration, Noë disagrees with his approach, because peripheral vision cannot be as precise and clear as in his drawing. Our eye has a central point of focus, while peripheral vision is inaccurate and blurry. Noë uses the example of reading a book: one can read the letters in the middle of the page but is unable to recognise the words at the edge of the page. A faithful representation of what we see would not include such precision.[752]

The impression of having a rich and detailed vision of the world is an illusion. It is the sensory-motor apparatus that helps us understand the distribution of things in space and not vision. Noë's example of a tomato and the visual experience of voluminosity is possible only if an observer walks and looks around it. Mach's drawing is incorrect because it does not result from vision, but an experiential interpretation of details. Mach demonstrates what he knows through experience as sight cannot afford such detailed vision. Noë continues: "Vision is active; it is an active exploration of the world".[753] Mach uses his experience of the world to represent his concept of visual reality.

Some aspects of experience are non-pictorial, such as the limitlessness of the visual field. A comprehensive visual perception derives from sensory-motor skills. If we perceive spatial qualities, then an immersive art environment, in its intense spatiality, fits our human expectations. If the visual world is not given all at once, as in a figure, an immersive environment aided by technology can provide multiple possibilities to accumulate experience through the sensory-motor apparatus. Why do we like to collect experiences? Because it is a way to know our being-in-the-world. For this reason, immersive art environments appear as extensions of the environment rather than creating totally new ones.

4.3   Spatiality, Temporality, and Immersion

'Perception has spatial qualities' is a phenomenological concept. In *The Visible and the Invisible*, Merleau-Ponty explains that we cannot perceive without opening ourselves to the uncertainty of the world, without adapting our sensory-motor structure to the distance and texture of the sensible. We have evolved from a

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[751]   Crary, Jonathan 1990, *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century*, p. 220.

[752]   Noë, Alva 2004, *Action in Perception*, p. 49.

[753]   Ibidem, p. 72.

representation of perception linked to visual perspective to the active and spatial perception of phenomenology.

Phenomenology can lead to new considerations when analysing the crucial turn from the perspectival view to the subjective position. The scholar Crary explains that "there is a broad range of work on perception in the late nineteenth and early twentieth century that in various ways (…) attempted to establish an image of the observer as an autonomous, intentional subject for whom perceptual organization is the product of a lived, situational, and dynamic activity".[754] Husserl was one of the scholars who contributed to "an ongoing modernization of knowledge and techniques of perception, cognition, language, and art".[755] We can consider the process of subjectivation activated by science and art in modernity as the cultural milieu of Husserl and the onset of phenomenology.

In 1910, Husserl argued that eidetic intuition is an experience of the gaze, a modulation of seeing, which removes any misunderstanding about idealism and realism. The impulse to search must not come from philosophies, but from the empirical world and its problems.[756] Human beings must use the sense of sight to see phenomena directly, as Husserl's coeval scientific experiments show. The perceptual experience, in a phenomenological sense, is therefore only possible within a horizon of relationships. Crary believes that "with the collapse of the *camera obscura* model of vision and the emergence of physiological optics, it became increasingly clear that perception was not a matter of a relatively passive *reception* of an image of an exterior world, but that the makeup and capacities of an observer contributed to the *making* of perception".[757] Phenomenology may have represented a new critique of experience, increasingly activating an observer who relates with reality in a reciprocal way. In 1887, the formulation by the French physician Charles Féré relocates the vision "from a disembodied and punctual system of images to an interplay of forces and motor reactions": "When rays of red light strike our eyes, *our entire body sees red*, as dynamometric reactions prove".[758] Science reveals that the

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[754]   Crary, Jonathan 1999, *Suspensions of Perception: Attention, Spectacle, and Modern Culture*, p. 157.

[755]   Ibidem, p. 155. Among other concurrent scholars he mentions Henri Bergson and Sigmund Freud.

[756]   Husserl, Edmund 1911, "Philosophie als strenge Wissenschaft" in *Logos I*; English transl. *Phenomenology and the Crisis of Philosophy: Philosophy as Rigorous Science and Philosophy and the Crisis of European Man*, edited by S. J. Quentin Lauer, Harper & Row, New York 1965; Italian translation *I problemi fondamentali della fenomenologia. Lezioni sul concetto naturale di mondo (1910–1911)*, edited by V. Costa, Quodlibet, Macerata, 2008.

[757]   Crary, Jonathan 1999, *Suspensions of Perception: Attention, Spectacle, and Modern Culture*, p. 155.

[758]   Ibidem, p. 167.

retina is compounded with a neuromotor system and that the "sensation and movement become a single *event*".[759] This new perceptual model seems to open the way to phenomenology and Merleau-Ponty, who emphasised the body as the main site of knowing the world, time, space and motion.

Starting with Merleau-Ponty's first study into the spatiality of the body, in *The Structure of Behavior* (1942), depth, movement, body schema, and temporality become the focus of *The Phenomenology of Perception* (1945). Here, Merleau-Ponty describes the "primordial spatiality" of the proper body,[760] an "original experience of space", which he also defines in his phenomenological analysis as the "spatiality of situation"[761] revealed by in-depth vision and gesture. French scholar Emmanuel de Saint Aubert observes that Merleau-Ponty still does not address the question of time and explores the theme of corporeality, writing about the time of the body and its natural initiative.[762] In 1953, Merleau-Ponty's course at the Collège de France delved deeper into the theory of the body schema. This included reconsidering the concepts of space, time, and their intertwining. Depth, motility, and corporeal schema moved from a spatial to a temporal dimension toward merging into a continuum. Merleau-Ponty often returns to the question of time and space in *The Visible and Invisible* and in other texts: "Our ordinary questions – 'Where am I?' 'What time is it?' – are the lack and the provisional absence of a fact or of a positive statement, holes in a fabric of things or of indicatives that we are sure is continuous, since there is a time, a space, and since the only question is at what point of this space and of this time we are".[763] For de Saint Aubert, these ordinary questions reflect an inner awe of the mystery that constitutes the existential basis of all knowledge.[764] On the occasion of a radio tribute a few days after Merleau-Ponty's death, Jean Wahl[765] confirmed that he was attempting to define "a new space-time".[766] This can also explain Merleau-Ponty's interest in the cinema, examined in

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[759]   Ibidem.

[760]   Merleau-Ponty, Maurice 1945, *The Phenomenology of Perception*, p. 208.

[761]   Ibidem, p. 115.

[762]   de Saint Aubert, Emmanuel 2016, "Espaço-temporalidade do ser carnal" in *Compêndio Merleau-Ponty*, edited by I. de Oliveira Caminha & T. Petrucia da Nóbrega, Liber Ars, São Paulo, pp. 235–251; Italian translation by G. Crivella, "Merleau-Ponty: la spazio-temporalità dell'essere carnale" in *Kasparhauser*, 18 February 2017. Available at: http://www.kasparhauser.net/Culture%20Desk/phaenomenologica/saint-aubert.html. Accessed 12 September 2020.

[763]   Merleau-Ponty, Maurice 1964, *The Visible and The Invisible*, p. 105.

[764]   See de Saint Aubert, Emmanuel 2016, "Espaço-temporalidade do ser carnal".

[765]   The French philosopher Jean Wahl attended Merleau-Ponty's last lesson at the Collège de France.

[766]   Wahl, Jean 1961, "Hommage à Maurice Merleau-Ponty", 17 May 1961, French radio programme, Archives INA – National Audiovisual Institute, Bry-sur-Marne.

Chapter 1 of this thesis. The early stage of experimentation in film was still considered an extension of painting,[767] although it established a new field of perception based on time and no longer on the canvas. Cinema is an audio-visual and space-time continuum medium. For semiologist Paolo Fabbri, contemporary technologies conveniently allow the representation of time. If painting and photography had to struggle to reproduce time, contemporary art using video and film is necessarily the art of time.[768] The experience of successiveness is indeed at the basis of the moving image, as well as in the perceptual process.

Haptic sense, motion, and embodiment are key points for Merleau-Ponty. The perceptual experience occurs at the edges of the subject, that is, in the body where it merges with the object. Motility, or motricity, which is the human ability to be in motion, and move the proper body does not represent consciousness transmitted to the body, but the body that moves towards the things that are significant to it. The body as motility is positioned in space and makes space exist around itself. The spatiality of the body is not a "spatiality of position", like that of things in a place next to each other, but a "spatiality of situation".[769] This implies the ability to spatialize, to expand control over the world, to annex objects by causing their motion. As already mentioned, Merleau-Ponty cites the example of the blind man, whose stick has become an extension of his body. He moves the stick as part of himself, feeling and touching objects with the stick.[770] The 'original space' should not be understood as that proposed by empiricism (the real form that contains things) or by intellectualism (the ideal form that the spirit imposes on things), but as a 'third spatiality'[771] or "a certain hold upon the world"[772] of my body. Perception is not a cognitive experience or contemplation of a given natural or human-made spectacle, but the use of the perceptive abilities of the body in motion. Merleau-Ponty is interested in the movement of advancing and penetrating space. The body exists in space, but it inhabits space only by moving through it. In other words, time and

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[767] For instance, from 1919 The Abstract Film, a German avant-garde movement including Oskar Fischinger, the Swedish-born Viking Eggeling, and Hans Richter, proposed film as an extension of visual art. The group members were mainly painters who found in cinema a way to expand their painting practice into filmmaking. Later, Nam June Paik himself frequently related his video work to painting. He sensed the vast potential of the moving image to expand the static nature of painting by introducing the element of time. See Paik, Nam June 1970, "Video Synthesizer Plus" in *Radical Software*, Vol. 1, No. 2, p. 25; Miller, Nancy 1984, *The Color of Time: Video Sculpture by Nam June Paik*, Rose Art Museum, Brandeis University, Waltham, MA.

[768] Fabbri, Paolo 2020, *Vedere ad arte. Iconico e icastico*, p. 241.

[769] Merleau-Ponty, Maurice 1945, *The Phenomenology of Perception*, p. 115.

[770] Ibidem, p. 165.

[771] Ibidem, p. 289.

[772] Ibidem, p. 412.

movement are essential to inhabiting space. This Merleau-Ponty's notion can be extended to viewers in a video installation or an immersive and interactive environment. What would Merleau-Ponty have thought of today's immersive environments? Would he have recognised in them an ideal place for a rewarding perceptual experience?

If the body's inhabitation of space is a matter of time and movement, then a perspectival approach is inappropriate, because it binds observers to a static point of view. Bodily motion is intentional and art environments leave room for bodily actions. (Fig. 84) Can we affirm that artists, with the support of new technologies, are finally able to create spatial qualities with their video art environments, and not only an illusory experience of them?

Sobchack interprets our electronic era through phenomenology: "Each technology not only differently *mediates* our figurations of bodily existence but also *constitutes* them. That is, each offers our lived bodies radically different ways of *being-in-the-world*".[773] She continues:

> "In sum, just as the photograph did in the nineteenth and early twentieth centuries, so in the late twentieth and early twenty-first, cinematic and electronic screens differently solicit and shape our presence to the world, our representation in it, and our sensibilities and responsibilities about it. Each differently and objectively alters our subjectivity while each invites our complicity in formulating space, time, and bodily investment as significant personal and social experience".[774]

I would propose that video art environments, with their 'all round' effect, provoke a close comparison with the natural environment in the audience. An immersive art environment engages the same daily perceptual activities that we carry out in the world. To avoid the illusion of having a rich and detailed vision of the visual world, we need to experiment with the movement of the gaze and of the body as well as spatial properties. An immersive art environment allows for all of this.

4.4   Interaction and Reciprocity

Most immersive environments or augmented reality installations are interactive. Technological progress has produced new issues. One of the outcomes is the waning of the terms interactive and/or interactivity which seem obsolete. In computational

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[773]   Sobchack, Vivian 2004, *Carnal Thoughts: Embodiment and Moving Image Culture*, p. 111.
[774]   Ibidem.

culture, interactivity is the active participation of a user through technological means. The current tendency is to define these environments as immersive installations, audience participation works or socially engaged art, although these types of art use various mediums, including those that are non-technological.[775] It is worth considering the statement by the artist and theoretician Edmond Couchot, who writes about two stages of interactivity: "Whereas the 'first interactivity' focused on the interactions between human beings and computers following the action-reaction or reflex model, the second interactivity examines action insofar as it is led by corporality, perceptions, sensorimotor processes, embodiment, and autonomy (or 'autopoiesis' to refer to a concept we owe to Francisco J. Varela)".[776] As the concept of the 'other' is so central in these types of art forms, the notion of interaction is slowly evolving toward the new concept of 'alteraction'. This term is more compelling because "it puts the emphasis not only on the action but also on the encounter with the other", as observed by media theorist Poissant.[777]

Beloff maintains that there are other concerns around the body in technological art practices. In the 1990s, the purpose of telematic art was "to get rid of the body's physical constraints". The Finnish artist and scholar is chiefly interested in wearable technology: "similar desires are also detectable in the 1990s virtual reality experiments and in the more recent development of online *metaverse* worlds; both practices have, in their own ways, aimed at diminishing the body and its physical limitations, whereas in wearable technology art, the physical body is of primary importance as the subject and also as the stage for the works".[778] Today the perspective on body skills has broadly changed: "Considering the current development of wireless networks and wearable and body embedded technologies from this perspective, one can argue that wearable technology is claiming back the importance of the physical body".[779] The significance of the body is reclaimed not only by wearable technologies but in interactive performances, multimodal experiences and immersive environments.

Interactivity and corporeality have inspired debates in art and philosophy starting from the postmodernist discussions. Some bear particular reference to phenomenology. In his book *Bodies in Technology* (2002) the philosopher Ihde

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[775] Laura Beloff, interview by L. Scacco. 25 September 2019.

[776] Couchot, Edmond 2007, "The Automatization of Figurative Techniques: Toward the Autonomous Image" in *MediaArtHistories*, p. 186.

[777] Poissant, Louise 2007, "The Passage from Material to Interface" in *MediaArtHistories*, p. 235.

[778] Laura Beloff, interview by L. Scacco. 25 September 2019.

[779] Beloff, Laura 2012, *The Hybronaut and The Umwelt: Wearable Technology as Artistic Strategy*, Doctoral dissertation, University of Plymouth, p. 64. See: https://pearl.plymouth.ac.uk/handle/10026.1/1247. Accessed 19 February 2020.

rejects Cartesian dualism and proposes two conceptual and perceptual bodies. He defines one body as "the motile, perceptual, and emotive being-in-the-world"[780] in reference to the phenomenological body that sees from a first-person point of view and can also be named the 'here body'. The second is the socially formed body, related to the third individual gaze, and thought of as the 'disembodied over-the body'.[781] Kozel believes that Ihde's differentiation is weak and argues that "this distinction between the biological and cultural is artificial, [as] Ihde acknowledges, and once its purpose of clarifying one's thoughts is fulfilled it necessarily collapses".[782] In a phenomenological approach, subject and the world are co-created in virtue of their technologically embodied interactions. Helsinki-based artist and engineer, Roberto Fusco, formerly known as Roberto Pugliese, offers an updated point of view on embodied technology. (Fig. 85) In his doctoral dissertation in the field of Computer Science he states:

> "Touch and HCI have gone 'hand in hand' due to the fact that touch is a common medium of interaction in the world and it mediates encountering and interaction with daily objects. (…) In the case of virtual reality, every time we design an interface that operates by extending the user's perceptual-motor capabilities 'into' these virtual environments, in some sense, the lack of tactile sensory feedback makes users impaired in acting within the virtual environment".[783]

A reduction in the haptic sensory dimension decreases the interactive possibilities in a virtual context and evidences the overlaps between the body, technology, and environment. In media art, it is important to acknowledge the growing role of the spectator in giving meaning and fulfilling the purpose of the work. Immersive art is a kind of multimedia and interactive installation where visitors relate to the work by being immersed in a sensory experience. The public becomes part of the evolving installation. In art, the current tendency is to use a computer program to render the work in real-time. This avoids the use of pre-recorded or loop sequences. In teamLab's interactive immersive installation *Drawing on the Water Surface* (2016–2018) at the Planets Museum in Tokyo, audiences walk through the water. (Fig. 86) According to teamLab, "interaction between the viewer and the installation causes continuous change in the artwork.

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[780] Ihde, Don 2002, *Bodies in Technology*, University of Minnesota Press, Minneapolis, p. XI.

[781] Ibidem.

[782] Kozel, Susan 2007, *Closer: Performance, Technologies, Phenomenology*, p. 89.

[783] Pugliese, Roberto 2015, *Creating and Evaluating Embodied Interactive Experiences: Case Studies of Full-body, Sonic and Tactile Enaction*, Doctoral dissertation 205/2015, Aalto University, Helsinki, pp. 30–31.

Previous visual states can never be replicated and will never reoccur". They believe that "by immersing the entire body with other people in these massive 'Body Immersive' artworks, the boundary between the body and the artwork dissolves, the boundaries between the self, others, and the world become something continuous, and we explore a new relationship without boundaries between ourselves and the world".[784] Immersion, absorption and fluidity drive this recent artwork. Water is an ongoing favourite subject of teamLab and connects to a long tradition in video art, where the notion of liquidity reflects the electronic flow.

The idea that the viewer is part of the artwork contributes to the critical art perspective and enhances the phenomenological idea of a perpetual and dynamic exchange between viewer and visible, perceiver and perceived. Phenomenology has a fundamental role in shifting and evolving our approach to perception, leading us from an era of perspective to an era of depth and involvement.

But is it correct to affirm that we have entered an era of depth and involvement thanks to immersivity? There is an emphasis on the idea that the experience of the world is a result of mutual interaction between the sensory-motor capacities of the human being and its environment. Could we link a mutual interaction between a living body and the world in an immersive environment with Merleau-Ponty's circular phenomenon of reciprocity? For Merleau-Ponty, circularity is one of the main pivots on which perceptual experience revolves. His description of vision involves an absolute coincidence between subject and object and a confusion between them. The boundaries dissolve between the sentient and the felt as they blur the boundaries between the senses. Merleau-Ponty adopts the metaphor of the chiasm to express the overlapping and merging of the tangible and the visible in a common spatiality or, rather, the uninterrupted circularity of the sensitive and the sentient. The same approach characterises the act of painting, in which circularity is established between the gaze and the hand of the painter. Merleau-Ponty embraces the notion of chiasm and reciprocity to demonstrate how every instance of circularity presupposes a counter-perception in a two-sided action, where the speaker and the listener become indistinguishable. In a working note for *The Visible and the Invisible*, he asserts: "Speaking-listening, seeing-being seen, perceiving-being perceived circularity (it is because of it that it seems to us that perception forms itself *in the things themselves*) – – *Activity = passivity*".[785] The circular relationship between the body and the world is evident in Merleau-Ponty's description of the touch of the world, the proximity to the world that the body experiences by being touched by things.

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[784]   From the artists' website: https://www.teamlab.art Accessed 20 September 2020.
[785]   Merleau-Ponty, Maurice 1964, *The Visible and The Invisible*, p. 265.

4.5   360-degree Visions for Experientiality

When the perceptual experience of spatiality takes place in an art environment, which characteristics are experienced? Should the environment have a circular shape? Could phenomenological thinking help in explaining the phenomenon of circularity? The philosopher Jacques Taminiaux notes that perception continues to be the main topic of Merleau-Ponty's late research, but it acquires a novel connotation.[786] Although, in a 1945 essay, Merleau-Ponty describes perception in terms of an active experience of the existential project, in his last years the binary active-passive association that constitutes perception internally becomes circular. He moves from a horizontal understanding of perception to a circularity in which the vertical and horizontal coexist. In the 1850s, scientists and philosophers had already revised the relationship between sensation and motor behaviour.[787] Despite this, it is remarkable that in the following 100 years no difference emerges between active and passive perception. A circular pattern starts to replace this dualistic model, which includes everything. In his early texts, Merleau-Ponty states that "perception is not a science of the world, it is not even an act, a deliberate taking up of a position; it is the background from which all acts stand out, and is presupposed by them".[788] However, in his late studies this identical background gains another and fundamental name: nature. It seems that perception is intended as an environment that corresponds to nature, which, in turn, surrounds us.

At this point, we might consider the immersive art environment as a visual tool to reproduce a dynamic, situational, and circular experience just like the natural universe. Could we read the artist's effort to replicate 360-degree vision as a way to re-create the dynamics of our perception in the world? 360-degree representations should not be considered simply as a way to chase the illusion and suggestion of reality, but of recreating the circular, extensive, and interactive approach that we entertain with the real world. As the philosopher Noë observes, "for my visual field – my visual world – is not the field available to the fixed gaze. The visual field, rather, is made available by *looking around*. We look here, then there, and in this way, we gain access to the world and our experience acquires that world as content".[789] From panoramas to spatial environments and up to media art installations and immersive environments, a number of visual representations aim at circularity, or maybe sphericity, to correspond with the spatiality of human vision in

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786   See Taminiaux, Jacques 1977, *Le regard et l'excédent*, Martinus Nijhoff, La Haye (Den Haag).
787   Crary, Jonathan 1999, *Suspensions of Perception: Attention, Spectacle, and Modern Culture*, p. 169.
788   Merleau-Ponty, Maurice 1945, "Preface" in *The Phenomenology of Perception*, p. XI.
789   Noë, Alva 2004, *Action in Perception*, p. 57.

motion. The circular environment predisposes the user to linger with and among pictures, in a sort of rounded and dynamic attention, because "perceptual experience acquires content as a result of sensory-motor knowledge".[790] Circularity also exploits peripheral vision despite its blurry quality. This is a signal that the art experience may continue in the surrounding space, as it happens in our daily experience with reality. Environment and the consequent 360-degree vision seem to mirror how things appear in phenomenological perception: an uninterrupted network of relationships within an infinite intersection of intentional horizons.

360-degree videos are also called spherical or immersive videos. It is interesting how sphericity recalls the experience of the planetarium with its large dome-shaped projection screen. (Fig. 87) The natural reference of sphericity is our Earth and the appearance of the starry sky, planets, and celestial objects in motion. Although the term *planetarium* has ancient origins, dating back to the Greek culture of the 4th century BC,[791] the first modern planetarium was realized by the German optical manufacturer Carl Zeiss in 1923 for the Deutsches Museum in Munich. Its roots are in the intensive eighteenth-century production of mechanical models designed to represent the orbital motions of the celestial spheres, the so-called *orreries*.[792] The present-day descendants of these instruments are technically complex, combining optical and electro-mechanical technologies, video projectors and lasers to simulate an accurate motion of the sky at any point in time, past or present, from a particular latitude on Earth. Today, planetariums immerse audiences in a mediated visual environment with educational and entertainment content.[793] (Fig. 88)

Like panoramas, the planetarium is a place of knowledge and meeting where different disciplines converge, from optics to theatre, from information technology to literature and art. Art has often been inspired by nature and the universe. A detailed naturalistic representation of celestial phenomena dates to the most ancient civilisations. The trajectories of the planets, the motion of the Earth in space and the stars are linked to an infinity of myths, stories, legends, and images created by artists, poets, musicians, and filmmakers. For instance, Fontana's interest in spatiality also stems from aerospace research, which advanced considerably in the late 1950s. In

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[790]   Ibidem, p. 9.
[791]   The discovery of constellations and thus the development of observational astronomy in the Greek world is attributed to Eudoxus of Cnidus, a Greek mathematician and astronomer. See: https://www.britannica.com/biography/Eudoxus-of-Cnidus. Accessed 4 January 2021.
[792]   See: https://academic-eb-com.ezproxy.utu.fi/levels/collegiate/article/planetarium/60300. Accessed 3 March 2021.
[793]   A 1998 survey counted 2,653 planetariums operating worldwide, with domes varying from 3 to 27,5 meters in diameter. See:
http://www.planetarioroma.it/en/il_museo/planetario/i_planetari_del_mondo. Accessed 7 March 2021.

fact, the first rocket launches captured the imagination of people. The trajectories of rockets and their whirling smoke inspired Fontana to produce some of his luminous forms or "marvellous rainbows".[794] In his *Spatial Environments*, the artist draws aerial images that transcend their physicality, creating a sign of what he defined as "an art for the Space Age".[795] It is no coincidence that there is a cultural connection with the sky and with the universe since artists and astronomers are both driven by the desire to explore their surroundings. One could see a parallel between immersive art environments with their circular/spherical aspect and the idea of cosmos at the basis of the Planetarium. I would suggest seeing in these circular environments the idea of miniature worlds in which perception takes place.

Cine Dreams: Future Cinema of The Mind by the American Stan VanDerBeek exemplifies the link between planetariums and media art. Well-known from the beginning of his career for his pioneering research in film and experimental animation,[796] VanDerBeek was one of the first artists invited to teach at the Massachussets Institute of Technology (MIT) on its program of integration between art and technology. A fundamental model of a mixture of art and science, *Cine Dreams: Future Cinema of The Mind* was presented in 1972 at the Strasenburgh Planetarium in Rochester, in New York state. The work consists of the simultaneous projection of twenty films on the dome of the planetarium, on which there are also projections of the celestial vault. This combination of shapes, sounds, and colours merged science and psychedelia, spectacle and criticism of the image-based society. VanDerBeek's work has often been interpreted as a premonition of the Internet and digital culture. A few years earlier, he was already planning to build a spherical theatre where visitors could lie down and enjoy films all around them. He aimed to replace the one-dimensional film projection with floating moving image sequences for a dynamic immersive experience. VanDerBeek created films for the *Movie-Drome*, which he started to build in 1963 inspired by Buckminster Fuller's spheres in New York. (Fig. 89) The media artist Jürgen Claus notes that the "engaged space

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[794] Pugliese, Marina 2017, "Lucio Fontana. Ambienti/Environments", pp. 23–24.
[795] In a 1967 interview, he explained to the art critic Carla Lonzi: "Now in space there is no longer any measurement. Now you see infinity … in the Milky Way, now there are billions and billions … The sense of measurement and of time no longer exists … and so, here is the void, man is reduced to nothing … And my art too is all based on this purity [,] on this philosophy of nothing, which is not a destructive nothing, but a creative nothing … And the slash, and the holes, the first holes, were not the destruction of the painting … it was a dimension beyond the painting, the freedom to conceive art through any means, through any form". See Lonzi, Carla 1967, "Autoritratto" in *Lucio Fontana*, edited by E. Crispolti & R. Siligato, Palazzo delle Esposizioni, Roma, 1998.
[796] As I described in Chapter 2, he was one of the contributors to the concept of 'expanded cinema'.

artist went far beyond the building itself and moved into the surrounding biosphere, the cosmos, the brain and even extraterrestrial intelligence".[797]

In the same years, Nam June Paik produced the multi-monitor installation *Moon is the Oldest TV* (1965) that emphasises the imaginative potential of TV technology beyond broadcasting. The twelve phases of the lunar cycle are displayed on twelve televisions arranged in the space. In recent years, Ahtila has used a galaxy as a background in one part of her multi-faceted work *Potentiality for Love* (2018), as it "re-creates an image of a distant memory, of mother and the primal unity".[798] Constellations have a long history as an ancient source of potentialities. (Fig. 90) Even in the field of immersivity, teamLab refers several times to the universe, planets, galaxies, both visually and conceptually, like in the large-scale installation *Massless*. (Fig. 91) In the recent teamLab Planets Museum they built a large planetarium where spectators can look not at galaxies but at a universe of flowers that rotate, grow, and disappear.

Since the 1960s, visual artist Shaw has aimed to evolve the position of the observer from passive contemplation to interactive and immersive involvement. For his pioneering work in virtual and augmented reality, immersive visualization, and navigable cinematic systems, he often choses circular or spherical structures. His round installations include: *Corpocinema* (1967), *Auditorium* and *Information Pavilion* (1971), *Inventer la Terre* (1986), *EVE Extended Virtual Environment* (1993), *Telepresent Onlookers* and *Place* (1995), *iC_inema 1* (1998), *Eavesdrop* (2004), *Place-Hampi* (2006), *Pure Land 360* (2012), and *We are like Vapours* (2013). In 1995, Shaw produced *Place*, an interesting return to the surrounding panoramic view of a city, but with a contemporary addition: a motorized platform allowing visitors to rotate a projected image within a circular screen to explore a 3D virtual environment. Viewers interacted with the work from within the circular perimeter of the screen, and bystanders could also see the work from its outside surface.[799] (Fig. 92) The artist highlights the emergence of a practice space: the 'place'. The concepts of place and environment will return as a focus for other media artists in the 1990s, when spectators start to become actors through interfaces.

Along with Shaw and Krueger, Michael Naimark (b.1952) is a pioneer, producer and scholar of virtual reality and media art, who taught in institutions such as San Francisco State University and MIT Media Lab. He experimented with several forms

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[797]   Claus, Jürgen 2003, "Stan VanDerBeek: An Early Space Art Pioneer" in *Leonardo*, Vol. 36, No. 3, 2003, p. 229.

[798]   Quotation from the press release of her exhibition at the Serlachius Museum, Mänttä. See: https://www.e-flux.com/announcements/152432/eija-liisa-ahtilapotentiality-for-love/. Accessed 24 January 2022.

[799]   See the artist's website: www.jeffreyshawcompendium.com. Accessed 15 September 2020.

of immersion, which "he defines simply as the feeling of being inside rather than standing outside",[800] and often investigated the notion of 'place representation'. His immersive installation *Be Now Here* spans several editions between 1995 and 2008, traversing various media trajectories. It shows endangered landscapes and public spaces on the UNESCO World Heritage's list, in which "visitors gain a strong sense of place by wearing 3-D glasses and stepping into an immersive virtual environment".[801] The artist explains that "the entire floor rotates once every two minutes in sync with the panning imagery, creating an illusion that the screen is rotating around the viewers. This effect is similar to the feeling when the train next to you pulls out of the station".[802]

Looking at pictures of international immersive art environments over the years, we can detect a sense of circularity, the aim to stimulate a spatial sensation, the complexity of the environments and a sense of immersion. Could we define an art environment as the intermediary between representation and experience? Could a media art environment be a new, contemporary step between images and experientiality?

Although the idea of circularity in time and space appears in one of Astala's first videos, *As Though Time Was All Around* (2002), the concept of spatiality will become even more important in his art practice in the following years together with his interest in phenomenology. The concept of circularity is present in a different way in *Twin Cities*, a three-channel video installation realized in 2016 in Seoul (Korea), where the position of the spectator is slightly different from Astala's other works. (Fig. 93) This composition of twenty-four video images forms two rotating planet cities on two screens. The artist explains:

"The 3-channel installation places the spectator in the middle of the screens, as if he/she would be observing the 'planetary' scene from inside a satellite (between two planets). Here the spatial structure serves as a perceptual reference, as if positioning the spectator into outer space. This is enforced by the sound track, as if the speech, music and sounds were coming from the radio ether".[803]

In *Twin Cities,* Astala seems to hark back to his initial interest in the Western scientific world view, with maps and globes, although the space is viewed panoramically. Here, the concept of the observer floating between two planet's cities, as if from the inside of a satellite, conjures up the atmosphere of a planetarium

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[800]   Grau, Oliver 2003, *Virtual Art: From Illusion to Immersion*, p. 244.
[801]   From the artist's website: http://www.naimark.net. Accessed 5 October 2020.
[802]   Ibidem.
[803]   Lauri Astala, interview by L. Scacco. 18 October 2019.

and its complex motions of heavens. It stresses the idea of distance from our world through a sense of diminishing gravity. The video also evokes distance in time, culture, and language, which Astala experienced during his stay in Korea,[804] by offering a view of the planets that tease the spectator.

Laitinen's four-channel video installation *Conductor* (2014–2015) is another example of an immersive environment, where circularity can be felt both aesthetically and conceptually. (Fig. 94) The work centres on the changes to the human-made environment, as seen through the circulation of physical matter. It is a sculptural construction that allows the audience to experience it in many ways, where, as stated by Laitinen, "what is essential is the tension and movement that arise from stepping inside the work – and out again". The Finnish artist explains his intentions: "I initially considered making a traditional four-channel piece with screens positioned so that viewers would have to shift their attention continually from one screen to another, whereas the present solution seeks to make all material seeable simultaneously, in superimposition and continual reflexive interaction".[805] Laitinen intentionally pursues the impression of being surrounded, drawn in and enveloped. He prefers a simultaneous and absorbing view to the splitting of the vision, highlighting how media artists select the finest technological solution to achieve a fully immersive experience for viewers.

The video installation *Passing By* (2008) by Lounila invites observers to walk around its circumference. (Fig. 95) This monochromatic travelogue shot from a car, underground, and train windows in natural parks, desert areas, and forest roads, revolves around the passing and movement of time and places. The artist explains how "individually uninteresting pictures and video clips started to become interesting as an entity due to its immense quantity. In them, constantly and regardless of the unintentionality, there has been an obvious effort to systematically record the same excitement and feeling of momentariness from finding something new".[806] The footage born from the necessity to record unique experiences takes the shape of a circular vision for viewers.

In Ahtila's video installations, images usually surround the spectator, and she works to incorporate the space around them. Apropos of the multi-screen setting in *Where is Where* (2008), Ahtila states that "it's like a circular film" because "the viewer, standing inside the installation, will have the experience of being in the same

[804]   Lauri Astala, in conversation with L. Scacco. Helsinki, 22 April 2021.

[805]   Hannula, Mika 2014, "Fundamental Matter: A Conversation in Three Parts" in *Tuomas A. Laitinen: Fundamental Matter*, edited by P. Kalhama, S. Sivulainen & I. Laine, EMMA, Espoo Museum of Modern Art, Espoo, p. 97.

[806]   For the press release, see: https://www.artsy.net/show/helsinki-contemporary-liisa-lounila-passing-by. Accessed 20 May 2020.

room" as the protagonists in the fictional story.[807] Her use of the space between the screens, in which projections interact with each other and where spectators are situated, is a circular system that shifts the detached position of the viewer pushing them into active participation. This circularity allows the artist "to play with the linear perspective and the order it implies – and the viewers' omnipotence".[808]

In the video installation *Personally Imposed* (2012), Oja choses a circular shape as this is linked to temporality, which characterizes human memory, and to the concept of personal space. (Fig. 96) The Finnish artist reconstructs a situational place/moment reminiscent of looking at old photos in the family album. Oja explains:

> "The installation reveals different photos which are moving around or travelling in the walls of the space but they are also visible in the transparent round curtain, which symbolizes some kind of more personal space. In the middle of the round construction you can see a little mirror which is turning around and that way causing the movement of the two different projection: the photos and a person. This construction also creates a rhythm for the viewer/audience to observe different parts of photo-watching-situation".[809]

In her research, Oja aims to bring a "physical depth to the picture plane"[810] by layering visual elements and liveliness with new technologies. She also makes use of the transparency of the images to create layers of depth in a sort of situational environment.

Generally speaking, the perception of circularity develops a sense of containment and acceptance in the audience, as in an encounter. These circular environments communicate the idea of incorporating or embracing the audience in their ambience. They evolve from 'space' to 'place' because the environment is conceived for the activities that take place there. This shift also involves design implications for Human-Computer Interaction (HCI), because, as computer scientist Dourish observes, "they emphasize not how to *design the space*, but how to *design for the*

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807 See Essling, Lena 2011, "What is the First Image?" and Haapala, Leevi 2012, "A Divided Sentence, a Split Viewer" in *Eija-Liisa Ahtila: Parallel Worlds*, Moderna Museet, Stockholm; Kiasma, Helsinki; Carré d'Art, Nîmes, edited by L. Essling, Steidl, Göttingen 2012.
808 Langhammer, Florian 2017, "How Do We Picture the World Around Us? Eija-Liisa Ahtila in the Studio" in *Collectors Agenda*. See: https://www.collectorsagenda.com/in-the-studio/eija-liisa-ahtila. Accessed 3 February 2022.
809 Marjatta Oja, in email conversation with L. Scacco. 2–6 October 2020.
810 Oja, Marjatta 2011, *Three-Dimensional Projection – Situation Sculpture between the Artist and the Viewer*, p. 7.

interaction".[811] In computer science, social computing is the area dedicated to the intersection of social behaviour and computational systems. There is mutuality between the two spheres, because "technological systems are themselves embedded in a set of social and cultural practices that give them meaning at the same time as being constrained and transformed by them".[812]

These art environments, which often use circular or spherical shapes, appear like small worlds with their sense of 'placing'. They seem to reflect the human need to rediscover the universe through its appearances, the circularity of the relationship between the artwork and spectator or, in a more general sense, the flow of exchange in intersubjectivity. As in later Merleau-Pontian thought, the dualistic model that divides and distances is subsumed into a circular pattern which includes everything. In his very last studies, the perceptual background gained the crucial name of nature. It seems that the background of perceptual experience in art could symbolise and overlap with the natural realm, which, in turn, encircles us.[813]

The importance of nature had already emerged in *The Doubt of Cézanne* (1945), in which the philosopher repeats relevant statements by the French painter, such as his reply to Émile Henri Bernard about Impressionist paintings: "They created pictures; we are attempting a piece of nature".[814] Regarding nature, Merleau-Ponty also cites Cézanne as stating: "the artist must conform to this perfect work of art. Everything comes to us from nature; we exist through it; nothing else is worth remembering".[815] In 1956–1957, Merleau-Ponty asserts that nature is our soil; it is not what we see in front of us, but what sustains us.[816] In addition to the centrality of nature, these statements also show the extent of the attention he invests into artists' experiences. The philosopher emphasises how much philosophy has to learn from art, because the latter is a "reconciliation of passivity and activity".[817] I would add that, in Cézanne's words "we exist through it" (nature), one should grasp not only the sense of sustenance, but also the depth that characterises our motion, our knowledge or, in other words, our life environment. I find it significant that in the summer of 1960, Merleau-Ponty travelled to the summit of Mont Sainte-Victoire

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[811] Dourish, Paul 2001, *Where the Action is: The Foundations of Embodied Interaction*, p. 90.

[812] Ibidem, p. 97.

[813] A part of *The Visible and the Invisible* is dedicated to the theme of nature. In his courses held at the Collège de France between 1956 and 1960, Merleau-Ponty was also focused on rethinking the idea of nature within Western thought.

[814] Merleau-Ponty, Maurice 1945, "Cezanne's Doubt" in *Sense and Non-Sense*, p. 12.

[815] Ibidem.

[816] Merleau-Ponty, Maurice 1956–1960, *La nature. Notes, cours du Collège de France*, Editions du Seuil, Paris 1995; Italian translation by M. Carbone, *La natura. Lezioni al Collège de France 1956–1960*, Raffaello Cortina Editore, Milano 1996, p. 4.

[817] Ibidem, p. 66.

from where Cézanne had painted his landscapes. (Fig. 97) The researcher Chad A. Córdova reports that "Merleau-Ponty travelled to Aix-en-Provence, a site immortalized by Cézanne's paintings, to gaze on the same landscape that had been the painter's passion and inspiration, to retrace in the flesh the painter's ascension of the mythic mountain, as stated by Claude Lefort. *L'Œil et l'esprit* was the product of this summer stay in the Aixois countryside".[818] I believe his visits arose from the desire to travel through the same nature experienced and painted by Cézanne. They also demonstrate that he was an active thinker in the process of the "reconciliation of passivity and activity", which artists usually accomplish.

4.6   Media Art Environments and Media Ecology

The discourse on circularity, environment, and nature opens another examination in media art and media studies. As I analysed in Chapter 2, the panoramas from the late eighteenth century are early manifestations of a media culture where circularity reproduces a 'view of totality'. The physical limits of circular panoramas coincide with the viewer's visual horizon.[819] Circularity returns in the illustrations of pamphlets advertising panoramic views of cities such as Berlin, Paris, Rome and Vienna, or famous battles such as that of Waterloo, Trafalgar and of Aboukir. (Fig. 98)

Video installations with multiple screens and immersive art environments show an affinity with moving panoramas by mirroring the circular structures that envelop the viewer and by recreating the spatiality of a habitat or place, and the possibility of exploring space through action. This search for roundness helps artists to evoke the inner experience of being-in-the-world. In Chapter 2, I analysed how Monet reproduced the spatial experience in his garden by painting in the *Water Lilies* at the Orangerie. This transfer of perceptions from reality to painting and vice versa is well illustrated in a statement by the art historian Patin, a specialist in Impressionism: "The 'water garden' was to take all the attention of Monet. The originality of the site was due to the fact that it was designed as a painting: exactly as intended by the artist, it was a transposition of the world he wanted to paint".[820] Monet sought to evoke this reciprocal and circular relationship with the natural environment by using

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[818]   Córdova, Chad A. 2012, "Merleau-Ponty and Cézanne: Describing and Painting Existence" in *Circé. Histoire, Savoirs, Sociétés*, No. 1/2012. Available at: http://www.revue-circe.uvsq.fr/merleau-ponty-and-cezanne-describing-and-painting-existence/. Accessed 30 June 2021.

[819]   Bordini, Silvia 1984, *Storia del Panorama. La visione totale nella pittura del XIX secolo*, p. 9.

[820]   Patin, Sylvie 2008, "Monet (1840–1926): From the Beginning to the *Water Lilies*" in the catalogue *12 x Claude Monet and Finnish Impressions*, p. 230.

the tools available at the time, but he had already grasped the importance of spatiality in visual art. In this chapter, I have also described how the circularity of immersive and interactive art environments is linked to planetariums and the spatial idea of the cosmos. A circular sequence of connections can also be identified, in terms of spatiality – the environment, nature, the cosmos – with which we can associate several types of panoramas, planetariums, spatial environments, video installations, interactive and immersive environments. It seems that technology is closer to the natural environment than one might think.

Following the dissemination of panoramas, the painter John Constable had already speculated that landscape painting could be considered a branch of philosophy: "Painting is a science and should be pursued as an inquiry into the laws of nature. Why, then, may not landscape painting be considered a branch of natural philosophy, of which pictures are but experiments?".[821] The German naturalist Alexander von Humboldt expressed a similar idea in his *Kosmos*.[822] Bordini observes that there was a common ground between the scientific gaze of the researcher/illustrator, the artistic gaze of the landscape painter and the gaze of the panorama designers, because they were all attempting to adhere, as much as possible to a chosen view of the landscape through the practice of life drawing. In the case of panoramas, the painter also sought to reproduce a scene encompassing the entire arc of the horizon into a macroscopic and spectacular painting.[823] These reflections on humanity, spatiality, and the cosmos in art, philosophy, and science return in Merleau-Ponty, who comments that "it is because we ourselves are one sole continued question, a perpetual enterprise of taking our bearings on the constellations of the world, and of taking the bearings of the things on our dimensions".[824] In the same years, McLuhan wrote in *The Gutenberg Galaxy* that perhaps it was better to use the word 'environment' instead of 'galaxy', because every technology tries to create a new human environment.[825] It seems that the idea of environment resonates with that of the measurable and immeasurable space that distinguishes our surroundings and the universe in which we belong. In the 1950s, Fontana and his artistic group had already grasped the twofold aspect of space: the

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[821]   Gombrich, Ernst H. 1956, Art and Illusion: A Study in Psychology of the Pictorial Representation, p. 150.

[822]   von Humboldt, Alexander 1845–62, *Kosmos. Entwurf einer physischen Weltbeschreibung,* Stuttgart; quoted in the French edition, Paris 1848, pp. 82, 85.

[823]   Bordini, Silvia 1984, *Storia del Panorama. La visione totale nella pittura del XIX secolo*, p. 34.

[824]   Merleau-Ponty, Maurice 1964, *The Visible and The Invisible*, p. 103.

[825]   He referred to the printing press. See McLuhan, Marshall 1962, *The Gutenberg Galaxy: The Making of Typographic Man*, University of Toronto Press, Toronto; Italian translation by S. Rizzo, *La Galassia Gutenberg. Nascita dell'uomo tipografico*, Armando Editore, Roma 1976, p. 20.

environment, intended as the surrounding space employed as a malleable material by artists, and the outer space, still largely unknown, between us and the galaxies.[826] The perception of our surroundings can multiply and expand to a planetary scale. New media and technology could amplify the artists' potential to encompass virtually limitless audiences and territories.[827] Hence, space is a category that allows access to embodiment, not as an illusionistic reference but as a sensitive process, and frees gesture and interaction, extending space into a universal dimension.

Contemporary artists, like Olafur Eliasson, still engage with the idea of an art that explores the cosmos and its natural phenomena through their environments and installations. The Icelandic-Danish artist works with light, natural phenomena, and processes of perception to create immersive and engaging experiences referencing panoramas and kaleidoscopes. His environment *Your Rainbow Panorama* (2011) on the roof of the Danish ARoS Aarhus Art Museum draws directly on circular panoramas. (Figs. 99–100) A 150-metre circular elevated walkway provides visitors with an all-round view of the landscape up to the horizon. The footpath is encircled by coloured-glass plates, which reproduce the spectrum of light and the shadows of a rainbow. Viewers are plunged into a rainbow that alters their chromatic perception of the environment. As they move, they animate their perception of the surroundings in various colours. Eliasson creates a place where dichotomies, such as inside and outside, no longer exist and where people find themselves slightly at a loss about whether they had stepped into an artwork or into another part of the museum. He declares: "This uncertainty is important to me, as it encourages people to think and sense beyond the limits within which they are accustomed to moving".[828] He seems to agree with Merleau-Ponty that viewers must adopt an impartial starting position, ignoring their assumptions about reality, in order to broaden their perceptual abilities. In conversation with Irwin, Eliasson admits that phenomenology is "a source of inspiration" for his work and that the "greatest potential of phenomenology is the ability to introduce an element of relativity and uncertainty into one's routine experience of space and time".[829]

Eliasson's *The Weather Project* (2003) was created for the Turbine Hall, at Tate Modern in London. In this project, the weather was the basis for investigating ideas

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[826]   See Manifesto del movimento Spaziale per la televisione (17 May 1952).
[827]   I refer to the spread of new media, such as television and Internet, and to the exploration of the solar system.
[828]   See: https://www.aros.dk/en/art/the-collection/your-rainbow-panorama/. Accessed 25 August 2020.
[829]   Irwin, Robert 2007, "Take Your Time: Olafur Eliasson" in *Olafur Eliasson*, Thames & Hudson, London, p. 55.

about perception and representation.[830] The artist aimed to recreate the image of an indoor sunset using a semi-circular screen, mirrors on the ceiling and an artificial mist. The light cycle and the mist were controlled by a complex technological system hidden from sight. Eliasson uses computers in many of his projects to control his complex environment. He uses the unstable element of the weather as a metaphor for the unknowability of the universe,[831] and simultaneously as a reference to time and the passing day. In a 2018 interview, Eliasson stated that he had always tried to tune into his experience of the landscape as it unfolds over time, because "movement is what really makes sense".[832] Here too, he echoes key aspects of Merleau-Ponty's phenomenology, such as embodied experience and time, because the landscape is not a vision dominated by our gaze, but a living environment in action. In his immersive works, the artist makes visitors aware of their perception and of how their bodies occupy the space and act within it. This modality of self-reflection could itself lead to a more conscious attitude towards the world outside the artwork. Many returned a number of times to the Turbine Hall to lie on the ground and follow the simulation of the solar cycle, wanting to feel their bodies engulfed by the warm misty light.[833]

American artist Aitken's multi-screen video installations demonstrate a deep sensitivity to the panoramic concept. They immerse the beholder in the alienating spaces of big cities, as in *Electric Earth* (1999), which won the Venice Biennale International Prize, and in intact and grandiose natural landscapes as in *New Ocean* (2001). These art environments are digitally constructed architectures made of sound and images. A sort of total immersion in Aitken's work occurs with the *New Ocean Cycle*. Reminiscent of Cinéorama, this work is an enveloping landscape in continuous metamorphosis.[834] Nine projected video sequences flow on the walls of a circular environment, turning increasingly blue and in a crescendo of sounds morphing from natural noises into electronic music. Aitken's interest in underwater seascapes returns in *Underwater Pavilions* (2016). Mirrored sculptures anchored onto the seabed near California's Catalina Island at various depths form an

[830] See: https://olafureliasson.net/archive/artwork/WEK101003/the-weather-project. Accessed 24 August 2020.
[831] Verhulst, Sophie 2017, "Modern Classics: Olafur Eliasson – The Weather Project, 2003" in *Artlead*, 31 May 2017.
[832] Eliasson, Olafur 2018, "The Whys and Hows of my Art Making: Olafur Eliasson in conversation with Anna Engberg-Pedersen" in *Olafur Eliasson: Experience*, edited by A. Engberg-Pedersen, Phaidon, London, p. I.
[833] More than two million visitors.
[834] Bordini, Silvia 1984, *Storia del Panorama. La visione totale nella pittura del XIX secolo*, p. 355.

interactive art installation. Here, the viewer's immersive experience is no longer metaphorical.

In 2020, at Helsinki's Kiasma Museum of Contemporary Art, Aitken presented a large-scale 360-degree video installation entitled *Song 1* (2012–2015)[835] projected onto both sides of a circular screen. (Fig. 101) The audience could walk into and around it. Aitken asked several Hollywood musicians and actors to make their own version of the classic 1934 jazz song "I Only Have Eyes for You". Actress and performer Tilda Swinton interpreted the song visually, accompanied by street dancers and gospel singers. Aitken states that this immersive work has no beginning or end and leads visitors into a circular hypnotic cinematic sequence. Even more relevant is Aitken's idea of the empowering nature of the encounter between public and work. He leaves viewers free to immerse themselves and "to take what they want from the art and make the experience their own".[836] The importance of the experience and its autonomy is again highlighted. It should also be noted that Kiasma, with this exhibition, confirms that it is at the forefront of media art, introducing the Finnish public to cutting-edge experimental art. Kiasma also held other relevant exhibitions that had immersive aims prior to Aitken's solo show. For example, Pipilotti Rist's solo exhibition *Elixir* was an immersive installation based on 3D-modelled video projections in the main exhibition hall in 2009. The installation enabled visitors to lie back on pillows and allow themselves to be enraptured by the flow of images and sound. In addition, Ragnar Kjartansson's nine-channel video installation *The Visitors* in 2019–2020, featured several musicians, all friends of the artist, singing and playing the same melody of the song "Feminine Ways". This immersive installation created a sense of temporary community, an experience of belonging and participation between spectators, without direct interaction but across the repetition and circular nature of actions and settings.

In 2017, also in Kiasma, Laitinen presented the four-channel video installation *Receptor*. (Fig. 102) The transparent environment and the reflections of the projection in the place overcame the limited views to allow filtered glances of the surrounding space. In this environment, the projected images become ethereal, porously entangled with the space and its mobile and static elements. As visitors walk by, the 'videoscape' transforms the work into a new version of the work in real-time. The panoramic environment changes constantly, as do the possible interactions. The AI-generated text in the installation revolves around vibes and ambiences with a contemporary feel,[837] in consonance with the themes of connectivity and reception.

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[835]   The exhibition took place from 18.9.2020 to 10.1.2021.
[836]   See: https://kiasma.fi/en/exhibitions/doug-aitken/. Accessed 25 February 2021.
[837]   See: http://www.tuomasalaitinen.com. Accessed 25 February 2021.

A recurring trait of these panoramic installations is the endless experientiality suspended between a call to action and disorientation. This modality of immersion differs greatly from the believable illusionism of the painted landscapes of panoramas. I believe that illusion is no longer a relevant matter. Artists constantly engage and get involved with the universe, and attempt to communicate it, through interventions in nature or the reproduction of natural phenomena. Unlike historical panoramas, the primary purpose of these panoramic installations is not to mirror coeval scenarios, but to configure the metamorphoses, entanglements, and challenges of the contemporary world. Eliasson expresses this sensibility towards the natural world by searching for new ways to perceive it, while Laitinen has a slightly different perspective on the natural environment and observes how technology mediates it. Laitinen's interest in ecological awareness and knowledge, and his concept of porous systems show a degree of resonance with Eliasson's practices mentioned above.[838] Aitken's approach is more explicit:

> "We are living in a new era, one of complete connectivity, where screen space has become seemingly equal to the physical landscape. This surreal shift in evolution brings us into uncharted waters, a new frontier, one for which we are not fully prepared. These artworks question how we navigate a world of increasing speed and transition, the direction of where we can go and how we can confront the future".[839]

His statement is attuned with the notion that media make our world. In this fast-paced society, driven by technology, the natural environment seems to have been replaced by a digital spectacle. The 'media space' should be intended as a new type of environment that shapes our experience of the world, and something that artists and scientists have to tackle. In particular, media ecology has been an active movement for many years in the study of the ecosystem formed by media and their users.

The discipline of Media Ecology dates to 1971, when Neil Postman of the New York School coined its name. In 1998, the Media Ecology Association was established.[840] This field examines the effect of media, technology, and communication on human perception. It is rooted in McLuhan's observation that each new medium perceivably transforms, in various degrees, the human sensorium. A number of researchers have recently reinterpreted the *Gutenberg Galaxy* (1962)

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[838] Tomás Saraceno (b. 1973), who belongs to the same generation as Laitinen, is another artist exploring new and sustainable ways of inhabiting the planet.

[839] See: https://kiasma.fi/en/exhibitions/doug-aitken/. Accessed 25 February 2021.

[840] Granata, Paolo 2015, *Ecologia dei media*, Franco Angeli, Milano, p. 19.

and *The Medium is the Massage* (1967). They believe that for McLuhan, the medium is an open, dynamic, active, and pervasive environment.[841] The Canadian scholar attempted to understand media starting from their perceptual effects. He assigned a crucial role to the notion of experience, as is the case in the distinction between hot and cold media that differentiate sensory modalities. For McLuhan, media forms are the technological means and channels by which the medium is conceived, realised, and distributed. They constitute a single, complex, and multifaceted environment, an expressive texture, a dynamic background in continuous transformation, bound by a logic of interdependence.[842] This approach reflects Merleau-Ponty's phenomenon of reciprocity. A number of scholars have observed a dialogue between McLuhan's media theory based on the senses and embodiment, and existential phenomenology, rooted in perception and lived experience.[843] This affinity is quite possible, since the periods of the two fields of research coincide.

Media Ecology does not consider media as mere tools, but as environments addressing the lives within which experiences are formed. However, this approach does not mean that life is determined by media, rather it constantly interacts and transforms itself in a process of reciprocal influence or in a chiasmic way. Media scholar Harold Innis, from the Toronto School, believes that communication media shapes a vision of the world, and consequently new forms of knowledge are organised according to a circular and mutual criterion. Innis demonstrates that extensively using a means of communication affects some characteristics of the knowledge communicated.[844] As such, media form a habitat across the invisible and complex network of the human ecosystem. If we consider media in these terms, we need to accept that there is an ecology of media that we deal with on a daily basis. This proposition seems encapsulated in a later statement by Sobchack: "The callus on my finger also reminds me that there is a reciprocity between our bodies and our various writing technologies that co-constitute different experiences of *spatiality*".[845]

In *Expanded Cinema* (1970) Youngblood had already pointed out that, the artist's approach to society increasingly resembles that of an ecologist, an individual who deals with systems of relationships within environments. Consequently, the

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[841]   Ibidem, p. 65.

[842]   Ibidem, p. 71.

[843]   Marshall McLuhan wrote that "[P]henomenology [is] that which I have been presenting for many years in non-technical terms." Letter to Roger Poole, July 24, 1978, as reported in Ralon, Laureano & Vieta, Marcelo 2012, "McLuhan and Phenomenology" in *Explorations in Media Ecology*, Vol. 10, No. 3–4, pp. 185–206.

[844]   Innis, Harold A. 1951, *The Bias of Communication*, University of Toronto Press, Toronto; Italian transl. *Le tendenze della comunicazione*, introduction by M. McLuhan, SugarCo, Milano 1982, p. 23 and p. 55.

[845]   Sobchack, Vivian 2004, *Carnal Thoughts*, p. 92.

creative process of future artists will no longer consist of the mere realization of new objects, but in the discovery of previously unknown relationships between existing phenomena, both physical and metaphysical. Artists and scientists will reshape the environment for the benefit of society. Youngblood highlights the notion of the artist as an ecologist, the concept of art as environment, rather than anti-environment, subsuming the ecosystem of the planet into the artistic process. Youngblood already sensed the connection between media and environments by using the term 'videosphere', a metaphysical technological system formed by all the video programming modalities existing at that time – from closed circuit to satellite – and in synergy with the noosphere, i.e., the sphere of human thought.[846] He also employed the term 'intermedia' for the simultaneous use of various media to create a total experience for the audience.[847]

The concept of circularity returns in the field of digital archiving. Annet Dekker identifies the feature of 'anarchive' in software-based art, echoing media theorists Wolfgang Ernst and Siegfried Zielinski. In this framework, cataloguing "is constantly re-used, circulated, and expanding, and thus only a metaphorical archive".[848] The condition of the digital archive is re-use instead of depository; circulation and instability rather than a central memory system. This circular process is certainly part of the performance of computational systems based on hyperlinking, sharing, and effecting processes.[849] Consequently, computational technologies reflect circular environments that often characterise interactive and immersive installations. Media ecology proposes that media are considered as real environments, living environments, and a set of cultural, technological, and communication forms within which individuals live and act. Or is there a human tendency to recreate the circularity of the natural environment in the media space? Aitken states that the "screen space has become seemingly equal to the physical landscape", pointing out how the two environments often overlap. The growing presence of media and the contiguity of real and virtual worlds is no longer problematic, as happened in the 1990s, but a relational co-existence of realms.[850] There are many examples of this coexistence in art, such as the immersive

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[846] I refer to the section titled "The Videosphere" in Youngblood, Gene 1970, *Expanded Cinema*, pp. 260–263.

[847] I refer to the section titled "The Artist as Ecologist" in Youngblood, Gene 1970, *Expanded Cinema*, pp. 346–351.

[848] Dekker, Annet 2019, "Between Light and Dark Archiving" in *Digital Art through the Looking Glass: New Strategies for Archiving, Collecting and Preserving in Digital Humanities*, p. 133.

[849] This subject will be investigated in Chapter 5.

[850] I analysed this topic in Chapter 3. Art exhibitions that offer immersive experiences such as *Van Gogh Alive* can foster the acquisition of knowledge in a world where real and virtual are becoming hard to separate.

installation *Digitized Nature* (2002) by teamLab, where the group explicitly establishes a parallel with the natural world and state: "Nature has formed over a long period of time. By turning nature into art, we can gain a sense of the continuity of nature, that humans do not usually perceive".[851] In a different way, the art group Random International investigates how interpersonal relationships and connections with nature are progressively mediated by technology. Their experiential artwork *Rain Room* (2012) garnered considerable attention when inaugurated at the Barbican Centre in London. (Fig. 103) Visitors simultaneously experienced exposure to and protection from the water falling all around them. This odd sensation of walking in a heavy rainfall and a sense of dryness is the result of collaboration between humans and technology, because "in *Rain Room* a seemingly intuitive relationship develops between visitor and artwork, human and machine".[852] Random International prototype an "amplified representation of our environment" hinging on concepts of consciousness, perception, and instinct. Research focusing on behavioural experiments in environments has increasingly grown.

Artist and researcher Beloff focuses on the concept of living in a techno-organic world. She creates wearable miniature green environments, such as *A Unit* (2012), that can become a part of daily existence and can offer potential health advantages. (Fig. 104) Beloff adapts her works to human proportions by opting for small sizes. By miniaturizing the natural environment, individuals can carry these green environments in their daily lives, therefore shifting the idea of being surrounded by nature into a private and intimate setting. The artist proposes new solutions for technologically enhanced individuals and their reciprocal relationship with the environment "that is also getting increasingly modified with the advancements in science and technology".[853] In the context of Merleau-Ponty's philosophy, this work could be a tool for thinking through the relationship between the living body, nature, and technology. Already in 1990, the post-phenomenologist Ihde argued that Merleau-Ponty's phenomenology of the perceiving body contains an implicit "latent phenomenology of instrumentation",[854] namely a theory of the process by which the body operates both a technical exteriorisation of its functions and an incorporation

[851] See: https://www.teamlab.art/it/concept/digitizednature/. Accessed 30 June 2020.
[852] See: https://www.random-international.com/rain-room-2012. Accessed 12 August 2021. After inauguration in London, the immersive installation was exhibited in MoMA, NY; Yuz Museum, Shanghai; LACMA, Los Angeles; Sharjah Art Foundation, UAE; Jackalope Art Pavilion, Melbourne; Museum of Contemporary Art, Busan; The Maxine and Stuart Frankel Foundation for Art, MI, United States.
[853] Beloff, Laura 2011–2012, "Living in a Techno-organic World" in *SOLU Bioart Society*. See: https://bioartsociety.fi/projects/art-and-henvi/pages/laura-beloff. Accessed 14 October 2021.
[854] Ihde, Don 1990, *Technology and the Lifeworld: From Garden to Earth*, Indiana University Press, Bloomington, p. 40.

of technical tools. This theory contributes to the development of a phenomenology of human-technology relations "to reinsert the role of technologies in all the dimensions of the lifeworld".[855]

It seems quite clear that the environment and spatial experiences are at the core of an accelerating technological evolution, opening new doors for experimentation within science, art, and culture. Inspired by panoramic and circular arrangements, these immersive art environments concentrate on the high-tech habitats in which lives and actions take place, with a focus on experiential, emotional, and physical behaviours, rather than on illusory and artificial outcomes. These immersive artworks aim to expand the realm within which nature and technology cohabit and cooperate. As such, they adapt lived experiences to media environments where machines are often invisible or discontinuous. These artworks are also noticeable in the contemporary perspective, recently named Anthropocene, where the distinction between humanity and nature is extremely narrow because of the strong impact of human activities on Earth.[856] Thus, immersive and interactive installations may contribute to increasing awareness of the current state of the planet and of the effects of our actions.

4.7   Virtual Presence

Having analysed immersive art environments, I will now investigate the immersion created by virtual realities and 360-degree videos. These media are two of the most popular forms of the 'spherical video' category. Although the field is changing rapidly, practitioners are already showing interest in their spherical visions and immersive environments. A recently developed piece of equipment enables viewers to explore a 360-degree video with their mouse or mobile device. Using a helmet or goggles, and a few simple gestures, they can look around in all directions to perceive an environment through exploration. Instead of just sitting and watching, 360-degree video enables viewers to interact with the content.

Virtual reality (VR) can produce a feeling of being in the action because each scene occupies the entire field of vision thanks to the Head-Mounted Display (HMD). When using an HMD, the screen is split into two so that each eye sees a slightly different perspective. For VR viewers, interaction is predominantly based on the movement of the user's head and performed with hand-held controllers, such as

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[855]   Ibidem, p. 41.
[856]   In 2000 the scientist Paul Crutzen adopted the term Anthropocene to describe our era. It follows the Holocene, starting with the industrial revolution of the eighteenth century. See Crutzen, Paul J. & Stoermer, Eugene F. 2000, "The Anthropocene" in *IGBP Newsletter*, No. 41, May 2000, pp. 17–18.

in the early consumer models of the Oculus Rift HMD. The Oculus Rift project was born in the garage of Palmer Luckey, a University of California engineer who was passionate about helmets for virtual reality. The project was realised thanks to an online fundraising platform in 2012. Luckey distanced himself from existing VR helmets to create a device that was easy to use and comfortable to wear. He also reduced the annoying limitations that had slowed interest in virtual reality, such as the sense of disorientation and latency. The Oculus Rift relaunched virtual reality, which was already considered to be outdated in 2012. Today the Oculus Quest 2 is a cutting-edge device with "inside-out" cameras that generate better inclusivity thanks to their increasingly reliable hand-tracking feature.[857] Contemporary artists who work with virtual reality and augmented reality are emerging, such as Jon Rafman, Tamiko Thiel and Elizabeth Edwards.

Analysing the concept of virtuality from a phenomenological perspective, the enactive approach shows how "the content of perceptual experience is virtual". All features exist in the environment, they "are present *as available*, rather than as represented". With our bodily approach in motion, we can enjoy an experience of worldly detail. The philosopher Noë maintains that "crucially, phenomenologically speaking, *virtual* presence is a kind of presence, not a kind of non-presence or illusory presence".[858] This reasoning overturns the concept of virtual reality as an extension of illusory practice. In a way, virtual reality aims to create a parallel environment and has the potential to be a tool for knowing the world. Virtual reality is potentiality, rather than illusory.

If everything is potentially virtual and knowable, then post-production and post-truth dynamics, as described in Chapter 2, can also be read as phenomena in the light of phenomenology. The approach to reality and its surrogates is not dualistic. In representation, there are no double identities for objects, but ambiguous, porous, intertwined realms in the phenomenological meaning. These dynamics take place in the corporeal 'interworld' that led Merleau-Ponty to outline human existence in terms of ambiguity. The creation of art environments where immersive experiences occur, indicates that attitudes are phenomenological. This is certainly not Cartesian, because it no longer separates true and artificial, but connects everything in terms of relationships (true and false, existing and not-existent). There is no hierarchy of

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[857]   Buckingham, Gavin 2021, "Hand Tracking for Immersive Virtual Reality: Opportunities and Challenges" in *Frontiers in Virtual Reality*, Vol. 2. See: https://www.frontiersin.org/articles/10.3389/frvir.2021.728461. Accessed 18 August 2022.

[858]   Noë, Alva 2004, *Action in Perception*, p. 67. In the 1990s, Pierre Lévy was one the first scholars to analyse the concept of virtual reality. In his *Cyberculture* (1997), he lists the meanings of virtual. In philosophy, virtual represents something that exists in potential, as in the example of the tree which is virtually present in the seed.

activities (the first and the second, reality and its double), but continuous small 'renaissances' born from endless chiasmic encounters.

In visual art, intentionality and embodied experience resonate with a phenomenological stance. On a strictly art historical level, I re-assess the role of video art in the transition from two-dimensional to three-dimensional representation in the digital era, as it is more directly relevant than the performance of cinema.[859] Tactile cinema, 3D projections, and access via different devices to media content, as outlined in the theory of the re-location of the medium, still hold the spectator in a static and frontal position.

Summing up, all the media I discussed (immersive art environments, 360-degree videos, virtual reality) share the same objective of constructing a spherical experience of perception, the form of perception closest to that of the material world. These are artistic environments set up to resemble the non-virtual world. Merleau-Ponty asserts: "Human life 'understands' not only a certain definite environment, but an infinite number of possible environments, and it understands itself because it is thrown into a natural world".[860] Immersive experiences are active explorations of the world. Their aim speaks to the human desire to know and experience the world, and to ways of perceiving between representation and experience. The spherical dimension I analysed corresponds to the unlimited nature of the sensory and visual field in which the body is immersed. The phenomenal sphere is the very horizon of phenomenology, that is, the world and its multiple environments.

4.8   Augmented Reality and Other Layers of Immersiveness

A further kind of virtual presence is augmented reality, with which artists bring their virtual reality compositions into material reality through web interfaces and cameras on portable devices, such as tablets and mobile phones. Works of this nature explore the intersection of space, place, and imagination, and involve a multimodal perception. For instance, in 2009 Tamiko Thiel started her series of augmented reality installations. Her *Water Lily Invasion* (2013) for the Digital Art Weeks at SIGGRAPH in Hong Kong, uses a Layar augmented reality application to portray 'hidden' historical and thematic layers in public spaces. (Fig. 105) This tool has been adopted by a number of museums for interactive explorations and for 'bringing objects to life'. In 2016, the technology gained popularity through the Pokémon GO

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[859]   I analysed this topic in Chapters 2 and 3.
[860]   Merleau-Ponty, Maurice 1945, *Phénomènologie de la perception*, p. 381.

gaming application.[861] For Thiel, AR should be considered the Street Art of the twenty-first century, because it is mainly planned as a public artwork.[862] With her multidisciplinary educational background,[863] Thiel merges the digital and the real into a single, shared place, where the spectator's body is the main connection between the two.

In Finland, AR and VR technologies are evolving and being used in various fields, from architecture to the game industry, from music to the visual arts. In 2017, an experiment into AR Street Art was organised on the streets of Pasila in Helsinki.[864] In 2018, the media art festival *City of Digital Art* was organised in Jyväskylä, in cooperation with Jyväskylä Art Museum. The three-day AR and VR art festival gathered digital artists from Finland, the United Kingdom, Japan, and Ukraine. During the festival, two digital AR murals were produced by the duo Samuli Kinnunen and Miikka Sipilä.[865]

The cross-disciplinary group Pagan, formed by Lisa Roberts, Daniel Blackburn & Tuomo Tammenpää, works with interactive media and participatory installations in public spaces. The art collective has a background in film, interaction design and game design. Recently, they have realized *Chrysalises* (2018), an augmented reality artwork in two locations in Helsinki: Esplanadi Park and Malminkartano Hill. Both artworks emit specific frequencies in response to different types of environmental stimuli, such as mobile phone signals. For the art group, "at times their behaviour can seem strange and erratic and can even sometimes follow you around or even envelop you entirely".[866] In their artistic research, circularity and engagement are central.

Pasi Rauhala's art practice spans interactivity, spatiality, and public space. *Flamigos* (2019) is a light installation and AR work located along the columns below Kulosaari bridge and the surrounding area of Helsinki.[867] (Fig. 106) The virtual

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[861]   See Grau, Oliver; Hoth, Janina & Wandl-Vogt, Eveline 2019, "Introduction" in *Digital Art through the Looking Glass*, p. 10.

[862]   In an interview, she mentions Banksy. Street artists are an obvious inspiration for AR. See: Aceti, Lanfranco & Rinehart, Richard 2013, "Tamiko Thiel" in *Not Here Not There, Leonardo Electronic Almanac*, Vol. 19, No. 2, p. 212. Available at: https://leonardo.info/sites/default/files/15_leavol19no2-thiel.pdf. Accessed 1 April 2023.

[863]   Thiel has a degree in Engineering from Stanford University, Mechanical Engineering from MIT, and Applied Arts from the Academy of Fine Arts in Munich. Additionally, since the 1990s, she has been lecturing about VR and AR at various Universities and Academies of Fine Arts.

[864]   They reinterpreted two murals by Millo and Onur. See: https://estinst.ee/en/restart-reality-digitanavakunst-pasilas/. Accessed 2 September 2021.

[865]   See: https://jyy.fi/en/event/city-digital-art-festival/. Accessed 3 September 2021.

[866]   See: https://tammenpaa.com/chrysalis/. Accessed 2 September 2021.

[867]   It is a temporary work that belongs to the Helsinki Art Museum's collection.

element of this work uses a smartphone AR application to display animated birds on the unused area under the bridge. *Concrete Pixel* (2019) is a media art installation with an AR extension, where the artist brings a visual digital unit into the physical world. Interactivity is fundamental to *Landscape Error* (2018), a 3D scanned landscape with the sounds of nature and humans. The artist explains that "without the human the artwork is silent and hidden, but when the spectator enters, work comes alive and starts to shape itself by following the movements of the viewer and finally it gets destroyed under their gaze".[868] Rauhala sees human interaction as the co-creation of the digital installation and, simultaneously, the enhancement of lived experience in his algorithmic landscape.

Kalle Rasinkangas is another Finnish artist who works with VR, sound art, and space environments. His recent *Common Domain* (2020)[869] is a virtual reality installation that presents different worlds as floating islands that can be selected and visited. In this artwork, operas are activated as soundscapes by direct or hidden interactions. The artist merges technology and creativity to adapt his pieces to the surrounding environment by using movable screens to encounter imaginative realms outside the VR headset. He explains that "using Nokia Bell Labs' 'Motion Engine' technology the current state of the space surrounding the piece will affect the virtual worlds. For example, in one world there will be sun shining when there's little to no people at all in the space, but when there's a big crowd there will be a whiteout blizzard".[870] Rasinkangas investigates ways of opening VR to a multitude of interactors simultaneously. Opera is a perfect choice because it involves more than one viewpoint, and each perspective provides distinct insights into the work.

All of these examples of Finnish contemporary art reveal a continued interest in collaborative art projects. Just as in the international arena, different competences and networked creative processes are required in technology-based practices. Unlike Finnish video art, immersive environments in Finland are being incepted simultaneously alongside the international art scene and growing rapidly. Clearly, this development can be attributed to the great attention paid to technology in Finland. Moreover, a phenomenological approach also guides this development. Notions such as 'attending to lived experience' and the 'daily being-with media' merge and ground the research. Finnish art academies and universities have steadily worked in the fields of media art with the goal of forming students with advanced

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[868]   From the artist's website: https://pasirauhala.fi. Accessed 20 September 2021.
[869]   It was realized in collaboration with Nokia Bell Labs and the Finnish National Opera and Ballet.
[870]   See: https://www.kallerasinkangas.com/common-domain.html. Accessed 8 September 2021.

skills,[871] while the spread of video art in various forms from the mid-1980s created a richness of new premises suitable for immersive art.[872]

In the international arena, Acute Art is an international digital platform that provides prominent contemporary artists with access to cutting-edge technologies and current topics of investigation. Established artists such as Abramović, Nathalie Djurberg & Hans Berg, Eliasson, Anish Kapoor and Tomás Saraceno, from different fields of art, are among the artists involved.[873] This kind of cooperation demonstrates the enormous potential of immersive virtual reality and augmented reality experiences that merge physical and virtual worlds. Artists with access to new technologies can envision novel applications and approaches and develop new aesthetics beyond traditional forms.

The scholar Patricia M. Locke, who adopts a phenomenological approach, points to a risk in these AR applications. She warns that the abundance of ways of sensing space thanks to easy and daily access to digital tools can lull our consciousness towards a "childhood's raw impressions (…) in favour of what Husserl calls a 'high altitude' point of view, or an instrumental one".[874] AR may offer access to the latest novel spatial levels of experience but reduces the fullness of the lived experience. One risk could be losing the nuances of reality that Cézanne translated on the canvas after his proximity and primordial embrace with the natural environment. Locke's observation reminds of a comparison by Schivelbusch, which describes the gradual decline of the habit of close-up views of landscapes after the construction of the railroads, and the emergence of the panoramic gaze.[875] It seems that every technology makes available new experiences of space-time and can simultaneously dismiss others or maybe transform them. Ihde notes that today spatiality has moved away from classical phenomenology towards a sense of space-time and a relativistic and multi-stable reading. He argues that "multistability, now common to many sciences, is a phenomenon by which many entities self-organize into different shapes and arrangements".[876] Ihde proposes an "embodied multi-stability of places". Multi-

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[871] See Tarkka, Minna 2003, "Finland: Manufacturing Content?" in *Nordic Media Culture*, p. 97.

[872] See Rastas, Perttu 1994, "Treasury: Finnish Media History" in *ART2: Journal of the University of Art and Design Helsinki*. Available at: http://www.uiah.fi/art2/art2_194/rastaslist.html. Accessed 12 September 2021.

[873] See: https://acuteart.com. Accessed 18 August 2021.

[874] Locke, Patricia M. 2019, "Cézanne, Merleau-Ponty, and Questions for Augmented Reality" in *The Phenomenology of Real and Virtual Spaces*, edited by E Champion, Routledge, New York, p. 183.

[875] See Schivelbusch, Wolfgang 1977, *Geschichte der Eisenbahnreise. Zur Industriealisierung von Raum und Zeit im 19. Jahrhundert*.

[876] Ihde, Don 2019, "Postphenomenology and 'Places'" in *The Phenomenology of Real and Virtual Spaces*, p. 52.

stable spatiality might be a fitting description for immersive art experiences in which people feel at ease because they are now used to living in this multi-stable condition, whatever technology is used.

I would argue that Locke's observation on the diminishing fullness of lived experience can be related to the process of post-production that has already re-defined its raw material. The vast amount of information in continuous flow is layered within the material of lived experience. Today, the perception of material life is already a composite of the natural environment and the media sphere. In other words, lived experience is informed by and educated in the sphere of the media, which exists in parallel and is integrated with the natural environment. In Finland, Astala observes that cinema deeply affects "the perception of space – and further on its dislocative aspects".[877] Referring to Foucault's idea that individual experiences combine with scenes from fiction and documentary films, Astala wonders if 'mental images' and 'future memories' are predestined in a way. In his recent video installation *Sketch for the Last Map* (2021), Astala explores how augmented and mixed reality contribute to this process. In the installation, layered images of indoor and outdoor sites overlap as if the places had become translucent or the view were formed by layered visual thoughts. The artist continues to investigate this present-day condition: "If reality has become a confusing image, not only do I ask what is that environment that is encircling me, but rather to what extent can I speak of presence? Or, is the question of presence relevant anymore? If the issue of presence is relevant or problematic, what could be the task of art in the face of this kind of question?". The topic of presence is linked not only to authenticity, but also to the concept of the embodied multi-stability of places, as Ihde argues by showing the complexity of the current approach to the sensory realm.

4.9   A New Spectator?

From this analysis of media art environments, it emerges that video art installations were crucial to the dissemination of circular and spherical vision, following on from panoramas and planetariums. Video art installation and immersive art share the aim of creating a space-time *continuum* through multi-projections, the extension of visual narratives, the inclusion and mobility of the spectator in an environment. How has this changed spectatorship in recent times? What is the articulation of vision, space, and motion? Here, I employ a phenomenological approach to interpret immersive experiences and related issues, such as spectatorship, starting from video surveillance and the society of the spectacle.

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[877]   Astala, Lauri, "Space, Place and Presence" in *PTAH*, No. 1/04.

Due to the use of surveillance cameras, especially from the 1970s to the 1990s, the relationship between surveillance and control and the power and knowledge described by postmodernist philosopher Foucault[878] shares a parallel interest with video art. Nauman's early video installations, such as *Video Surveillance Piece: Public Room, Private Room* (1969–1970) offer a strong example. Later, in the Nordic countries Dahlberg's video installation *Untitled* (2000) inspired by the Panopticon[879] (Fig. 107) and Renvall's video piece *7 Arts Part 3: Film* (1998) based on surveillance camera material show how the process of watching and being watched became commonplace. (Fig. 108) Mitchell notes that this complex area of visual reciprocity is not a mere side effect of the social environment, but an actively co-constitutional factor.[880] Merleau-Ponty analyses this mutual process of the reciprocity of vision and concludes that the acts of seeing and being seen become indistinguishable, so that "he who sees cannot possess the visible unless he is possessed by it, unless he *is of it*".[881]

People generally desire to be the protagonists of a media show. In 1992, the American artist Mike Kelley stated: "Since the 1970s I've noticed that the audiences increasingly refuse, or are simply unable, to become quietly consumed by films. (…) Perhaps this is because, today, we *are* films. We have become filmic language, and when we look at the screen all we see is ourselves".[882] Increasingly, the spectator wants to be at the centre of representation, whether artistic or filmic. Erving Goffman is one of the best-known social scientists to analyse how people manage their daily conduct. Using a metaphor taken from theatre, he proposes 'front-stage' and 'back-

[878]   I refer to his book *Surveiller et punir* published in 1975 (in English *Discipline and Punish*, 1977; in Finnish *Tarkkailla ja rangaista*, 1980).

[879]   This project encompasses two video installations with black and white footage of empty, anonymous rooms. The camera travels through all the rooms, silently passing before the viewer, both horizontally and vertically. These films were made using an architectural model with a circular base surrounded by eighteen spaces. A centrally positioned panning camera acts as the viewer's eye. Here, the artist draws inspiration from the Panopticon, the prison where all inmates can be supervised by one individual located in the centre. In his book *Discipline and Punish*, Michel Foucault takes the panopticon as a model of power in contemporary society. The architecture of the panopticon represents a power that no longer descends on society from above but pervades it from within.

[880]   See Mitchell, W. J. T. 1996, "What do Pictures 'Really' Want?" in *October*, No. 77, pp. 71–82.

[881]   Merleau-Ponty, Maurice 1964, *The Visible and The Invisible*, pp. 134–135.

[882]   Kelley, Mike 1992, "Hollywood Filmic Language, Stuttered: Caltiki the Immortal Monster and Rose Hobart" in *Mike Kelley: Essays and Criticism*, edited by J. C. Welchman, The MIT Press, Cambridge, MA and London, 2003, p. 41.

stage' behaviours.[883] In an immersive environment, spectators become actors thanks to the interfaces that allow various forms of interactivity. The possibility of being at the core of an artwork with other visitors implies a sense of sharing and interacting. Crary observes that during the first industrial revolution, sociologist Émile Durkheim detected a social disaggregation reinforcing his worries about the deterioration of forms of binding and cohesion: "If religion was the key 'collective representation' within Durkheim's premodern mechanical solidarity, the spectacle, as a 'specious form of the sacred,' was to become the primary simulation of cohesion and unification within 20th century modernity".[884] According to Crary, "Debord's *Society of the Spectacle* can stand for the final implosion and dismantling in the 1960s of the sociological tradition that issued from Durkheim, in Debord's insistence that the only solidarity produced by capitalism is a unity of subjects in their very separateness".[885] Sharing an event in an interactive and immersive environment could be a way of finding proximity in the present-day. Can we define an immersive art environment as a new and contemporary spectacle?

Video installations and immersive art environments share a mode of attention directed towards a plurality of images and practices. In a video/immersive/interactive installation, we move the gaze from one scenario to another as multiple objectives emerge. The viewers activate their decentralised attention or, in other words, a gaze without an obligatory focal point but with many targets and purposes. The scholar Casetti states that this vision is not contemplative, as required by an Old Master painting, but more casual, as for one of the many objects one encounters in daily life.[886] If related to the phenomenology of perception, Casetti's statement could be interpreted differently from his line of thought pertaining to the 'screen culture'. In Noë's enactive approach rooted in phenomenological and empirical thinking, it emerges that attention split over many targets and purposes is like the attention used to perceive the world. In an immersive art environment, perceptual experiences are enacted similar to daily life. This is not a casual perception, but a gradual and active exploration. As Noë argues in his book *Action in Perception*, the content of perception is not like the content of a picture because the world is not given to consciousness all at once, but gains it progressively through active inspection and investigation. As such, perceptual experience acquires content thanks to the exercise of practical bodily knowledge.[887] In addition, the computer scientist Dourish affirms

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[883]   See Goffman, Erving 1959, *The Presentation of Self in Everyday Life*, Anchor Books, New York.
[884]   Crary, Jonathan 1999, *Suspensions of Perception: Attention, Spectacle, and Modern Culture*, p. 184.
[885]   Ibidem, p. 185.
[886]   Casetti, Francesco 2015, *La galassia Lumière*, p. 281.
[887]   Noë, Alva 2004, *Action in Perception*, p. 1 and p. 35.

that "Human-Computer Interaction research is responding to the challenges of computation that inhabits our world, rather than forcing us to inhabit its own".[888] Technology seems to follow human customs and ways of exploring the world rather than vice-versa.

Crary's analysis of "reception in a state of distraction", in my opinion, can be related to screen culture. He argues "that modern distraction can only be understood through its reciprocal relation to the rise of attentive norms and practices".[889] The need for "a concentrated attentiveness within the disciplinary organization of labor, education, and mass consumption"[890] develops an opposite concept: the idea of a "deficiency of attention" attributed to the sphere of creative and free subjectivity. Thus, the notion of distracted reception in today's visual perception may also be linked to the opposition of the two concepts of attention and distraction, coined for practical reasons and for the purpose of foisting productivity. Phenomenologically speaking, our visual processes connect with a free and creative subjectivity, because "the visual field is unbounded" and "the unboundedness of the field derives from the unboundedness of our sensorimotor capacities".[891]

Starting from the 1960s, artists have aimed to create artworks that evoke the sensory realm in a way that it can be experienced, rather than artworks that simply portray and represent the world. The result has been an increase in spectator involvement in a number of ways, particularly in experiential artworks. This has also generated new theoretical interpretations. For instance, in the field of philosophy, Rancière argues for an 'emancipated spectator', addressing the field of theatre and, more generally, of performing arts. His ideas evoke the perceptual experience of people in an immersive environment. He begins by referring to Debord's theory of externality, which describes the dispossession of one's own being in the context of the spectacle and in the wider realm of vision. Debord states about the alienated spectator that "the more he contemplates, the less he lives".[892] After noting a sort of anti-Platonic stance in Debord, Rancière agrees that vision and activity have become separated in the spectacle, leaving the individual in a state of passivity and ignorance. For Rancière, throughout the history of philosophy, thinkers have tried to remove spectators from the perceptive and cognitive illusions that would have made them subordinates. He states:

[888] Dourish, Paul 2001, *Where the Action is: The Foundations of Embodied Interaction*, p. 17.
[889] Crary, Jonathan 1999, *Suspensions of Perception: Attention, Spectacle, and Modern Culture*, p. 1.
[890] Ibidem.
[891] Noë, Alva 2004, *Action in Perception*, p. 71.
[892] Debord, Guy 1967, *La société du spectacle*, Buchet-Chastel, Paris; English translation by K. Knabb, *Society of the Spectacle*, Rebel Press, London 1983, p. 16.

"All these oppositions – looking/knowing, looking/acting, appearance/reality, activity/ passivity – are much more than logical oppositions. They are what I call a partition of the sensible, a distribution of places and of the capacities or incapacities attached to those places. Put in other terms, they are allegories of inequality".[893]

Rancière proposes an emancipation of audiences starting from a principle of equality, which moves away from any form of opposition. This process should encourage a different use of individual perceptive skills in translating spectacles into thought or action, even when looking at unfamiliar subjects and, I would add, in a state of distraction or entertainment. Rancière notes that spectators act, observe, select, compare, and interpret.[894] They connect what they see to a myriad of other things they have seen in other sceneries and places, then participate in the performance by reshaping them as they please. In performing arts, he hopes that spectators will no longer be inactive beholders, but that they may learn instead. In other words, that spectators become active participants in a collective performance instead of passive viewers. Rancière's theory seems to fully materialise in contemporary immersive environments, rather than in theatre or live shows. Immersive art requires the exploratory and dynamic participation of the spectator, who is pushed by artists to eradicate the active/passive binomial in searching of a new sensory experience.

Immersive art would have suited Debord, who opens his 1967 essay stating that "life is presented as an immense accumulation of *spectacles*. Everything that was directly lived has receded into a representation".[895] Here, the spectator's experience is the focus, while the importance of representation has waned. Multimedia installations do not primarily consist of images or stories, but rather of bodies, representations, space, movements, and 'time'. They elicit an embodied experience via their spatially dispersed audio-visual devices. Nowadays, immersive art installations with their spectacularism demonstrate a clear and increasing tendency to include audiences in the space-time of the artistic experience.

In art history, Wolfgang Kemp argues for an 'explicit beholder' as in contemporary art, which differs from the 'implicit beholder' of all previous art. The scholar notes that over the centuries, the deceptive resemblance between

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[893]   Rancière, Jacques 2007, "The Emancipated Spectator" in *Art Forum*, pp. 271–281. It was originally presented, in English, at the opening of the Fifth International Summer Academy of Arts in Frankfurt on August 20, 2004. The text appears in *Art Forum* March 2017 in a slightly revised form.
[894]   Rancière, Jacques 2007, "The Emancipated Spectator" in *Art Forum*, p. 277.
[895]   Debord, Guy 1967, *Society of the Spectacle*, p. 7.

representation and material reality, which aspired the majority of painters, aimed to attract the implicit beholder: "from verification to gesture, from act to action".[896] In his book in German, *Der explizite Betrachter* (The Explicit Beholder, 2015), he observes that from the late 1960s up to relational art in the late 1990s, art has demanded an explicit beholder whose physical presence has turned into a requisite for the work to be fully realised. In this transformation, he mentions the importance of Nauman's art research. The artist focuses on the possibilities offered by video to communicate with the public, rather than on its representative aspect.[897] Nauman's video art environments foster sensory reactions and consequently an unprecedented self-awareness of the viewers' physical identity in the space. In a 1998 article, Kemp argues that a mutual recognition between artwork and beholder is assured because "in the same way that the beholder approaches the work of art, the work of art approaches him, responding to and recognizing the activity of his perception".[898] Although he refers to the Reception Aesthetics in literary studies, and in particular to Wolfgang Iser's 'implicit reader', the condition of mutuality between viewer and art piece may also be read in a phenomenological way. The philosopher Pietro Montani observes that Iser quotes a sentence from Sartre's 1948 book *Qu'est-ce que la littérature?* (What is Literature?).[899] The dual process of grasping the meaning of what is read, according to Iser, has to be sought not only in the text, but in its phenomenological space of interaction between text and reader,[900] very much like in the process between artwork and viewer.

Kemp is critical of recent art developments, including immersivity, and believes that spectators have become too deeply implicated in the market economy of art and

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[896]   Kemp, Wolfgang 2020, *Lo spettatore dall'implicito all'esplicito*, p. 45.

[897]   See Becker, Ilka 2016, "Wolfgang Kemp: Der explizite Betrachter. Zur Rezeption zeitgenössischer Kunst" in *Recensio.net. Rezensionsplattform für die europäische Geschichtswissenschaft*, No. 6. Available at: https://recensio.syslab.com/rezensionen/zeitschriften/sehepunkte/16/06/der-explizite-betrachter?set_language=en. Accessed 30 August 2021. W. Kemp, *Der explizite Betrachter. Zur Rezeption zeitgenössischer Kunst*, Konstanz University Press, Konstanz 2015. Chapter 3, "Der Betrachter als Proband", is dedicated to Bruce Nauman.

[898]   Kemp, Wolfgang 1986, "Kunstwerk und Betrachter. Der rezeptionsästhetische Ansatz" in *Kunstgeschichte. Eine Einführung*, edited by Hans Belting et al., Dietrich Reimer Verlag, Berlin, pp. 203–221; translated into English as "The Work of Art and Its Beholder: Methodology of the Aesthetic of Reception" in *The Subjects of Art History: Historical Objects in Contemporary Perspectives*, edited by M. A. Cheetham, et al., Cambridge University Press, Cambridge 1998, p. 181.

[899]   Montani, Pietro 2014, *Tecnologie della sensibilità. Estetica ed immaginazione interattiva*, Raffaello Cortina Editore, Milano, p. 63–66.

[900]   Ibidem, p. 65.

the commercialisation of the museum.[901] He comments that viewers devote less time to the aesthetic experience than to consumption in cafés and gift shops. Kemp believes that the explicit beholder has lost the contemplative attitude and the potential critical distance from the artwork, becoming an uncritical viewer, especially at large art events.[902] Conversely, Rancière defines critical distance as an intellectual act that distinguishes the emancipated spectator of recent generations. Here, distance functions as a counteraction to passivity, a way to avoid the alienation of the self. It is difficult to contend with the concept of distance when most artistic events are defined as immersive. We probably underestimate the digital dimension of our era, or rather our media environment. On the whole, contemporary audiences are well-informed, active, and willing participants. Curator and art critic Bourriaud observes that the 'ecstatic spectator' of the 1980s has been replaced by an intelligent and potentially subversive consumer: the user of forms. As a result of promoting access to art for everyone in a relational way, the audiences of the 1990s enjoy skills similar to those of the practitioner, who "is only a *transmitter* for the following producer, and each artist from now on evolves in a network of contiguous forms that dovetail endlessly".[903] While Bourriaud's theory of post-production culture is still sustainable, the contemporary spectator has new potentialities, such as the ability to move freely and consciously between physical and virtual dimensions. Contemporary spectators are also open to being stimulated to interact without any specific difficulty or reluctance. Their approach is synonymous with experience, performance, and interpretation; it is unbound in its search for relational involvement.

Recent research in contemporary art shows that artists are extending beyond previous forms and are interested in anything that can serve as a medium to encounter the sensory realm. For instance, Laitinen highlights the potential of electricity, skin, language, or technology.[904] The experiential field is therefore continuously expanding, thanks to transmitters like electrical currents, language or individual technological tools placed in various ecosystems. Laitinen utilises research into artificial intelligence and the study of animal intelligence to realise layered installations, such as the environment *ΨZone* (2021), presented at the Helsinki

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[901]   See Becker, Ilka 2016, "Wolfgang Kemp: Der explizite Betrachter. Zur Rezeption zeitgenössischer Kunst".

[902]   Kemp refers to several artists and art critics already mentioned in this research, such as Nicolas Bourriaud, Peter Weibel, Bruce Nauman, and Olafur Eliasson among others.

[903]   Bourriaud, Nicolas 2002, *Postproduction*. *Culture as Screenplay: How Art Reprograms the World*, p. 40.

[904]   Laitinen, Tuomas A. 2021, "ΨZone, 2021" in the catalogue *Helsinki Biennial 2021: The Same* Sea, edited by S. Metsola & S. Tuulikangas, HAM Helsinki Art Museum's Publications, Helsinki, p. 167.

Biennial. Here, microbiological parts, glass, alchemical images, video, and sounds emitted via ultrasonic speakers co-exist in a symbiotic relationship. (Fig. 109) The artist explains that "the work is based on the concept of multi-layeredness and the porous intertwining of materials. The underlying idea concerns the formation of knowledge within an unstructured realm where it is impossible to pigeonhole things, desires, and events in strict categories".[905] Such a fluid and porous environment evokes immersivity. The title itself alludes to the wave function and the many-worlds interpretation in quantum mechanics, which opens to the realisation of all possible outcomes in different universes.

Returning to spectatorship, Kemp notes that media art addresses a mass of recipients, not only those who have the exclusive privilege of owning art. An exclusive minority is replaced by a participatory audience, especially in multimedia art gatherings.[906] The majority of artists have a positive view on the large participation of people in immersive art experiences. teamLab claims that digital art can change the relationships among visitors sharing the same environment, making their presence a positive experience, because co-creation is accompanied by a sort of co-empathy.[907] The presence of many spectators is considered vital and not a hindrance, as would be the case for painting or sculpture. Some immersive works are more exploratory, like the environments created by Random International, where interactors question aspects of identity and autonomy in the digital age. Other immersive works demand a plethora of users because of their social aims. In other media installations a gesture or an action can affect the entire system and many people, sometimes unexpectedly. For instance, Haaslahti's participatory installation *Captured* (2018) creates new identities by merging viewers' faces into a virtual collective. She explains: "*Captured* enables people to step into virtual world as a digital double, making them actors and spectators at the same time. The doubles participate in a simulation depicting an unsettling cyclical performance of social humiliation, each becoming a character in one of the groups composing together the bullying triangle, the Bully, the Target or the Bystander".[908] Opening the space to inhabit one's self image in a simulated context, the work broadens knowledge about the social entanglements of human relations. In this case, the viewers' critical approach is encouraged rather than inhibited.

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[905] See: https://helsinkibiennaali.fi/en/artist/tuomas-a-laitinen/. Accessed 20 September 2021.

[906] Kemp wrote about "Massenrezipienten" in *Der explizite Betrachter*. I have already examined the immersive art experience of modern artists in Chapter 2, highlighting their success of public and their educational advantages.

[907] See: https://www.teamlab.art/it/concept/relationships/. Accessed 20 May 2021.

[908] From the artist's website: http://www.hannahaaslahti.net/portfolio/captured/. Accessed 16 August 2021.

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Mobile media can also broaden accessibility, not only extending the potentiality for contact with other people but also for the space occupied by media users, such as AR, VR, and mixed reality. This theme has recently emerged in media studies focusing on the use of locative media and mobile computational devices and how they affect the perception of place and space.[909] With references to Merleau-Ponty and Ihde, the media theorist Leighton Evans states: "If embodiment can be understood as not limited by the body itself but rather open to alteration by the various technologies we employ as prosthesis then the use of smartphones to discover in formation on spaces and places may be considered an embodied activity".[910] He continues to question "how the understanding of places may be affected by the use of mobile computational devices, locative media, and the potential for interpreting such an understanding as either as place or 'technological' space".[911] It is evident that the perception of simultaneous and multiple spatial layers of reality will become our common condition. Emerging developments in digital technology seem to foster orientation and attunement as key phenomenological concepts, as they can describe aspects of the placehood in emerging new media such as AR and VR.[912] With their dynamic trajectories of visitors, the phenomenological concepts of orientation and attunement can be applied to further comprehend the human experience not just within the gallery but everywhere else, when immersed in modern life, thanks to the locomotive media.

In conclusion, art groups and artists increasingly define themselves as developers of spatial experiences, experimental practice, and active participation. Immersive art environments of all kinds are spaces with a strong element of performativity. Employing a term from Mitchell, I am inclined to state that art is experiencing an 'immersive turn' imbued by phenomenology, with spectators, their sensory experiences and technology at its core. The emancipated, explicit, and interactive spectator has turned into an immersant[913] who experiences environments built with digital images. As early as 1995, Davies used the term 'immersant' to describe the participant of her VR work *Osmose*, although the word did not catch on at the time. (Fig. 110) As is often the case, artists sense advance features of the human experience that will only later spread wider.

[909] Evans, Leighton 2019, "The Efficacy of Phenomenology for Investigating Place with Locative Media" in *The Phenomenology of Real and Virtual Places*, edited by E. Champion, Routledge, New York & London, p. 40.
[910] Ibidem, p. 42.
[911] Ibidem.
[912] Ibidem, p. 48.
[913] See the artist's website: www.immersence.com. Accessed 15 May 2021.

Sharing Unstable Archives

In 2007, the new media scholar and art historian Edward A. Shanken highlighted art history's limited focus on media art, science, and technology. He observed that "until the mid-1990s, the journal *Leonardo* primarily published writings by artists and scientists, in large part because critics and historians simply did not generate much material on the subject".[914] This contrasts starkly with other domains, which have produced a great deal of literature "such as comparative literature, film history, performance studies, and cultural studies".[915] In addition, artists have published several art catalogues documenting their own research, and media-art festival organisations have issued pamphlets. In recent years, scholars have finally published anthologies and genealogies about media art and virtual reality, which also question the role of the viewer/user. The curator Andreas Broeckmann expressed the need to develop an aesthetic theory that can approach electronic or digital artworks where "temporal structures within images have come into view not as mere narrative dispositions, but as 'programs' that need to be executed and thus actualized by the viewer".[916]

It could be said that the term 'new media art' had lost its originality, or perhaps it constantly renews itself as it is a continuous process of incessant evolution. The term 'media art' without the attribute 'new' would be preferable. Furthermore, as noticed by the computer scientist Wendy Chun:

> "Indeed, rather than asking, what is new media? we might want to ask what seem to be the more important questions: what was new media? and what will it be? To some extent the phenomenon stems from the modifier new: to call something

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[914]   Shanken, Edward A. 2007, "Historicizing Art and Technology: Forging a Method and Firing a Canon" in *MediaArtHistories*, p. 46.
[915]   Ibidem.
[916]   Broeckmann, Andreas 2007, "Image, Process, Performance, Machine: Aspects of an Aesthetics of the Machine" in *MediaArtHistories*, pp. 196–197.

new is to ensure that it will one day be old. The slipperiness of new media – the difficulty of engaging it in the present – is also linked to the speed of its dissemination".[917]

In fact, in recent years several conferences have been devoted to the concept of sustainability in media art.[918] What are the current strategies for the future sustainability of digital archives? If sustainability is the ability to continuously exist, immersive and interactive environments raise several questions. Differing from stable paintings or sculptures, how can we conceive of their preservation for future audiences? How can we tackle the problem of technologies becoming obsolete? Is it sufficient to store the photographic and video documentation for these media environments? Should we also preserve evidence of the public interaction with media art installations, broadening the analysis from representation to experiential context? In the future, art archives will probably be less voluminous because testimonials and related documents will be stored electronically. Interactive and immersive experiences will also likely remain in people's memories, and on request, will be rearranged from the digital storage. Media art pieces seem to exist intermittently in a non-linear dynamic.

In this chapter, I will first observe the recent changes in museology and museography that have resulted from digital and participatory dynamics, such as new ways of displaying art collections. I will then outline the current strategies deployed to achieve sustainability in media art. These will span methods that prioritize artists' intentions, debates on the meaning of works as outcomes of audience interplay, recent re-enactments, and shared archives in motion. Conservation experts in media art discuss the archival and conservation issues of computer-based art and video art, or more generally media art, without precise references to the preservation and documentation of immersive environments. Given that these have developed from interactive video installation, the care and tendencies of this practice should be considered. This leads to the following sub-question: can immersive art become a sustainable activity in the future? To address this, I will highlight further parallels between the conservation of media art and phenomenology, such as the concepts of intentionality, intersubjectivity, ambiguity and porosity.

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[917] Chun, Wendy 2008, "The Enduring Ephemeral, or the Future Is a Memory" in *Critical Inquiry*, Vol. 35, No. 1, p.148.

[918] For instance, The Roundtable – a DARIAH event at the 2017 "RE:TRACE Conference" held at the Academy of Sciences, Vienna (23–25 November 2017); "13th International Conference on Digital Preservation", iPRES 2016, in Bern on October 4th, 2016; "Tech-Focus III – Caring for Software-based Art", an event hosted in 2015 at the Guggenheim Museum in New York.

5.1   From Linear to Simultaneous Perception

In digital languages, time in its fluidity, non-linearity, stratification, and acceleration has emerged as a key notion in art theory and adjoining fields. In this digital age, it is increasingly difficult to delineate the areas of research in contemporary art because concepts and practices emerge and blossom simultaneously. As early as the 1980s, the scholar Flusser noted the epochal turn that humankind was undergoing from what he called 'linear thinking', essentially based on writing, towards a new form of complex and multifaceted visual thinking embodied by digital culture.[919] While books are appropriate for delivering linear stories, the American scholar Janet H. Murray predicted that computers would be suitable for distributing stories of a different kind, specifically "procedural, participatory, encyclopedic, and spatial".[920] The digital age is characterized by complex patterns, fractured realities and networked ways of being-in-the-world.

The digital image particularly exemplifies the transformation of our relationship with temporality, which is no longer linear but open, simultaneous, and overlapping. In the era of real-time and virtual reality, everything is, potentially, present, and ongoing. De Kerckhove was one of the first scholars to outline how the collective technological memory provides the means for an endless exploration of many temporal layers. He defined the accelerated time of the computer as the past integrating into an immense enlarged present.[921]

Since the 1990s, the concept of simultaneity has arisen in various fields, from literature to the visual arts, from entertainment to the Internet. For instance, in 1992 the literary critic Alberto Asor Rosa edited the *Dictionary of Italian Literature of the Twentieth Century* according to a new criterion: he listed the titles of works not according to their genre and chronology, but in alphabetical order. Thus, literary, and historical works live in a sort of permanent coexistence, developing deeper connections across time.[922] This resembles the dynamics of hypertext documents, in which systems of linking and cross-referencing function simultaneously. The World Wide Web, which was launched in the early 1990s, is the most complex implementation of hypertext. A similar direction has also been taken by the video game industry. Players find themselves in front of a screen and, based on their

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[919]   *Vilém Flusser: Writings*, edited by A. Ströhl, translated by E. Eisel, University of Minnesota Press, Minneapolis 2002, pp. 63–69. See: www.jstor.org/stable/10.5749/j.ctttttwnk. Accessed 23 January 2021.

[920]   See Murray, Janet H. 1997, *Hamlet on the Holodeck: The Future of Narrative in Cyber Space*, The MIT Press, Cambridge, MA and London.

[921]   See De Kerckhove, Derrick 1991, *Brainframes: Technology, Mind and Business*, Bosch & Keuning, Utrecht.

[922]   Rosa, Alberto A. 1992, *Dizionario della letteratura italiana del Novecento*, Einaudi, Torino.

movements, change the evolution of the game by interacting with the characters. This also implies new ways of preparing plots by creating alternative, and partly neutral scripts, which are then adapted in real-time to the needs of the players.

Several art museums have changed their methods for exhibiting collections, preferring genre over a linear and chronological order. Between 2000 and 2006, for example, Tate Modern in London designed a new approach to present its collection of works. Instead of a chronological order for the collection from the nineteenth to the twentieth century, the works were organised according to the following categories: Landscape, Body, Object, and History.[923] This meant evoking a simultaneous and multifaceted response from visitors by enabling them to look at artworks from different periods and movements in an exhibitive room. Still continuing the search for a direct dialogue between contemporary art and the past, a second rehang from 2006 to 2012 was arranged thematically according to pivotal moments from twentieth-century art history: Material Gestures, Poetry and Dream, Energy and Process, States of Flux.[924] In 2012 there was a partial third rehang following the same method according to major subject categories.

In the Italian art field, which is well-known to be highly conservative in terms of how artworks are preserved and exhibited, some large-scale changes have recently occurred in displaying art collections. For instance, in 2016, a new phase in the history of the National Gallery of Modern Art in Rome started with the exhibition titled *Time is Out of Joint*. The new display, conceived by the director Cristiana Collu, is part of a wide process aimed at transforming, rearranging, and updating the institution, which now offers a profound reinterpretation of its huge collection.[925] Currently, the National Gallery presents itself as a space for discovering and researching artistic languages and practices without the traditional chronology used in art history. Thus, the Neoclassicist sculpture *Ercole and Lica* (1795) by Antonio Canova is situated close to the contemporary art installation *32 Square Meters of Sea* (1967) by Pino Pascali, and to the artwork *Skin of Gold on Acacia Thorns* (2002) by Giuseppe Penone. (Fig. 111) This revived manner of displaying the collection has given rise to unexpected connections in the audience.

The lack of chronological order, and the consequent temporal simultaneity across major subjects in the layout of the collections of contemporary art museums, are signs of a shift in the perceptual experience due to digital technologies: from linear

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[923] See: https://www.tate.org.uk/press/press-releases/tate-modern-collection-2000. Accessed 24 October 2018.

[924] See: https://www.tate.org.uk/press/press-releases/tate-modern-opens-first-major-rehang-its-collection-support-ubs. Accessed 28 October 2018.

[925] See: https://lagallerianazionale.com/mostra/time-is-out-of-joint/. Accessed 21 October 2018.

to non-linear perception. This turn implies new and more complex approaches in art theory. Here, I will mention some examples from various perspectives: practice, approach, and spectatorship. As opposed to the past, digital language has enabled artwork to be manipulated many times, and, at the same time, to return to its previous version quickly and inexpensively. About this creative practice, in 2004 the artist Pierre Huyghe stated: "It is less a question of 'process', which is too linear, but of a vibrating temporality".[926] The work process begins with a plan, but the programme, as he affirms, may be modified several times. His complex work with Philippe Parreno started in 1999 *No Ghost Just a Shell*, refers to a rhizome-like entity that evolves organically through interactions with other projects and people.[927]

In philosophical terms, the notion of non-linearity is reflected in Kozel's 'connective tissue' – a metaphor for how phenomenology can be transferred from one person to others. Here, Kozel underlines that the tendon is nonvisual and nonlinear: "It permits a way to think of both a physicalized notion of the pre-reflective and a means of communication of a phenomenology. (…) The ideas do not come after the experience, they do not come before, they permeate it like tendrils, like the web of connective tissue".[928] Simultaneity occurs not only in receiving contents but also in experiencing them. Trained in dance and inspired by Merleau-Pontian philosophy, Kozel senses an entwined simultaneity in the singular and plural phenomenologies of the human body in live performance practice, which can be transferred to the lived and immersive experience of digital technologies. This type of multimodal resource, or 'multitasking', provides the human being with the ability to perform more than one task, or action, at the same time.

Today's spectators multi-task. The multi-focused attention brought by viewers to a video art installation, or an immersive environment leads them to observe several elements at the same time. Instead of trying to grasp everything that is presented to them, they work on a series of withdrawals. At times, they immediately interact with what they perceive. Interactivity and its radical impermanence can only be a non-linear experience. Furthermore, the spectator is often in an open and dynamic position, which functions as a hub for an ideal network of connections between author, work, and other spectators. Similarly, the scholar Casetti highlights the 'performance' of the contemporary cinema spectator. Historically, the observation

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[926] Quoted in van Saaze, Vivian 2013, "Case Study: No Ghost Just a Shell by Pierre Huyghe, Philippe Parreno, and many others" in *Preserving and Exhibiting Media Art: Challenges and Perspectives*, edited by J. Noordegraaf, C. G. Saba, B. Le Maître & V. Hediger, Amsterdam University Press, Amsterdam, p. 172.

[927] I will analyse the work *No Ghost Just a Shell* in subchapter 5.3.

[928] Kozel, Susan 2008, *Closer: Performance, Technologies, Phenomenology*, pp. 28–29. Kozel specifies that her book "relies heavily on the writings of French phenomenologist Maurice Merleau-Ponty" (p. XVI).

of an art piece has been described as a static event and the media art experience as active in that the spectator goes into action.[929] This is particularly true in the case of interactive installations, where the viewer becomes a performer with an enactive dimension. One could state that the artist has transferred the role of the performer to the spectator.

5.2   The New Commitment of the Art Museums

Nowadays, contemporary museums and art spaces, "have become increasingly concerned with promoting public engagement through the consumption of interactive installations, as opposed to the traditional approach of housing static curiosities and authentic pieces", as observed by the Finnish sociologist Vuokko Härmä.[930] The art theorist and curator Christiane Paul reiterates: "The potentially interactive and participatory nature of new media projects (…) runs counter to the basic rule of museums: 'Please do not touch the art.' For the longest time, visitors of museums and galleries have entered art spaces with the expectation to contemplate objects".[931] In museography, the concept of distance in our approach to art has been a dominant motif in the past. Distance is a notion that permeates time and space. Distance is what separates us from artworks in a museum, determining a mental process with a key juxtaposition: the art piece and the observer. Immersivity and interactivity have reversed this static and dualistic dynamic. Thanks to new technology, contemporary artists have conceived immersive and interactive environments that enable the audience to experience artworks in many ways with various emotional responses. Therefore, the behaviour of visitors in museums is changing, or rather, the response of the public is changing museums.

Since the 1950s, the development of interactive art has been a sign of the growing awareness of the social dimensions of museums and art galleries. In contrast to the traditional concept of 'high culture', contemporary heritage and tourism industries promote "cultural inclusivity, democratizing access, and facilitating public engagement. A new emphasis on the educational role of museums and galleries reconfigures them as dynamic spaces in which anyone, regardless of social background, can participate".[932] In the same co-authored article, the scholars

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[929]   Casetti, Francesco 2015, *La galassia Lumière*, p. 26.
[930]   Härmä, Vuokko 2011, "Interaction and Performativity in Digital Art Exhibitions" in *Nordisk Museologi*, No.1/2011, p. 98.
[931]   Paul, Christiane 2007, "The Myth of Immateriality: Presenting and Preserving New Media" in *MediaArtHistories*, p. 254.
[932]   Scott, Susie; Hinton-Smith, Tamsin; Härmä, Vuokko & Broome, Karl 2013, "Goffman in the Gallery: Interactive Art and Visitor Shyness" in *Symbolic Interaction Journal*, Vol. 36, No. 4, p. 418.

highlight how recently interactivity has turned out to be essential: "Audience participation is not merely encouraged but required in order for an exhibit to 'work' effectively, and it becomes hard for visitors to adopt the more passive, traditional role of the detached spectator. (…) Thrust into the spotlight as an actor frontstage, the visitor becomes objectified as part of the installation, their reactions laid open to observation, evaluation, and scrutiny".[933] In particular, Vuokko Härmä and her team of international scholars refer to the American-Canadian sociologist Goffman, one of the leading proponents of 'symbolic interactionism', who adopted the structure of dramaturgy to describe people as actors, whose actions are shaped by the type of interplay they engage in with others.[934] In museums, the performativity of digitally interacting with others introduces a social situation where visitors can experience a range of feelings (joy, self-consciousness, fear, shyness, surprise, excitement) like actors on a stage. Thus, such a participatory stance in museology has several facets that could be considered to converge with the social sciences.

One of the first books to discuss the concept of the participatory museum is by Nina Simon, an American museum consultant and exhibition designer. Her book, *The Participatory Museum*, published in 2010, is a practical guide developed with community members and visitors to generate more active cultural institutions. In the book, Simon states that museums can become crucial social and educational venues when their exhibition designs focus on the standard of participation such as dialogue, co-creative moods, and shared learning.[935] Thus, this book revolves around the concept of visitors as contributors. As noted by scholar Kjetil Sandvik, "with her emphasis on museum visitors as contributors, collaborators and co-creators, Nina Simon takes a starting point in the so-called second-generation experience economy".[936] Indeed, the first generation decided what the customer wanted instead of fostering a creative dialogue. Today, visitors navigate a shared social space where a large variety of interactions can take place such as meetings with artists, curators, companions, bystanders, and nonhuman interactors such as technologies and cultural discourses.

Today, new museums are also conceived as a shared space in their architectural design. For example, the Whitney Museum of American Art, which opened in 2015 as the largest column-free museum gallery in New York City, includes modular dividers that work as canvases for projections and areas for immersion. In 2016, the

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[933]   Ibidem, p. 419.
[934]   See Goffman, Erving 1959, *The Presentation of the Self in Everyday Life*, Anchor Books, New York.
[935]   See Simon, Nina 2011, *The Participatory Museum*, Museum 2.0, Santa Cruz, CA.
[936]   Sandvik, Kjetil 2011, "Book Review" in *MedieKultur. Journal of Media and Communication Research*, No. 50, p. 190.

exhibition *Dreamlands: Immersive Cinema and Art, 1905–2016* materialised the commitment of the museum towards research in these media and towards enveloping the spectators in a total experience that extended perceptual experience from sound and image to smell and touch. As reported in an article by the cultural historian Mabel Rosenheck:

> "We are surrounded by multiple screens and numerous audio tracks, not to mention furniture, at all times. It can be difficult to separate one piece out from another as sounds bleed into and over one another, but this is one of the exhibit's greatest strengths. It creates something new by bringing together disparate artists and layering them on top of one another as well as positioning them next to one another".[937]

Thus, the idea of a fluid experience for audiences is increasingly present in art institutions. According to Härmä, "the concepts of visitor-centered design (…), participatory museums (…) and inclusive museums are examples of cultural institutions' more recent aims to increase accessibility to sectors of the public who might otherwise be excluded".[938] She continues to analyse these types of approaches as "resulting in visitors being required to adopt the interchangeable roles of someone who creates experiences and of someone who experiences them", in a sort of chiasmic exchange. Throughout the interactive exhibition the user/visitor is transformed "from passive stroller gazing at static objects, into actively engaged critic".[939]

Evidently visitors sometimes encounter obstacles when visiting multimedia installations. To intimidate audiences or make them feel inadequate some interactive exhibitions require a high level of technological and performative competence. For example, the limited presence of interpretation and information about the artwork in gallery spaces is based on the artists' assumption that visitors will construct their own understanding of the work and this is not always functional. As noted by one international group of scholars: "In the absence of clear rules, the unscripted nature of visitors' encounters with exhibits evoked an array of 'shy' responses. Loss of script is identified as a major cause of embarrassment in interaction, when actors feel

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[937] Rosenheck, Mabel 2016, "In Dreamlands at The Whitney Museum, Enter an Immersive World of Cinema and Art" in *Untapped Cities*, New York. See: https://untappedcities.com/2016/11/17/enter-dreamlands-immersiv…inema-and-art-1905-2016-at-the-whitney-museum-of-american-art/. Accessed 9 January 2020.

[938] Härmä, Vuokko 2010, "Experiencing pervasive computer mediated art exhibitions" in *Suomen Antropologi: Journal of the Finnish Anthropological Society*, Vol. 35, No. 3, p. 91.

[939] Ibidem.

uncertain of how to enact and coordinate their role performances".[940] Thus, this type of model usually tends to fail. Another difficulty can also arise because of the improvisation of embodied actions in interactivity: "The most shyness-inducing exhibits seemed to be those that required visitors to enact a bodily movement or vocal utterance, insofar as these made them feel personally exposed and vulnerable to scrutiny".[941] This incompetence as a social actor belongs to dramaturgical stress, whereby "it renders the actor vulnerable to criticism as a writer as well as a performer of the show".[942] Given this point of view, it could be predicted that shyness might slowly disappear if virtual reality devices become more ubiquitous in future daily lives. In addition, an important factor is peer validation. Case studies have frequently shown that "visitors appeared more confident and were more demonstrably performative when they were in groups, compared to the self-consciousness they exhibited when alone frontstage".[943]

Historically speaking, Huhtamo examines how devices turning knobs within miniature panoramas brought media to the fingertips of visitors. He observes: "They provided seeds for the growth of personal interactive media such as laptop computers, game consoles, iPhones, etc. As the device became smaller, the human grew bigger".[944] In a previous article, Huhtamo also stated: "Not only does the emphasis on touch run counter to the customary idea of the 'untouchability' of the art object; it challenges us to compare art with a whole range of other human activities – from work to lay – where physical contact is expected".[945] In fact, haptic technology, motility and actions are central to the standards of new museums where media and interactive art is shown. An example is the so-called 'hands on' exhibits, which allow visitors to touch, explore, and play around with artworks. The aim here is to intentionally appeal to children and young people. On the other hand, in his early research Merleau-Ponty observed how perception in human beings, and hence knowledge, have affectual roots. In *The Structure of Behavior* he states that "nascent perception is an emotional contact" and that "the advent of human action and human perception (…) are irreducible to the vital dialectic of the organism and its milieu".[946]

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[940] See Scott, Susie; Hinton-Smith, Tamsin; Härmä, Vuokko & Broome, Karl 2013, "Goffman in the Gallery: Interactive Art and Visitor Shyness", p. 427.

[941] Ibidem, p. 428.

[942] Ibidem.

[943] Ibidem, p. 430.

[944] Huhtamo, Erkki 2013, *Illusions in Motions: Media Archaeology of the Moving Panorama and Related Spectacles*, p. 368.

[945] Huhtamo, Erkki 2007, "Twin-Touch-Test-Redux: Media Archeological Approach to Art, Interactivity, and Tactility" in *MediaArtHistories*, p. 71.

[946] Merleau-Ponty, Maurice 1942, *La structure du comportement*, Presses Universitaires de France, Paris; English translation by Alden L. Fisher, *The Structure of Behavior*, Beacon Press, Boston 1963, p. 176.

The sensory realm appeals to all our senses, wherefore "hands on" exhibits are certainly productive, especially in an educational context. In fact, over the past decades, there has been a growth of so-called 'hand-on-centres' as they provide a higher degree of interplay than is commonly found in more traditional museums and art galleries.[947]

A group of scholars from City University of London have highlighted that multi-touch interfaces are far more user-friendly than traditional computer interactivity: "One of the major criticisms of computer interactives in the past has been that they can limit users' social experience of museum environments".[948] Furthermore, a 1991 study carried out by the scholars Davidson, Heald, and Hein showed that multi-sensory interactive installations induce visitors to spend more time at exhibits and consequently foster audience learning.[949] Interactivity has for a long time been museums' preferred strategy for involving children and young people in their activities. Moreover, multi-touch and tangible interfaces are conceived to be playful, creative, and instantaneous. One could ask the following question: how can the playful involvement proposed by interactivity be considered an artistic experience? Should art experts change the parameters of their judgement? Certainly, museum teams, in collaboration with curators, utilise entertainment and gamification when planning an exhibition. These are now increasingly considered valuable tools for including and involving the public. In addition, the participatory aspect of media art has often been extended to the curatorial process. As observed by Paul**,** Adjunct Curator at the Whitney Museum of American Art: "In the organization of an exhibition presenting new media art, a curator may play a role closer to that of a producer – particularly if the work is commissioned – supervising a team of creators and the public presentation of the work. Collaboration requires an increased openness of the production and presentation process as well as awareness of process".[950]

Recently, social media has also been adopted for its potential to encourage visitors to cooperate, interact and maintain a 'museum dialogue' beyond the

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[947] See Braund, Martin 2004, "Learning science at museums and hands-on centres" in *Learning Science Outside the Classroom*, edited by M. Braund & M. Reiss, RoutledgeFalmer Publishers, Oxford.

[948] Kidd, Jenny; Ntalla, Irida & Lyons, William 2011, "Multi-touch Interfaces in Museum Spaces: Reporting Preliminary Findings on the Nature of Interaction" in *Re-Thinking Technology in Museums 2011: Emerging Experiences*, Proceedings of the International Conference, University of Limerick, Limerick, 26–27 May 2011, p. 8.

[949] See Davidson, Betty; Heald, Lee Hein & George E. 1991, "Increased Exhibit Accessibility through Multi-sensory Interaction" in *Curator*, Vol. 34, No. 4, December, pp. 273–290.

[950] Paul, Christiane 2007, "The Myth of Immateriality: Presenting and Preserving New Media" in *MediaArtHistories*, p. 257.

museum. Therefore, new professions have emerged in museums such as social media managers, web content managers, social media strategists, and web community managers. In the meantime, as observed by two Norwegian scholars, Dagny Stuedahl and Ole Smørdal:

> "The integration of social media into museums' curatorial and pedagogical practices preserves a situation where these media primarily are used to engage visitors in short term voting and rating, or to engage communities in collecting images, and there seems to be a potential for developing a conceptual understanding of the relations between social interactions as visitor enactments, hybrid exhibits with digital media, immaterial knowledge, and artefacts". [951]

In this way, social media has helped museums and heritage institutions to become more responsive, accessible, and egalitarian.

A renewed emphasis on the educational role of museums and galleries has repositioned them as dynamic locations where everyone can participate and interact. Therefore, I have selected three art museums to describe their approach to offering digital and engaging environments for audience participation: Tate Modern in London (United Kingdom), ZKM–Zentrum für Kunst und Medientechnologie in Karlsruhe (Germany), and Amos Rex in Helsinki, whose new venue is at the forefront of immersive exhibitions in Finland.

In 2003, Tate Modern was one of the first museums to employ a time-based conservator and to acquire software-based art: the computer-generated animation *Becoming* by the London-based artist Michael Craig Martin.[952] As described by the media conservator Falcão: "Subsequent acquisitions of software-based artworks by Tate were at a somewhat leisurely rate of one per year until a step change occurred in 2016, when Tate Modern's Director Frances Morris, in her first interview in post, signalled a shift in Tate's curatorial goals".[953] In a British newspaper, Morris claimed to be attentive to what is on the horizon: "I am sure that for the collection, the next big challenge is going to be digital. In the 19th century we didn't buy photography. It took us over 100 years to catch up. Let's not be in that position again".[954]

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[951]   Stuedahl, Dagny & Smørdal, Ole 2011, "Re-thinking Museum Assemblies" in *Re-Thinking Technology in Museums 2011: Emerging Experiences*, p. 141.

[952]   In 2003, the media conservator was Pip Laurenson. See Falcão, Patrícia 2019, "Preservation of Software-based Art at Tate" in *Digital Art through the Looking Glass*, p. 271 and p. 273.

[953]   Ibidem, p. 273.

[954]   Higgins, Charlotte, "Interview with Frances Morris Director of Tate Modern" in *The Guardian*, 16 April 2016. See: www.theguardian.com/artanddesign/2016/apr/16/tate-moderndirector-frances-morris-interview. Accessed 15 January 2021.

In the early 2000s, several experts welcomed the possibility of archiving and distributing a mass of knowledge globally via the web. Databases became one of the major research tools in digital humanities.[955] Thus, in 2013, Tate Modern started to share its digitized art collection with the community. As highlighted by Simon, the London art museum "opened up their collection database to the world on GitHub, a website where programmers collaborate on projects. The Tate is providing metadata about artworks and artists in its collection formed by over 70,000 artworks in all".[956] Following this initiative, the British Museum digitized its archives and special library collections between 2013–2015.[957] In addition to the advantages that arose from this for scholars and amateurs, the digitalization of art collections and archives was the first stage in increasing the attention that audiences paid to a museum's activities.

Tate Modern is constantly ahead of the curve, as shown in 2016 with the introduction of an art project called *TIWWA, This Is Where We Are*. This was an immersive and interactive algorithmic sculpture fed by the data that people collectively generated during the opening of the new Tate building on 17–19 June 2016. Visitors were able to engage, interact, and play with the MOB algorithms[958] that created the dynamic digital artwork implemented by i-DAT, an international organization of artists and researchers, in collaboration with the Tate Collective London. By experimenting with creative technology, the interdisciplinary group i-DAT stated on their website how "data is created all around us – from our interactions with social media to our movements through a city. TIWWA invites audiences into a sculptural space where they can see, hear, and interact with the data of our everyday lives, contributing to an evolving artwork which questions the influence of algorithms on our behaviour".[959]

Located in Karlsruhe, ZKM (Centre for Art and Media) is a German cultural institution with a special interest in time-based art such as film, video, electronic art, music, dance, and performance. Since 1997, it has been housed in a historical industrial building dating from the early twentieth century. It was founded in 1989 "with the mission of continuing the classical arts into the digital age".[960] Today,

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[955]   See Grau, Oliver; Hoth, Janina & Wandl-Vogt, Eveline 2019, "Introduction" in *Digital Art through the Looking Glass*, p. 15.

[956]   Simon, Nina 2013, "Visualizing the Tate's Collection: What Open Data Makes Possible" in the blog *Museum 2.0*.

[957]   See: https://www.tate.org.uk/about-us/projects/digital-transformation. Accessed 15 November 2018.

[958]   MOB is an algorithm with the potentiality to evaluate variable associations and instability.

[959]   See: http://www.tiwwa.me/about.php. Accessed 15 November 2018.

[960]   See: https://zkm.de/en/the-zkm. Accessed 16 March 2019.

ZKM actively combines research and production, collections and archives, exhibitions, and performance. Moreover, the centre organizes symposia and other platforms for theoretical discussion about science, philosophy, visual art, economics, and politics.

As part of these activities, in 2017–2018 ZKM dedicated a cycle of three exhibitions to immersive art. *The Art of Immersion* provided an overview of some of the most significant artworks in contemporary immersive art. Since the 1990s, ZKM had played a key role in the research and development of immersive panoramic projection environments such as EVE – Expanded Virtual Environment (1993), PLACE – A User's Manual (1995), and AVIE – Advanced Visualization and Interaction Environment. The first edition of *The Art of Immersion* presented a selection of seminal works for panoramic projection and audience engagement by Jean Michel Bruyère, Neil Brown, Dennis Del Favero, Kurt Hentschläger, Sarah Kenderdine, Ulf Langheinrich, Matthew McGinity, and Jeffrey Shaw.[961]

The Art of Immersion II[962] presented artworks that were conceived for Kenderdine and Shaw's multiscreen projection environment called *ReACTOR* (2008; Fig. 22). *ReACTOR* is a hexagonal projection environment that offers a physically immersive 3D representation space made up of a mixture of real and virtual reality. The pictures achieve immersive depths and multiple perspectives, and spectators can move freely around the hexagon to view each screen or step back and watch the six screens simultaneously.

Double District (2008) was created by Saburo Teshigawara in collaboration with Volker Kuchelmeister as a series of solo performances. As documented on the museum's web page: "Thanks to the multiple camera perspectives of the recording situations, the dancers perform without the limitations of a conventional frontal stage situation, and are free to orient their movements on an omnipresent virtual spectator within the space".[963]

Fragmentation (2011) is an excerpt from Robert Lepage's nine-hour stage play *Lipsynch*, which uses the ReACTOR system to present recorded images from six points of view. The result is a stereoscopic multi-perspective video installation.

During the exhibition *The Art of Immersion III*,[964] ZKM presented an interactive virtual reality installation called *Inside Tumucumaque*, created by Interactive Media Foundation in cooperation with Filmtank and the Museum für Naturkunde in Berlin.

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[961]   *The Art of Immersion I* exhibition at ZKM lasted from 09 September 2017 to 28 January 2018.

[962]   *The Art of Immersion II* exhibition at ZKM lasted from 09 February 2018 to 27 May 2018.

[963]   See: https://zkm.de/en/exhibition/2018/02/the-art-of-immersion-ii. Accessed 16 March 2019.

[964]   *The Art of Immersion III* exhibition at ZKM lasted from 06 April 2018 to 27 May 2018.

Visitors could experience the Amazon rainforest and explore the unique ecosystem of the Brazilian nature reserve from the viewpoint of the animals living there. As described on the museum's website, "via ultraviolet color spectra, movements in super slow motion, visualizations of echo sounder locations and color night vision and spatial 3D sound, the perception of animals is interpreted as a sensual experience that can be traced by the human perception system."[965] The installation was a light-hearted contribution to a more in-depth understanding of the endangered biodiversity on our planet.

In August 2019, Amos Rex replaced the historic Amos Anderson Art Museum with a new building. The museum, 13,000 square metres in size, offers a multifunctional environment on Mannerheimintie, the main street in downtown Helsinki. The centrepiece of the museum, designed by the Helsinki-based architectural firm JKMM, is an underground exhibition hall of approximately 2,200 square metres. The museum extends below street level, with porthole-shaped windows, which seem to be inspired by those on a submarine, as skylights. Before the inauguration of the new exhibition spaces, Kai Kartio, the director of Amos Rex commented: "Art used to be something you hung on the wall and went respectfully to contemplate. Today art is increasingly interactive and conversational. It is something people make and experience together. Contemporary art finds all the time new forms and new media, and this is exemplified in the work of our first artistic contributor, teamLab".[966] In fact, the first opening introduced teamLab, the Tokyo-based artistic collective, to Finnish audiences. The project involved an enormous team, including programmers, architects, and graphic designers, and indicated the futuristic path taken by the museum. Project manager Kazumasa Nonaka from the Japanese group announced that "the public will seem to enter an inverted world",[967] and that they would see "a universe without weight" as indicated by the title of the exhibition, *Massless*.

TeamLab created art installations specifically tailored to the new museum's spaces. The show was divided into four key exhibition spaces, each hosting a digital installation inspired by natural elements: for example, twenty-eight metre long waves in motion (*Black Waves*), as a tribute to Japanese artist Katsushika Hokusai; flowing water rising from the concave ceiling (*Vortex of Light Particles*); a sort of jungle, changing according to the behaviour of visitors in the room (*Graffiti Nature*); and flying birds that turned into flowers when they bumped into visitors (*Crows*).

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[965]   See: https://zkm.de/en/exhibition/2018/02/the-art-of-immersion-iii. Accessed 16 March 2019.

[966]   See: https://news.cision.com/helsinki-marketing/r/amos-rex--a-new-cultural-powerhouse-for-helsinki,c2601010. Accessed 16 March 2019.

[967]   Quotation from the press release of the museum opening. 30 August 2018.

All of these installations relied on projection and, to be realised, required a considerable technical commitment from around fifty people, including representatives from teamLab and the museum staff, and technical external collaborators, who used approximately one hundred and fifty projectors and thirteen kilometres of electric cable. The main challenge for the artists and technicians was to hide this powerful technological equipment.[968]

The element of water appears in the installation titled *Vortex of Light Particles* and *Black Waves*. In *Crows*, the birds flying overhead are based on light trails and spatial paths, and the immersive environment changes in real-time as it reacts to bystanders. "When crows 'hit' an onlooker, they break into particles and transform into flowers".[969] This interaction is enabled by a high-tech piece of equipment. The technician Jorma Saarikko, who contributed to installing the multimedia installation, explained that "you enter the space and stand in spot lighting in the middle of the room so the sensors can calculate your position. This means the crows don't touch you when they fly and this all amounts to an experience that is different every time".[970] Powerful technological systems produce this kind of immersion in a parallel realm, which is an unstable experience just like that of the natural universe. The use of real-time produces representations of the dynamic status of nature. This is one of the advantages of the possibilities offered by immersion in the digital era. In fact, in earlier times, it was impossible for artists to reproduce changeable experiences for their spectators in a such way.

Many visitors interacted with the ever-changing *Graffiti Nature* installation, particularly children. (Fig. 112) Indeed, these interactive installations are much appreciated by children, whose curiosity free from inhibitions immediately stirs them into action to discover possible interactions. Museums now tend to plan an area dedicated to interactivity for young people in the exhibition or as a workshop. In Amos Rex, the opportunity to create a visual icon on the wall through bodily movements and scan it in a separate room to later see it appear later in the projections was highly successful. The entire *Massless* exhibition by teamLab was visited by 281,400 people out of a total of 316,435 visitors to Amos Rex in 2019.[971]

As observed by Härmä, it is significant that Finland is a nation of technology enthusiasts. In her comments on Finnish codes of interaction, she emphasises that "Finnish people are particularly keen on technological communication because it

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[968]   See Mutter, Zoe 2018, "When Art and Innovation Collide".
[969]   Ibidem.
[970]   Ibidem, p. 4.
[971]   Timo Riitamaa, Head of Communications and Marketing in Amos Rex, correspondence with L. Scacco. Helsinki, 13 March 2020.

allows them to avoid face-to-face interaction".[972] As shyness and reluctance may be common traits in Finnish audiences, immersive and interactive exhibitions can be helpful. This type of media art differs, for instance, from net art with its online presentations. Here people have to share the art space and often the experience. In this way, museums such as Amos Rex may be significant for the future of art exhibitions and the visitor experience. As stated by the museum director Kartio, "it is impossible to predict what the art of the future will involve or require. Amos Rex has, nevertheless, been built for the future and as a result, the space is well suited to installations that experiment with new means of expression and techniques, like the immersive projections in the inaugural exhibition".[973] This means that Amos Rex in Helsinki belongs to the category of architectural designs that was conceived for immersive experiences such as the Whitney Museum of American Art, which opened in 2015 in New York. Director Kartio continues: "The content will change in future exhibits but it will always feature an element of technology because every exhibition needs to be accompanied by some sort of information, augmented reality, projection or sound".[974]

In Helsinki, the Amos Rex Art Museum is a close neighbour to the Kiasma Museum of Contemporary Art. The two museums, both dedicated to contemporary art, were built about twenty years apart. It is interesting to note how Kiasma, with its floor levels that meet at different points, can host various types of art exhibitions, even if the museum was especially created for media art. (Fig. 113) One of the two main differences between the two museums is the architectural concept. While Kiasma and its large windows on three sides of the building develops a constant relationship with the exterior environment, Amos Rex is 'submerged' in the ground like a sort of submarine, its windows resembling portholes. (Fig. 114) This offers an ideal setting for immersive art exhibitions because the large rooms can easily be darkened. In addition, the rooms are unencumbered by architectural obstacles, thus enabling visitors to fully inhabit the structure. Hence, the museum is an ideal location for immersive and installation art exhibitions, having been designed according to the above-mentioned director's statement. Their entrance also connotes different concepts of architecture. In Amos Rex, after the main atrium a staircase welcomes visitors to descend and immerse themselves in the exhibition rooms. When the visit is over, the public climb the stairs as if they are emerging from the earth. In contrast, Kiasma's entrance hall is characterized by two main paths, one of which ascends and

[972] Härmä, Vuokko 2010, "Experiencing Pervasive Computer Mediated Art Exhibitions", p. 92.
[973] See Mutter, Zoe 2018, "When Art and Innovation Collide", p. 7.
[974] Khan, Nora Nahid 2017, "Light Play: Twisting Reality and Deepening Narrative through Augmentation" in *Mousse Magazine*, No. 60.

offers glimpses into the other floors. In Amos Rex, visitors move along a circular route passing through a sequence of similar spaces, while in Kiasma the architect Holl, as explained by Drake, "uses a spiral form to direct visitors back and forth between two wings designed to intersect in a crossing or 'chiasm,' inspired in part by the writings of French phenomenologist Maurice Merleau-Ponty".[975] This idea of intersection seems to support that of interactivity – one of the main characteristics of the media art exhibitions hosted at Kiasma. Kiasma and Amos Rex depict two different concepts of viewer-centred design, but they both demonstrate the developments in contemporary art over the years and the new demands emerging from artists and spectators. However, these Finnish cases show that they are part of a more general international development. This means that the Finnish community is attentive to contemporary needs and open to integrate global ones, if suited to their priorities. After a phase of Nordic cooperation, the opening of the Finnish artworld to a variety of international influences is now more than evident.

Regarding media art and its preservation, the second difference between Kiasma and Amos Rex is their role in collecting art via active acquisitions, commissions, and resources for conservation. Kiasma's art collection is focused on media art and currently houses nearly 600 media artworks in various media as a part of the Finnish National Gallery's collections. Kiasma's media art archives emphasis long-term preservation in digital format and include software, programmes, and installation instructions. In digital preservation, Kiasma operates at the highest national level, and collaborates with the collection management department at the Finnish National Gallery. In contrast, Amos Rex exhibits media art but has not had a media art collection until now, despite having its own collection.

Education in museums makes use of another interesting type of interaction – 'augmented reality' (AR) – to interact with software-based art. The details of the work of art can thus be selected by the audience to enrich their access to information. Here, again, the sense of touch is present. Without going through a keyboard, the users can directly manipulate the figures on the screen with their fingers. Casetti states: "The world that was once in my eyes is now also in my hand".[976] Media artists too sensed AR's possibilities. For instance, Laitinen points out AR's potential as a parallel communication strategy in museum installations, illustrating a "beautiful underlying subversive potential here: imagine a situation where one would go to a history museum and there is an alternative critical history of colonial objects made

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[975] Drake, Scott 2005, "The 'Chiasm' and the Experience of Space: Steven's Holl Museum of Contemporary Art, Helsinki" in *Journal of Architectural Education*, p. 53.
[976] Casetti, Francesco 2015, *La galassia Lumière*, p. 291. Translation mine.

through an unofficial AR application".[977] As argued by Laitinen, augmented reality could function as a critical intervention in a global world that is mainly guided and managed by corporations. The Finnish artist "imagines one might use it to scan the embedded structures, the flows of money and influence supporting a powerful artistic institution to gain an intimate familiarity with its social and financial infrastructure".[978] I would also consider presenting parallel histories in museums using AR, which could expand and enrich the single version that visitors usually encounter in institutions. Here too, we find a non-linear dynamic for a simultaneous perception of events over time.

Cave automatic virtual environment (CAVE) technologies has contributed to the profound changes experienced by cultural tourism in the last two decades, such as the enjoyment of cultural goods through immersive experiences. Augmented reality can provide another type of immersive experience in the cultural field through the enhancement of cultural heritage. For instance, *Archeoguide* was the first technological model to be applied to cultural heritage in 2001 in Olympia, Greece. This system presents AR views of reconstructed ruins. Among these presentations, a reconstruction of the Ancient Olympic Games with avatar athletes competing in a stadium stands out as a special category. As reported by a group of international scholars:

> "In order to achieve this goal, virtual human models have been created and animated with high realism and historical accuracy in terms of the necessary movements (and/or artifacts) to execute each sporting modality. Special care was taken in modeling and animating the virtual athletes, based on specific bibliography and historical descriptions, published by international experts on ancient Greek civilization, about the ancient Olympic athletes and games".[979]

Here, the tourist-users at the archaeological site carry mobile devices such as laptops, pen-tablets, and palmtop computers. Recently, after a period of using wearable helmets with 3D displays, digital immersive systems have become available on smartphones to allow visitors to view the reconstructions of missing

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[977] Khan, Nora Nahid 2017, "Light Play: Twisting Reality and Deepening Narrative through Augmentation" in *Mousse Magazine*, No. 60, p. 12.

[978] Ibidem.

[979] Almeida, Luìs; Karigiannis John & Stricker, Didier 2002, "Archeoguide: An Augmented Reality Guide for Archeological Sites" in *IEEE Computer Graphics in Art History and Archeology*, Vol. 22, No. 5, September / October 2002.

parts for a more reasonable cost. Thus, audiences can bring back to life ancient societies and their customs as immersive experiences.

The Grand Palais Immersif, a new public agency that engages in the production, management, and distribution of digital and immersive exhibitions, has recently been established in France. This new state structure is an initiative by the Réunion des Musées Nationaux et du Grand Palais (RMN – Grand Palais).[980] It is one of the main European cultural operators, managing 34 national museums (including e.g., the Louvre, the Musée d'Orsay, the Musée Rodin), under the supervision of the Ministry of Culture and Communication. RMN deals with museum management, the organization of exhibitions and events, the educational and publishing sector, acquisition of artworks, as well as many other activities in the cultural field. The Pompeii exhibition at the Grand Palais in Paris was an inspiring product of this new agency's focus on immersive technologies. It presented high-definition digital three-dimensional reproductions of the everyday life of the Roman city dramatically interrupted by the eruption of Vesuvius in 79 CE. The exhibition hosted 200,000 visitors from 1 July to 29 October 2020.[981] Roei Amit, CEO of Grand Palais Immersif, stated: "Pompeii confirmed our intuition that developing this kind of exhibitions, a combination of three factors is vital: the immersion that generates emotion, the narration that gives the information and the interaction that leads to the involvement of the public".[982] On this basis, immersive sets, digital mediation, virtual reality, and augmented reality will be the ingredients for future productions at the Grand Palais Immersif, in collaboration with other agents, such as the Louvre, and Iconem, one of the digital startups specialized in the digitization of cultural heritage.

These case studies illustrate the myriad of possibilities that come with new technologies and immersive systems. Immersivity and interactivity seem to be among the criteria that museums consider today when planning exhibitions. Museums and cultural institutions should continue to contribute to the distribution of this new sensibility and aptitude for sharing, where knowledge extends beyond cultural boundaries.

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[980] Réunion des Musées Nationaux was founded in 1895 under the leadership of Raymond Poincaré and Georges Leygues. See: https://www.rmngp.fr. Accessed 24 January 2021.
[981] See: https://www.grandpalais.fr/en/node/51417. Accessed 24 January 2021.
[982] Ibidem. Translation mine.

5.3   Unstable Memories: How to Preserve Media Art

Studying interactive or immersive artworks raises the question of what kind of documentation this type of multimedia work will have in the future. This warrants further investigation into the current documentation processes carried out by some contemporary art museums. Today, as noted by several scholars, a considerable number of international museums recognize the artists' intents as a guiding idea for documenting contemporary artworks.[983]

Regarding interactive artworks, many museums and institutions are re-thinking the modes and means of documentation. One interesting example is the interactive project entitled *Uncle Roy All Around You* (2003) by the artists group Blast Theory. The UK-based group is well-known internationally for its pioneering use of interactive media and its creation of new forms of live performance, with the audience at the core. Since the early 1990s, they have investigated society and politics by using popular culture, new technologies, and games. Blast Theory has been collaborating with scientists at the Mixed Reality Lab at the University of Nottingham since 1997.[984] In fact, their work often challenges the boundaries between what is real and fictional, as in *Uncle Roy All Around You*, which premiered in London at the Institute of Contemporary Arts (ICA). This project required a mass of documentation, as it was a mixed reality game played both on a real city street and online by players in a virtual city. Finding Uncle Roy is the aim of a game where online players and street players collaborate to identify the protagonist.

Blast Theory engages in a wide ranging and accurate documentation process both while producing and exhibiting. Taking their work as a reference, the scholar Dekker distinguishes three phases where the act of documenting plays a significant part: 'documentation as process', where documents are considered a tool during the work's progress; 'documentation as presentation', or the production of audio-visuals about the work; and 'documentation for recreation' in the future. A media art event can produce documentation in many forms such as notes, descriptions, photos, films,

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[983]   See Wharton, Glenn 2015, "Artist Intention and the Conservation of Contemporary Art" in *Objects Specialty Group Postprints*, Vol. 22, The American Institute for Conservation of Historic and Artistic Works, New York, pp. 9–10; Hummelen, Ijsbrand 2005, "Conservation Strategies for Modern and Contemporary Art. Recent Developments in the Netherlands" in *Cr 3: interdisciplinair vakblad voor conservering en restauratie*, Jaargang 6, No. 3, p. 24; Hummelen, Ijsbrand et al., 1999, "Towards a Method for Artists' Interviews Related to Conservation Problems of Modern and Contemporary Art", ICOM-Committee for Conservation, 12th Triennial Meeting, Lyon, 29 August–3 September 1999, preprints, Vol. 1, James & James London, Lyon, pp. 312–317.

[984]   See the artists' website: https://www.blasttheory.co.uk. Accessed 28 February 2020.

or videos. Indeed, since the onset of digital tools, many technological advances have complemented sketch books, letters, or diaries to build a more detailed vision of the artist's purpose.

When using documentation to rebuild an installation, especially for complex installations, it is also necessary to commission an architectural survey and 3D images of the work installed in the museum. This supports scholars, conservators, and curators in visualising the artistic result. For media art environments, with their interactive elements and combination of real and virtual spaces, video documentation represents a decisive added value for scholars since it can record both the working of an art piece and the experiences it triggers. According to Dekker, audio-visual documentation "provide us with a unique perspective on the history of art, a perspective that moves beyond the image in a book, words on paper, or abstract notations. They provide us with a fuller sense of what it was like to be there and then".[985] Furthermore, audio-visual documentation of an art piece allows conservators to shift the focus from the artist's intents to the lived experience of the work and how it is received. At this point, Dekker argues for an "expanded understanding of documentation as presentation", that "treats video documentation not merely as a way to capture live events, but also as a form of dialogue, response, and reflection",[986] which may bring new layers to the art piece.

One of the key methods used by museums for documenting interactive projects is the Variable Media Network (VMN), "a strategy where artists are encouraged to define their work independently from medium so that the work can be translated once its current medium becomes obsolete".[987] This preservation strategy was employed by the Guggenheim Museum in New York to preserve its well-known collection of minimalist art, conceptual art and video art.[988] Dekker continues by noting that the content of the work is what needs preserving and restaging rather than its material form, which comprises four methods for preserving media art: storage or hardware preservation, emulation, migration and re-interpretation. The Variable Media Questionnaire (VMQ) helps to grasp the essence of a work for future presentations. As observed by Dekker, this method "is not intended to be exhaustive" but only to capture "artists' desires about how to translate their work into new mediums after expiration of the work's original medium".[989]

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[985] Dekker, Annet 2013, "Enjoying the Gap: Comparing Contemporary Documentation Strategies" in *Preserving and exhibiting media art: challenges and perspectives*, p.155.
[986] Ibidem, p. 168.
[987] Ibidem, p. 159.
[988] See: http://www.variablemedia.net/e/welcome.html. Accessed 11 January 2021.
[989] Dekker, Annet 2013, "Enjoying the Gap: Comparing Contemporary Documentation Strategies" in *Preserving and exhibiting media art: challenges and perspectives*, p. 159.

Another methodology came from the V2_Organisation, the Institute for the Unstable Media, founded in Rotterdam in 1981. The Capturing Unstable Media Conceptual Model (CMCM) was created in 2003 as a method for describing and mapping out recent media art installations, rather than reinstalling or conserving existing artworks. The V2_Organisation identifies three phases in the development of a work: research, development, and implementation. Their methodology involves a description of the environment in which the multimedia artworks are exhibited,[990] which is usually not included in traditional preservation strategies. As I already examined in the previous chapters, spatiality is indeed a significant part of the immersive experience; it should not be considered secondary. In this regard, Jeroen van Mastrigt, an academic and game designer who applies gaming principles to real spaces, suggests considering a media artwork as "an ecosystem instead of an object"[991] in which interacting relations take place.

In comparing strategies, Dekker notes that the CMCM model "highlights the creative and production process of the work by focusing on the interaction between the work and the stakeholders. Next to a detailed description of the resources it focuses on the relationships between entities in the construction and the execution of the work".[992] However, V2_Organization confirms that more research is needed in this area and notes that suggestions could come from the social sciences, where the study of social behaviour and intercommunications between humans and machines is still in development.[993] In Chapter 4, I also mentioned how nowadays artists are increasingly interested in researching behavioural experiments in environmental installations, including Eliasson, Haaslahti, and Random International.

Matters in Media Art: Collaborating towards the Care of Time-based Media, a joint action by Tate, the San Francisco Museum of Modern Art, MoMA in New York, and the New Art Trust, includes useful guidelines for acquiring and lending media artworks. Lastly, *Aktive Archive* (Active Archives), a project started by Bern University of the Arts in 2004 aims to research the preservation, restoration, and storage of various forms of media art.[994] At this stage, audience feedback in blogs, comments, and on social media is a central element for structuring the archive.

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[990]   Ibidem, p. 161.

[991]   See Dekker, Annet 2010, "Serious Archiving: Preserving the Intangible by Capturing Processes. Annet Dekker in conversation with Jeroen van Mastrigt" in *Archive 2020: Sustainable Archiving of Born Digital Cultural Content*, edited by A. Dekker, Virtueel Platform, Amsterdam.

[992]   Dekker, Annet 2013, "Enjoying the Gap: Comparing Contemporary Documentation Strategies" in *Preserving and Exhibiting Media Art: Challenges and Perspectives*, p. 163.

[993]   See: http://capturing.projects.v2.nl. Accessed 23 November 2018.

[994]   Himmelsbach, Sabine 2019, "Net-based and Networked" in *Digital Art through the Looking Glass*, p. 236.

The analysis above shows that media art is characterized by the coexistence of numerous different formats and devices linked to the obsolescence of technology. Artistic processes that use digital technology can undergo continuous variations. Therefore, it may be strategic to adopt the artist's intent as the guiding principle for documenting media artworks in the future. However, other important aspects of documentation need to be evaluated, including reception and audience responses.

5.4   The Intentional Arc

The notion of intentionality as intended by phenomenology might be an interesting aspect to consider in the field of conservation, especially in relation to electronic art. Merleau-Ponty articulated intentionality as a vital relationship between subject and object and as a pre-categorial experience in our consciousness. In addition, as observed by the scholar Reuter, one of Merleau-Ponty's merits was to include "directionality" in the concept of intentionality.[995] She remarks that: "Merleau-Ponty's basic intentionality is the body-subject's concrete, spatial and pre-reflective directedness towards the lived world. The pre-reflective moving *body* is in itself intentional".[996] This tendency towards something develops the original dimension of the relationship between consciousness and the world within perception. It is an operating intentionality closely linked to the theme of temporality and the lifeworld, distant from an abstract sphere. It refers to the originality of experience, and it operates anonymously in every act of experience. This operating intentionality can be found in the interactions of the public with artworks, especially in interactive and immersive environments. In fact, as mentioned above, today conservators increasingly account for participant experiences.

Based on Husserl's speculation, Merleau-Ponty's theoretical novelty is moving the main reference of intentionality from consciousness to the body. From Husserl's work entitled *Ideas II*, which Merleau-Ponty examined during his stay in Leuven, the French philosopher derives that the fulcrum of the intentional act is the body. Intentionality is essentially the corporeal 'naturally' acting against the backdrop of the lifeworld. The philosopher Roberta Lanfredini emphasises two fundamental characteristics of intentional acts: 'incorporation' and 'extension' or body dilation. According to the former, the primary sphere of meaning resides in motility and not representation, while the latter corresponds to the condition of extension, exemplified in the relationship between a blind person and their stick or in the

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[995]   Reuter, Martina 1999, "Merleau-Ponty's notion of pre-reflective intentionality" in *Synthese,* Vol. 118, No. 1, Kluwer Academic Publishers, Dordrecht, pp. 69–88.
[996]   Ibidem, p. 72.

relationship between musicians and their instruments, which is defined in terms of immediacy and familiarity.[997]

Using as a starting point several cases of psychiatric patients, Merleau-Ponty introduces the concept of the intentional arc, which combines the body scheme with motility. The French philosopher states:

"The life of consciousness – cognitive life, the life of desire or perceptual life – is subtended by an 'intentional arc' which projects round about us our past, our future, our human setting, our physical, ideological and moral situation, or rather which results in our being situated in all these respects. It is this intentional arc which brings about the unity of the senses, of intelligence, of sensibility and motility. And it is this which 'goes limp' in illness".[998]

Unfortunately, the concept of 'intentional arc' proposed in *The Phenomenology of Perception* is not sufficiently explained by the author. For this reason, the philosopher de Saint Aubert views it as a sort of 'magic formula', a confused attempt at responding to his quest for anthropological wholeness.[999] Indeed, Merleau-Ponty no longer considers the intentional arc in his later works, where, instead, he rethinks the concept of intentionality in an ontological sense, employing new concepts such as flesh and chiasm.

The intentional arc, "which projects round about us our past, our future, our human setting", seems to be the methodological approach that media conservators adopt in the case of unstable archives. The idea to document the creative process, the artistic result, and its interplay with the public, along with the shifts in technology, functions as an intentional arc trying to link past, present and future.

Moreover, the concept of intentionality gives meaning to the existence of human beings. According to Merleau-Ponty, the most important contribution of phenomenology consists in having linked "extreme subjectivism and extreme objectivism in its notion of the world or of rationality".[1000] In this respect, the French philosopher restates that "the phenomenological world is not pure being, but the sense which is revealed where the paths of my various experiences intersect, and also where my own and other people's intersect and engage each other like gears",[1001] and as such it is inseparable from subjectivity as well as from intersubjectivity. As

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[997] See Lanfredini, Roberta 2017, "Intenzionalità fungente: involontarietà e impersonalità in fenomenologia" in *atque materiali tra filosoia e psicoterapia*, No. 21, pp. 91–108.

[998] Merleau-Ponty, Maurice 1945, *The Phenomenology of Perception*, p. 157.

[999] de Saint Aubert, Emmanuel 2005, *Le scénario cartésien*, Vrin, Paris, p. 138.

[1000] Merleau-Ponty, Maurice 1945, "Preface" in *The Phenomenology of Perception*, p. XXII.

[1001] Ibidem.

outlined by the scholar David Morris, *The Phenomenology of Perception* "shows that being has a meaning in virtue of an intentionality in movement underwritten by a body schema. But the body schema engenders meaning in virtue of being ontologically open to a temporality of the body (in habit and perceptual learning), to space (in movement), to language (in expression) and to others (in intersubjectivity)".[1002]

Intersubjectivity is the result of the body acting in a pattern. Bodily intentionality is thus directed towards other bodies and is understood by them as pre-reflective. Merleau-Ponty claims:

> "I experience my own body as the power of adopting certain forms of behaviour and a certain world, and I am given to myself merely as a certain hold upon the world; now, it is precisely my body which perceives the body of another, and discovers in that other body a miraculous prolongation of my own intentions, a familiar way of dealing with the world. Henceforth, as the parts of my body together compromise a system, so my body and the other's are one whole, two sides of one and the same phenomenon, and the anonymous existence of which my body is the ever-renewed trace henceforth inhabits both bodies simultaneously".[1003]

Intersubjectivity becomes inter-corporeality, an 'exchange' of intentionality. Later, Merleau-Ponty defines the relationship between my body and the other as "intentional transgression",[1004] because when my body directs its intentional vectors towards others, it is simultaneously struck by those emitted from other bodies. In a working note in May 1960 entitled *Flesh of the World – Flesh of the Body – Being*, he also writes about a coincidence in transgression and overlapping:

> "*Flesh of the world*, described (apropos of time, space, movement) as segregation, dimensionality, continuation, latency, encroachment (…) my body is made of the same flesh as the world (it is a perceived), and moreover that this flesh of my body is shared by the world, the world reflects it, encroaches upon it and it encroaches upon the world (the felt [*senti*] at the same time the culmination of subjectivity and the culmination of materiality), they are in a relation of transgression or of overlapping – This also means: my body is not

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[1002] Morris, David 2008, "Body" in *Merleau-Ponty: Key Concepts*, p. 118.
[1003] Merleau-Ponty, Maurice 1945, *The Phenomenology of Perception*, p. 412.
[1004] Merleau-Ponty, Maurice 1964, *The Visible and The Invisible*, p. 202.

only one perceived among others, it is the measurant (*mesurant*) of all, *Nullpunkt* of all the dimensions of the world".[1005]

The continuous exchange in our encounter with the world makes our being a measure of everything in constant evolution. The notion of *encounter*, as described by the Finnish literary scholar Kuisma Korhonen, "has a kind of chiasmatic structure".[1006] Chiasm, or overlapping, hints at the fact that we are not the same after the relation with others. The same happens in the creation and perception of artworks.

5.5   The Multiple Authorship and Intersubjectivity

Today, the creative process in visual art demands multiple skills. Nonaka, one of the artists at teamLab, explains this condition: "When we started teamLab in 2001, at the rise of the digital age, we had the passion to eliminate boundaries and work beyond existing disciplines, which was becoming possible using digital technologies. To make this happen, we wanted to create our own lab uniting people with different skills".[1007] Hence, immersive environments are driving a need for more collaboration between different competences. Indeed, the amount of technology in these types of installation requires the input of experts in different fields at every stage of the work. Collaborations offer the opportunity to share equipment, resources, and experience, but the individual media artist also acts within a network of relationships and abilities. This appears close to the thought of Merleau-Ponty, where intersubjectivity becomes inter-corporeality – an 'exchange' of intentionality.

Taking a broad view, the Swedish curator Maria Lind notes that "collaboration was crucial in the transition from Modernism to postmodernism, particularly since the advent of conceptualism in the late 1960s. During the following decade, redefinitions of art tended to go hand in hand with collaborative practices".[1008] I would add here the activities of Fluxus that emerged in the 1960s thanks to the synergies between international artists, composers, and poets. The search for collaboration grows in happenings and performances and becomes indispensable with digital technologies. Since the 1990s, art and media theorists have also addressed new production methods in visual art based on cooperation, decentralization, networking, open-source structures, and the instability of

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[1005]   Ibidem, pp. 248–249.
[1006]   Korhonen, Kuisma 2018, "General Introduction: Rereading Chiasms" in *Chiasmatic Encounters: Art, Ethics, Politics*, p. XIII.
[1007]   Mutter, Zoe 2018, "When art and innovation collide" in *AV Magazine*.
[1008]   Lind, Maria 2009, "Complications; On Collaboration, Agency and Contemporary Art" in *Public*, No. 39, Spring 2009, p. 53.

technologies.[1009] For instance, in 1994, the French media theorist Lévy coined the notion of 'collective intelligence', a form of distributed intelligence continuously enhanced and coordinated in real-time, leading to an effective mobilisation of skills thanks to the spread of digital communication techniques, such as knowledge sharing, cooperative learning and open collaborative processes.[1010] On the other hand, sharing theoretical and practical knowledge means incorporating the knowledge and identity of others. This form of mingling has increased with the technologies of virtual reality, welcoming potential endless aspects of identity, such as the virtual and its indefinite and infinite source of actualisations. Thus, the social theorist Baudrillard refers to the 'fractal subject', who "only dreams of resembling itself in each of its constitutive fractions", and "to individuals as potential mutants and hybrids",[1011] and the philosopher Rosi Braidotti delineated a 'nomadic subject'.[1012] Thanks to digital and global flows, the 'other' is increasingly important as an interlocutor and part of our nature.

The concept of the individual as a multiple entity is visible in the fictional figure with an 'open-reputation' called Luther Blisset. From 1994 to 1999, Luther Blisset became established as an imaginary character in the European youth culture scene. By signing with this collective pseudonym, various people in different countries produced magazines (both printed and online), essays and fiction works, records, performances, theatre plays and websites. Luther Blisset is a multipurpose pseudonym, a virtual character available to anyone, whose reputation was constantly deconstructed and re-invented by those who adopted it.[1013]

Other artistic movements of the 1990s focused on the relationship between the artwork and the audience, and on various forms of participation: *Relational Aesthetics* with Bourriaud as its main theorist; *New Genre Public Art*, coined by

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[1009]   I only quote two sources but many articles could be found in art magazines, catalogues, and books. See Van Saaze, Vivian 2013, "Case Study: No Ghost Just a Shell by Pierre Huyghe, Philippe Parreno, and many others" in *Preserving and Exhibiting Media Art: Challenges and Perspectives*, p. 171. See also Lind, Maria 2009, "Complications; On Collaboration, Agency and Contemporary Art", p. 54.

[1010]   See Lévy, Pierre 1994, *L'Intelligence collective. Pour une anthropologie du cyberspace*, La Découverte, Paris; Italian translation, *L'intelligenza collettiva. Per un'antropologia del cyberspazio*, Feltrinelli, Milano 1996.

[1011]   Baudrillard, Jean 1992, "Transpolitics, Transsexuality, Transaesthetics" in English translation by M. Valentin, pp. 9–26; in *Jean Baudrillard: The Disappearance of Art and Politics*, edited by W. Stearns & W. Chaloupka, Macmillan Academic, London 1992, p. 18.

[1012]   See Braidotti, Rosi 1994, *Nomadic Subjects: Embodiment and Sexual Difference in Contemporary Feminist Theory,* Columbia University Press, Cambridge, MA.

[1013]   Although mostly present in Europe, sporadic appearances of Luther Blissett have been also noted in Canada, Finland, the United States, and Brazil. See: http://www.lutherblissett.net. Accessed 12 February 2020.

Suzanne Lacy, the founding member of the Feminist Studio Workshop; *Connective Aesthetics*, created by the artist and theorist Suzy Gablik; *Progetto Oreste* (1997–2001), a variable set of people with the aim of creating spaces of freedom for ideas, and projects, invited by Harald Szemaan to the 48th Venice Biennale in 1999; *Kontextkunst*, created by Weibel in 1993, and *Dialogical Art* founded by Grant Kester.

Since the 1990s, artists working in pairs or in groups have multiplied. The scholar Vivian van Saaze lists diverse modes of collaboration, which "vary from a pragmatic choice or necessity" (for instance: technological know-how), "to a form of activism" (for example: a challenge to the market), "and simple curiosity" (as the result of a mutual effort).[1014] In media art, one can recall *Critical Art Ensemble*, a group of tactical media practitioners, the duo Sommerer and Mignonneau, 0100101110101101.org and their previous work in the Net Art movement, Blast Theory, and Studio Azzurro, who, with its more than thirty years of experience, may give authentic testimony of how to succeed in realizing the idea of a collective author.

In the Nordic countries, among others, one can recall the art collective The Icelandic Love Corporation, Elmgreen & Dragset, and Superflex. In Finland, for instance, the collaboration of the artists Tellervo Kalleinen and Oliver Kochta started in 2003 when they organized the performance festival *The First Summit of Micronations* in Helsinki, but they became well-known for their *Complaints Choirs*, which has spread to more than 150 cities around the globe as an open-source concept. Here, the collaboration extends to anyone who wants to join a choir to sing their protests with other complainers. In media art, the brothers Juha and Vesa Vehviläinen, active as Pink Twins since 1997, are visual artists and electronic musicians based in Helsinki. Their video screenings are often combined with digital soundscapes. They continue to collaborate in the field of interactive works, and their recent art piece entitled *Infinity* (2017) also uses an online platform to reach a wider audience. [1015] IC-98 is an artist duo comprising Visa Suonpää and Patrik Söderlund, who represented Finland at the Venice Biennale in 2015. In their twenty-year collaboration, they have realized site-specific projects and video installations. Beloff collaborated several times with colleagues to realize media artworks, as illustrated

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[1014]   Van Saaze, Vivian 2013, "Case Study: No Ghost Just a Shell by Pierre Huyghe, Philippe Parreno, and many others" in *Preserving and Exhibiting Media Art: Challenges and Perspectives*, p. 171.

[1015]   Miller, Arja 2017, "Pink Twins" in the catalogue *ARS 17: Hello World! Art After the Internet*, pp. 188–189.

in the second chapter.[1016] Furthermore, Nissinen collaborated with Mellors to create the multimedia installation *The Aalto Natives* for the Finnish Pavilion at the 57th Venice Biennale (2017). Mellors' artistic activity ranges from installation to sculpture and from music to performance, while Nissinen is particularly interested in film, drawing and installation. As reported in an interview, humour was the shared interest that first attracted Nissinen and Mellors to working with each other.[1017] Shia LaBeouf, Nastja Säde Rönkkö, and Luke Turner have been working as an art collective since 2014 and in *ARS 17* exhibited a multimedia installation and performance entitled *#Alonetogether*, where social interaction fosters the development of new forms of communities across digital and physical networks.[1018]

Collaboration results in multiple authorship. The art critic Bourriaud quotes philosophers Roland Barthes and Foucault and their notion of 'death of the author' (or rather, of authorship).[1019] Media scholar and curator Kluszczyński argues that "the notion of author is being replaced with the notion of dispersed authorship – the joint aim of the so-called artists and the so-called recipients".[1020] Artist Gordon remarks on the 'promiscuity' of artistic collaboration since the 1990s.[1021] In 2009, Lind stated:

> "Collaboration is without a doubt a central method in contemporary art today. Artist groups, circles, associations, networks, constellations, partnerships, alliances, coalitions, contexts and teamwork – these are notions that have been buzzing in the air of the art world over the last two decades. (…) Various kinds of collaboration – between artists, between artists and curators, between artists and others – are once more appearing and becoming an increasingly established working method".[1022]

[1016] For instance, she realized the wearable work *Heart-Donor* (2007) in collaboration with Erich Berger and Elina Mitrunen. A multiple collaboration produced *Seven Mile Boots* (2003) with Beloff, Erich Berger and Martin Pichlmair.

[1017] Jeffreys, Tom 2017, "The Aalto Natives: An interview with Erkka Nissinen and Nathaniel Mellors" in *FRAMEnews*, 23 February 2017.

[1018] Miller, Arja 2017, "LaBeouf, Rönkkö & Turner" in *ARS 17: Hello World! Art After the Internet*, pp. 112–115.

[1019] Bourriaud, Nicolas 2002, *Postproduction. Culture as Screenplay: How Art Reprograms the World*, p. 86.

[1020] Kluszczyński, Ryszard W. 2007, "From Film to Interactive Art: Transformations in Media Art" in *MediaArtHistories*, p. 220.

[1021] This is reported in Obrist, Hans Ulrich 2015, *Lives of the Artists, Lives of the Architects*, Penguin Books, London.

[1022] Lind, Maria 2009, "Complications; On Collaboration, Agency and Contemporary Art", p. 53.

No Ghost Just a Shell (1999–2002) by Huyghe and Parreno, and many others is one of the best-known examples of collective art practices in recent years. After purchasing the cartoon character AnnLee from a Japanese manga company, the French duo invited other artists to produce a new image based on the same subject. Each new shape was not definitive but served as a catalyst for the following work. In this three-year project, the AnnLee motif inspired animated videos by Huyghe and Parreno as well as by Liam Gillick, Dominique Gonzales-Foerster, François Curlet, Melik Ohanian, and Rirkrit Tiravanija.[1023] The project has been shown at the Van Abbemuseum in Eindhoven, the Institute of Visual Culture in Cambridge, and at Kunsthalle Zürich. Lind observes that *No Ghost Just a Shell* is an art project whose "structure ends up looking very much like the rhizome described by Gilles Deleuze and Felix Guattari".[1024] The rhizome, a philosophical concept developed by the French philosophers,[1025] is based on the botanical term describing a horizontal mass of roots that illustrates the concept of multiplicities. Indeed, Parreno characteristically questions the real by exploring the multiple connections that unite individuals, groups, and images. As highlighted by Bourriaud, Parreno considers collaboration one of the milestones of producing art projects where the co-presence of different people is negotiated through the creation of a topic, or a scenario.[1026]

This series of works inspired by AnnLee provoked questions in its authors in relation to the status of images and of representation, the work's polyphony, and copyright. These queries became more urgent when the Van Abbemuseum in the Netherlands decided to acquire the entire art project in 2003. As explained by the conservator van Saaze:

"With this acquisition the Van Abbemuseum has confronted itself with problems that are typical for many of today's collaborative artworks. Huyghe and Parreno acted as intermediaries between the museum and all individual artists who had contributed to the project. In conclusion, by acquiring NGJAS, the Van Abbemuseum needed to continue collaborating with the individual artists, their galleries, and former exhibition places. This acquisition transformed the

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[1023]   Other artists and writers who participated in the art project include Gordon, Sylvie Fleury, Molly Nesbitt, and the actress Catherine Deneuve.

[1024]   Lind, Maria 2009, "Complications; On Collaboration, Agency and Contemporary Art", p. 65.

[1025]   Deleuze, Gilles & Guattari, Félix 1976, *Rhizome*, Éditions de Minuit, Paris; Italian translation by S. Di Riccio, *Rizoma,* edited by J. Risset, Pratiche, Parma 1977.

[1026]   Bourriaud, Nicolas, 2002, *Postproduction. Culture as Screenplay: How Art Reprograms the World*, p. 74.

museum's role: rather than an 'end point,' the museum becomes a lively collaborator as well".[1027]

The museum too becomes a dynamic entity, adapting to the impermanence and collaborative porosity of digital art.

Janina Hoth observes that in digital art "the concept of originality needs to shift towards one of collectivity, which can include the technology, collective aesthetic, and collaborative interaction. (…) As artefacts, digital artworks expand the idea as a single entity towards a continued development, an always in process-state and inherent 'embodied' or 'interactive' knowledge".[1028] In fact, the introduction of interfaces in electronic arts added a further dimension of intersubjectivity. As commented by the scholar Couchot:

"The position of object, image, and subject is no longer linear. Through the interfaces, the subject hybridizes himself with the object and the image. A new feature of subjectivity is appearing. According to Roy Ascott, for example, subjectivity is no longer localized in a sole point but distributed through the networks; according to Siegfried Zielinski, subjectivity is the possibility of action at the frontier of the networks; according to Pierre Levy, subjectivity has become fractal; Derrick de Kerckhove speaks of 'borrowed subjectivity', the possibility of 'alienarization'. Therefore, a new perceptive habitus is emerging".[1029]

It could be argued that thanks to technology society has become more open-minded and accepting of a variety of points of view with ease. One could add that phenomenology has contributed to preparing the ground for this receptivity in the individual.

Regarding multiple authorship and otherness, it is worth mentioning the notions of intersubjectivity, porosity, and ambiguity as introduced by Merleau-Ponty. He dedicated one chapter in *The Phenomenology of Perception* to the existence of others describing "the body of the other person as the vehicle of a form of behaviour"[1030] in human relationships. The French philosopher's understanding of being-for others

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[1027] van Saaze, Vivian 2013, "Case Study: No Ghost Just a Shell, by Pierre Huyghe, Philippe Parreno, and many others" in *Preserving and Exhibiting Media Art: Challenges and Perspectives*, pp. 170–175.

[1028] Hoth, Janina 2019, "Historicization in the Archive: Digital Art and Originality" in *Digital Art through the Looking Glass*, p. 151.

[1029] Couchot, Edmond 2007, "The Automatization of Figurative Techniques: Toward the Autonomous Image" in *MediaArtHistories*, p. 183.

[1030] Merleau-Ponty, Maurice 1945, *The Phenomenology of Perception*, p. 406.

emphasises a degree of reciprocity that is missing from the setup of other phenomenologists, such as Sartre. As stated by philosopher Gail Weiss, "while Sartre's descriptions in *Being and Nothingness* imply that the self oscillates between being-for-itself and being-for-others as if these were separate experiences, Merleau-Ponty insists that I exist for the other and the other also exists for me concurrently without either experience being privileged".[1031] Merleau-Ponty goes deeper into this point in the following passage from the concluding pages of *The Phenomenology of Perception*: "I am all that I see, I am an intersubjective field, not despite my body and historical situation, but, on the contrary, by being this body and this situation, and through them, all the rest".[1032] In other words, perception projects the subject and fits a horizon of relationships in a world that is essentially porous.

Merleau-Ponty's concept of intersubjectivity has an affinity with the status of visual art in the digital revolution, particularly in the participatory context where individual creation moves towards the collective, the finished work towards open process, the centrality of the single artist towards interaction with the spectator. For instance, the approach of media artists during the planning of an interactive work develops in terms of intersubjectivity. They must consider and foresee the actions of the audience in the space. One of the founders of Studio Azzurro, Paolo Rosa, describes the tendency to visualise the positions and actions of spectators in the preparatory drawings for an interactive installation. Unlike the preparation for a film, it is essential to consider how visitors will interact with the work, which is why their presence has become such an integral part of the project.[1033] It is reasonable to interpret this approach to interactive art as phenomenological, for its sense of anticipated dialogue with visitors and its explicit recognition of the alterity of the other.

Intersubjectivity relates to notions of ambiguity and porosity. Concerning the notion of ambiguity in Merleau-Ponty, Weiss writes: "Here, the ambiguities of human experience are interconnected and multiplied, extending from the complex interrelationships between subjectivity and intersubjectivity, individuality and generality, to the dynamic interplay between my body and my historical situation, our intersubjective life and the world".[1034] There is also a temporal ambiguity of the past, the 'now' of the present and the future, of where human experience is located. As noticed by Weiss, the interweaving of all three temporal modalities, as well as the relations among body, subjectivity and intersubjectivity bring Merleau-Ponty to

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[1031]   Weiss, Gail, "Ambiguity" in *Merleau-Ponty: Key Concepts*, p.135.
[1032]   Merleau-Ponty, Maurice 1945, *The Phenomenology of Perception*, p. 525.
[1033]   Rosa, Paolo & Balzola, Andrea 2011, *L'arte fuori di sé*, Feltrinelli Editore, Milano, p. 150.
[1034]   Weiss, Gail 2008, "Ambiguity" in *Merleau-Ponty: Key Concepts*, p. 136.

transition "from the terminology of the body (which privileges a particular body-subject) to the more ambiguous notion of the flesh of the world".[1035] The importance of placing human experience in a historical context also leads us to consider the dialogue of art with society and its needs in an interchange of relationships. The elaboration of experiences of the world is constantly supported by the development of inter-human relations. This way of thinking may open aesthetics to ethics.[1036] For instance, teamLab foresee positive developments in the presence of others in an immersive environment. Differing from traditional art mediums, such as painting and sculpture, where the relationship is mainly based on the single spectator, the Japanese group state: "Digital art has the ability to change the relationships among people who are present within the same space. If the interaction of other people with an artwork creates change that we feel is beautiful, then the presence of others can in itself become a positive element".[1037] Their statement is oriented towards the well-being of others, towards an ethical direction.

Regarding the concept of porosity, for Merleau-Ponty, it is "synonymous with being situated" – being together in a constant exchange. Merleau-Ponty states that being is not-coincident with itself, because it is "a being by porosity",[1038] which is not an imperfection, but a source of openness.[1039] If an intersubjective, porous, ambiguous condition leads artists to multiple authorship, then the digital artwork becomes increasingly open, porous, and interrelated with the audience. Nowadays, one could argue that interactivity and immersivity are new forms of intersubjectivity and porous experience. Interactive and immersive art installations encourage viewers' reactions in a given space or context. These kinds of media art unfold a porous situation or an unfinished system activated by the public.

In his installations, Laitinen likes to create a porous ambience. One of his recent exhibitions, hosted at Helsinki Contemporary in 2017, was entitled *A Porous Share*. (Fig. 115) He elaborates on the concept in an interview: "I hope that the works could operate as a decentralized network where the movement of the viewer is hopefully opening up new combinations for the experience. This also leads to the concept of porousness. I wanted to create fluid spatial transitions for these different works so

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[1035]   Ibidem.
[1036]   Cataldi writes: "Merleau-Ponty's philosophical accommodation of "an affectivity where I am given to the field of the other" can be construed as opening a way to the construction of ethical and politically sensitive accounts of relations between different kinds of bodies". See Cataldi, Suzanne L. 2008, "Affect and Sensibility" in *Merleu-Ponty: Key Concepts*, p. 172.
[1037]   See: https://www.teamlab.art/it/concept/relationships/. Accessed 1 February 2021.
[1038]   Merleau-Ponty, Maurice 1964, *The Visible and the Invisible*, p. 149.
[1039]   Ibidem, p. 128.

they could create an idea of active tentacular co-existence".[1040] His purpose is achieved by placing viewers above and all around his artworks. Porosity is also present in his working method, as observed by curator Pilvi Kalhama: "Old works blend into new material yet to be processed; in the artist's words, everything connects with everything else".[1041]

The notion of porosity can also explain the doubts of some scholars and media conservators in the field of software-based art. For instance, Hoth highlights the difficulty of adopting artists' intention as the guiding principle in media conservation when the artwork is the result of a process engaging several people (artists and interactors/visitors), and therefore questions the concept of authenticity. She asserts:

> "To archive digital art, we cannot rely on the idea of preservation as saving the origin of an artwork but need to integrate the collectivity into archival methodology. If we accept that an artist's intention is not an exclusive origin in the collective effort of a digital artwork and in its processual mediality, we are also no longer bound by the archival paradigm of authenticity. As knowledge cognition, the ideal is not to get as close to the idea of origin as possible but understand its processualism as ever-continuing development".[1042]

The re-enactment, which I will investigate in the next subchapter, elucidates the idea of the processualism of performativity, and shows the continuous elaboration of intentionality.

5.6 Re-enactment as an Overlapping of Time and Experience

The Dadaists and the Futurists were among the first to introduce new ideas in art through performative actions and to support the participation of viewers. In the 1960s, a flourishing of performative practices involved the author's body, the viewer or both. Historiography has labelled such events as Happening, Fluxus, Performance Art, Body Art, Relational Art. These practices are presented as ephemeral actions that reject the objectification and commodification of the art object, and transform art into space, time, and action. From a theoretical point of view, in the 1960s the

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[1040] Dillemuth, Mia 2017, "Interview with Tuomas A. Laitinen" in *Around*, online magazine. Available at: http://www.aroundjournal.com/tuomas-laitinen-porous-share/. Accessed 24 May 2020.

[1041] Kalhama, Pilvi 2014, "Pulse of the World," in *Tuomas A. Laitinen: Fundamental Matter*, p. 16.

[1042] Hoth, Janina 2019, "Historicization in the Archive: Digital Art and Originality" in *Digital Art through the Looking Glass*, p. 152.

semiotician Eco devoted particular attention to furthering the role of the viewer in his *The Open Work* (orig. *Opera aperta*, 1962), insisting on the dialectic between form and openness, while Debord proposed the idea of a spectator who should return to be an active subject in the community in *The Society of the Spectacle* (1967).

A fundamental element of performative practices is the creation of meaning through a relationship with the public, exposing artistic expression to the immediacy and unpredictability of the changing reactions of spectators. Thanks to video art, these actions have been recorded and disseminated to subsequent generations. Today, it is possible to convert video from tape to digital media. Video techniques provide further proof of the importance of moving images in art history and this type of documentation may be considered a method for a phenomenology of lived experience. In fact, the recording of performances allows their re-enactment, which can become another way of preserving and, at the same time, renewing the art experience. As observed by the art historian Laura Leuzzi: "In the past two decades, the re-enactment of historical artists' performances and historical events has become an internationally growing practice. Several exhibitions and studies have been dedicated to the topic of re-enactment towards definitions, historical and theoretical contextualization and categorizations of this form".[1043] One notable event of this type was Marina Abramović's *Seven Easy Pieces* in 2005 at the Guggenheim Museum in New York. She re-enacted a set of seminal performance works from the 1960s and 1970s, including one of her own plus a new piece. For several performances from the earlier period, the artist had to search the archives for texts, reviews, and photographs, watch video and film recordings, if available, and interview authors to collect oral testimonies to re-enact the original performances as closely as possible. Indeed, regarding the performance works by Nauman, Acconci, Valie Export and Beuys, Abramović was obliged to re-enact them only partially, owing to a lack of available documentation. *Seven Easy Pieces* examined the possibility to remake and preserve ephemeral art and highlighted concepts such as "performativity, liveness, authenticity, authorship, memory, documentation and definitions of the term re-enactment".[1044]

[1043]   Leuzzi, Laura 2019, "Re-enacting Early Video Art as a Research Tool for Media Art Histories" in *Digital Art through the Looking Glass*, p. 163. She quotes as the most relevant exhibitions: *A Little Bit of History Repeated*, curated by Jens Hoffmann (Kunst-Werke, Berlin, 2001); *Life, Once More: Forms of Reenactment in Contemporary Art*, curated by Sven Lüttiken (Witte de With, Rotterdam, 2005); *Playback. Simulierte Wirklichkeiten / Playback: Simulated Realities* curated by Sabine Himmelsbach (Edith-Russ-Haus für Medienkunst, Oldenburg, 2006), *RE:akt! Reconstruction, Re-enactment, Re-reporting* curated by Domenico Quaranta, Antonio Caronia and Janez Janša (Ljubljana, 2009).

[1044]   Ibidem, p. 163.

In performativity, theory and practice are equally significant. As observed by computer scientist Letizia Jaccheri, "performativity has originally been developed to understand artistic phenomena, but it has applications for the creative and cultural industries".[1045] Thus, it can be considered a structure for the comprehension of phenomena related to interactions in a wider sense. Phenomenologically speaking, re-enactments may also be related to the concept of porosity, because the action of the re-enacting performer may open new combinations for viewers' experience. This leads to a state of fluid transition of meanings and configurations or, in other words, of 'porousness' between the first and the following performance. Re-enactments could also be linked to immersive art experiences via their post-truth dynamics, investigated in Chapter 3. On a technical level, *Van Gogh Alive*, an exhibition in the form of video environments based on paintings by the Modern Master, may constitute a parallel to Abramović's *Seven Easy Pieces* drew on the original performances of other artists. These events can symbolise the porousness of art and culture, the transmission of art history through new interpretations. Both could be considered a phenomenon of post-truth dynamics because they are not merely copy of artworks but involve a degree of ambiguity in a phenomenological sense.

Furthermore, the media conservator Falcão appreciates how archiving work done by video-artists helps museums to recover information. She hopes that digital artists will adopt the same attitude. She questions: "However, I think that all the success of video-based art, for example, artists and artist cooperatives achieved themselves. Museums have some responsibility, yes. But are there similar artist cooperatives nowadays where they themselves are working to preserve their own artworks?".[1046] This opens a conversation about future media conservators, their education, and the implications of relying on the resourcefulness of artists. One of the first academic courses devoted to media conservation was held in 1999 at the University of the Arts in Bern.[1047] Other electronic media conservation programmes have been launched, but a lack of specialized conservators is an issue in many countries. For instance, Besser reports how New York-based organization Transfer (XFR) Collective operates directly with artists "to preserve their works, to reformat their works and keep their works alive (…) So there were two sides to it: on the one side was video transferred to digital, and on the other side was old visual media transferred to newer. But yes, museum staff does [sic] go around to artist festivals for recruiting artists to

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[1045] Jaccheri, Letizia 2009, "Artistic Performance of Open Source Software" in *Technical Report Draft*, Interscience Enterprises, Geneva, p. 5.

[1046] See the panel discussion "Six Decades of Digital Arts and Museums: A New Infrastructure. DARIAH Connectivity Roundtable" in *Digital Art through the Looking Glass*, pp. 96–97.

[1047] Falcão, Patrícia 2019, "Preservation of Software-based Art at Tate" in *Digital Art through the Looking Glass*, p. 273.

preserve their own works. This is filling a gap that museums aren't filling".[1048] Additionally, the profession of media conservators requires knowledge in various areas, from exhibition studies to technology. As pointed out by Falcão: "Working in the context of software-based art means understanding hardware, software and the overall technical environments needed to run it, as well as aspects of display, either in the gallery or in a browser on a computer screen".[1049] Her observation echoes the 'modus operandi' of media artists and why they prefer to work in groups sharing different competences. Media art conservators should probably adopt a similar collaborative strategy: a team of experts in a range of fields may be better equipped to cover all the critical aspects of artwork in the digital era.

5.7   Sharing Archives and Memories in Motion

In 2019, an international declaration signed by more than five hundred experts, researchers and artists affirmed the urgent necessity to realize a global platform of interoperable archives.[1050] In recent years, many scholars have highlighted the lack of coordination between existing archives and documentation strategies. Media scholars Grau, Hoth and Wandl-Vogt list a series of recent digital art database projects that "went beyond traditional art historical archival methods, e.g. scientific based (Archive of Digital Art, the Variable Media Questionnaire), collaborative (Artelectronicmedia.com), institutional (V2, Rhizome Artbase, Media Art Festival Archives) and commercial (Sedition, Niio). Most archives document textual and visual data: biographical, bibliographical, indexical, descriptive and often develop tools for recording and re-using archive material".[1051] They also noted that these databases are infrequently interactional and interlinking with others, and generally disregard a long-term maintenance and sustainability.[1052]

Digital archives require dynamics of renewal rather than of mere storage. As observed by Parikka:

[1048]   See the panel discussion "Six Decades of Digital Arts and Museums: A New Infrastructure. DARIAH Connectivity Roundtable", p. 97.

[1049]   Falcão, Patrícia 2019, "Preservation of Software-based Art at Tate" in *Digital Art through the Looking Glass*, p. 273.

[1050]   International Liverpool Declaration: "Media Art needs global networked organization and support". See: http://www.mediaarthistory.org/declaration. Accessed 1 February 2021.

[1051]   Grau, Oliver; Hoth, Janina & Wandl-Vogt, Eveline 2019, "Introduction" in *Digital Art through the Looking Glass*, p. 17. I examined some of these archives in subchapter 5.3.

[1052]   Ibidem.

"Unlike the earlier formations of the archive which can be said to focus on freezing time – to store and preserve – these new forms of archives in technical media culture can be described as *archives in motion*. The notion suggested by Eivind Rossaak (2010) captures well this new archival situation: such archives are not only archives of motion but archives that themselves are dynamic, changing forms".[1053]

In fact, the speed of dissemination and the malleability of new media make evaluation difficult in digital humanities research. For instance, an online phenomenon can disappear before researchers have time to analyse it. Software theorist Chun argues that: "The fact that we cannot all access the same text – because, for example, the page has simply disappeared – seems an affront to scholarly analysis. This lack of verifiability gives a different spin to discourses of trust that dominate technology planning".[1054] It appears that digital technology brought in a post-truth era where true and false have permeable borders in various ways due to their impermanence and malleability.

Software-based art requires frequent updating because technology is an intrinsic part of its medium and subject. In fact, as illustrated by Chun:

"The major characteristic of digital media is memory. Its ontology is defined by memory, from content to purpose, from hardware to software, from CD-ROMs to memory sticks, from RAM to ROM. Memory underlies the emergence of the computer as we now know it; the move from calculator to computer depended on 'regenerative memory.' (…) The internet's content, memorable or not, is similarly based on memory".[1055]

The continuous renewal of memory is the basis of documentation for future generations. It requires progressive collaborations between computer scientists, media conservators and artists in the years to come.

Digital archives are less stable and necessitate less space than those comprising paintings and sculptures requiring a permanent and protected place. As formulated by the sociologist and art critic Ann-Marie Duguet, "a digital archive is not an archive in the traditional sense of the term: no dust, no smell, no specific place, building, basement, no definitive format. By nature, it can be constantly transformed, extended, indefinitely recombined and it can migrate to various kinds of

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[1053] Parikka, Jussi 2012, *What is Media Archaeology?*, p. 120.
[1054] Chun, Wendy 2008, "The Enduring Ephemeral, or the Future Is a Memory" in *Critical Inquiry*, p. 152.
[1055] Ibidem, p.154.

supports".[1056] As predicted by Baudrillard, in a way a digital archive appears to balance the saturation of signs and the anaesthesia of imagination derived from the digital revolution. He concedes that imagination may be annihilated by an 'overdose' of images.[1057] If 'screen culture' leads to an excess of images, unstable archives temporarily remove them from physical space rather than adding material works to art collections. In response to Baudrillard, Rosa and Balzola claim that electronic art prevents the disappearance of art through the art of disappearance.[1058] This momentary suspension of artistic presence appears to make room for processing content and forms in our imagination. The invisibility and the transience of media art, and its eventual reiteration in media memory, accentuate the fact that people have a singular experience that is, perhaps, difficult to replicate.

In *The Visible and the Invisible*, Merleau-Ponty describes how Proust understands musical melody as not discernible from its audible material and that it "transcends all physical sounds and begins to lead a life of its own in the memory of the listener even after the audible notes have become silent once more".[1059] In a similar way, when viewers start interacting with an immersive environment or an interactive installation the emotional involvement and the experience of immersion, interaction, or embodiment, 'lead a life of their own' in their memory, even after it has stopped taking place. This condition is also like performativity. Regarding historical and contemporary artists' performance, Leuzzi points out how "re-enactment substantially engages with memory at multiple levels: personal, collective and the media memory".[1060] The possibility to re-enact a performance or an immersive art environment recalls the phenomenon of the visible and the invisible described by Merleau-Ponty. The impermanence of media art and its potential for re-enactment seem to correspond to a condition of reversibility, where something is present but at the same time not present.

Even after interactive and immersive installations have been dismantled, the artworks remain in people's memories, in the imaginary of communities, as images and experiences. About digital archives, Parikka observes that they "are suddenly not only about storing and preserving, but about transmitting".[1061] These unstable

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[1056] Duguet, Anne-Marie 2019, "The 'anarchive' Series as a Challenge between Art and Information: A Singular Approach of Media Art History" in *Digital Art through the Looking Glass*, p. 74.

[1057] Baudrillard, Jean 1995, *Le crime parfait*, Editions Galilée, Paris; Italian translation by G. Piana, *Il delitto perfetto*, Raffaello Cortina Editore, Milano 1996, p. 69.

[1058] See Chapter 5 in Rosa, Paolo & Balzola, Andrea 2011, *L'arte fuori di sé*.

[1059] Merleau-Ponty, Maurice 1964, *The Visible and The Invisible*, pp. 149–150.

[1060] Leuzzi, Laura 2019, "Re-enacting Early Video Art as a Research Tool for Media Art Histories" in *Digital Art through the Looking Glass*, p. 165.

[1061] Parikka, Jussi 2012, *What is Media Archaeology?*, p. 123.

archives should ensure the possibility to reactivate video interactive environments, or other types of media art, on demand, in order to transmit the contents and stimulate the perceptual experience of future spectators. Participatory cultures redefine the ways of cultural production and the concept of authorship. According to Parikka they may also "offer new ways of organizing data – also dynamic, changing and grassroots-emergent, as with folk-sonomies".[1062] Folk-sonomy is the methodology used by groups of people who collaborate spontaneously to organize available information into categories via the Internet. In contrast to classic methods of classification, this phenomenon grows in a non-hierarchical manner because it is enacted by communities linked to web applications. Folk-sonomy may be another approach to consider in choosing a system of interoperable archives.

How can we archive the feedback from viewer interactions in media art? This is another important question. Scholars of media archaeology have attempted to investigate the role of the observer, who could be a spectator, a user, or a player, in historical contexts. In media culture, as observed by Parikka, "this approach also feeds into an understanding of the historical and complex forms of sensation – that we access our media not only with our eyes, but with our hands, ears, and, more widely, the affective registers of the body".[1063] In media art, it would be necessary to find a way to record audience engagement. An example of an archive working in this direction is *The Pool*, a documentary tool developed by Jon Ippolito, Joline Blais, and researchers at the University of Maine's Still water Lab. As described by the scholar Paul:

> "The Pool was specifically designed as an architecture for asynchronous and distributed creativity and documents the creative process in different stages: the 'Intent,' a description of what the artwork might be, an 'Approach' to how it could be implemented, and a 'Release' of the artworks online. The architecture also includes a scaling system that allows visitors to the site to rate any given project. The Pool supplies descriptions of projects' versions, reviews of the projects, and relationships to other works in the database. Tags to contributors make it possible to credit all the artists who have worked at any given stage. The Pool illustrates the shifts in the paradigm of culture production induced by the digital commons where a whole culture can be built in seeds of ideas and different iterations of a particular project".[1064]

[1062]   Ibidem, p. 133.
[1063]   Ibidem, p. 20.
[1064]   Paul, Christian 2007, "The Myth of Immateriality: Presenting and Preserving New Media" in *MediaArtHistories*, p. 271.

Direct interactions and comments by digital communities, with respect to a museum exhibition, devoid of filters by the museum staff or press office, are critical because they represent authentic feedback that can facilitate research work for institutions and artists. This also involves an afterthought by the artists. In the case of Studio Azzurro, Rosa, in collaboration with Balzola, have pursued aesthetics based on behaviour rather than on shapes and objects.[1065] They spur artists to embrace ethical actions in which the significance of an artwork is not "in itself" but "in its consequences", to rethink aesthetics in terms of relationships and no longer of forms.[1066] Thus, one of the main aims of artists is to create an artistic context for sharing this aesthetical experience. Thanks to the digital revolution of the late twentieth century, artwork has irreversibly changed within the general context of social relations and behaviour. It has transferred from an individual to a collective creation, from a complete work to an open process, from the central role of the artist to that of the spectator, with an increased participatory aspect and free circulation.[1067]

Relationships between art museums and people have also increased through social media. Visitors share comments, make suggestions, tag images and others use interactive tools directly with the institution. As stated by Parikka: "With the emergence of such new social media 'archives' as YouTube, Flickr, etc., the notion of the bureaucratic archive has changed. Modes of accessing and storing data have changed from centrally governed and walled spaces to distributed and software-based".[1068] At first, museums were reluctant to activate social media accounts, then realised the importance of visibility on these new channels and of the immediacy of transmitting information to the public. These tools provide platforms for direct feedback from viewers to organisers and authors of an exhibition and to whoever else has an interest. For this reason, Dekker recommends detaching areas of archiving digital art from conservation on the basis that they require different methodologies: "Archiving digital art steps away from the idea of written, factual knowledge to an open method of co-creatively recreating the archival material by adding the process of creation, the participants' creative input and reception, as well as the processualism of its digital technologies".[1069] Moreover, I would observe that viewer feedback regarding the original media art installations, and then their future re-enactments, may contribute to emerging critical inquiries in the history and theory of art and to the related sociological analysis. The original media artwork and its

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[1065] Rosa, Paolo & Balzola, Andrea 2011, *L'arte fuori di sé*, p. 25 and p. 101.
[1066] Ibidem, p. 102.
[1067] Ibidem, p. 177.
[1068] Parikka, Jussi 2012, *What is Media Archaeology?*, p. 114.
[1069] Dekker, Annet 2019, "Between Light and Dark Archiving" in *Digital Art through the Looking Glass*, p. 155.

repetition with the consequent influence on different audiences will create a circularity of comments and actions in time and space. As is happening for displays of art collections, it is feasible to assume that progressive chronology in the archives may also lose its importance to make room for simultaneous and circular order. Moreover, in the field of sociology, it would be interesting to understand why human beings are attracted to moving contents and their impermanent nature. As noted by Chun: "Rather than getting caught up in speed, then, we must analyze, as we try to grasp a present that is always degenerating, the ways in which ephemerality is made to endure. What is surprising is not that digital media fades but rather that it stays at all and that we stay transfixed by our screens as its ephemerality endures".[1070] An explanation may perhaps come through a phenomenological approach. Phenomenologically speaking, ephemerality is an aspect of our sensory realm, and we deal with it daily, as in the case of the perception of colours. In *The Visible and the Invisible*, Merleau-Ponty characterises colour as "an ephemeral modulation" of the universe.[1071] He adds that colour is "a certain node in the woof of the simultaneous and the successive. It is a concretion of visibility, it is not an atom".[1072] Instability and impermanence in nature and media images further show how the universe of moving images shares several aspects with the sensory realm. This occurs because the practice of moving image is founded on the experience of successiveness, which is an empirical condition of perception and not a paradoxical fact. Phenomenology can therefore offer alternative approaches to reading media art in various fields in a non-dualistic way.

[1070] Chun, Wendy 2008, "The Enduring Ephemeral, or the Future Is a Memory", p. 171.
[1071] Merleau-Ponty, Maurice 1964, *The Visible and The Invisible*, p. 132.
[1072] Ibidem.

Conclusion

The Phenomenological Pathway

This thesis focuses on interactive and immersive art installations from a phenomenology-based theoretical perspective. To create a link between disciplines, practices, and concepts, Merleau-Ponty's writings have proven invaluable due to his fascination with artists, art history and cinema. I have also investigated the association between Merleau-Ponty and media art in the work of other scholars, who have applied his ideas across a spectrum of contemporary fields, arising in 'post-phenomenological' approaches.

From the 1960s, Merleau-Ponty reconsiders the medium of cinema as a new method for illustrating ideas and images in motion. By connecting cinematic images to paintings, Carbone suggests that Merleau-Ponty enables cinema to create a screen-based model of vision, and through this connection, the French philosopher questions the modes of contemporary experience of images.[1073] In immersive art environments, as analysed in this research, screen-based visual activity has increasingly been accompanied by experientiality, evolving into a way of perceiving that deals simultaneously with places, motion and actions. These immersive environments connect with Merleau-Ponty's thinking because they aesthetically manifest inter-corporeality and shared perception in the lived experience of the recipients. *Enactive theory* builds on and broadens *phenomenology.* Vision and perception become forms of action. As such, they depend on the sensory-motor skills of the perceiver and the stimuli originating from the environment, a key characteristic of immersive art forms.

In this research, I recounted how late twentieth-century art, science and philosophy finally focus on the human body and its senses. Scholars re-establish a contingent contact between the sensory realm and the individual to enhance the viewer's engagement with the artwork, shifting from pure contemplation to participation. Merleau-Ponty recasts human existence as an embodied immersion in

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[1073]   See Carbone, Mauro 2015, *The Flesh of Images: Merleau-Ponty between Painting and Cinema*, p. 3; Carbone, Mauro 2016, *Filosofia-schermi. Dal cinema alla rivoluzione digitale*, Raffaello Cortina Editore, Milano, pp. 37–49.

a profoundly entwined, vibrating flux of multi-sensory experiences that seem to be recreated in immersive artworks. Here viewers share a feeling of being surrounded by a multiplicity of viewpoints and the lived experience of the artwork. Artists like Cézanne persistently tried to represent the mutability of perception demonstrated by coeval scientists. Today, this concept is a critical feature prompting the immersive experience. Due to the innumerable temporary perceptions they evoke, immersive art environments ensure several types of experiences for the public, for which record keeping is becoming one of the main challenges of conservation in media art.

In Chapter 2, I outlined that phenomenology can be applied to virtual and immersive art experiences to interpret them in a new light. This offers an alternative method to the dualistic interpretation commonly referenced in the allegory of the cave from the sixth book of Plato's *Republic*. Here, the shadows cast onto the cave walls by real things are often compared to projected images in virtual reality systems.[1074] This comparison implies a dualistic approach – the perceivable world and the world of ideas, the metaphysical dualism argued by Plato in his *Phaedo* and taken up by Descartes – which is no longer present in the system of virtual reality. Technology has indeed changed and re-contextualized the virtual experience because users can suspend their disbelief by ignoring the technology that generates the illusory simulation and move and act within it, as in real life. Experientiality contributes to preventing dualism and encourages a circular and mediated attitude in spectators.

I selected artworks from the Renaissance onwards that are 'viewer-centred' to analyse and compare them with recent interactive and immersive works and virtual systems. Frescoes like *The Bridal Chamber* (1465–1474) by Andrea Mantegna in Mantua, and *The New World* (1791) by Giandomenico Tiepolo in Venice, are pertinent examples. They elucidate how the Old Masters aspired to identify new modalities that would involve the observer ever more intensely in paintings. In my attempt to describe the phenomenon of immersion, I harked back to concepts, artistic movements and artists who explored this topic, which enriches my research by adding a genealogical aspect.

To overcome Cartesian dualism, a phenomenological view can be adopted, leading to reciprocity, circularity, and porosity. This allows the digital space to be interpreted from a new perspective. Overcoming this dualism has also been a challenge for some pioneers of immersive art in their attempt to build an embodied experience. In response, they have aspired to evoke suggestions of indeterminacy, to get closer to reality instead of proposing a detached vision, hard-edged simulation of

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[1074]   As illustrated by CAVE (Cave Automatic Virtual Environment), one of the first virtual reality environments presented by researchers at the University of Illinois in 1992 in Chicago.

perspectival space and orientation towards an objective so common in computer-based worlds. Illusion can be avoided when viewers shift from perceiving to performing, following the plot, and actively partaking in it. A phenomenological approach can improve immersive art experiences by moving away from the illusive simulations that have prevailed until today and moving nearer to our way of being-in-the-world. A 360-degree representation should not be considered merely as an endeavour to chase illusions and suggestions of reality but to recreate the circular, spatial and reciprocal attitude through which we engage with the natural world. The circular system interrupts the detachment of viewers and drives them to act in an immersive milieu. A phenomenological approach can support artists in their latest creations by adopting virtual technologies as a source of new and advanced knowledge in immersive settings. Phenomenology can also be fertile for art historians in their reading of such immersive environments.

My analysis also illustrated an affinity between the shift from videotape to video art installation and interactive and immersive environments with the shift from a 'spatiality of position' to the 'spatiality of situation' described by Merleau-Ponty in *The Phenomenology of Perception*. To develop a spatiality of situation, individuals require an environment to move, interact, and extend their actions. This dynamic mirrors the artists' aim of creating a video art installation, a small reality to interact and experience spatiality. Recent developments in immersive environments are proof of the specificity of video art and its prominent position in the field of art history. Its concurrent space-time response encourages the feeling of a 'lived' experience. Video art is an expressive language that generates a set of participatory and interactive modes of public engagement. In my research, I presented various contemporary art examples to document how keenly artists embrace the emergent forms of spatial exploration opened by video art in a constructive continuum rather than viewing them as new technologies. According to the theory of the 're-location of the medium', the immersive art environment could be considered a relocated experience of video art because it spatially uses video projections and screens, with or without interactive systems.

The case studies, particularly the virtual exhibitions of Modern Masters, motivated the research question: Could phenomenology have contributed to other digital art practices, in a broader international context? Merleau-Ponty attributes relevance to intersubjectivity, porosity, and reciprocity, providing significant key concepts to read the processes of postproduction, appropriation of culture and post-truth in the digital era. A phenomenological approach contributes to overturning the dichotomy of subject and object, as well as actual and simulated, true and false. The latter attracted literature and philosophy attuned to postmodernism, giving access to a novel reading of the latest phenomena in media art. Today, our approach to reality is neither dualistic nor post-Cartesian but phenomenologically speaking, ambiguous,

porous, and intertwined, taking place in the corporeal 'inter-world' that led Merleau-Ponty to outline human existence in terms of ambiguity. Even creating art environments or small worlds where circular and immersive experiences occur testifies to this contemporary phenomenological approach. It is not dualistic because it no longer distinguishes between opposites but sees everything as relational (true and false, existing and non-existent) and avoids a hierarchical organisation. I would argue that it implies small 'rebirths' from a succession of perpetual chiasmic encounters.

The Immersive Art Experience

I have extended my analyses to various immersive art experiences, such as video art installations, interactive art environments, 360-degree videos, augmented reality, mixed reality, and virtual reality. This research has also outlined various degrees of immersive experiences that depend on the scale of the art environment, the possibility of entering the space, the feeling of proximity or, at least, the prospect of making contact and the perception of being surrounded by an environment. Spatiality and motility emerge as the major characteristics of a state of immersion.

In Chapter 2, I examined the historical antecedents of immersive spaces. I traced the late eighteenth-century precedents of immersive environments ranging from moving panoramas with their circular structures, via Monet's curved painted panels, to Fontana's spatial environments, which have recently been rediscovered and defined by international scholars as precursors to immersive environments. To deepen my research into previous models of immersive experiences, in Chapter 4, I recognised the idea of the circularity of media art environments as linked to planetariums and the spatial view of the cosmos. I identified a circular sequence in terms of spatiality – the environment, nature, the cosmos – with which we can associate panoramas, planetariums, spatial environments, video installations, and interactive and immersive environments.

To situate immersive art as a continuous form within video art, I analysed several case studies relating to the spatial projection of moving images: from expanded cinema and the early experiments of interactivity in the late 1960s to video art installations from the 1990s, as well as from projection mapping and AR and VR environments. I highlighted how immersive art has reshaped vital aspects of video art installations – moving images, screen, and the physical environment – in a new way, especially in 360-degree video works. By incorporating projected areas, immersive art deconstructs the cinematic screen and opens new possible viewer experiences. As it exceeds two-dimensionality, the aesthetic potential of projected moving-image installations resides in their ability to convert, rather than solely

describe, the continuum of experience by creating a combination of visual and sensorial conditions.

The case studies show that immersive environments can be seen from inside and outside, entered into, circled, and interacted with from countless positions. It is easy to identify a strong affinity with phenomenology in this moving into and around the artwork extended in the space, in activating it and transforming it, in its reformulation of the visual and kinaesthetic experience. An immersive work solicits an experience of multi-stable spatiality, where people feel at ease because they are used to living in these conditions. The dynamic trajectories of visitors further elucidate the human experience not only within the art gallery but also when immersed in daily life.

The Role of Others

Today, new technologies enable us to attend to the latest immersive modes of reception that I examined in Chapter 4, starting from Debord's 'society of the spectacle', via Rancière's observations on the emancipated spectator, and Bourriaud's 'user of forms' instead of the ecstatic spectator, up to Kemp's explicit beholder. This metamorphosis of spectatorship places viewers at the centre of the environment and transforms them into performers. So nowadays, we can talk about 'immersants' instead of viewers.

In immersive art environments, perception is not an experience that lies in the contemplation of a given show but in the perceptive abilities of the body in motion. From a predetermined and distant position between observer and artwork, today's viewer is asked to react to multimodal art environments that trigger a series of situational reactions. The observers' gaze shifts from one scenario to another with the multiplication of objectives shared with other visitors. Viewers understand the different possibilities offered by immersive artworks partly because they see other users activate some of these potentialities. I clarified the role of others in highlighting and strengthening immersive art spaces, in tune with Merleau-Ponty's thought. The phenomenologist postulates that contact with another conscience creates an encounter with someone who inhabits the same world and that their viewpoint on the world merges and overlaps with that of the other. The sensory realm is always available to others and intrinsically intersubjective. This experience is the core dynamic of immersive environments.

In an immersive environment, otherness is also considered when artists anticipate the interaction of future visitors to their artworks. Their first formulations of immersive spaces usually consider and envisage interactional and motional possibilities. Immersiveness is therefore created through reciprocal considerations. A recipient can enjoy an immersive experience when certain conditions are met. This

notion of reciprocity accentuates how a phenomenological approach can expand the concept of immersiveness, because it is a trait of a specific event and a driving force of a state of being, which reciprocally depend on each other.

After analysing the condition of immersion in media art from several angles, in Chapter 5, I clarified the research questions by focusing on the prominent role of contemporary art museums, and how media art will be archived in the future. The new possibilities of the digital era have also changed the notion of contemporary art museums: from visual archives to participatory sites, from mid-sized halls to large spaces and from linear to non-linear display criteria to leave room for interplay. In addition, the need for professional competencies to generate media art environments has prompted artists to collaborate instead of aiming for individual creation. Today, shared authorship is expected, and is creating new challenges in art conservation theory and practice.

The Finnish Art Scene

After a period of close collaboration among the Nordic countries, in the mid-1990s, Finland joined the European Community, enabling a more effortless cultural transfer at formal and organisational levels. The construction of the Kiasma Museum of Contemporary Art broadly represents this moment of lively cultural exchanges. Steven Holl's project, selected by the dedicated committee, departs from functionalist architecture to adopt a phenomenological approach to construction. The reference to Merleau-Pontian chiasm symbolises an increasing openness towards otherness, also indicated by its large windows onto the outside and the growing intertwined activity of cultural relations, suggested by its intersection of floor levels. Holl intended Merleau-Ponty's concept of two hands clasping to represent the interlocking of spaces and as the architectural equivalent of a public invitation to the encounter between individuals.

In subchapter 3.4, I addressed the research question: What kickstarted the dissemination of phenomenology in Finland? To this end, I investigated how and when phenomenology took hold in Finland, its leading scholars, especially in academia, and its dissemination in the cultural milieu. After World War II, continental philosophy was subordinated to analytic philosophical approaches. In the 1990s, it strongly appeared again in the academic community and the cultural field. Heinämaa sees an interdisciplinary discourse informed by phenomenological insights and methods in Finland in the late 2000s.[1075] A renewed interest in French culture of the second half of the twentieth century emerged in the 1990s in Finland,

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[1075]   Sara Heinämaa, interview by L. Scacco. 7 November 2018.

as evidenced by the translated editions of numerous French authors, such as Maurice Blanchot, Simone de Beauvoir, Guy Debord, Jean-Luc Nancy, and Michel Foucault. These translations prepared the ground for a new understanding of the body, theories of spectatorship and media archaeology.

Chapter 3 began by analysing the development of electronic arts in the Nordic countries that contributed to the media art background in Finland. I examined the early experiments of Finnish media artists. Then, I identified the association between the historical spread of electronic arts in Finland and the international context between the 1970s and 1990s. Early Finnish media art also had an interest in kinetic art and Fluxus. Later, Finnish artists focused on American video art, especially the work of Paik, Nauman and Hill, and some artists went on to study in the United States.

In the late 1990s and the beginning of the 2000s, the emergence of immersivity through the spatialisation of video art in Finland coincides with an intensified interest in phenomenology. In Chapter 3, I dedicate three subchapters to the themes and approaches of Finnish media artists close to phenomenology: the importance of intersubjectivity and the consequential porosity, concepts of spatiality and spectatorship, all evident in the practices of Ahtila, Astala, Beloff, Haaslahti, Laitinen and Oja. From the 1990s, Ahtila's work is an example of openness to new installation practices in video art. In addition, Laitinen, from a younger generation, demonstrates an awareness of current issues and technologies within the international arena. Beloff attempts to bridge digital and natural worlds through wearable technology and bio-art, while Haaslahti and Nissinen's video installations investigate how media and technology affect society. More recently, emerging artists like Rauhala, Rasinkangas, and the Pagan collective are exploring the new possibilities of immersive technologies, such as augmented reality and virtual reality. Finally, I also observed how today, Finnish pioneers of electronic art, such as Hakola and Liulia, contribute spatial and immersive projections to theatrical and performative shows as directors or multimedia collaborators. Here, the concept of spectacularisation is akin to that of immersive experiences: circularity, performativity and virtual technologies are employed to enhance the sense of inclusion of the public.

In Finland, the 'phenomenological moment' and the development of technology have enabled artists to build an embodied experience through spatiality and experientiality. As a result, today, 'spatial thinking' has become an integral part of Finnish artists' approach and has meant an openness to connect and merge layers of natural and virtual realms. Through the interviews, I have demonstrated how a phenomenological vocabulary is present in Finland, on the levels of artistic processes and institutional praxis. Thus, I see the phenomenological approach as an embodied part of the Finnish art professionals' experience, pushing its art community towards

the following challenges with immersive technologies. It also prepares them for new developments in biotechnologies and AI.

I also identified an increasing interest in immersiveness in Finland, manifested in the construction of the new Amos Rex Museum in 2018 in Helsinki, which was precisely built for immersive exhibitions. This shows an attentiveness to the new need for exhibiting immersive artworks professionally and effectively. Moreover, locating Amos Rex's exhibition activities and halls below street level seems to suggest and incorporate the idea of an immersive state.

Different peculiarities emerge in comparing the Kiasma and Amos Rex museums, built about twenty years from each other. Each of Kiasma's twenty-five rooms is unique in shape and lighting conditions, while the domes in Amos Rex create spacious, pillar-free spaces that enhance the immersiveness of an art experience. Thus, Amos Rex can be transformed into a unified spatial experience, unlike Kiasma, where elevators, stairs and ramps create zigzag trajectories and can give rise to many possible itineraries. These museum buildings testify to the shift from interactivity to immersivity in media art and provide a highly contemporary and dynamic perspective on the artworks to their visitors. The Moderna Museet in Stockholm laid the foundations for new experiments in Nordic contemporary art. However, today Helsinki can offer media artists airier and more open gallery spaces for experimentation at its Kiasma and Amos Rex Museum buildings.

I also examined the inception of media archaeology in the 1990s, mainly how Huhtamo contributed to preparing Finnish viewers for new forms of visual culture and the experiential and spatial dimensions of post-cinematic spectatorship. Media archaeology has also contributed to introducing some phenomenological traits into the approach of Finnish media artists, such as a concept of circular time that moves away from a purely linear chronology.

This research project demonstrates the significant role of video art in developing interactive and immersive art environments. I paid particular attention to Finnish media artists who adopt interactivity and projections in spatial artworks. The technology accessed via Fine Arts Academies, study, and research trips abroad, and the international exchange network fostered by Finnish institutions from the 1990s has advanced and expanded the use of electronic tools by Finnish artists. In Chapter 3, I listed several international and Finnish media art exhibitions from the 1990s to provide an overview of the vitality of the Finnish media art scene. My research proposes that the Finnish art scene of the mid-1990s was informed principally by a renewed interest in phenomenology, the onset of media archaeology, the diffusion of media art through several exhibitions and festivals, and the dissemination of video art installations. Focusing mainly on immersive art has enabled me to recognise that my contribution to the history of Finnish media art may be considered a starting point to develop further research in this extensive area.

Contemporary art is also a vital enabler of critical reading for immersive culture. As shown above, immersive experiences can be associated with commercial aims. Still, artists can shape and develop their content through comments, connections, experimentation, and re-use for the new digital society. Looking at the contemporary Finnish art scene, I recognise that media artists prefer to work in this direction, their artistic choices and contents orienting towards a critical reading of digital culture and remaining attentive to viewer sensitivity.

Other Findings

I answered the research questions by interweaving investigations; therefore, in addition to the many correspondences between phenomenology and immersive environments, other kinds of observations emerged in art history and phenomenology. For example, in Chapter 1, I highlighted that in the United States, the interest in continental philosophy, particularly in Merleau-Ponty, started earlier than generally believed. Hobbs describes through Rosenberg's work that Merleau-Ponty's thought was present in America before the 1960s. This opens new possibilities for interpretating the Abstract Expressionist practices of the 1940s.

In Chapter 2, I considered the affinities between Fontana's work and phenomenological and existential thought. The notion of the fold in Fontana could in fact be closely related to Merleau-Ponty's late thinking. It is also interesting to observe how some Finnish exhibitions of artworks by Fontana and his pupils Colombo and Kusama approached Spatialism.

Experientiality and Sustainability

Experientiality, which increasingly denotes media art environments, can be seen as a reaction to the digitisation of every aspect of everyday life that causes the desire to experience in-person and sensory encounters, to connect, and to share a multifaceted universe. Immersiveness could be a moment of shared experience that balances the amount of activity remotely enacted.

Experientiality highlights that the presence of other people is welcome. In an immersive environment, the more participants, the better the visual and sensory outcomes. Thus, discourse moves from aesthetical to ethical, supported by notions such as sharing, liveliness and encounter. Interactivity develops a new kind of media art research based on behavioural experiments in environments, as analysed in Chapter 4. Immersive art environments, which often use circular or spherical shapes, resemble small worlds with their sense of 'placement' and invite viewers to experience them. They seem to respond to the human need to rediscover the universe through its phenomena and simultaneously mediate our relationship with the digital

sphere. Digital spaces are environments within which we address our lives, in which our experiences are formed. I argued that immersive artworks expand the cohabitation and integration between nature and technology. They offer an opportunity to adapt our lived experience to media environments, where machines are often invisible or discontinuous. In these spherical environments, space is a potentiality, a set of positions for the body to move and from which it could experience a sort of situational awareness. These virtual and immersive spaces could also be seen from the perspective of the present-day Anthropocene epoch. The possibility of temporarily superimposing, thanks to video projections, moving images to interact in a space similar to a daily space may contribute to increasing awareness of the planet's current state and the effects of our actions.

In Chapter 5, I explored the research question: Can immersive art become a sustainable activity in the future? My observations on the archiving and restaging of media art revealed several factors. Immersive environments richly recreate the artists' intent. In addition, they capture the full extent and breath of artist and audiences' sensations, without permanently occupying the physical space. Immersive artworks temporarily overlap with reality through projections and are therefore environmental-friendly and sustainable. For instance, the last edition of the Helsinki Biennial (2021) hosted several immersive installations on the heritage, the formerly fortified island of Vallisaari in dialogue with existing historical structures. This approach can be defined as ecological because ephemeral representations and narratives elaborated by the artists endure as experiences in people's memories and, on request, can be restaged via a digital archive. Despite falling into the same category as other digital media, immersive art generally has specific qualities because it is only present when materialised in its surroundings. The fact that immersive artworks intermittently exist and respect the environment adds to the affinity between natural environments and immersive experiences with moving and interactive moving images. My research findings could inform further research into the development of public art across the creative potentials of immersive art environments.

Summing up, I argue that all immersive experiences share a spherical field of perception, the form closest to that of the world. Immersiveness, with its high level of interactivity and experientiality, can be considered complementary to this digital shift in the field of representation. It is also possible that the recent pandemic may further increase the frequency of this experiential component in future artistic activities. Striking a balance between computational culture and experience, fostering an ethical approach, and recognising the advantages of sustainability are aspects that emerge after investigating immersive art experiences and can help to shed light on the present increasing recognition of immersiveness.

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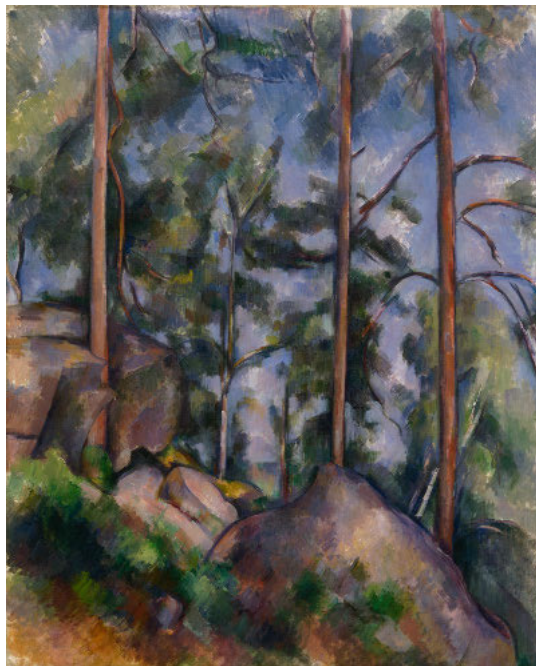
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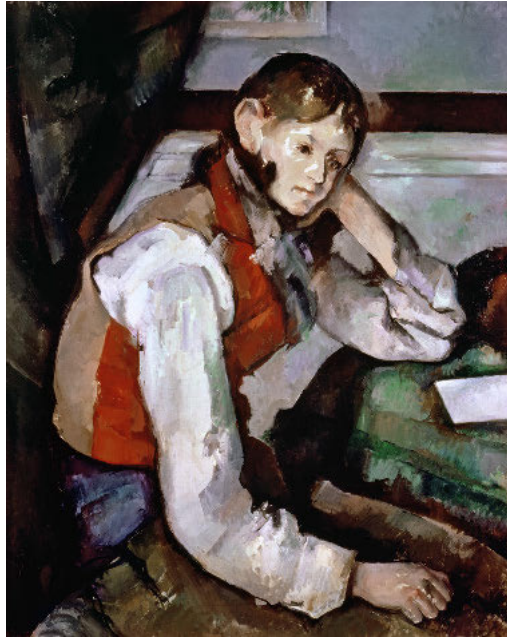
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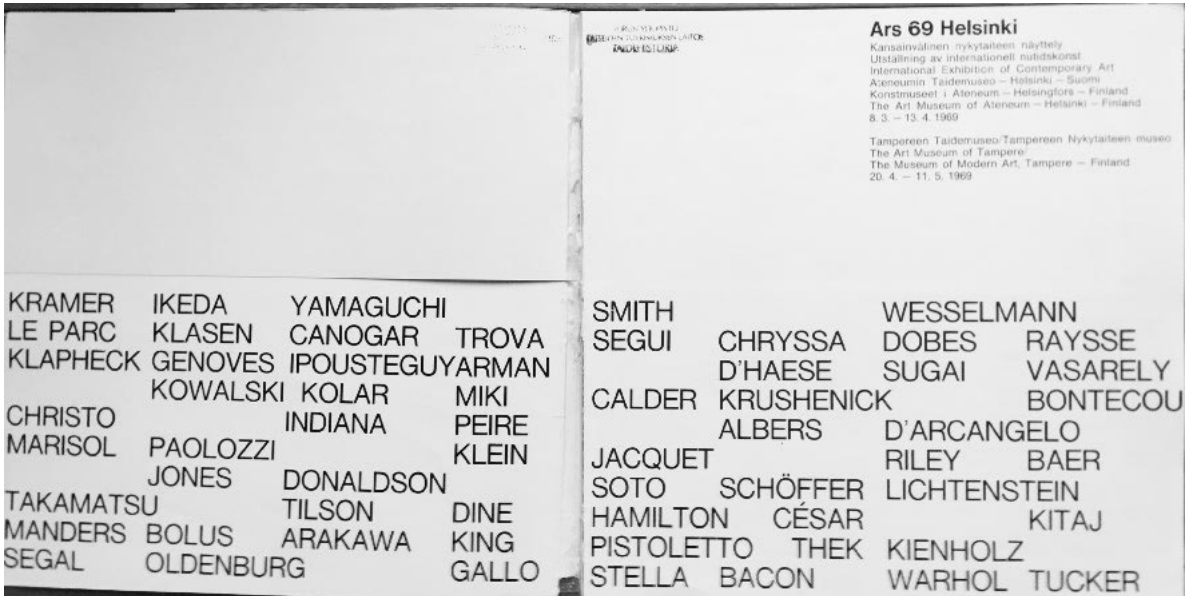
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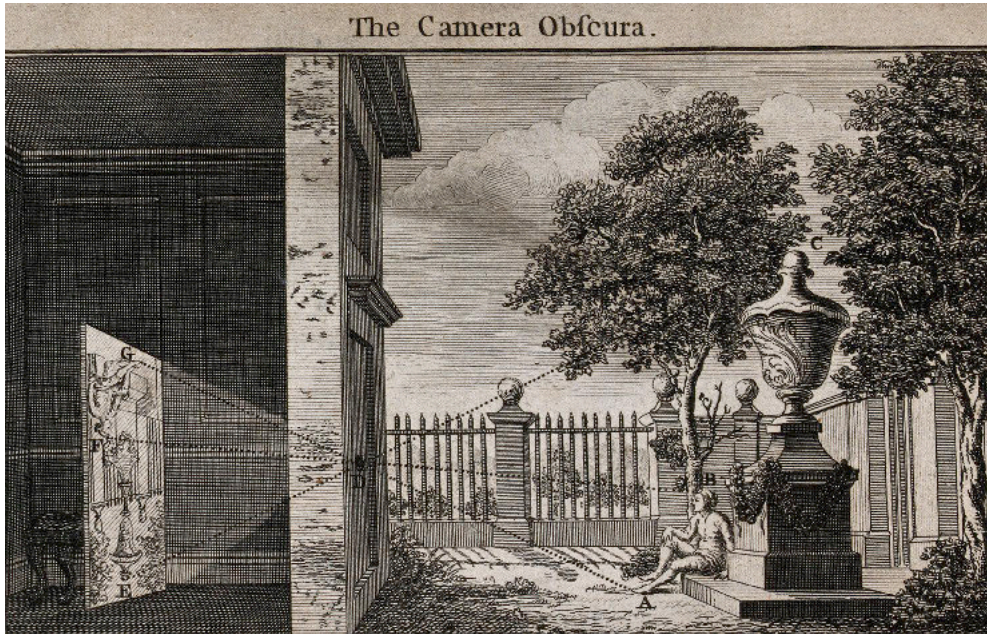
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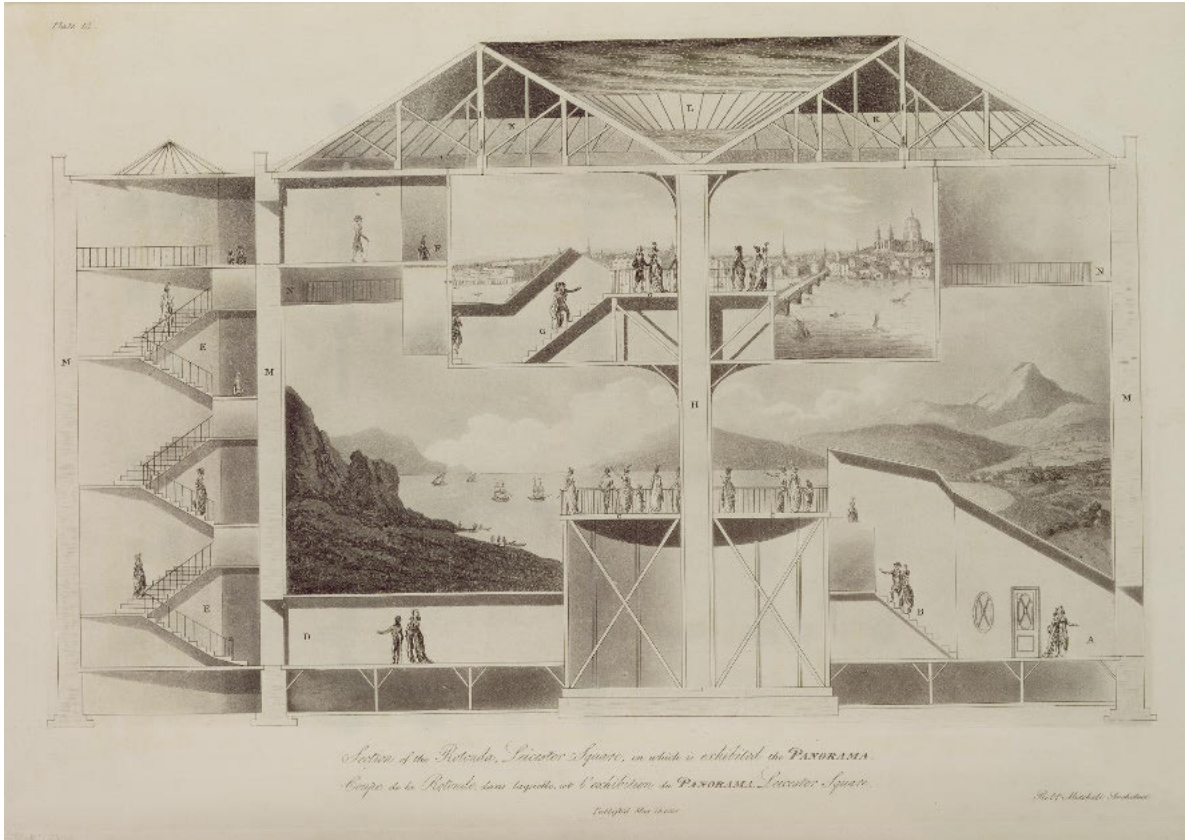
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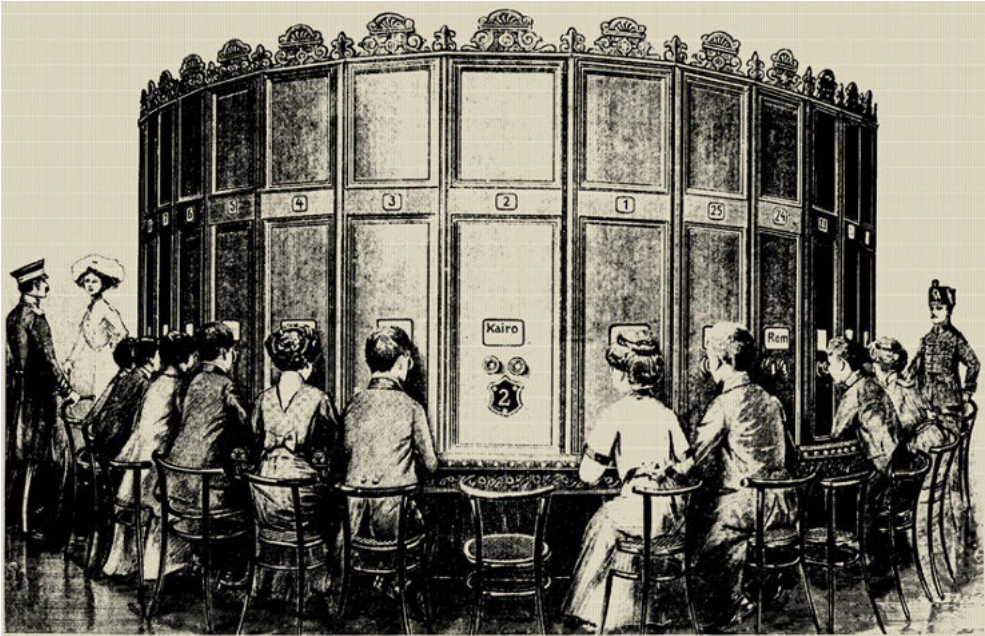
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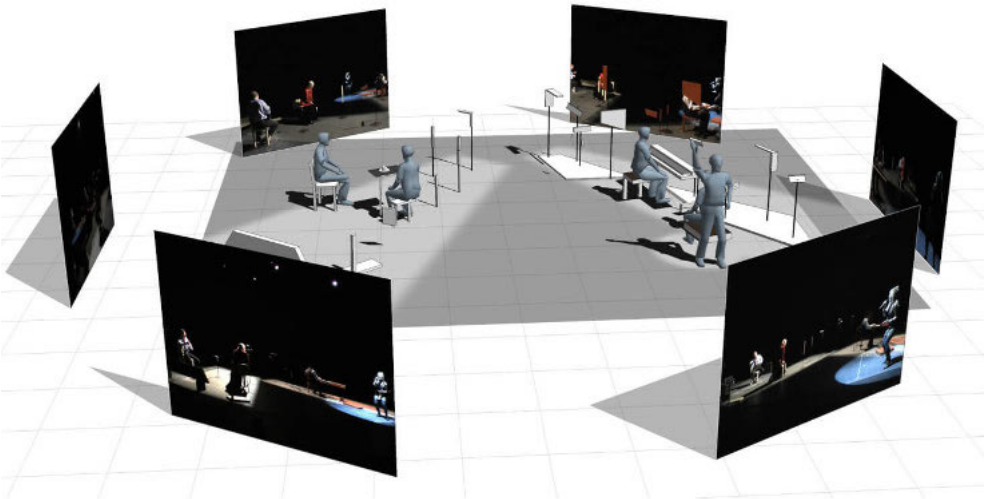
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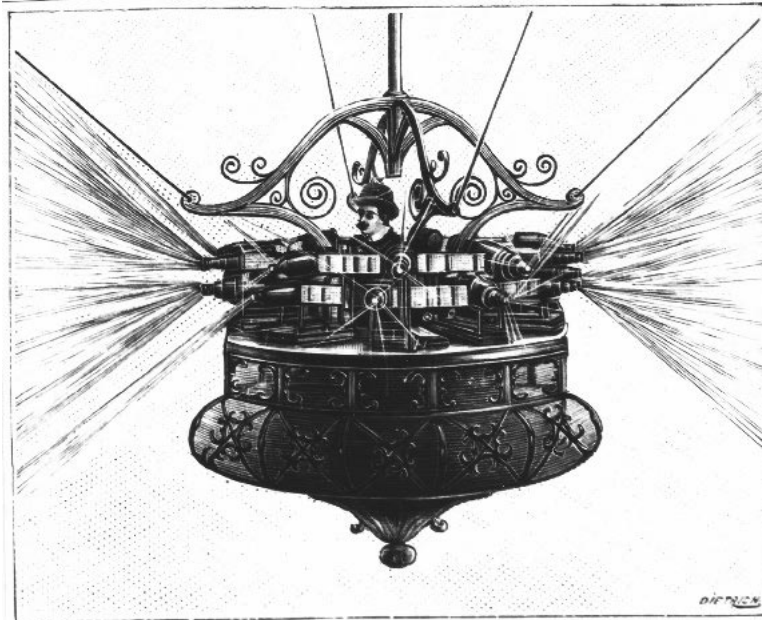
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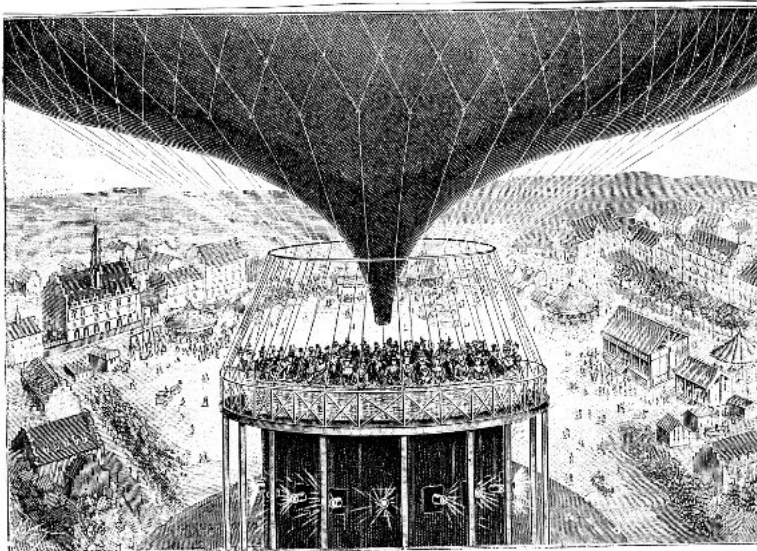
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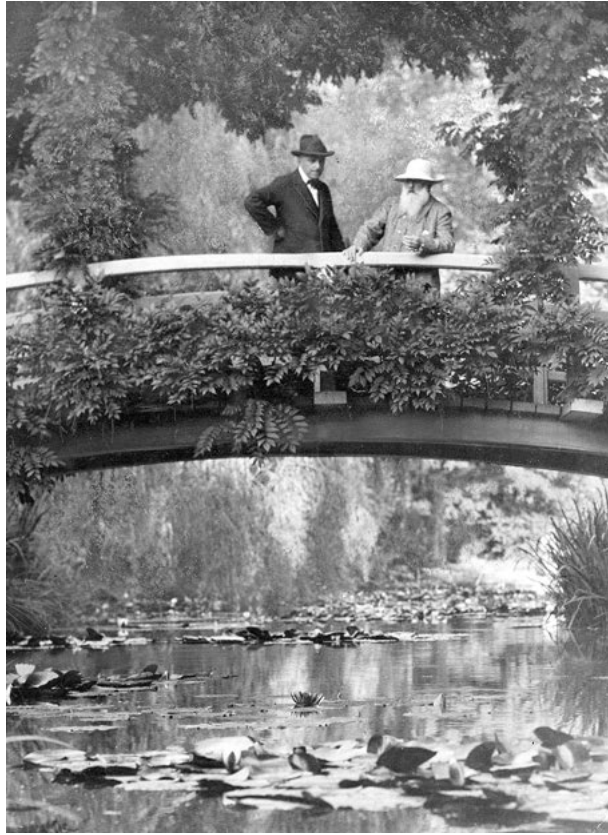
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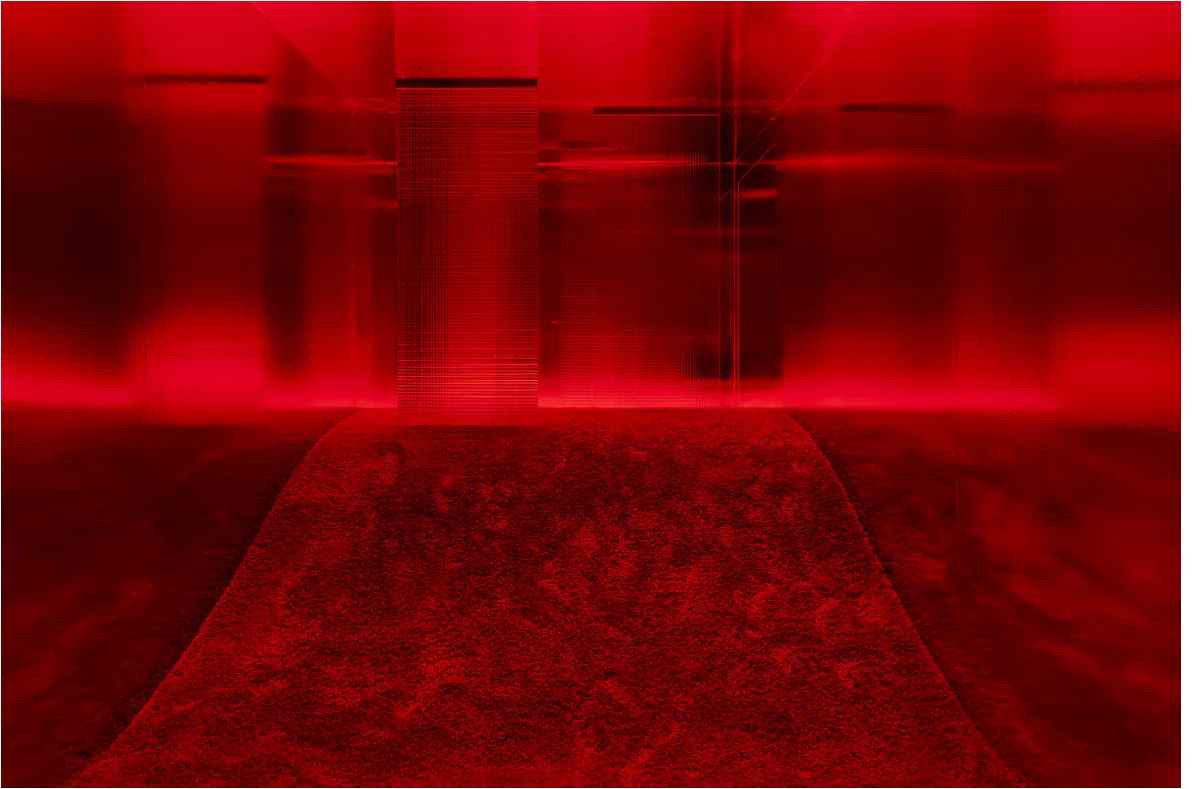
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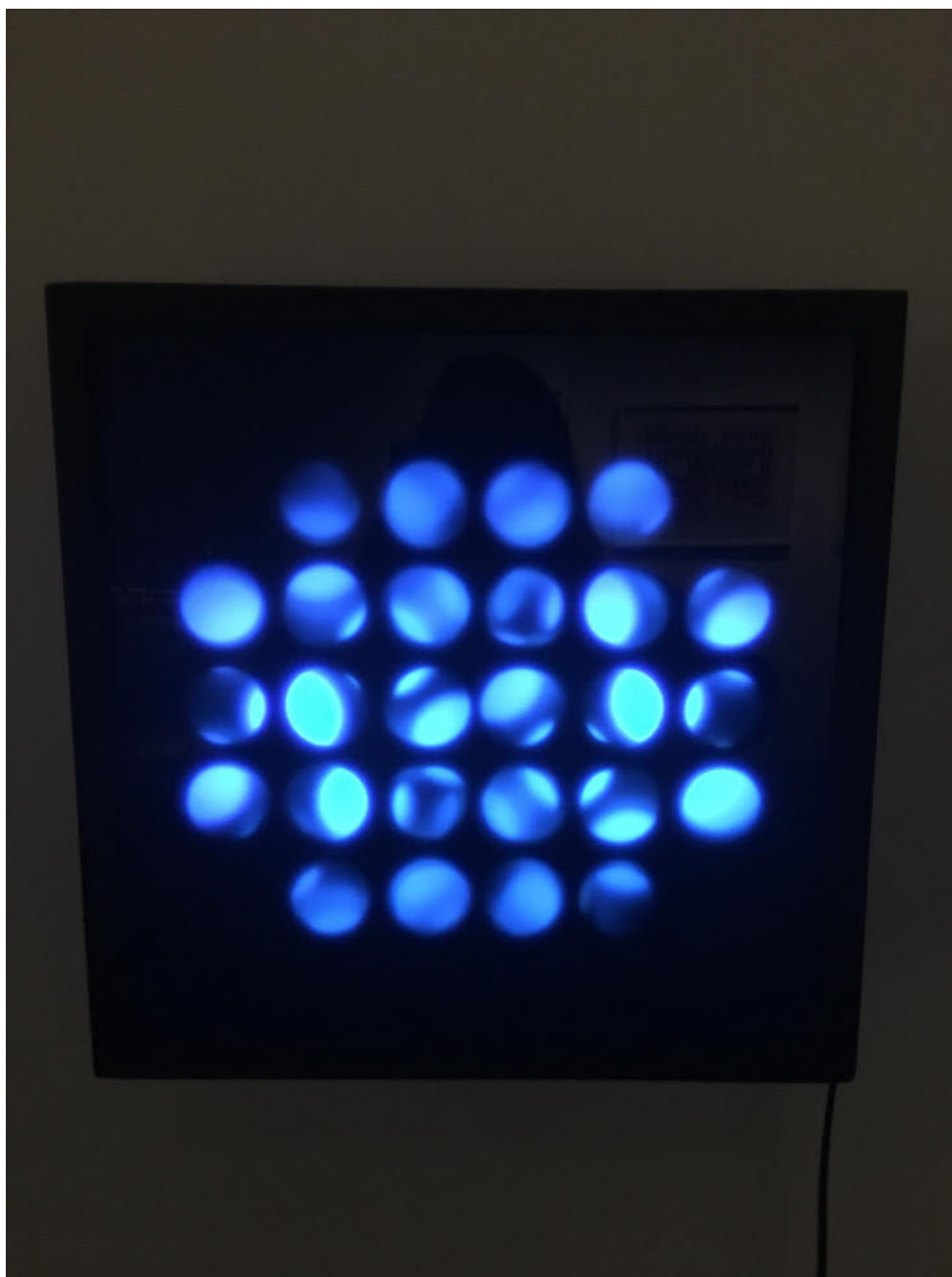
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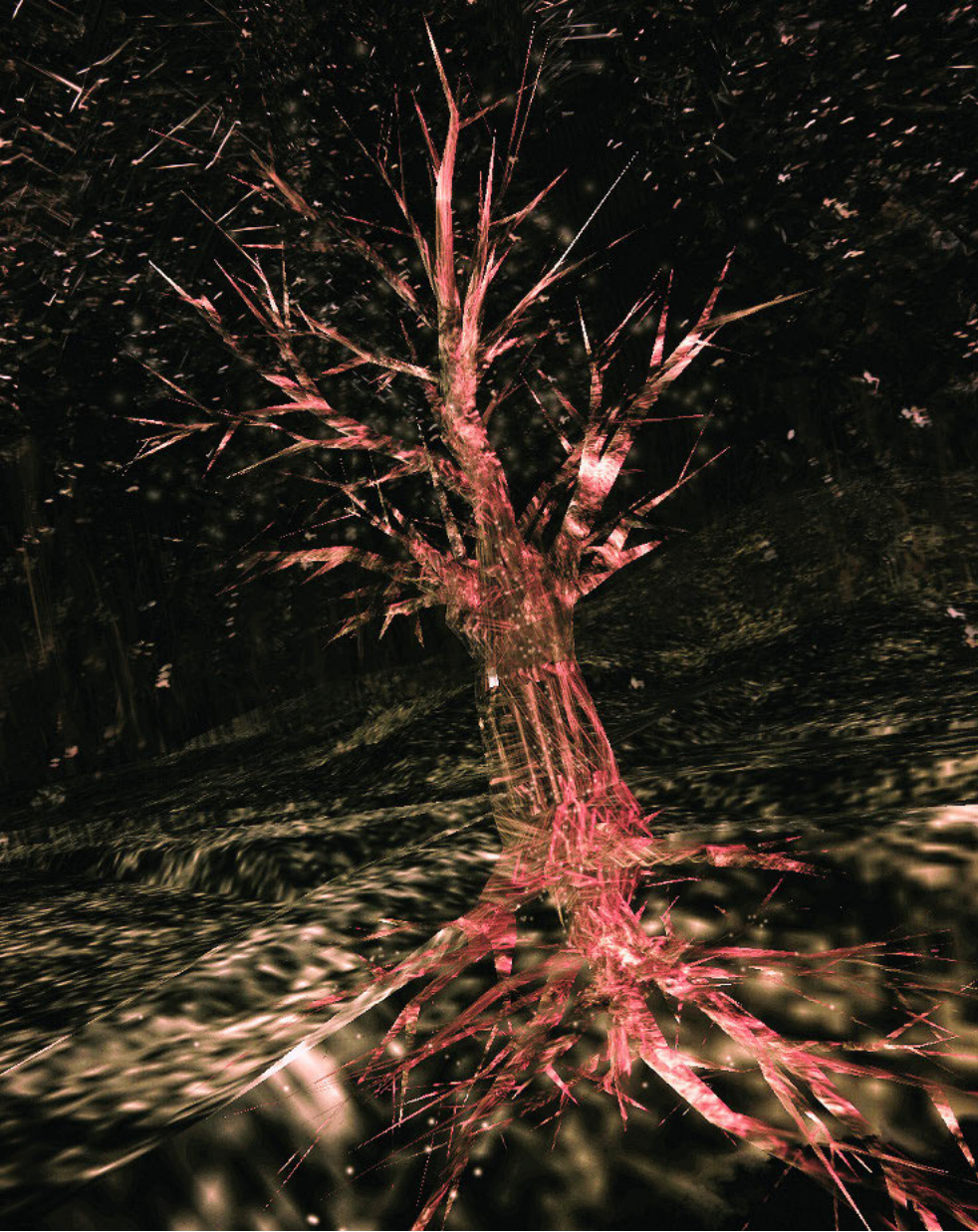
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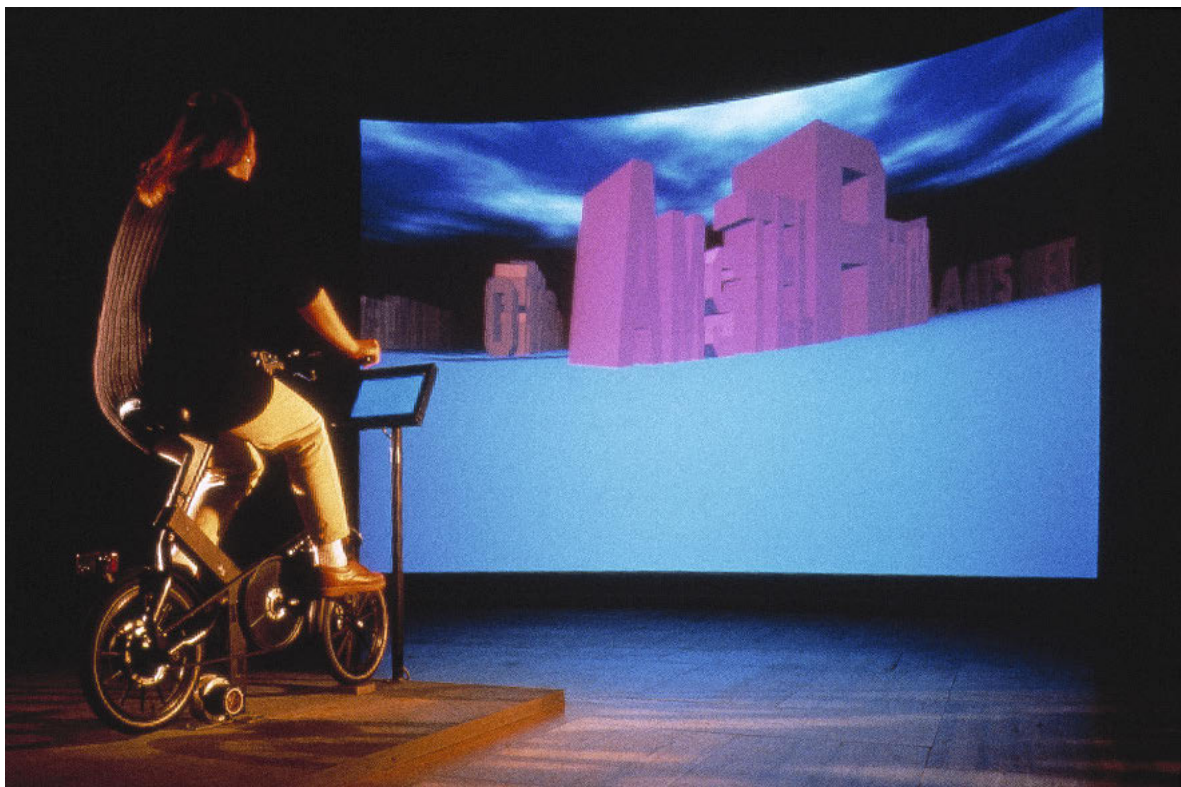
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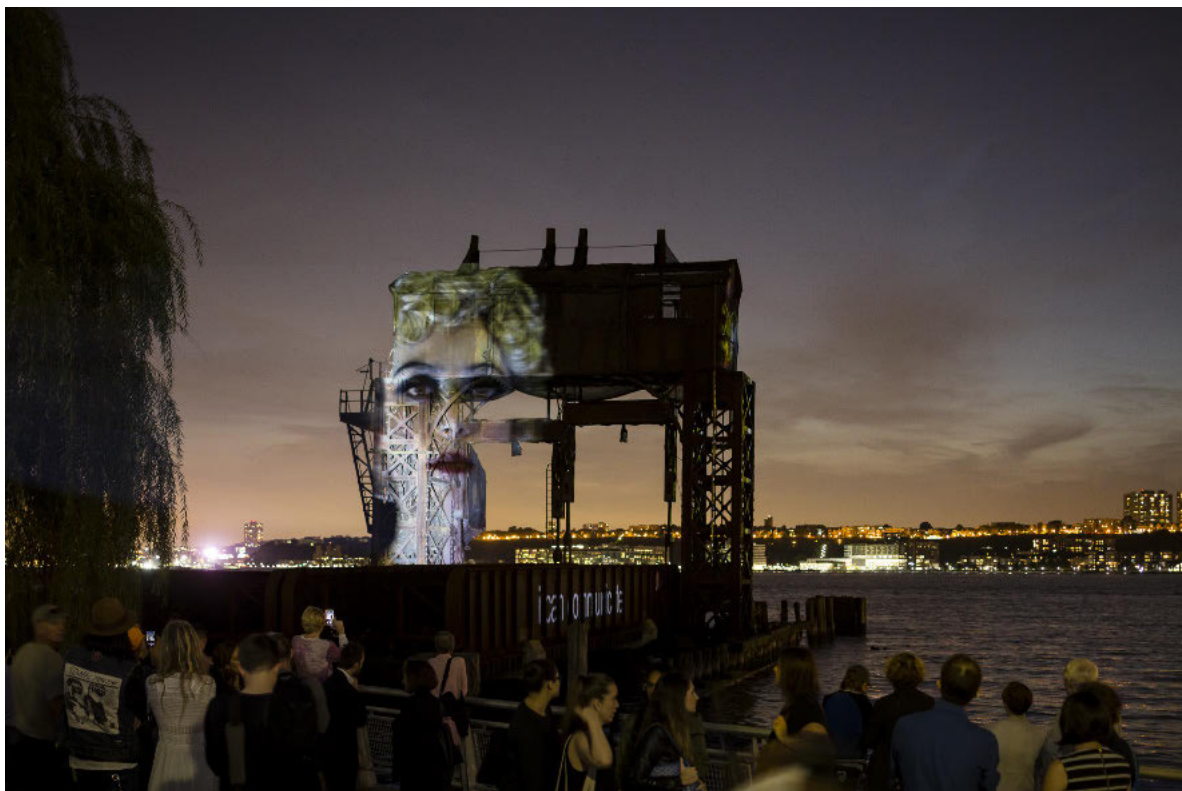
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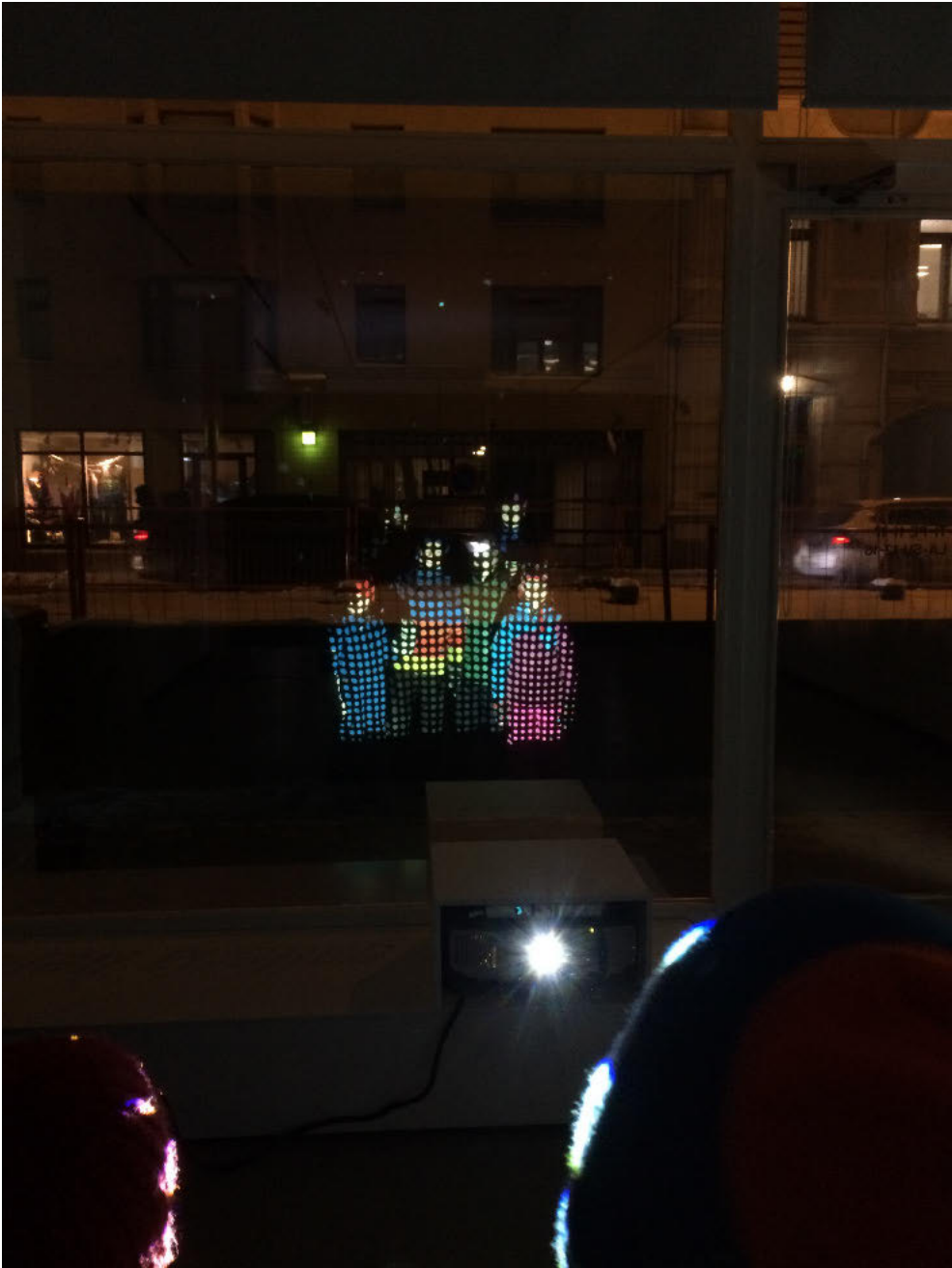
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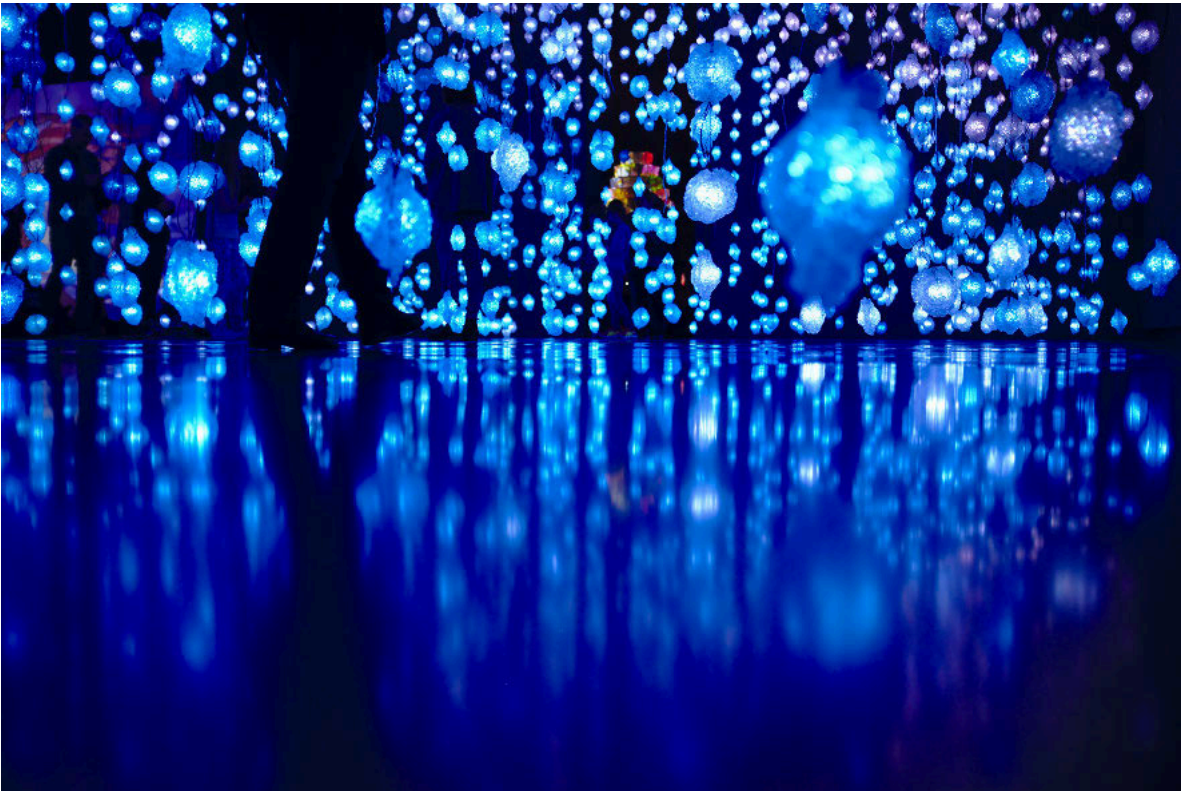
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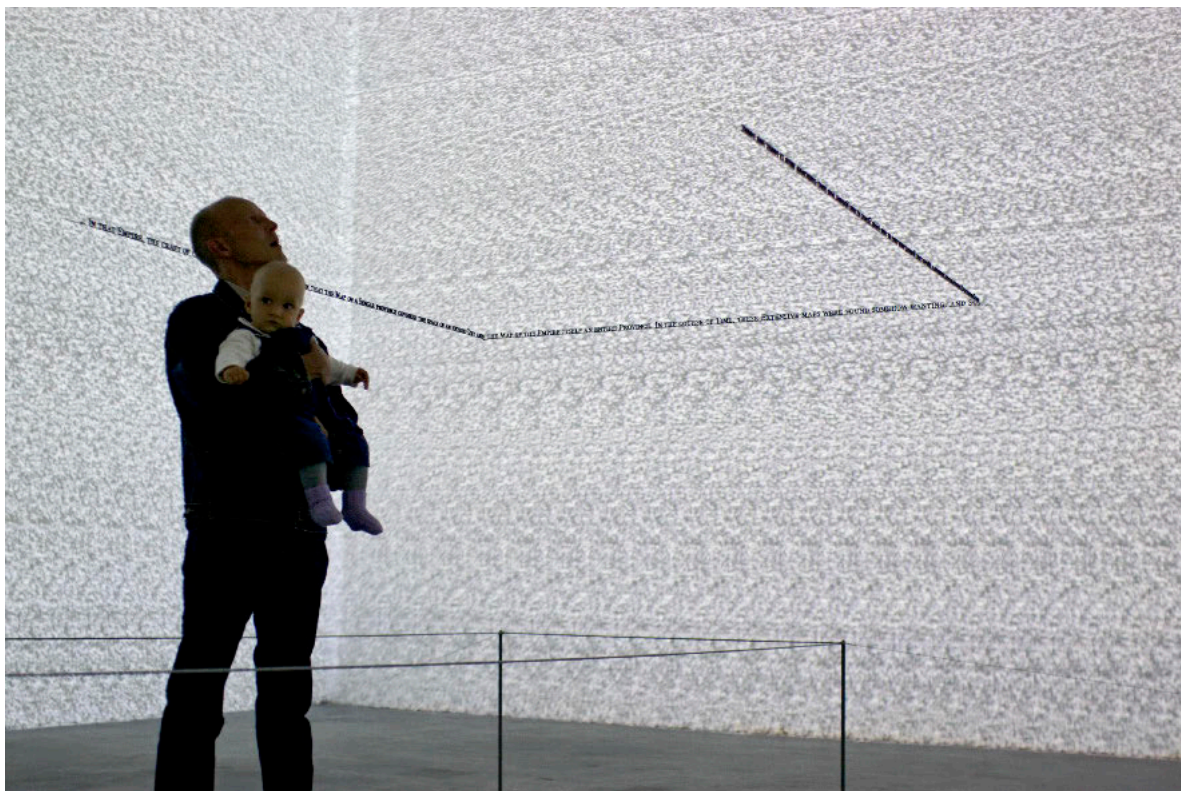
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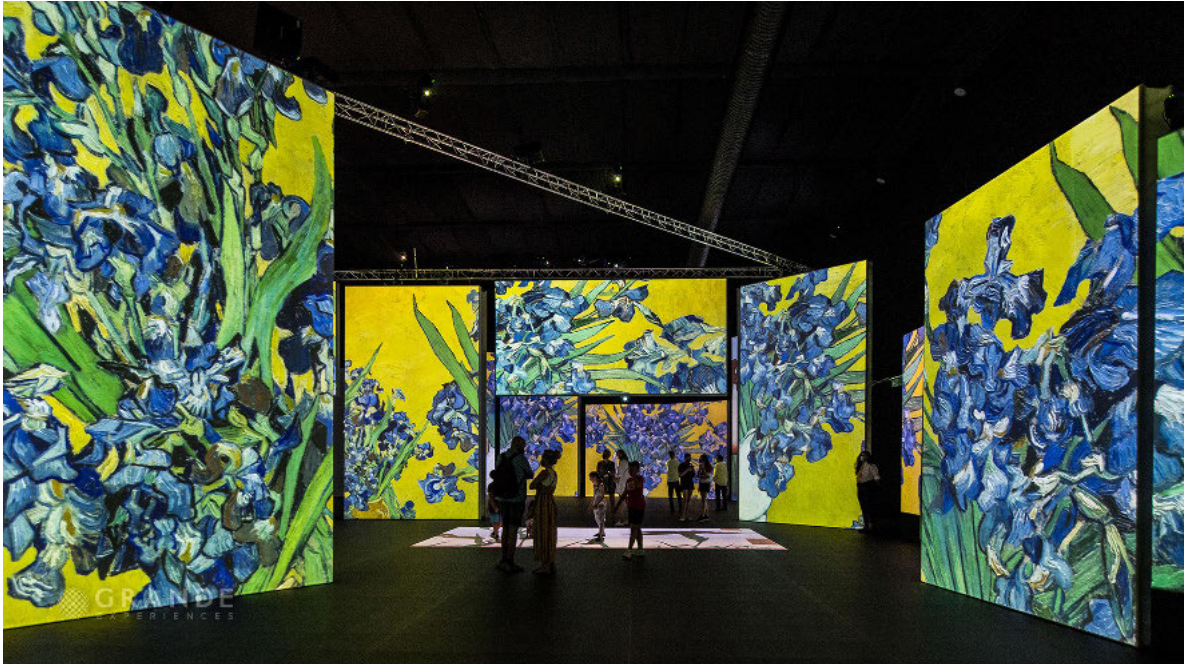
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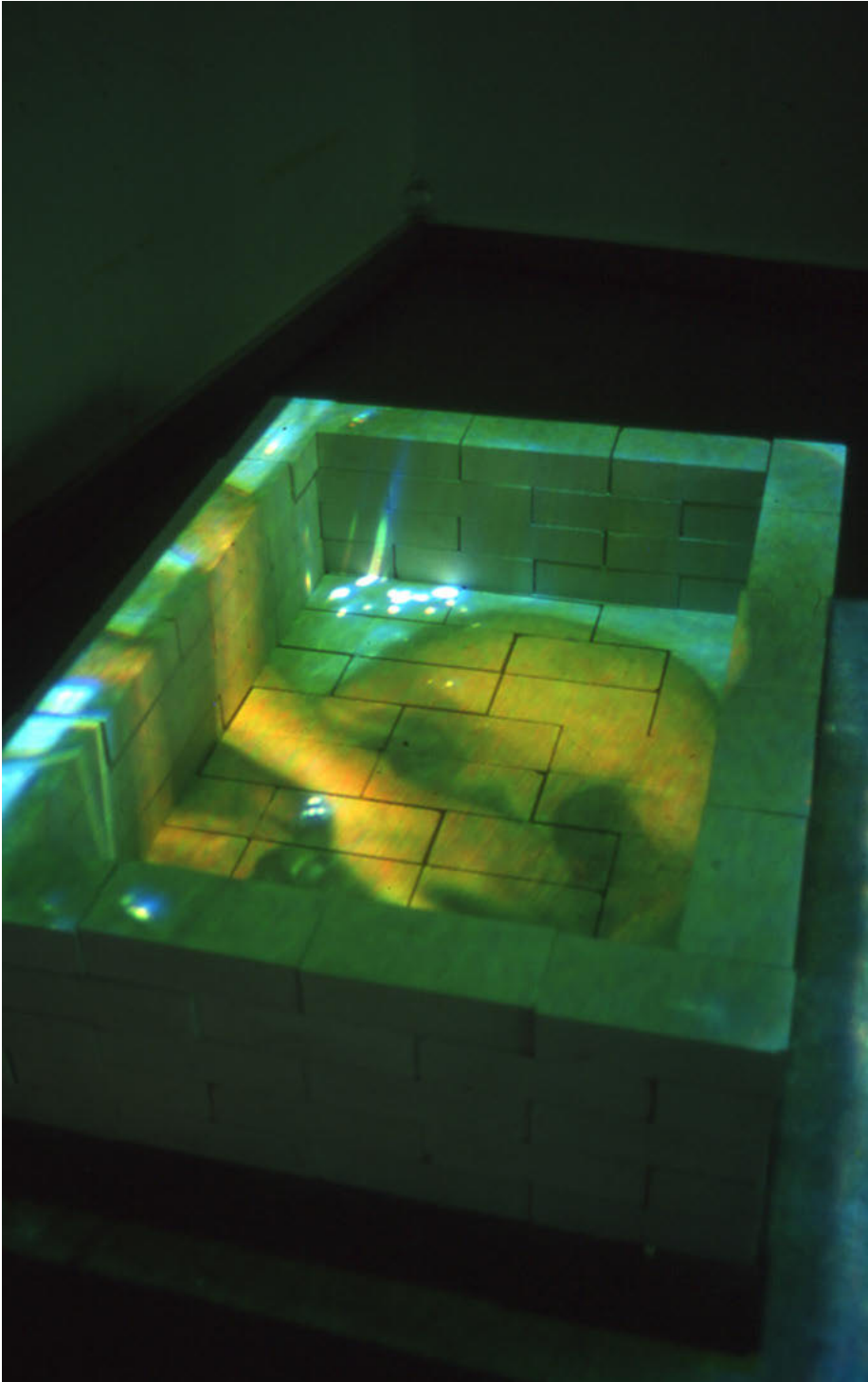
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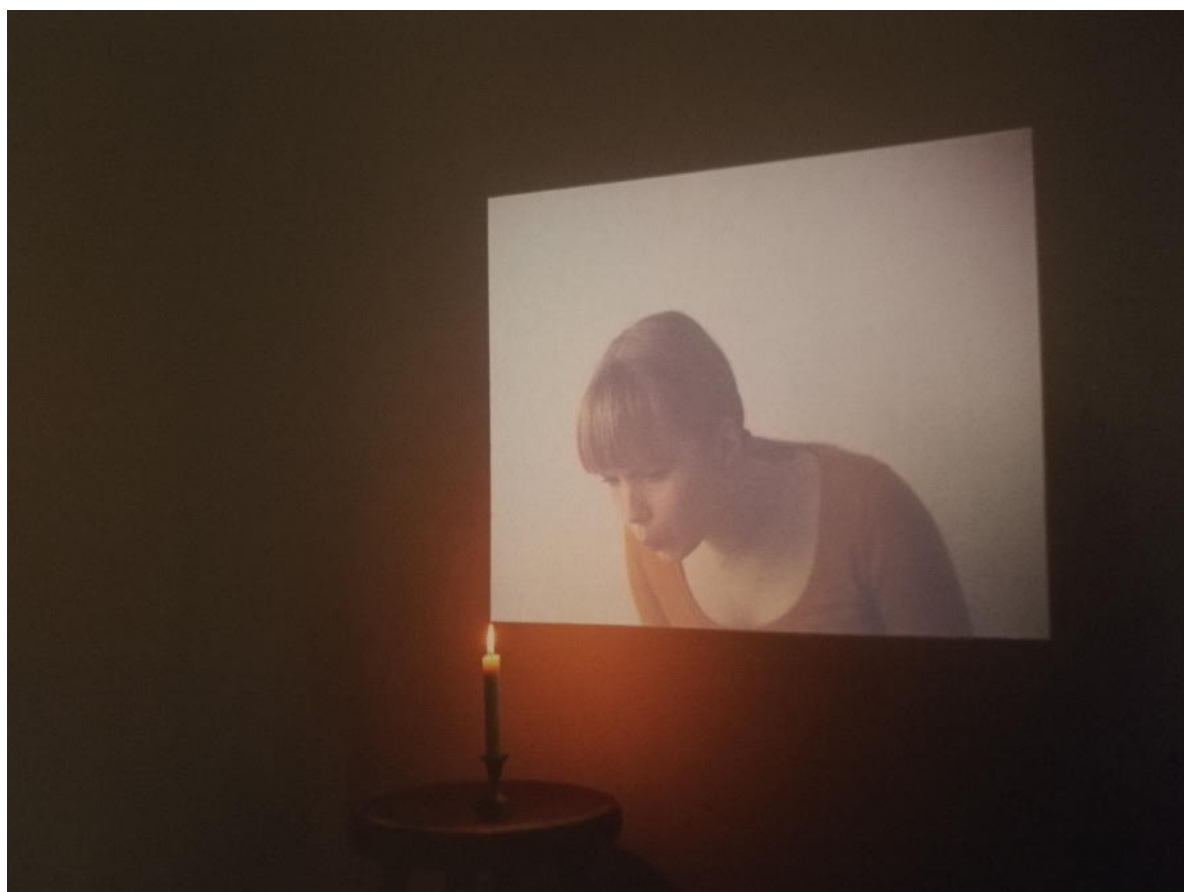
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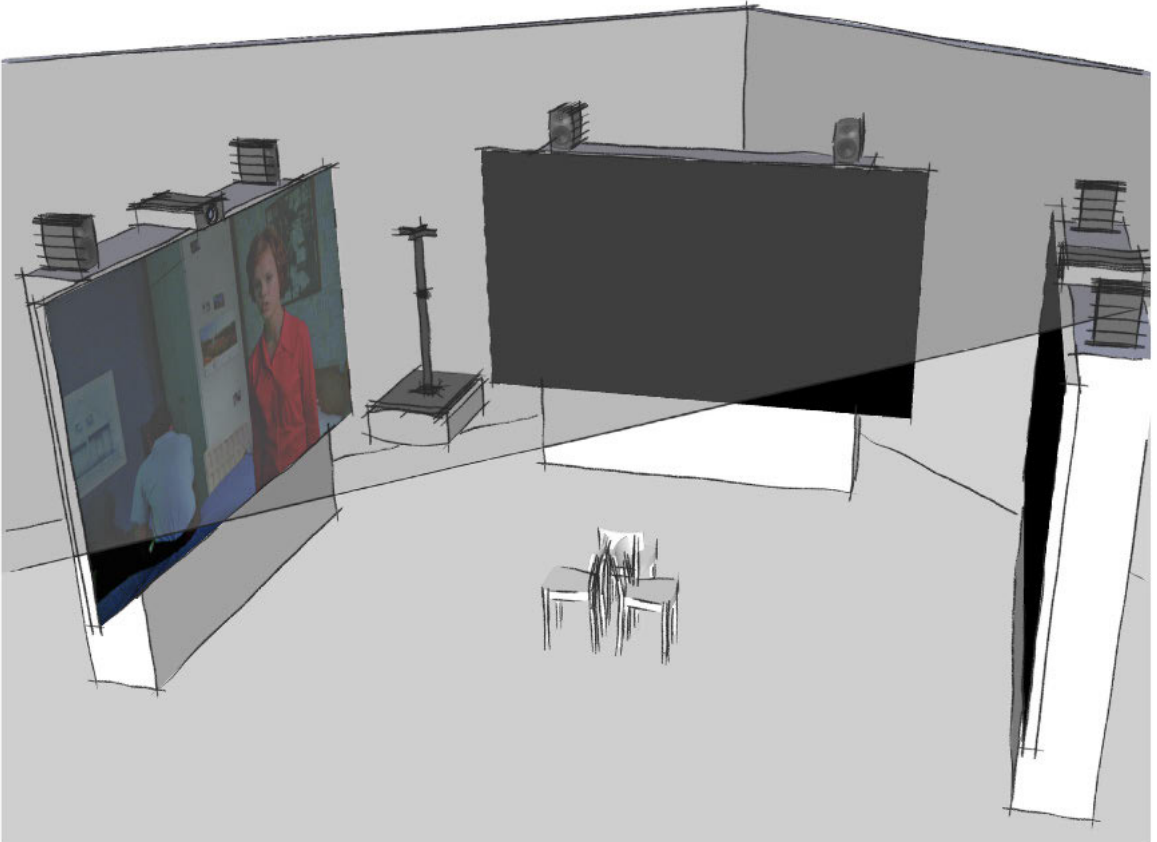
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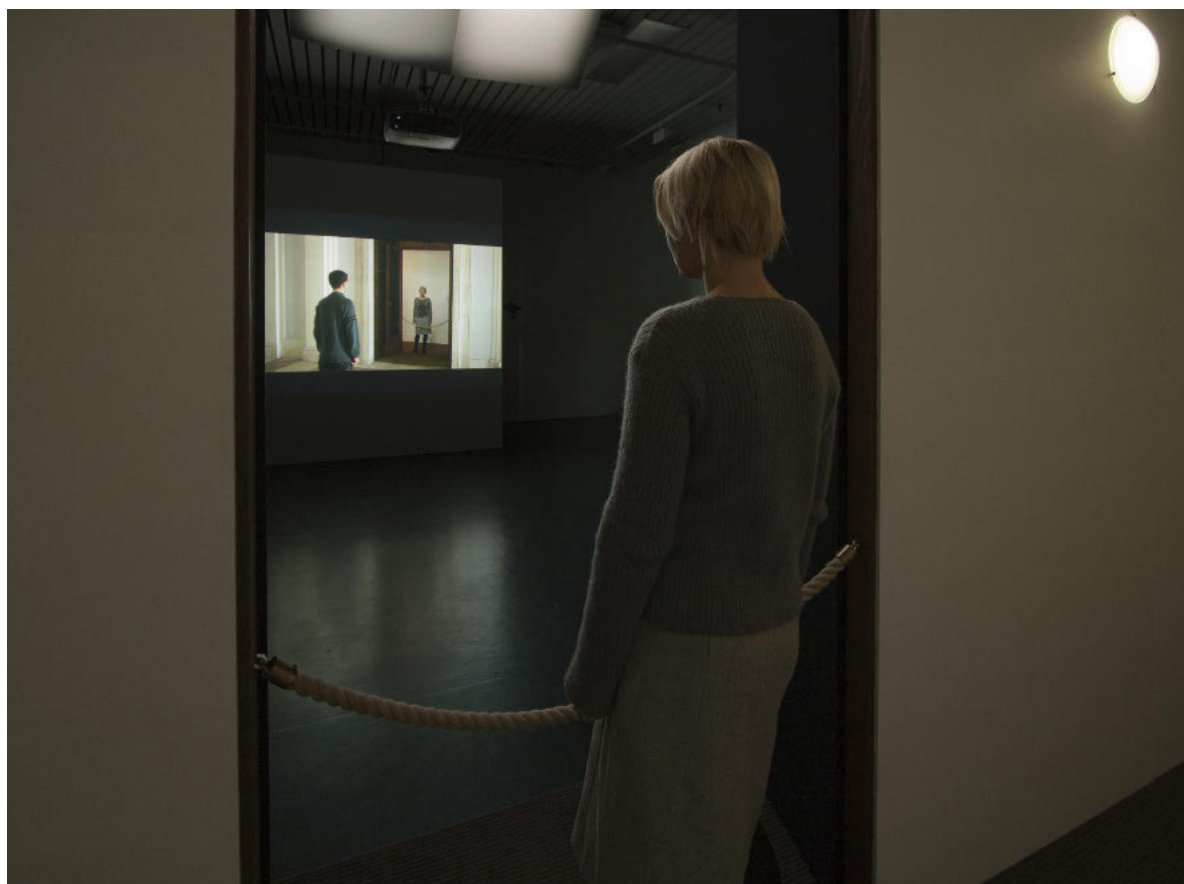
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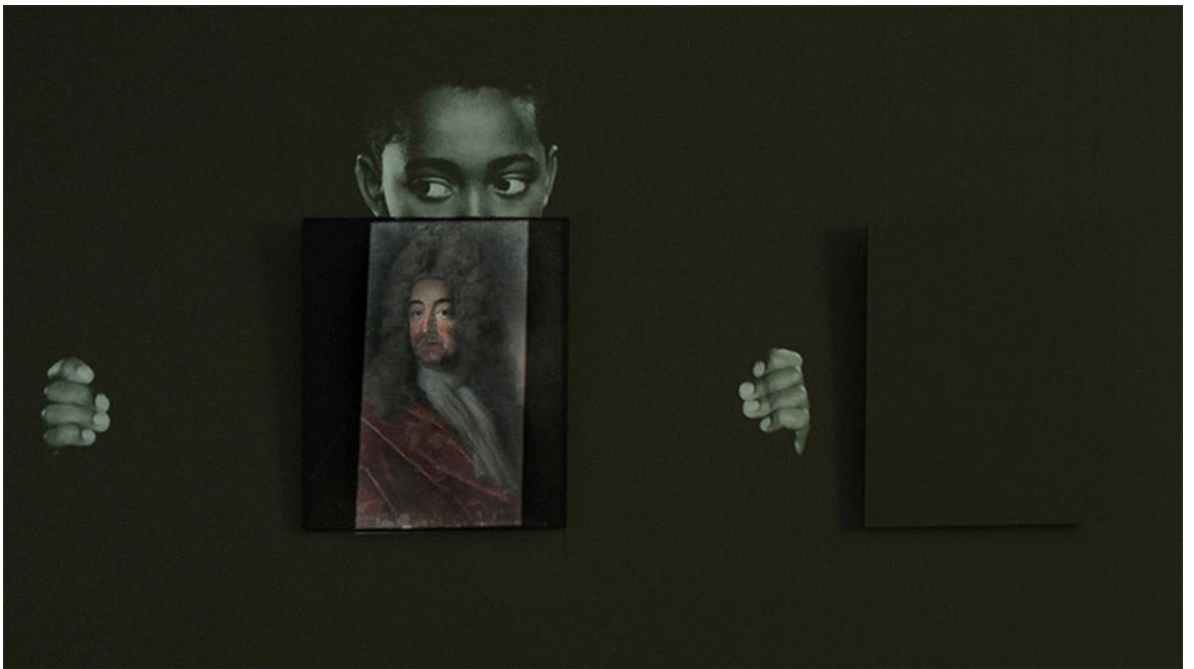
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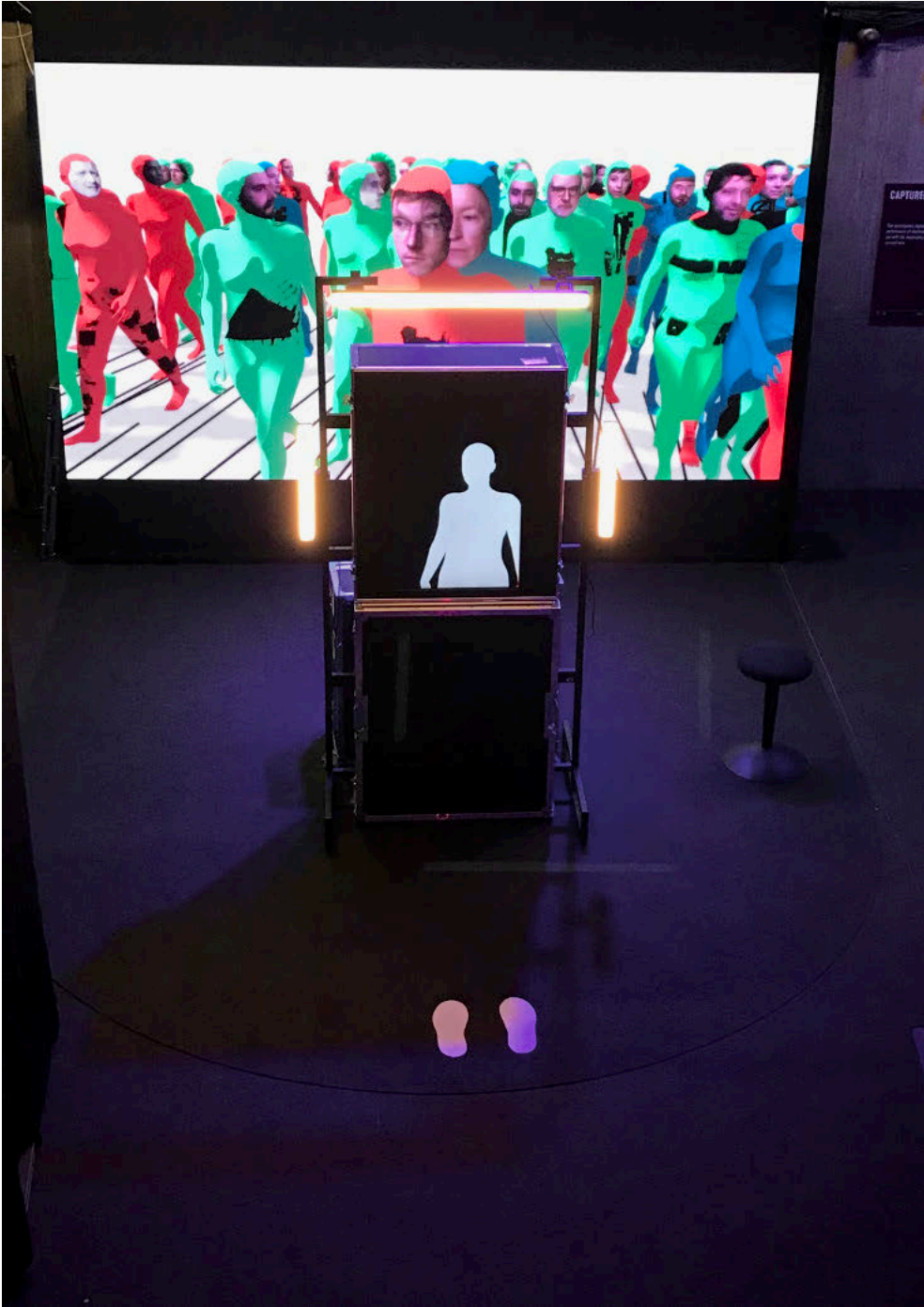
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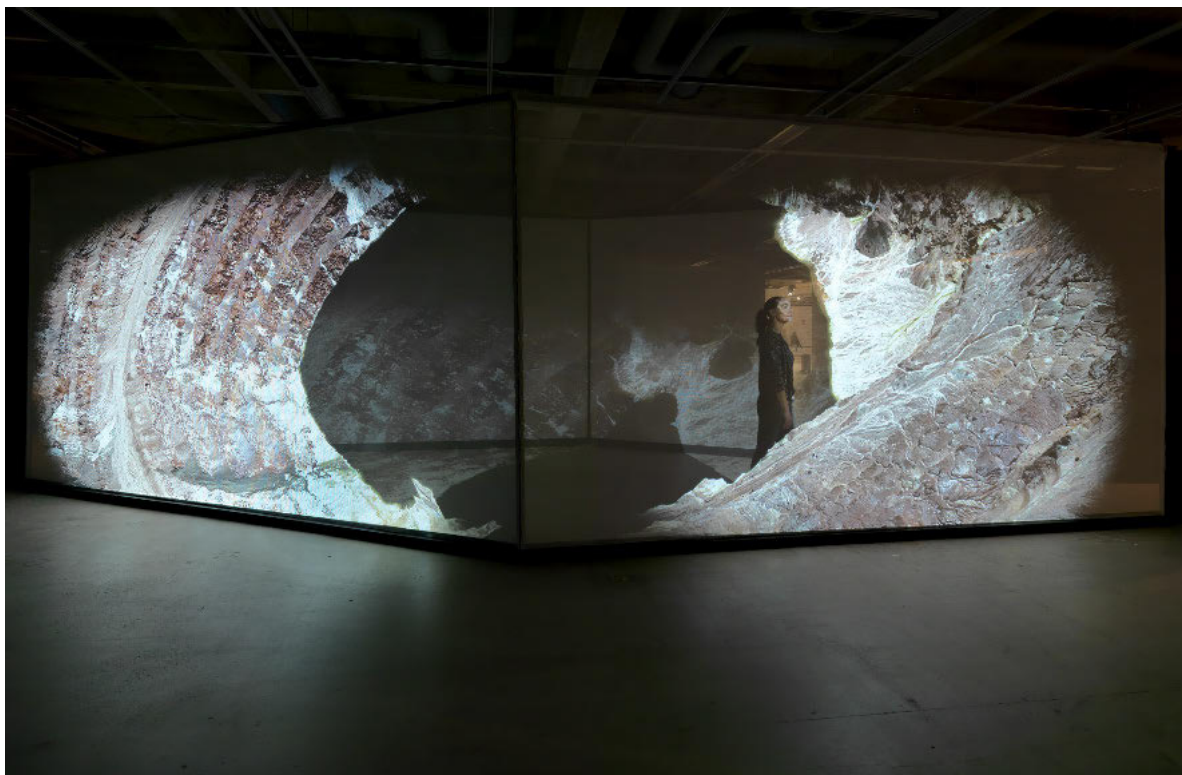
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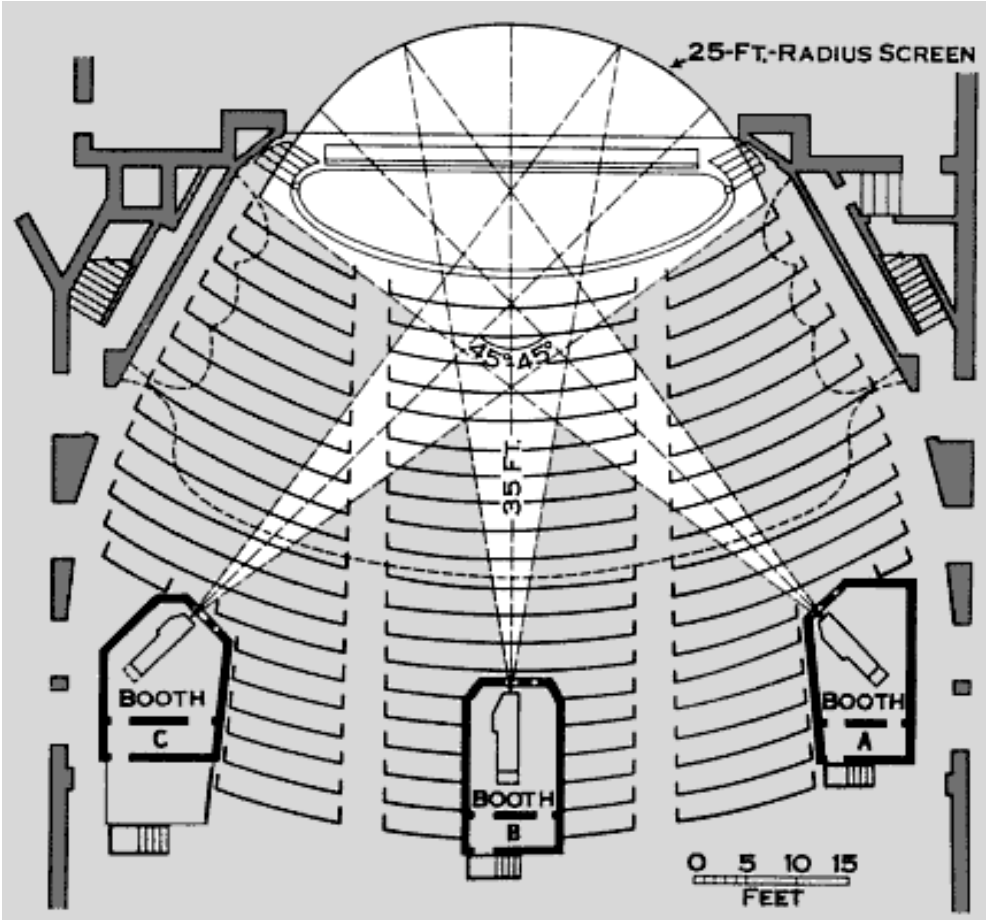
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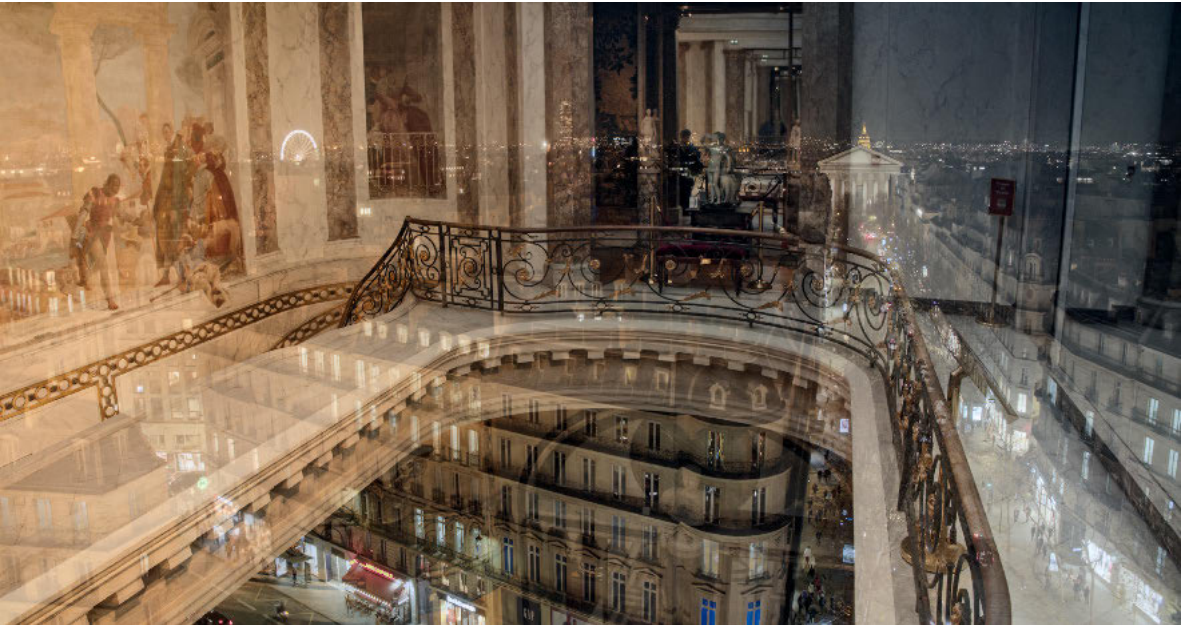
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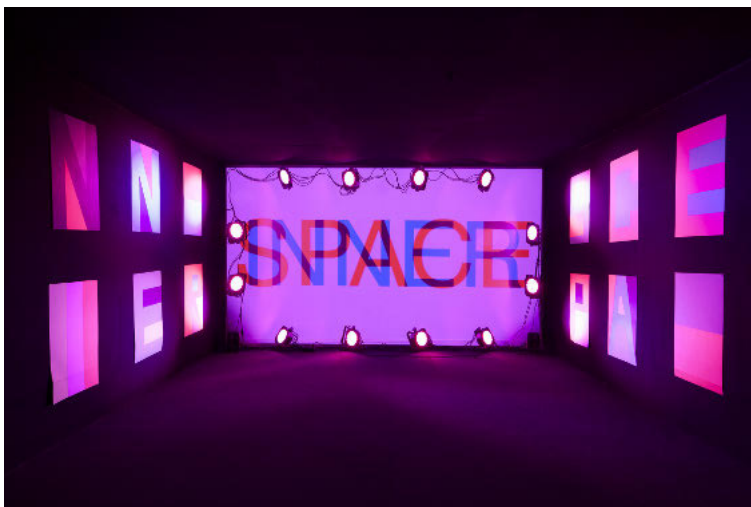
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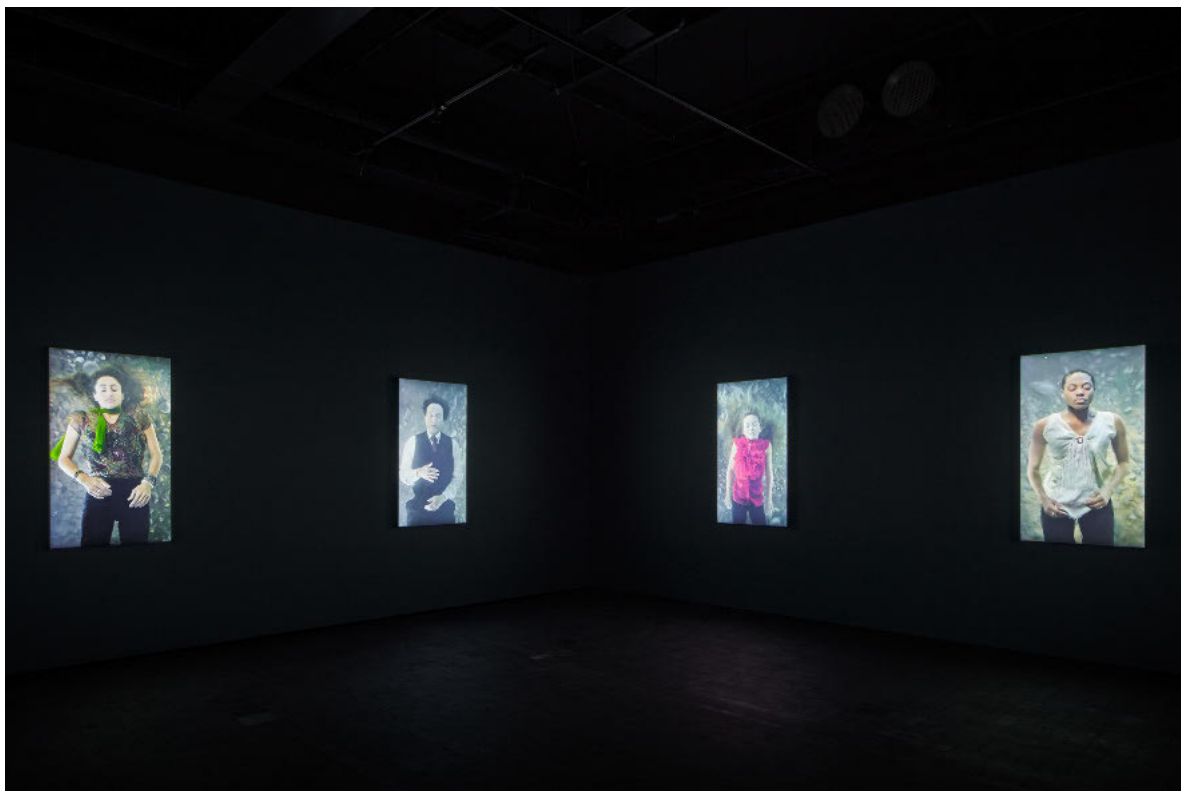
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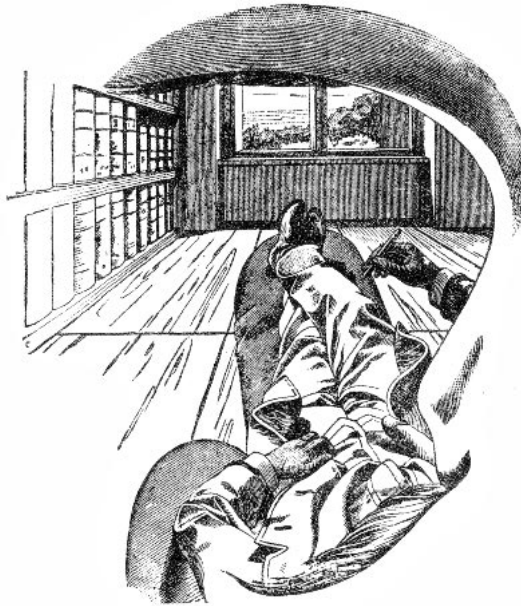
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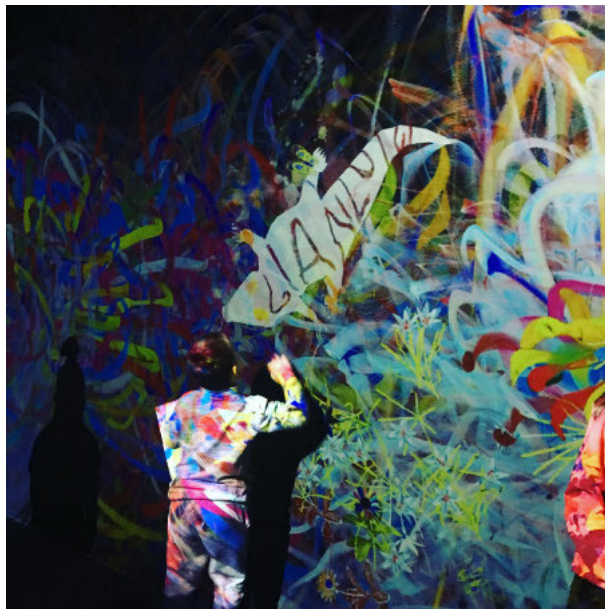
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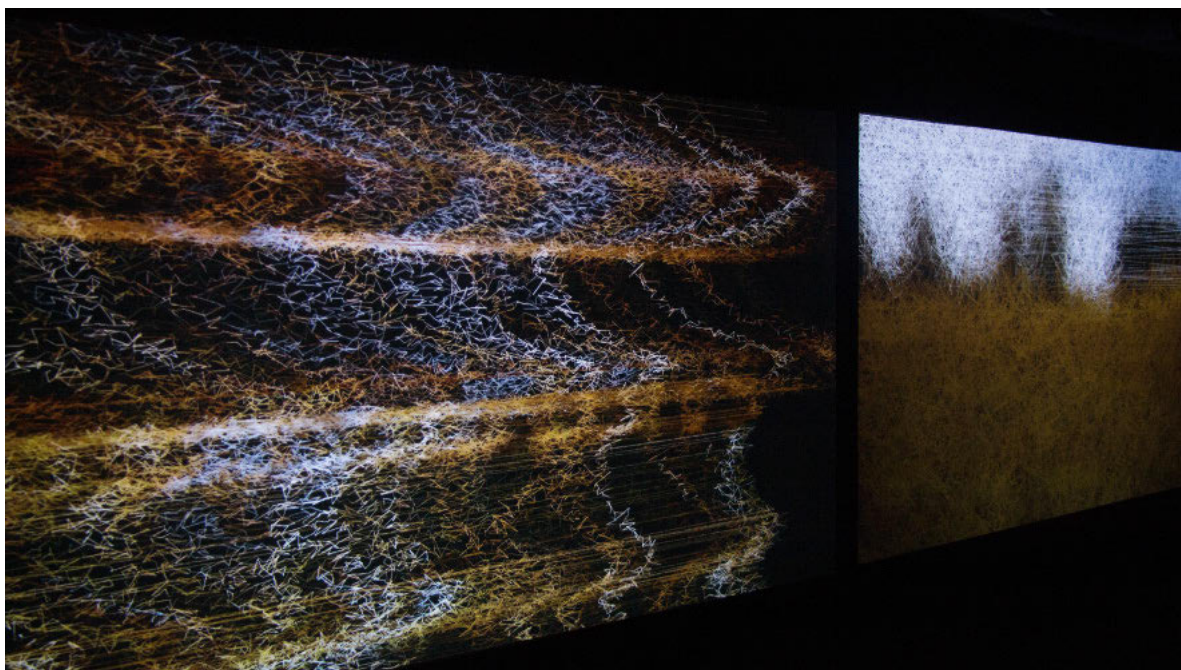
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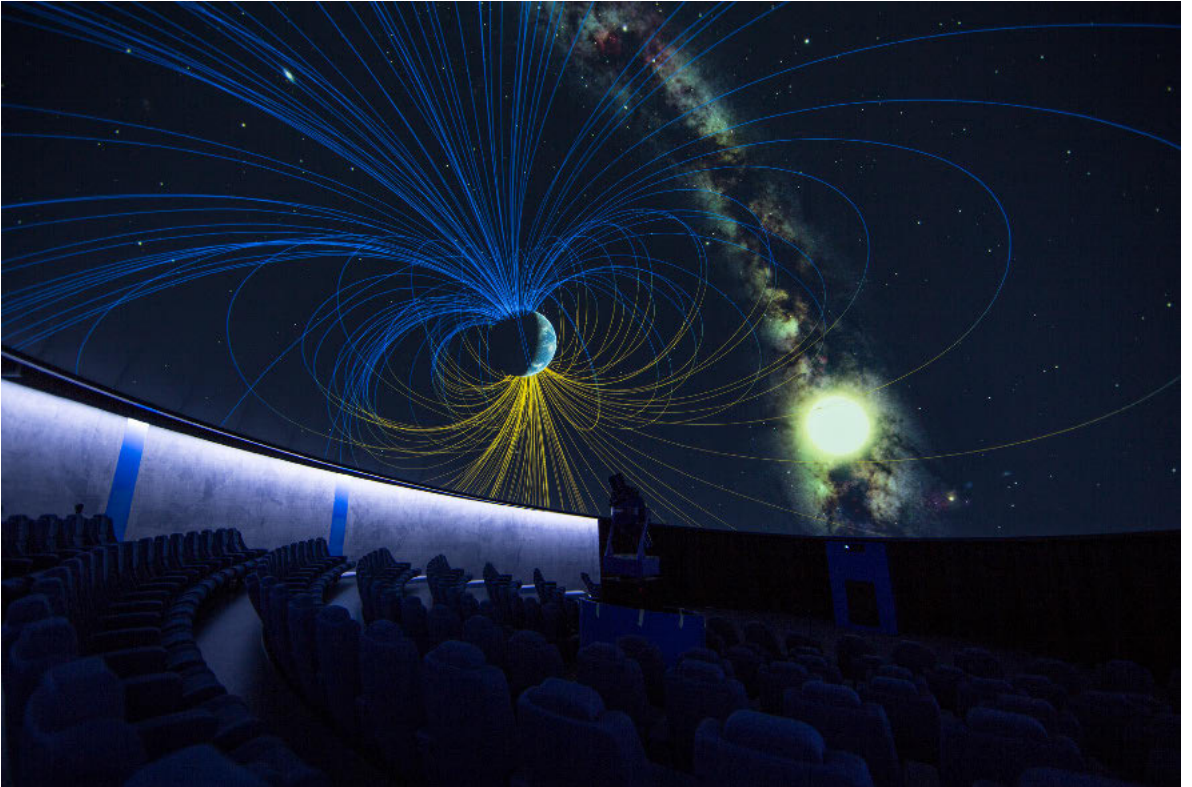
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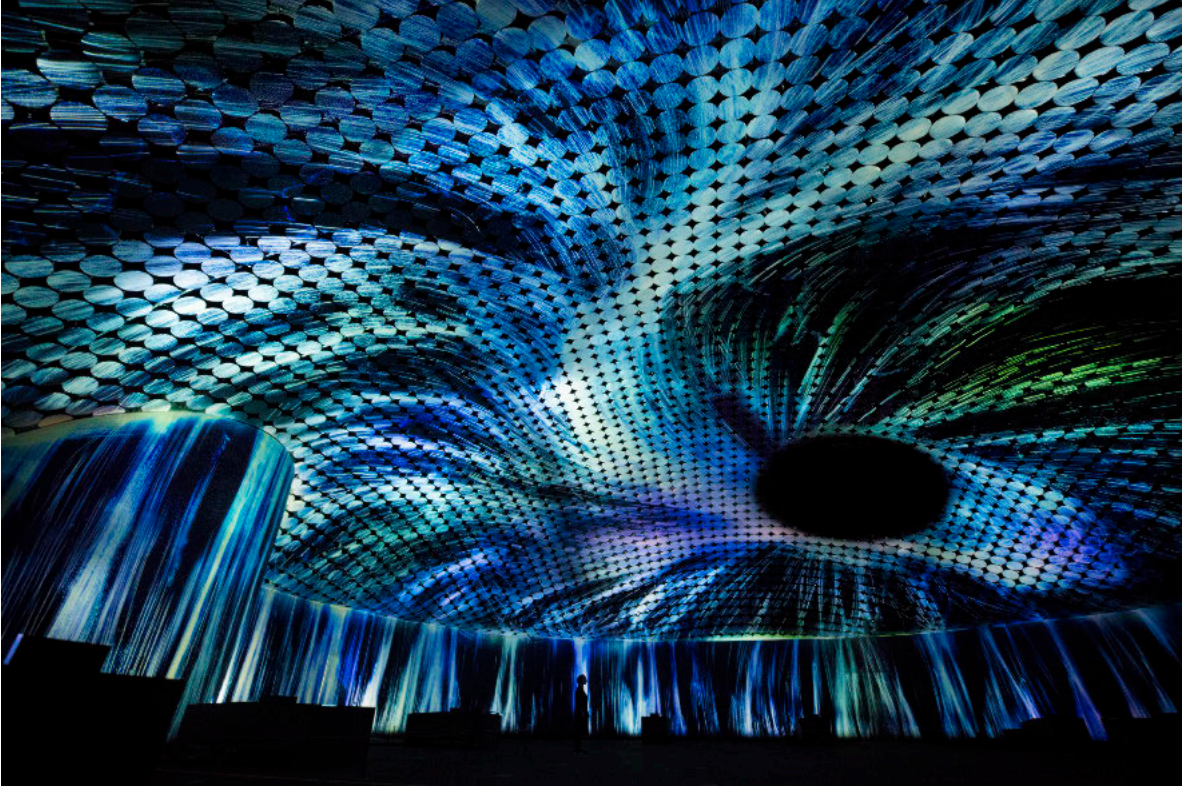
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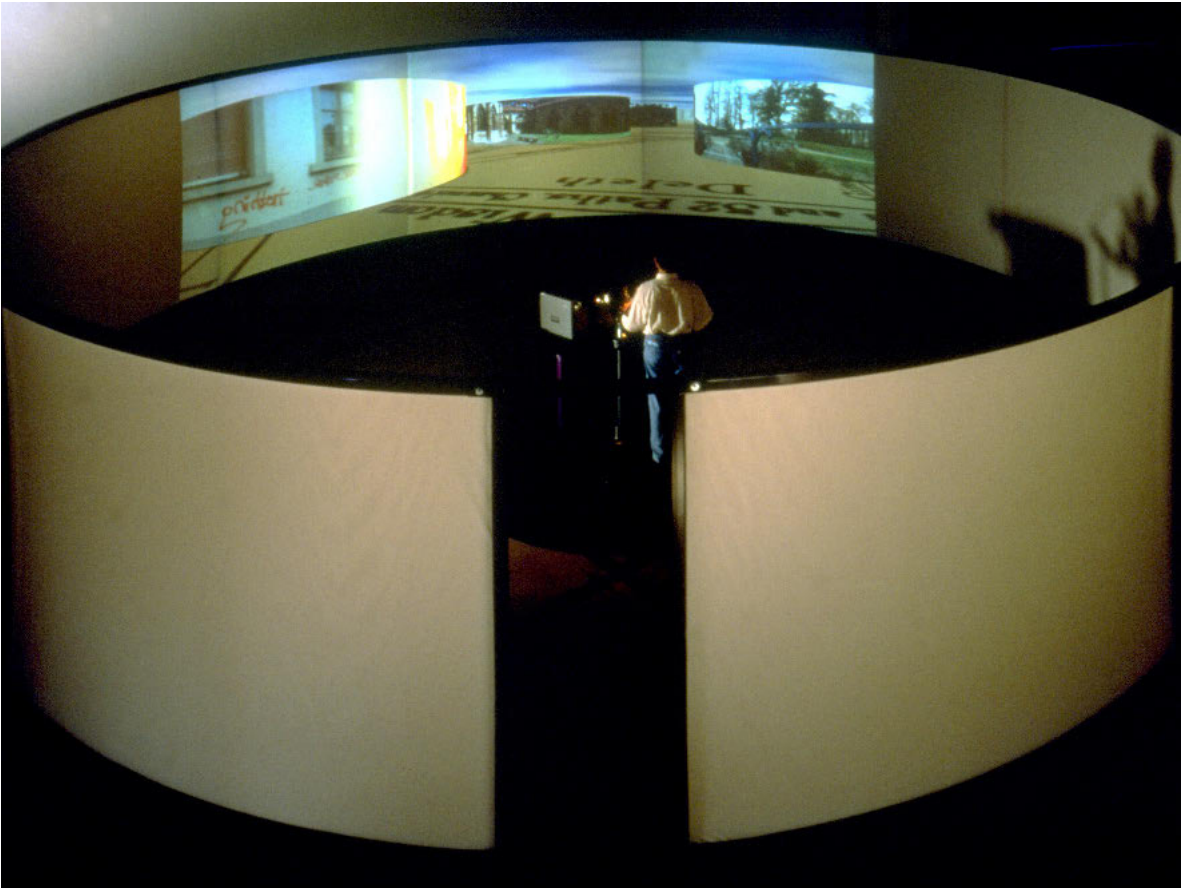
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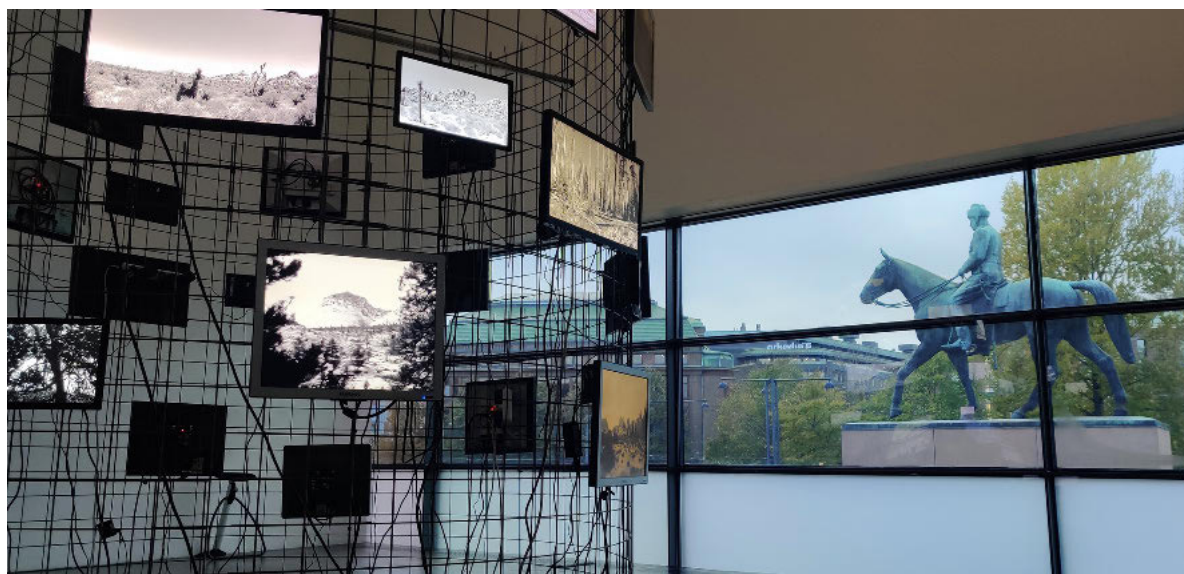
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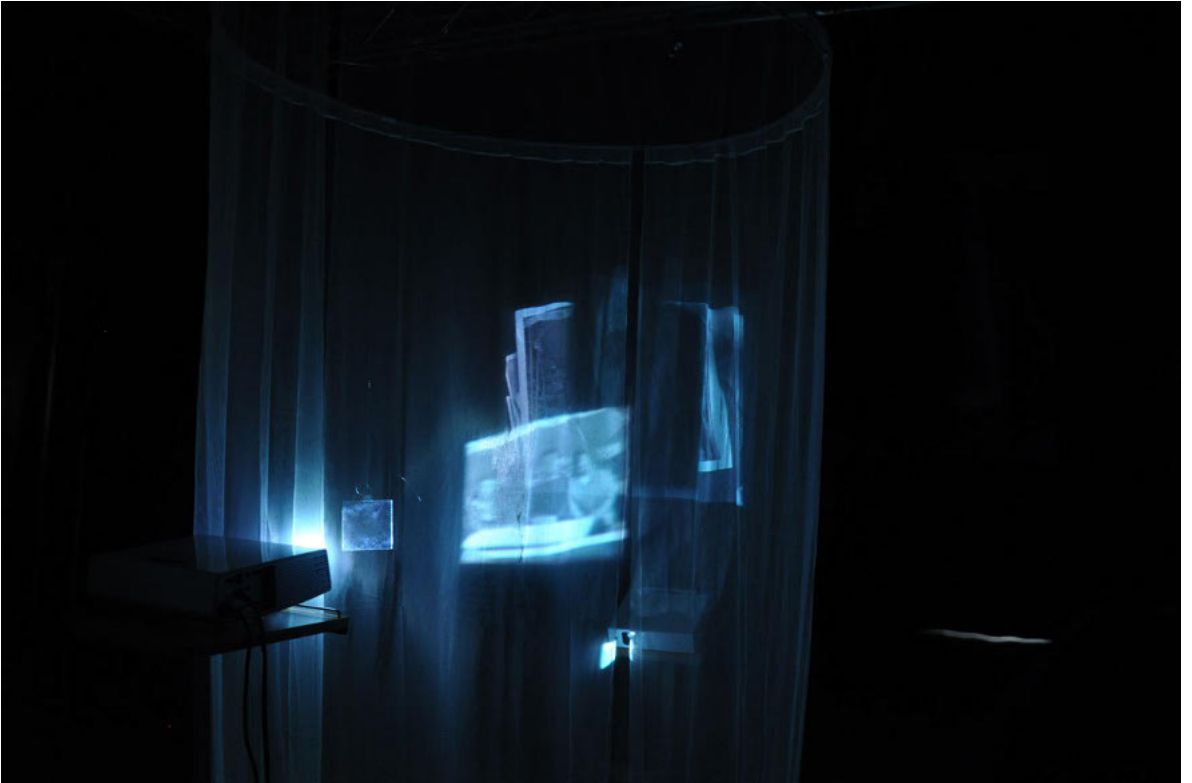
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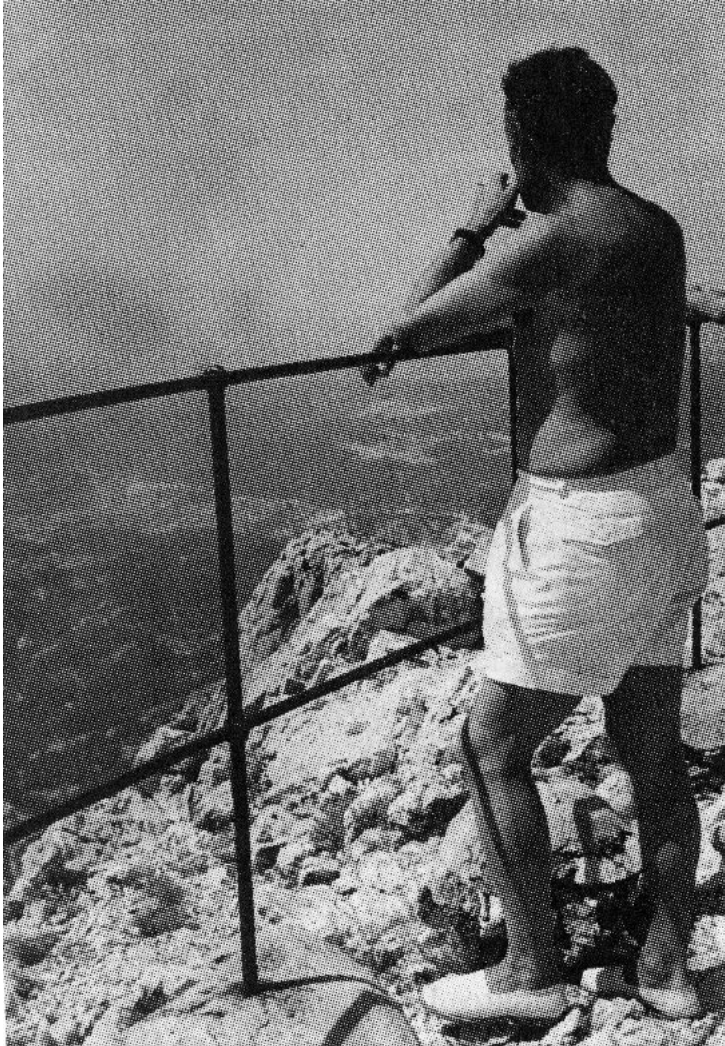
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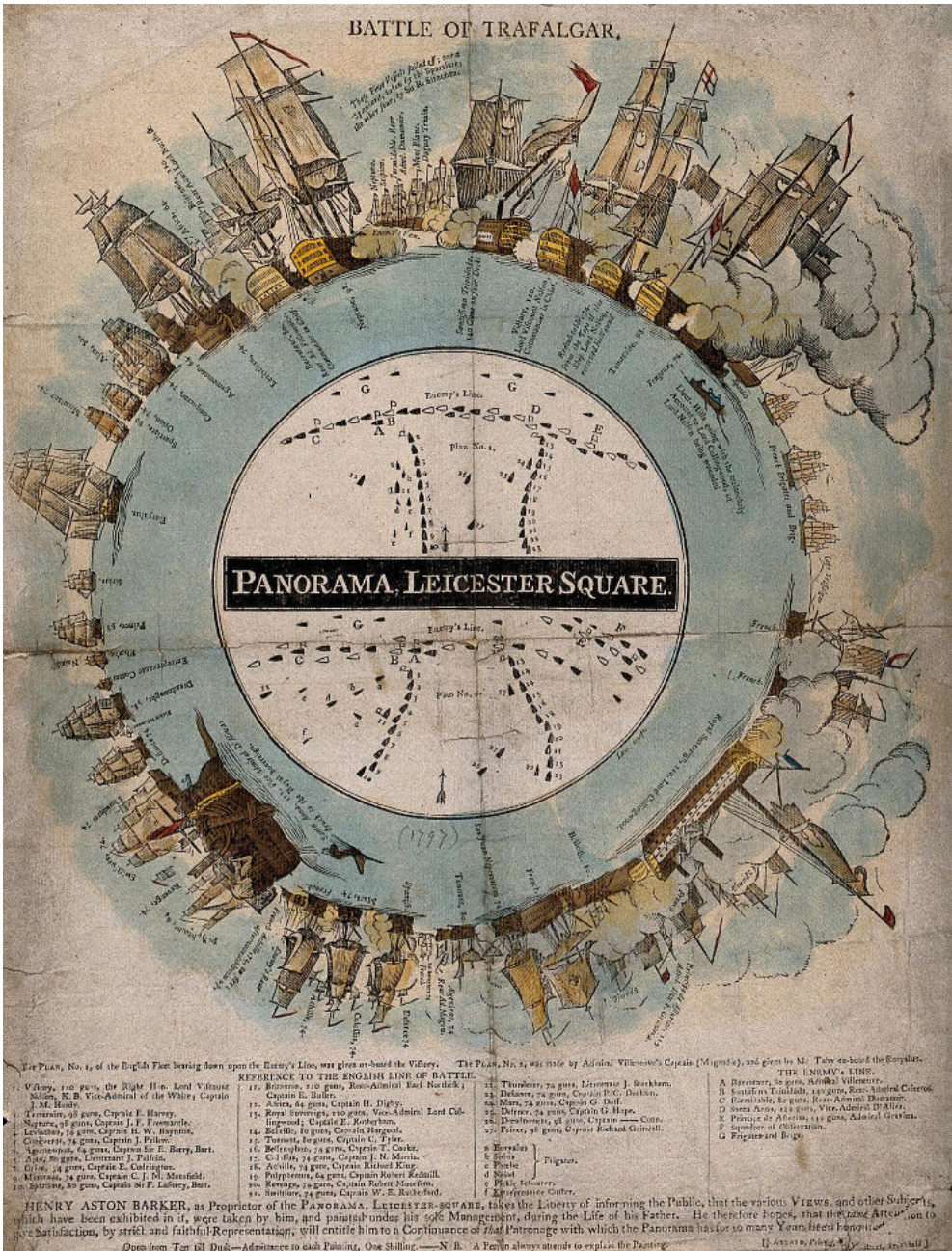
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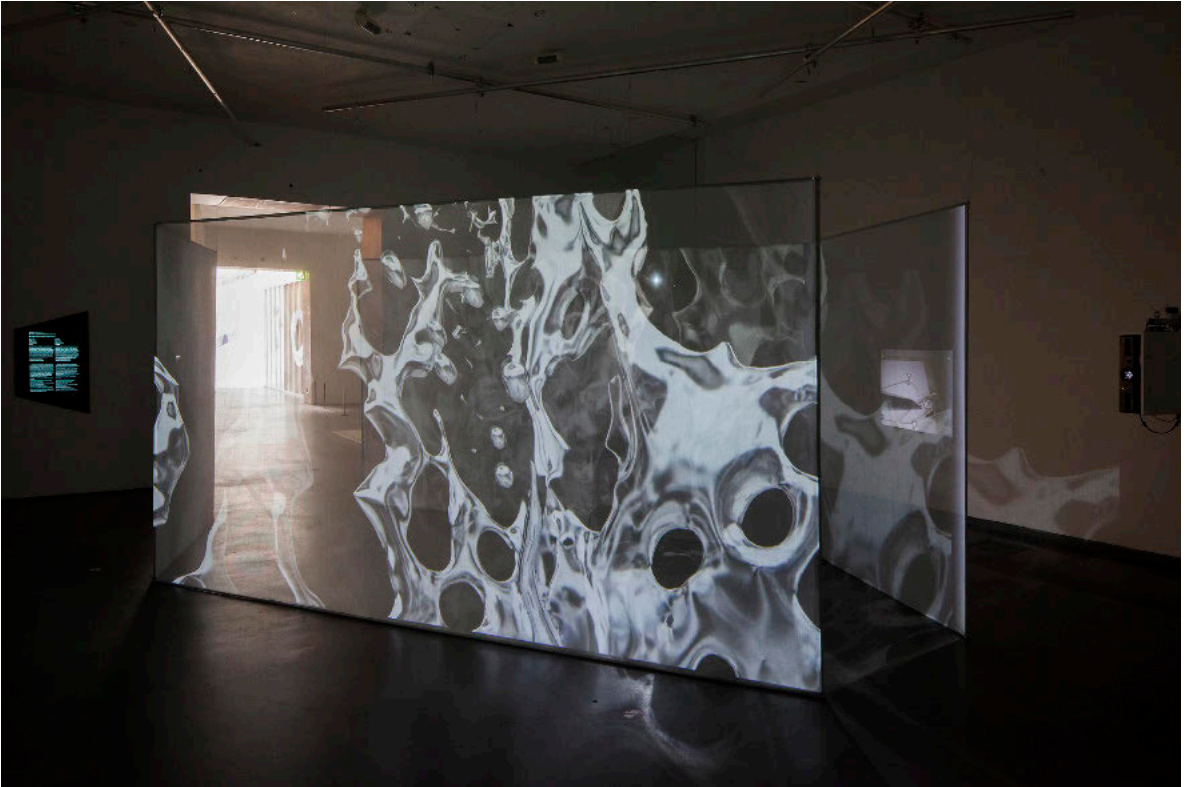
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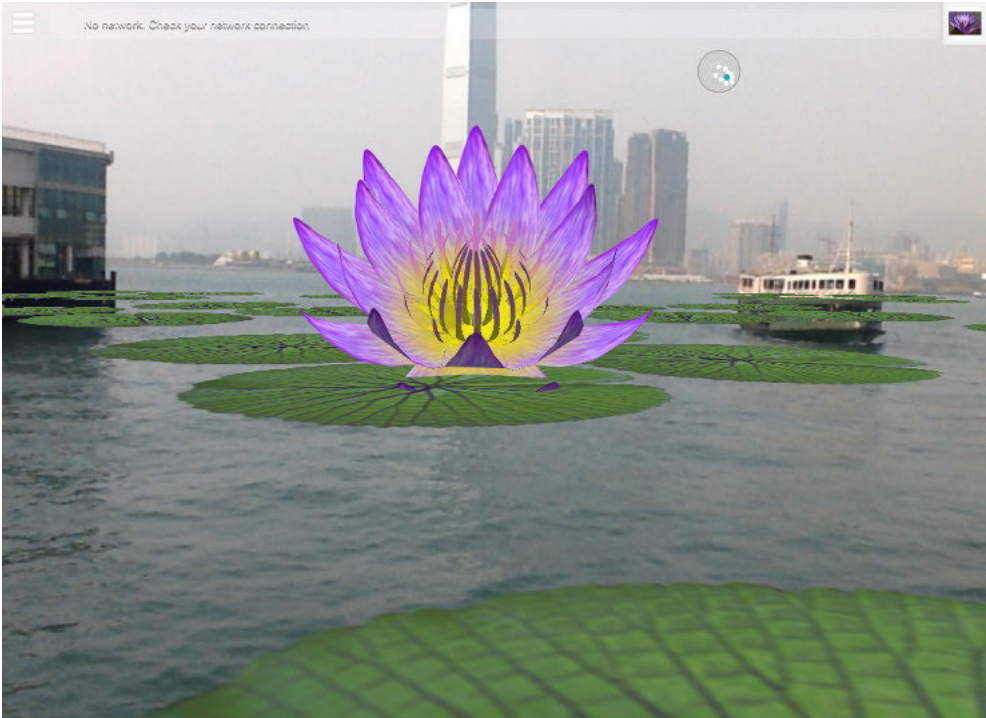
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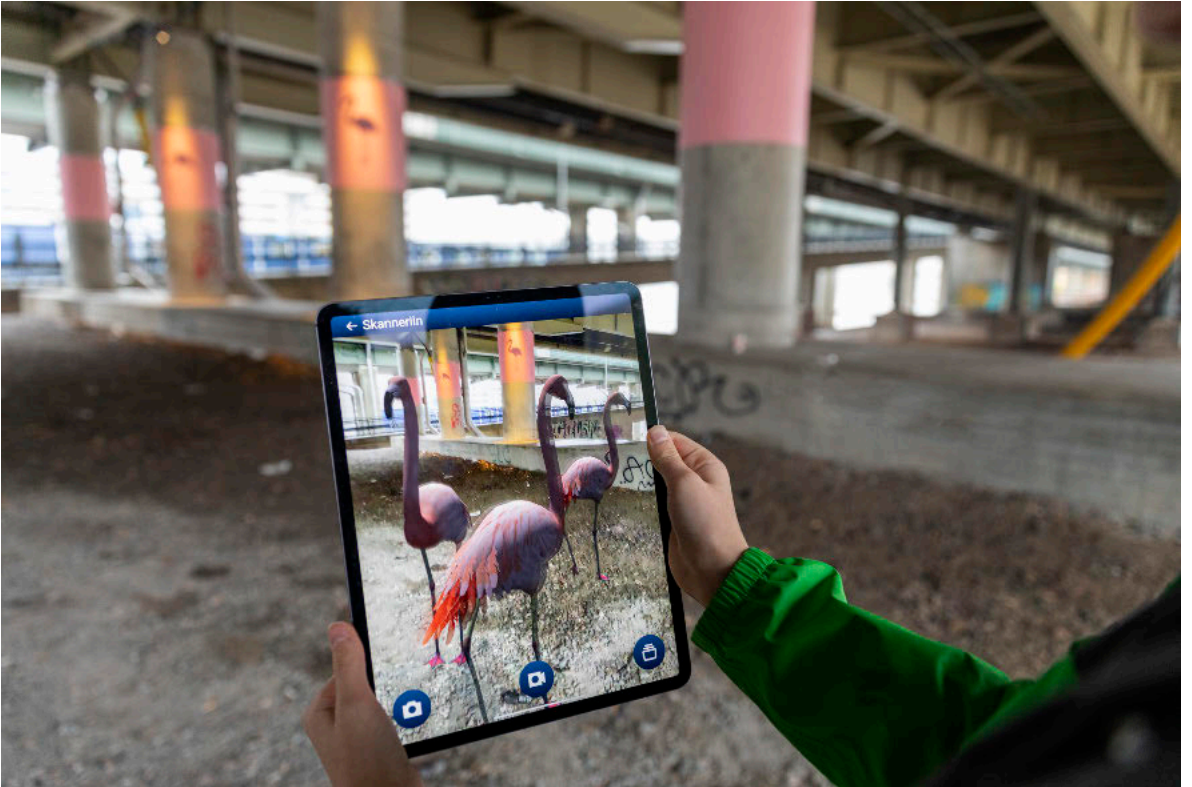
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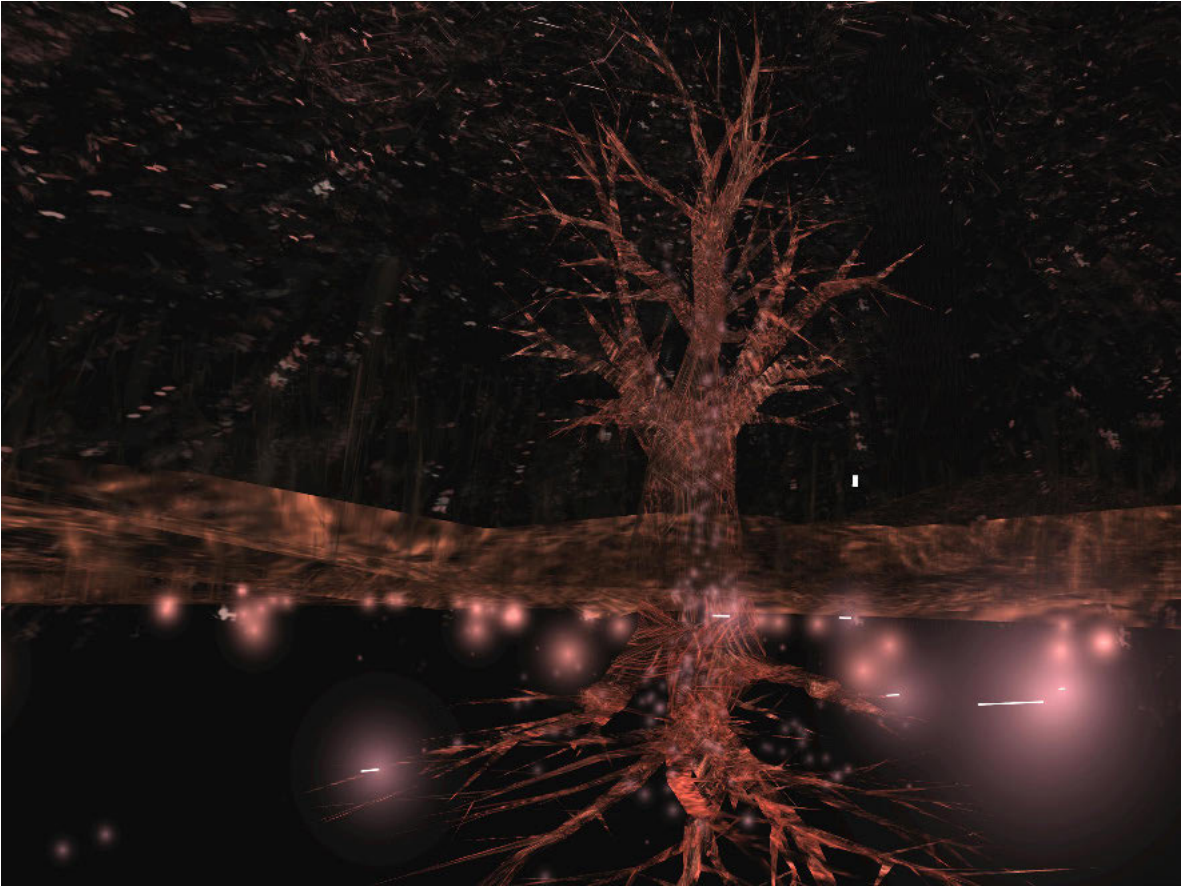
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