AESTHETICS

IN VIRTUAL REALITY

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AESTHETICS IN
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ABSTRACT

Virtual reality (VR), which takes place in our life as a result of advanced technology, has shown its existence in diverse disciplines beyond a doubt. Due to its preposterous nature, virtual reality has attracted the attention of philosophers and became the focus of several theoretical explanations, in which the aesthetic perception in virtual reality is one of these studies. Even though this domain has produced numerous important works, artistic projects, and restructured aesthetic experiences, as Grant Tavinor points out, there are not sufficient philosophical discussions of virtual reality devoted to philosophical aesthetics in scientific literature. Therefore, in order to fill in this gap, in this paper, we will be concentrating on this topic. This result is the fact that this study will be derived from the philosophy of arts, and eventually, VR will be analyzed as a medium. Virtual reality should, however, show its ontological structure to understand the philosophical procedure behind its manifestation. This obligation to explain virtual reality from ontological point of view raises additional concerns, for example experience in virtual reality and creates the question of what virtual body is. Moreover, it generates the following questions: how does virtual body establish its identity? How is virtual reality enabling us to fully interact with our perception? What are the ways that virtual reality transforms our relationships with aesthetics into an experience-

based signification? The other important point which is worth analyzing is temporality of virtual reality and relationship with memories since it directly affects the ontology of the virtual body. On the other hand, VR technology has the potential to increase our interaction with events by affecting a greater number of perceptions than we have experienced before, giving it a surplus importance to be analyzed from several dimensions.

La realtà virtuale (VR), che entra nella nostra vita come risultato di una tecnologia avanzata, ha dimostrato la sua esistenza in diverse discipline senza ombra di dubbio. A causa della sua natura assurda, la realtà virtuale ha attirato l'attenzione dei filosofi ed è diventata il fulcro di diverse spiegazioni teoriche, in cui la percezione estetica nella realtà virtuale è uno di questi studi. Anche se questo ambito ha prodotto numerose opere importanti, progetti artistici ed esperienze estetiche ristrutturate, come sottolinea Grant Tavinor, nella letteratura scientifica non ci sono sufficienti discussioni filosofiche sulla realtà virtuale dedicate all'estetica filosofica. Pertanto, per colmare questa lacuna, in questo articolo ci concentreremo su questo argomento. Il risultato è che questo studio sarà derivato dalla filosofia delle arti e, alla fine, la VR sarà analizzata come medium. La realtà virtuale, tuttavia, dovrebbe mostrare la sua struttura ontologica per comprendere il procedimento filosofico che sta alla base della sua manifestazione. L'obbligo di spiegare la realtà virtuale dal punto di vista ontologico solleva ulteriori preoccupazioni, ad esempio l'esperienza nella realtà virtuale e crea la domanda su cosa sia il corpo virtuale. Inoltre, genera le seguenti domande: come fa il corpo virtuale a stabilire la sua identità? In che modo la realtà virtuale ci permette di interagire pienamente con la nostra percezione? Quali sono i modi in cui la realtà virtuale trasforma il nostro rapporto con l'estetica in una significazione basata sull'esperienza? Un altro punto importante che vale la pena analizzare è la temporalità della

realtà virtuale e il rapporto con i ricordi, poiché influisce direttamente sull'ontologia del corpo virtuale. D'altra parte, la tecnologia VR ha il potenziale per aumentare la nostra interazione con gli eventi, influenzando un numero maggiore di percezioni rispetto a quelle sperimentate in precedenza, il che le conferisce un surplus di importanza da analizzare da diverse dimensioni.

Parole chiave: Realtà virtuale, estetica, percezione, senso, esperienza, multisensorialità, corpo virtuale, immersivo, interattivo, esperienza estetica

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Casa Study: La Camera Insabbiata

Fig. 3.17   Laurie Anderson and Hsin-Chien, La Camera Insabbiata, 201

The Water Room, https://usaartnews.com/events/fine-art/taipei-

fine-arts-museum-presents-virtual-reality-work-by-laurie-

anderson-and-hsin-chien-huang

INTRODUCTION

Virtual reality is an environment that is built by using computer visuals and audio, which is entirely realized in the mind of the participant connected to computer, who actively engages with it. It has received widespread recognition not only in scientific circles but also in the larger scale of our societies. It is an unlimited collection of potential human lives that actively engages all senses in the environment and responds to the external world and interacts more with their surroundings. This perspective on virtual reality, on the one hand, emphasizes the breadth of its scope, and on the other hand, it includes all the possibilities related to computer network engineering, which also helps to go beyond the boundaries of traditional aesthetic perception. As a result of the substantial amount of work that has been completed, it is clear that virtual reality will open up new doors through which aesthetic appreciation can be comprehended. (It is also needed to highlight the fact that VR has contributed to the destructuralization of philosophical comprehension of topics, for example the connection between art and emotions, the value of art, and so on.) As virtual reality challenges traditional classifications and establishes a new subfield of aesthetics, it is quite likely that in the not-too-distant future it will play a significant role in the post-nonclassical aesthetic classification systems. In contrast to classical art, virtual works are more concerned with free

modeling (free modeling refers to changes that take place according to the actions and perceptions of participants) of life rather than its images.[1] The evaluation of virtual reality in terms of certain basic characteristics that are inherent in its ontology, which also comprise the fundamental core components of the philosophy of the arts, can assist us in comprehending properly these particular aesthetic practices. However, here it is quite significant to emphasize that aesthetic experience in virtual reality differentiates itself from the theories in the so-called real world since all the knowledge we have at the moment originate from so-called real world, and thus, it is another reason to look at virtual reality from an ontological standpoint to prove the idea that it is a real entity in its own right. The interactive nature of virtual reality, which is one of its fundamental characteristics, takes our experience to a new level while resulting in a shift in the emotional connection we have with the event. In addition to this, virtual reality prompts individuals into ongoing events which are not perceivable in the so-called real world (Painting and film can be thought of as mediums in

[1] N. Mankovskaya, Virtual Reality in Moving Images: Psychology of Aesthetic Perception, in Narration and Spectatorship in Moving Images, J. D. Anderson & B. F. Anderson, Newcastle, Cambridge Scholars Publishing, 2007, pp. 204-209

the so-called real world). In this sense, we are separated from the object-events as we do not share the same space with them, and as a result, they don't realize our existence; however, virtual reality enables us to share the same space with the object-event we perceive. It is like existing in one of Van Gogh`s paintings and, in the meantime, being able to touch the wheatears. In this case, we are sharing not only the same space with the objects, but also the emotions of the scene which is an immersive experience. In this environment, individuals are no longer passive viewers, but performers bodies who transformed into virtual bodies to influence this world. But at one-point, virtual reality falls under the umbrella of aesthetics so sharply in a way that it creates a deeper link with it, stretching back even before the present field of philosophical aesthetics and even Enlightenment Age. It was the German philosopher Alexander Baumgarten and other intellectuals of the Enlightenment period who first introduced aesthetics as a discipline, but the word aesthetics was merely a term used to describe perception and sensation borrowed from the ancient Greek word *αἰσθητικός*. Aesthetics in virtual reality sheds light on how virtual reality connects to sensation and perception, instead of being limited only to the concerns of disciplinary aesthetics. Accordingly, in this paper, the focus of the topic will be around this approach due to the fact that the examination of aesthetics in virtual reality is necessary to understand how such a media computerizes the ordinary sensory and perceptual

capacities of humans, which, in turn, create the impression of being a sensible

agent. Finally, the feature of virtual reality which restores our relationship with

the external world is worth discussing.[2]

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[2] G. Tavinor, The Aesthetics of Virtual Reality, New York, Routledge, 2022

CHAPTER I

AESTHETICS

A designer is a planner with an
aesthetic sense.

Bruno Munari
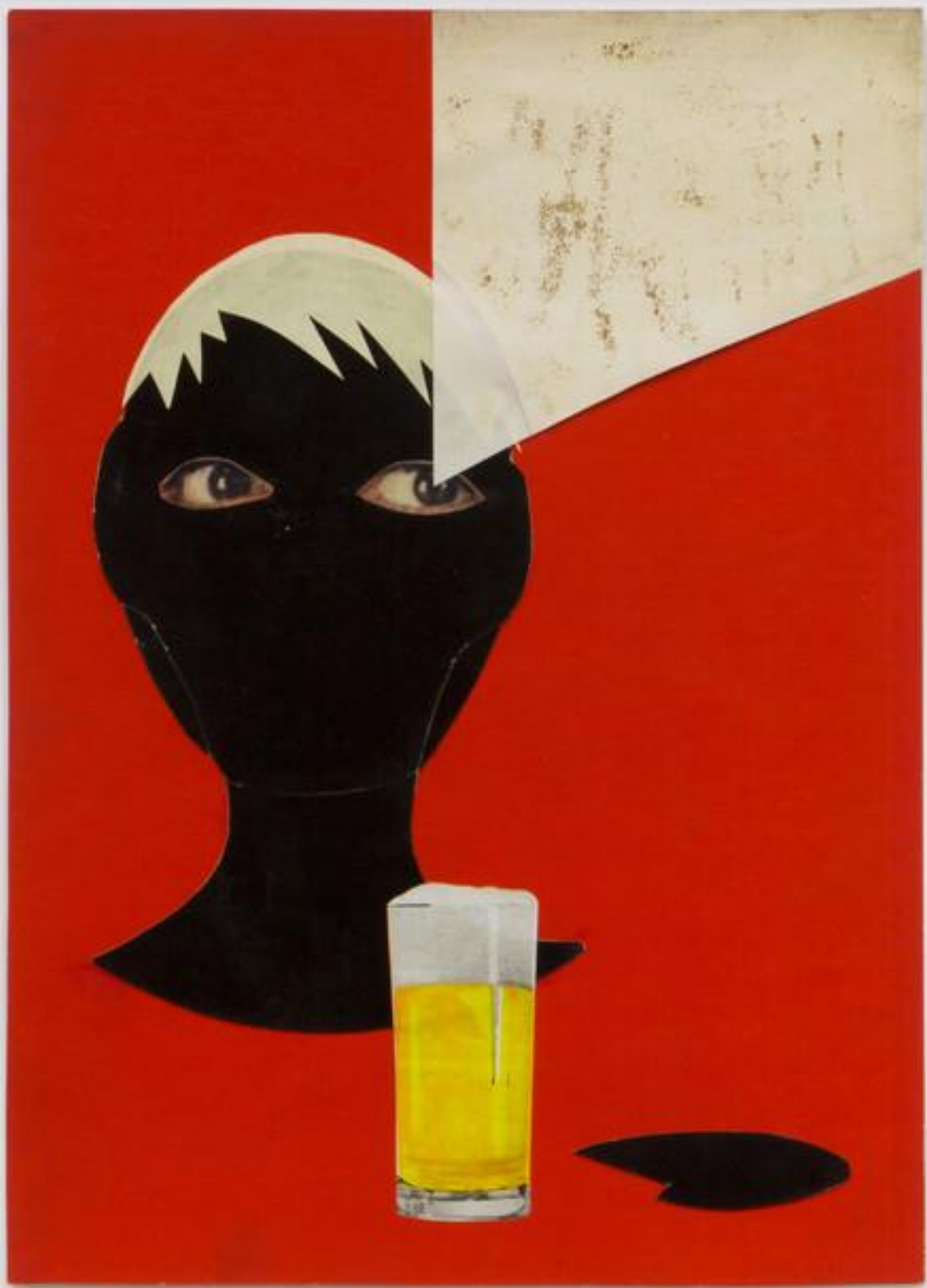
1. AESTHETICS

Aesthetics, the roots of which comes from the Greek *αἰσθητική* "aisthetike",[3] in a very general sense is a subfield of philosophy. This is a type of value theory or axiology, which examines values related to sensory, or sense-emotional, experiences. Aesthetics is also known as the evaluations of sentiment and taste, or the study of beauty. It is mostly associated with the creation of beauty, and, therefore, it is related to the philosophy of art.[4]

Aesthetics, as a discipline, didn't come into existence until the 18th century, even though scholars have been contemplated on the beauty of nature, our perception of beauty, and other related topics since ancient times. In the year 1735, Alexander Gottlieb Baumgarten, who was only 21 years old when he coined the term *aesthetics* for the first time, introduced it as part of academic

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[3] From an etymological point of view, this needs to be indicated the term was first used in German, and its more common usage in English showed itself at the beginning of the 19th century. But it formed itself as standards of taste or judgments of taste.

[4] New World Encyclopedia contributors, 'Aesthetics', New World Encyclopedia, 2022

(Accessed 12.20.2022)

practice of philosophy. The first definition of aesthetics by Baumgarten[5] appeared as "[the] science of how things are known through the senses".[6] Right after it was recognized as an academic field, the term aesthetics was used to refer to a broad variety of concepts, such as objects, judgments, attitudes, experiences, and values. Within the framework of these considerations, different theories in the field of aesthetics emerged. These theories in aesthetics have diverged over one of these concepts. For instance, sensation in aesthetics, as the basis of any aesthetic experience, should be considered just in objects or its scope is broader than this.[7] In short, aesthetics encompasses a wide range of issues as well as concepts, defining the nature of beauty in specific objects. To comprehend contemporary aesthetics theory,

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[5] Even though it is the first definition of the term aesthetics. There is a process before the main definition is made by Baumgarten. After making the first definition as it is indicated above, Baumgarten transformed this definition as "the art of thinking beautifully" in Metaphysica. As a final definition and merging the previous two definitions, he introduced aesthetics as the "science of sensitive cognition" in Aesthetica. Peter Kivy (ed.), The Blackwell Guide to Aesthetics, Malden, MA: Blackwell Pub., 2004

[6] Peter Kivy (ed.), The Blackwell Guide to Aesthetics, Malden, MA: Blackwell Pub., 2004 (To learn more about the historical background of the term check out page 15th)

[7] J. Shelley, The Concept of the Aesthetic, The Stanford Encyclopedia of Philosophy, Metaphysics Research Lab, Stanford University, Spring 2022 Edition, (Accessed 24.12.2022)

it is necessary to trace its roots back to the 18th century, when aesthetics was reckoned as a sensible experience. However, it should be highlighted that even though this traditional understanding focused on its definition, nowadays the concentration is on another side of the topic. In fact, recent discussions have centered on aspects, attitudes, and the scope of aesthetics as well as our perceptions of aesthetics.[8] In this regard, it is possible to indicate that aesthetics has moved from museums into our lives, characterizing every aspect of individual and social activities. We are concerned not only with the aesthetics of objects, but also the *aesthetics of experiences*. As we progress in this part, this study will focus on how aesthetics became experienced based, understanding contemporary aesthetics, and how it was extended into our lives.

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[8] B. H. Slater, Aesthetics, The Internet Encyclopedia of Philosophy, ISSN 2161-0002, (Accessed 24.12.2022)

1.1 THE WORLD THROUGH SENSIBILITY

The world is a place where we can understand it with experiences. Given the fact that we exist, it should not sound odd if we classify the world as external and internal. From an ontological standpoint, internal and external entities show their existence either directly or indirectly. Scholars generally believe that we access the information about the external world through our senses, and the degree to which we feel a close connection with the outside world is proportional to our level of sensibility. The more sensory interactions we experience while perceiving something, our recollection and understanding of the things become more perennial, effective, and deeper. Accordingly, emotions and feelings are transferred to our body through the senses, and all body functions take place under the influence of this transfer. The senses affect perception holistically, and the level of experience with the things depends on the level of sensorial connections we establish with them.[9]

There was a strong emphasis on sensibility in the eighteenth-century culture, influencing debates beyond physiology, epistemology, psychology, and

[9] A. Berleant, Aesthetic Sensibility, Ambiances International Journal of Sensory Environment, Architecture and Urban Space,2015 (Accessed 28.11.2022); A. Berleant, Sensibility and Sense the Aesthetic Transformation of the Human World, Imprint Academic, UK, 2010

aesthetics. Sensibility is, indeed, the ability to perceive aesthetics and responds to delicate passions.[10] Our impressions of beauty are intimately connected to our human sensibilities. Praising something that comes close to its ideal, we simply describe its inherent quality and convey the direct impact it makes on our senses. Finding out what beautiful can be facilitated by redirecting attention to the things which appeal to our sensibility.[11] The question now is: how do we comprehend sensibility?

[10] K. Vermeir & M. F. Deckard, The Science of Sensibility: Reading Burke's Philosophical Enquiry, International Archives of the History of Ideas, Vol. 206 (2012)

[11] G. Santayana, The Sense of Beauty Being the Outlines of Aesthetic Theory, Charles Scribner`s Sons, New York, 1896

Before explaining the details about sensibility, it is necessary to consider what we mean by sensibility. Throughout history, scholars have debated on the topic of sensitivity since, in its literal meaning, it is the capacity to perceive beauty and compositional perfection as well as to appraise creative value based on aesthetic criteria.[12] What makes things beautiful or attractive is not how objectively stunning they may seem; it is, in fact, how they strike the observer's sensibility by reaching out to their intellect and heart.[13] On the other hand, the term sensibility describes the capacity for intense perception of something or mental reaction towards it; or it can be described as a feeling or awareness towards something. Therefore, the concept of sensibility tends to be regarded more as a way of reacting to feelings and applauding creative works rather

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[12] G. Corradi, E. G. Chuquichambi, J. R. Barrada, A. Clemente, M. Nadal, A new conception of visual aesthetic sensitivity, British Journal of Psychology, Vol.111 (2020), no.4, pp.630-658

For more information check out: G.Corradi, M. Belman, T. Currò, E. G.Chuquichambi, C. Rey, M. Nadal, Aesthetic sensitivity to curvature in real objects and abstract designs, Acta Psychologica, Vol.197(2019), pp.124-130; A. Clark, Whatever next? Predictive brains, situated agents, and the future of cognitive science. Behavioral and Brain Sciences, Vol.36(2013), pp.1-24

[13] G.Santayana, The Sense of Beauty Being the Outlines of Aesthetic Theory, Charles Scribner`s Sons, New York, 1896

than an analytical ability. For example, with our poetic senses, we can find the perfect words to evoke a certain mood while writing.[14] From this point of view, we can define sensibility as intense encountering feelings. One of the fundamental sources about sensibility, John Locke in *An Essay Concerning Human Understanding (1689),* indicates that

"I conceive those ideas in the understanding, are coeval with sensation, which is such an impression or motion, made in some part of the body, as makes it be taken notice of in the understanding." [15]
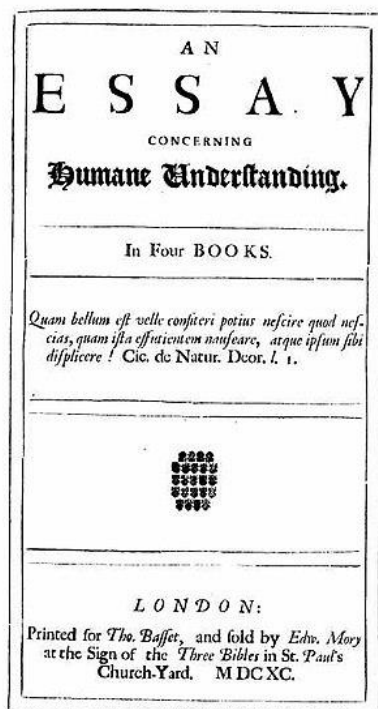
Fig. 1.2
J. Locke, An Essay Concerning Humane
Understanding,1689, Cover Page

[14] Definition from vocabulary dictionary (Accessed12.14.2022)

[15] J. Locke, An Essay Concerning Humane Understanding, London, 1689, p. 44.

The process of improving sensibility is another important point of discussion.

Some academicians maintain that education may help build and improve one's

sensibility whereas others dispute this viewpoint by justifying that sensibility

depends on individuals, and one can have high sensitivity without being

conscious about it. Therefore, according to Arnold Berleant, sensitivity is

perceptual awareness, which can be cultivated, directed, and targeted.

Eventually, sensibility entails more than a straightforward feeling and goes

beyond the realm of sensory stimuli. Strikingly, Berleant categorizes sensibility

as an educated feeling. He emphasizes the fact that we continuously grow our

perceptual knowledge and abilities as a result of the interactions and actions

we participate in. Parallel to what Berleant claims, the aesthetic sensibility at

the core of conscious awareness develops and employs this capacity.[16] On the

other hand, scholars like Guido Corradi justify that an individual can be

profoundly sensible while not being aware of aesthetics. For instance, beauty

can be identified and recognized wherever it exists if we are sensitive about it.

Moreover, he suggests that aesthetic sensitivity has little to do with the

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[16] A. Berleant, Aesthetic Sensibility, Ambiances International Journal of Sensory Environment,

Architecture and Urban Space,2015

capacity to discern externally the mandated criteria of beauty than a person's sensitivity to perceptual alterations.[17]
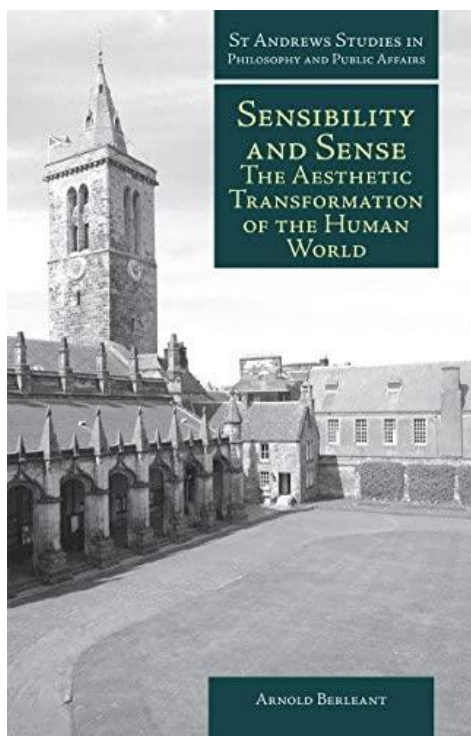
Fig. 1.3
A. Berleant, Sensibility and Senses: The Aesthetic Transformation of the Human World, 2010, Cover Page
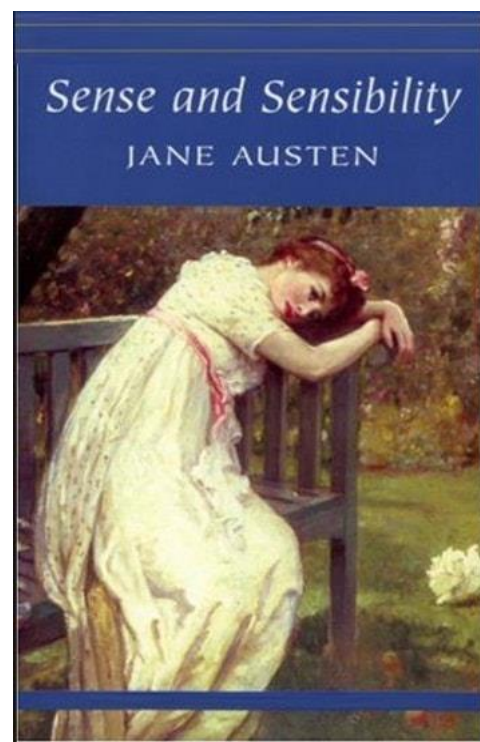
Fig. 1.4
J. Austen, Sense and Sensibility, 1811, Cover Page

[17] G. Corradi, You Can Be Aesthetically Sensitive and Know Nothing About Art, Psyche, 2020, (Accessed 12.18.2022)

1.2 AESTHETICS AS SENSIBILITY & EXPERIENCE

The study of sensory perception, which was pioneered by Alexander Baumgarten, is credited with introducing the concept of aesthetics into conversation. Yet, this comprehension of aesthetics was confined to artworks for a considerable amount of time. Throughout the history of Western aesthetics, natural objects and phenomena, architectural structures, utilitarian items, and human actions as well as what are now recognized as fine arts were the areas of interest. However, since the eighteenth century, the conversation on aesthetics has increasingly been centred on fine arts. Even while the aesthetics attitude theory holds that almost everything may serve as a source of aesthetic experience, this confining focus, nonetheless, emerged. In contrast to the growing interest in nature and environment, followed by the investigation of popular arts, there appeared the beginning of challenges to this rather narrow scope of aesthetics in the second half of the 20th century. As a result of this, the concept of aesthetics became more inclusive in our modern understanding as it moved into our experiences.[18] Deleuze also states in his book *The Logic of Sense* that aesthetics is a theory of sensibility, and

[18] Y. Saito, Aesthetics of the Everyday, The Stanford Encyclopedia of Philosophy, Metaphysics Research Lab, Standford University, 2021 (Accessed 11.12.2022)

sensibility can be in any form of experience. All of these historical and theoretical implementations give us a ground to consider aesthetics as a fundamentally philosophy of sensibility. In this regard, we can see the arts of the past as well as the arts of today and, accordingly, acknowledge that aesthetic value is as an often-concealed trait, which is present throughout all encounters. By adopting a more holistic view of aesthetics, we can see that there is something beautiful in every encounter and recognize that every experience possesses an aesthetic aspect.[19] Arnold Berleant, in his book *The Aesthetic Field*, underlines that the world is a place to experience, and all the knowledge about the world can be inferred through our senses. In this sense, experience helps us to recognize, order, and analyse everything within this world. By considering our relationships with the world as experience bases, we can elevate aesthetics to the centre of our lives. This elevation places a greater emphasis on something which is sensed. That's why at its core, sensibility is the study of aesthetics. To put it another way, aesthetics is an examination of whether or not the experience is pleasant, as well as an investigation into the degree of pleasantness. On the other hand, due to the nature of philosophy which generates more questions than responses, forming questions is more

[19] A. Berleant, Aesthetic Sensibility, Ambiances International Journal of Sensory Environment, Architecture and Urban Space,2015 (Accessed 28.11.2022)

significant than finding or attributing definitions to such questions. All these

points lead us to the understanding that aesthetics is worth analysing, while

holding surplus values to consider it as an important field of study.

Additionally, this recognition allows us to examine aesthetics from another

perspective, in a wider sense, to investigate the questions concerning our

experience of pleasure with things. Even though it may seem as a relatively

general approach; however, at least, it allows to develop a framework to reach

authentic comprehensions,[20] and this approach towards aesthetics as sensible

experience can be traced back to the work of the philosopher Alexander

Baumgarten[21], framer of aesthetics.[22] In his seminal book *Aesthetica*, he refers

to aesthetics as "scientia cognitionis sensitivae", the science of sensory

cognition.[23] In addition to this, it is also possible to refer to another reference

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[20] A. Westenberg, What is Aesthetics?, in: V. Vino (eds). Introduction to Philosophy: Aesthetic Theory and Practice, Open Access Textbook, Rebus Community, 2021

[21] N. Carroll, Recent Approaches to Aesthetic Experience, in: P. Lamarque & S. H. Olsen (eds). Aesthetics and the Philosophy of Art the Analytic Tradition an Anthology, Hoboken, Wiley-Blackwell, 2018

[22] G. Tavinor, The Aesthetics of Virtual Reality, New York, Routledge, 2022

[23] A. G. Baumgarten, Reflections on Poetry. Berkeley, California, University of California Press,2022 (Originally published 1954-Translated by K. Aschenbrenner and W. B. Holther)

from the origin of the word, which is αἰσθητικός.[24] This term refers to the experience and comprehension of the senses which allude to sensorial experience. Therefore, according to this understanding, aesthetics is about what is sensed and expressed sensitively rather than the analysis of what is thought or imagined.[25] According to Baumgarten, aesthetics is associated with sensible knowledge and the perfection of that knowledge whereas beauty is presented as the culmination of sensible knowledge,[26] and it is often considered to be an explanation for beauty or pleasing aspects of things, and, in a sense, this statement is right.[27] The nature of beauty, the norms for understanding and judging artistic works, and taste have been covered philosophically under the umbrella term aesthetics.[28] How humans see beauty

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[24] H. G. Liddell & R. Short, 1940, "αἰσθητικός." A Greek-English Lexicon

[25] A. Westenberg, What is Aesthetics?, in: V. Vino (eds). Introduction to Philosophy: Aesthetic Theory and Practice, Open Access Textbook, Rebus Community, 2021

[26] G. Keskin, Baumgarten'ın Felsefesinde Estetik ve Mantık, Felsefe Arkivi, Vol. 49 (2018), pp. 13-22

[27] A. Berleant, Aesthetic Sensibility, Ambiances International Journal of Sensory Environment, Architecture and Urban Space,2015 (Accessed 28.11.2022)

[28] T. Munro & R. Scruton, Aesthetics, Encyclopedia Britannica, 2022, (Accessed 27.11.2022)

and ugliness, as well as the experiences and judgments that lay underneath these impressions, have fascinated academicians to contribute to aesthetics. Moreover, it has been the objective of scholars to comprehend the essence of these experiences and judgments as well as to assess the legitimacy of them.[29]

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[29] N. Zangwill, Aesthetic Judgment, The Stanford Encyclopedia of Philosophy, Metaphysics Research Lab, Stanford University, Fall 2022 Edition (Accessed 28.11.2022)

1.3 THE SCOPE OF AESTHETICS

Understanding beauty in both art and nature has been the primary goal of the study of aesthetics. Depending on time and place, aesthetics' concentration on one of these has changed. In aesthetics, natural beauty had a significant value in the 18th and 19th centuries; however, in contrast, the 20th century turned back to art centralization approach. There has been a resurgence of interest in nature while aesthetics has been broadened in scope.[30] This change in aesthetics' evolution and definition brought one reality into discussion: aesthetics is more inclusive than it was imagined. It cannot be found just through artworks, even though art is the primary source of aesthetics. Many modern aestheticians, such as Saito, find it peculiar to introduce aesthetics as a branch of philosophy which is art oriented. Aesthetics may, indeed, be associated with art; however, Saito underlines that it covers a much broader territory than art, encompassing all human existence. In her book, *Everyday Aesthetics*, Saito takes a critical look at Western aesthetics, arguing that it has

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[30] A. Berleant, Aesthetic Sensibility, Ambiances International Journal of Sensory Environment, Architecture and Urban Space,2015 (Accessed 28.11.2022)

hampered the development of a theory, capable of addressing global challenges.[31] Arnold Berleant also defends the view that aesthetics takes place in the centre of our lives since it revives in every experience we engage, and that is the reason why the extent of its scope goes beyond traditional understandings. Due to these considerations in contemporary era, aesthetic appreciation extends beyond the arts and recognizes beauty in other areas as well. This situation results in gaining a better understanding of aesthetics because it is not only a tool to help to comprehend fine arts: this means, aesthetic consideration can be found in everyday experience: the chair seated on, or the door passed through. Eventually, it allows the scope of the program to extend beyond what it was mostly concentrated during the history. As another result of these changes to aesthetic comprehension, Arnold Berleant asserts that scholars have fundamental responsibilities, one of which is to face unseen obstacles since aesthetics is no longer limited to art and nature: it is also about a whole range of life experiences. As these developments change the conceptual frame of aesthetics and its scope, it is needed to recall the etymological meaning of aesthetics and Baumgarten's concentration on

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[31] V. Vino, Aesthetic Education, Neglect and Culture Today, in: V. Vino (eds). Introduction to Philosophy: Aesthetic Theory and Practice, Open Access Textbook, Rebus Community, 2021

perception, which refers to sensorial experiences.[32] To clarify what is meant by aesthetics as a sensorial experience and the extension of its scope, it is needed to go through some of the new titles of aesthetics in the contemporary age. Everyday aesthetics, urban aesthetics, environmental aesthetics, internet aesthetics, and specifically virtual reality are the new matters of discussion in the aesthetics field.

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[32] A. Berleant, Aesthetic Sensibility, Ambiances International Journal of Sensory Environment, Architecture and Urban Space, 2015 (Accessed 28.11.2022)

"At every turn of my research and investigation, I found a gem lying around,

ready to be polished and brought to life"

Yuriko Saito-Everyday Aesthetics

1.3.1. Everyday Aesthetics

By integrating the things, occasions, and activities which shape people's daily lives, *everyday aesthetics* expands individuals' horizon of experiences; however, rather than creating a new arena, it is appropriate to describe this recent development as the restoration of the breadth of aesthetics.[33] Before explaining the particular qualities of everyday aesthetics and the benefits of using the term everyday aesthetics, it is required to highlight the concept of everyday aesthetics, and, ultimately, understand the meaning of *everyday*, which is the inescapable foundation on which everything else is constructed in everyday life. In every aspect of life, one is reliant upon everyday experiences. It is virtually impossible to live a life free of everydayness, and it is difficult to even envision what such a life might look like. There are certain items, actions, and occasions that occur every day, along with specific attitudes and relationships everyone holds and establishes with them. Everyday things, activities, and events are defined based on the time on which they are spent, and generally, these experiences refer to the things and occurrences which connected to an individual's job, environment, and interests. It is needed to

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[33] Y. Saito, Aesthetics of the Everyday, The Stanford Encyclopedia of Philosophy, Metaphysics Research Lab, Standford University, 2021 (Accessed 11.12.2022)

pinpoint that even though the same activities repeatedly occur in everyday life, they differ from person to person. This also implies that one can only acquire experience-based knowledge of their own daily lives. Our current day is a unique type of interaction between individuals and their surroundings. Because they have to develop a daily relationship with the things around themselves and, in fact, no one else can replicate such experiences for them, no items or events behave in the same way for everyone. As a result, this phenomenon sheds light on the dynamic relationships between individuals and the activities they carry out.[34]

Everyday aesthetics also refers to a specific manner, which occurs outside traditional modes of creative expression rather than just being a synonym for minor, vernacular, or non-fine art. Rather than episodic events or undertakings, everyday aesthetics is concerned with regular, daily activities. It is defined as those areas of life which are characterized by commonly observed daily activities which are imbued with aesthetic qualities.[35] Kevin Melchionne defines these activities as typical *daily settings*, by indicating that it is necessary to

[34] O. Naukkarinen, What is 'Everyday' in Everyday Aesthetics?, Contemporary Aesthetics (Journal Archive), Vol. 11 (2013), no. 14.

[35] K. Melchionne, The Definition of Everyday Aesthetics, Contemporary Aesthetics (Journal Archive), Vol. 11 (2013), no. 26

take aesthetics into account for these daily activities.[36] Melchionne divides

these daily activities into five categories: eating, dressing, living, socializing,

and going out. In each of these activities, individual eats, dresses, lives

somewhere, interacts with others, and goes to places for work or other

purposes, behind all of which there rests an aesthetic value.[37] In this regard,

the goal of everyday aesthetics is to take into consideration all these aspects

of a person's complex aesthetic existence. This goal includes numerous aspects

of daily life events, such as domestic responsibilities, social interactions, and

routine activities, such as cleaning, homemaking, cooking, dressing, eating,

walking, and bathing.[38] The elucidation of this goal leads to the realization that

the focus of everyday aesthetics is on actions rather than items.[39] In other

words, it is the method of accomplishing something wonderful instead of

concentrating on the beauty of the things themselves. Since aesthetics can

[36] O. Naukkarinen, What is 'Everyday' in Everyday Aesthetics?, Contemporary Aesthetics (Journal Archive), Vol. 11 (2013), no. 14.

[37] K. Melchionne, The Definition of Everyday Aesthetics, Contemporary Aesthetics (Journal Archive), Vol. 11 (2013), no. 26

[38] Y. Saito, Aesthetics of the Everyday, The Stanford Encyclopedia of Philosophy, Metaphysics Research Lab, Standford University, 2021 (Accessed 11.12.2022)

[39] K. Melcionne, The Point of Everyday Aesthetics, Contemporary Aesthetics (Journal Archive), Vol. 12(2014), no. 17

be comprehended through senses, and since sight is one of the most significant among these senses, then it should be present in all aspects of life, especially in the everyday activities in which an individual spends majority of their time.

Fig. 1.5
Garda, Italy, June 2022, by Author

For instance, since one cannot frequently decorate their living places, it cannot be considered as a habit; however, if a person opens a window every day, then positioning curtains will become a habit. After that, interacting with the curtain and observing its location in the room becomes another part of everyday aesthetics.

Although aesthetic practices infiltrate every aspect of life, the influence of these practices may not be clear enough. Moreover, as they are fleeting or shallow, common aesthetic practices might not affect others. This perspective reveals that these aesthetic practices are not particularly important; however, they are common.[40] It should also be indicated that aesthetics in daily life has a significant impact on well-being,[41] and subjective well-being is one of the goals of daily aesthetics and positive psychology. A consistent stream of pleasant emotions, the absence of negative emotions, pleasure in one's primary activities, such as jobs and relationships, and a simple happy outlook on life are all signs of well-being. Looking from a different perspective, high levels of good feelings, low levels of negative emotion, a sense of contentment

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[40] C. Dowling, The Aesthetics of Daily Life, British Journal of Aesthetics, Vol. 50 (2010), no.3, pp:225-242

[41] K. Melchionne, The Definition of Everyday Aesthetics, Contemporary Aesthetics (Journal Archive), Vol. 11 (2013), no. 26

in important domains, and favourable evaluations are the four primary components of well-being. People who provide themselves with these favourable reviews in these four categories are more likely to call themselves as happy human beings whereas unhappy people are less likely to come up with affirmative answers in these areas. Similarly, positive mental states have positive effects on relationships and workplace affairs; positive emotions improve our ability to handle adversity and inspire creativity and discovery. Even stressful situations tend to improve subjective well-being when viewed positively. On the other hand, negative emotions, like wariness and melancholy, tend to distract the attention and reduce the efficiency of mind.[42] As a result, life is perceived as more enjoyable with positive feelings, resulting in a downward spiral.[43]

In contrast to these positive impacts and the importance of everyday aesthetics, there are some scholars who cast doubt on the impacts of aesthetics and indicate that it will lose its meaning within this new dimension of the topic by justifying that everyday aesthetics has evolved into a kind of

[42] K. Melcionne, The Point of Everyday Aesthetics, Contemporary Aesthetics (Journal Archive), Vol. 12(2014), no. 17

[43] B. Fredrickson & T. Joiner, Positive Emotions Trigger Upward Spirals Toward Emotional WellBeing, Psychological Science, Vol.13 (2002), no.2, pp. 172-75

niche field. In fact, some of the debates concerning the controversial nature of aesthetics stem from the subject's ambiguity and susceptibility to commonly reckoned, though incorrect, inferior tasks, like doing laundry, or simply passive activities in the category of daily aesthetics. These activities may appear like unexpected instances for aesthetic evaluation. Everyday aesthetics has occasionally been used by academics as a sort of catch-all, a fallback, third category for the things which don't fit neatly into either fine arts or the realm of natural beauty.[44] For example, Tom Leddy in his book, *The Extraordinary in the Ordinary: The Aesthetics of Everyday Life (2012)* uses quote "things that are neither art nor nature" to describe everyday aesthetics in a negative, however, in the meantime, inclusive manner. Other scholars have objected to this extension, claiming that it compromises some of the key tenets of the aesthetic notion. For instance, Christopher Dowling expresses the concern that "we are in danger of losing the acute and substantial emphasis on those reactions which properly engage critical attention and interest" in light of how inconsequential many common aesthetic experiences appear to be.[45]

[44] K. Melchionne, The Definition of Everyday Aesthetics, Contemporary Aesthetics (Journal Archive), Vol. 11 (2013), no. 26

[45] K. Melchionne, Aesthetic Experience in Everyday Life: A Reply to Dowling, British Journal of Aesthetics, Vol. 41(2011), no. 4, pp: 437-442

1.3.2. Urban Aesthetics

Aesthetics is present in various areas, including urban environments and the intimate relationship between perception and urban surroundings implies the fact that aesthetic qualities are often involved in some way with urban settings. Indeed, urban areas are not just a space for structures: they are also a place for human relationships and activities. Interactions which include both place and people become the whereabouts of aesthetic experiences once again. At this juncture, the following questions should be taken into account: Why do we need aesthetics in urban surroundings? This is the essential question that will direct the attention toward comprehending the concept of urban aesthetics.

One of the most important reasons about the essentiality of the above questions is the vitality of urban surroundings. Urban vitality is demonstrated through urban life, which may be characterized as the interplay of urban areas and human activities. In this context, Stenberg (1991) emphasized that urban aesthetics shapes a city's character and plays a crucial role in urban dynamics: the phenomena that give cities their identities and sense of community. For instance, it can be observed that the vitality of certain urban spaces is considerably more effective than that of other urban spaces, which don't have a distinct identity in the case of many historic and modern locations where

have created their own brand. Furthermore, it was stated by Kondo et al. (2009) and Cerin and Leslie (2008) that positive aesthetic views of the environment show a substantial correlation with higher levels of vitality and leisure activities. According to Chion (2009), in the instance of San Francisco, the intercommunication of citizens results in complex and distinct arrangements of locations and activities, which gives urban areas their vibrancy. This space's vitality encourages the individuals to define their identities in ways which are compatible with urban aesthetics, allowing them to interact with the city and identify themselves through urbanization. Here, identity signifies in two levels: identity of the city and identity of citizens. It is crucial to note that a city's public places contribute to identity, memories, and traditions. Therefore, it is necessary to respect and appreciate a city and its inhabitants' sense of distinctiveness.[46] Since cities have distinct identities which are readily apparent to both residents and outsiders, both aesthetic and social factors are crucial in the formation of that identity. Consequently, that identification is already a part of a citizen's legacy in urban areas. The main cause of the positive view of urban public space is the success of the invention

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[46] H. A. Nia, The Role of Urban Aesthetics on Enhancing Vitality of Urban Spaces, Khulna University Studies, Vol.18 (2021), No.2, pp: 59-77

of a place and the materialization of it through its identity.[47]

On the other hand, urban aesthetics plays an important part in the design, construction, and upkeeping of cities as well as in the physical and mental well-being of individuals and, finally, the growth and development of communities.[48] There are several researches carried out to determine how urban aesthetics and the health of urban places are related. For instance, pleasant and creative landscape elements are usually associated with leisure-related health activities.[49] In light of these data, urban aesthetics can be readily associated with well-being, and the impact that has on the well-being of citizens cannot be underestimated. There is no doubt that the city's improving quality of life affects residents' well-being since it produces happier, healthier individuals.

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[47] S. Garcia-Domenech, Urban Aesthetics and Social Function of Actual Public Space: A Desirable Balance, Theoretical and Empirical Research in Urban Management, Research Centre in Public Administration and Public Services, Vol.10(2015), No.4, pp: 54-65

[48] V. Vihanninjoki, Urban Places as Aesthetic Phenomena: Framework for a Place-Based Ontology of Urban Lifeworld, Topoi, Vol.40 (2019), no.2, pp:461-470

[49] H. A. Nia, The Role of Urban Aesthetics on Enhancing Vitality of Urban Spaces, Khulna University Studies, Vol.18 (2021), No.2, pp: 59-77

Fig. 1.6
Libraries as meeting points, Mantua,
Italy, September 2022, by Author

Fig. 1.7
Squares as activity areas, Weimar,
Germany, March 2022, by Author

Fig. 1.8
Parks to express creativity, Mantua,
Italy, September 2022, by Author

Fig. 1.9
Squares as a stage, Weimar,
Germany, March 2022, by Author

1.3.3. Environmental Aesthetics

The field of environmental aesthetics is a relatively new subfield that has connections not just with philosophical aesthetics, but also with environmental philosophy. It evolved in the latter third of the twentieth century as a response to the emphasis placed by aesthetics on the philosophy of art, particularly analytic aesthetics. Environmental aesthetics has connections with a wide variety of other subjects in addition to the re-evaluation of the aspects which are considered to be a part of conventional philosophy and aesthetics of nature. It concentrates on revealing the uniqueness of pristine nature as well as understanding and exhibiting this lyrical, picturesque and visual pleasure not only in landscapes, but also in gardens and everyday life.[50] Moreover, environmental aesthetics redirects attention to the world as a whole entity since it is concerned not only with items, but also with surroundings. Since environmental aesthetics interested in the different type of surroundings, new environments which are emerged as a result of technological developments, are in the scope of environmental aesthetics. Cybermedia, digital media and virtual environments are relatively new surroundings of the environmental aesthetics; to be more explicit, computer games, radio, cinema, television,

[50] S. Feloj, Environmental Aesthetics, International Lexicon of Aesthetics, Autumn 2018, (Accessed 03.04.2023)

social media, and most intriguingly virtual reality can be example of these brand-new mediums. Since this study will examine virtual reality as a new entity, in this section, firstly we will be addressing emergence of environmental aesthetics, and finally virtual environments will be the topic of discussion.

Even though environmental aesthetics emerged in 1960s, it is originated from 18th century. Carlson (2021) asserted that the origin of environmental aesthetics arises from landscape aesthetics.[51] Carlson also (2020) formulated a significant approach to demonstrate the claim that the origin of the field stems from aesthetics of nature. One typical narrative state that (Stolnitz 1961) the idea of the nature of aesthetics was first articulated by the Third Earl of Shaftesbury, who defined it as a concept of aesthetics. With Francis Hutcheson, it was further broadened and elaborated by linking aesthetic experience not just with personal elements, but also with underlining connections it has with nature, as it was later defined as a state of mind by Archibald Alison.[52]

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[51] A. Carlson, Environmental Aesthetics, Routledge Encyclopedia of Philosophy,2021, (Accessed 03.04.2023)

[52] A. Carlson, Environmental Aesthetics, The Stanford Encyclopedia of Philosophy, Metaphysics Research Lab, Stanford University, Winter 2020, (Accessed 03.04.2023)

The emphasis on the aesthetics of nature prevalent in the 18th century faded away to a large extent as a result of the emphasis that was placed on the philosophy of art in the 19th century. So, aesthetics of nature also experienced a setback in terms of philosophical progress along with other sub-branches of aesthetics. Here Carlson presents a distinct perspective, arguing that the major elements of nature in philosophical aesthetics — the idea of sublime, the approach of disinterestedness, the picturesque — have already achieved their apex with Kant and the claimed that this situation caused its stagnation in the 19th century. In contrast to Europe's stagnation, North America was developing a fresh perspective on philosophy of nature. This appreciation of nature has shown itself in different fields such as writing, science, painting, and so on. The concept revealed itself specifically in writing, for example, in Henry David Thoreau's essays. The main theme of the nature of aesthetics and the concept of sublime and picturesque have manifested themselves in other artistic arenas such as the paintings of Thomas Cole and Frederic Church. However, since the main appreciation of nature has shown itself in writings, the advancements in natural sciences significantly influenced this conception. American naturalist John Muir, who was an eminent scholar in natural history, articulated this point of view in his writings at the end of 19th century. Muir brought a significant amount of attention to the aesthetics of nature through his essay *A Near View of the High Sierra* (Muir 1894), which is one of his most

famous works. This approach to nature, brought Muir to see the natural environments as a whole entity and understand nature aesthetically. Despite notable exceptions, the negation of the nature of aesthetics emerged in Anglo-American philosophy throughout the first half of the twentieth century. By the end of the 20th century, environmental aesthetics stood in reaction to all these instances of neglection of nature. Likewise, apparent environmental degradation was also another factor in its birth. As a result of the advances of the 20th century, environments have taken on a great deal of responsibility, and aesthetic appraisal has become an important area of focus. Awareness of environmental movements in terms of both theory and practice in academic world was also another reason for the emergence of environmental aesthetics. Environmental aesthetics have been pushed farther than conventional aesthetics as a result of all the above-stated reasons. These factors not only influenced environmental aesthetics, but also laid the groundwork for the primary theoretical debates and philosophical concerns that have emerged in the field. These questions have been about the most basic things, like what and how to appreciate objects and experiences. The responses to these inquiries have given rise to a diverse range of philosophical perspectives, which can be divided into two categories: cognitive and noncognitive. The former category emphasizes a variety of emotional and feeling-related states and reactions, which are often considered to be non-cognitive aspects of aesthetic

experience. On the other hand, cognitive aspect holds a more analytic approach; it focuses on the appreciation of the nature of objects and the knowledge about their origins, suggesting that it is necessary for appropriate aesthetic appreciations. Both noncognitive and cognitive categories had their first iterations formed primarily via reference to large-scale natural surroundings. However, a significant portion of the recent research in this discipline has concentrated on human surroundings, activities, and everyday life experiences.[53]

Virtual environments are one of the newest human surroundings which can be described as a three-dimensional construct that may be experienced instead of the real world by replacing regular sensory inputs with those created by the computer. The most significant feature of the virtual environments is being immersive. The employment of the body inside a spatial construct that, albeit virtual, surrounds the participant in three-dimensional space gives conception to phenomenological embodiment within virtual settings, and degree of the immersion into this space determines phenomenological embodiment of the virtual environments. As a result, virtual environments have a high potential to affect people directly and intimately. Another key factor to comprehend

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[53] A. Carlson, Environmental Aesthetics, The Stanford Encyclopedia of Philosophy, Metaphysics Research Lab, Stanford University, Winter 2020, (Accessed 03.04.2023)

ontological and phenomenological nature of virtual environments is *experience*. Erik Davis indicates it as "world of participation",[54] while Jacquelyn Ford Morie defines this key factor as *meaningful* by referring its memorable and cohesive nature. Due to its distinctive characteristics of virtual environments, being immersive and experience based, distinguish them from other mediums. Because rather than simple being influenced by technological features, virtual environments entirely engage with the users. On the other hand, users have deliberated and purposeful control over their surroundings which make them a part of the scenario and integrate them into the environment. Moreover, virtual environments dissolves mind-body incompatibility by connecting people not only through mind but most importantly, through the fully immersive of the self (diffusion between mind and body). And, this cognitive process determines how users will empathize with virtual environments in terms of quality, presence, and flow. The discussion and examination of virtual environments will be elaborated under the title of *Virtual Lebnswelt* in the second chapter.

[54] E. Davis, Techgnosis: Myth, Magic + Mysticism in the Age of Information, Three Rivers Press, New York, NY, 1998.

[55] J. Ford Morie, Meaning and Emplacement in Expressive Immersive Virtual Environments, University of East London, Thesis for Doctor of Philosophy, 2007

Fig. 1.10
Painted Gas Cover, Florence, Italy,
November 2021, by Author

Fig. 1.11
Beautifully Written Signboard,
Florence, Italy, November 2021,
by Author

1.3.4 Aesthetics and Virtual Reality

Considering aesthetics as a field based on perception, the scope and significance of the field stretch considerably beyond what we previously knew from aesthetics. This new understanding of aesthetics raised many different branches as it is stated above. There is no doubt that recognition of aesthetics developed further from object base to experience base. And, considering background of aesthetics which was mostly art and nature oriented, this shift regarding the understanding of aesthetics and its influence in our life cannot be underestimated as it has relocated from museums into the core of life. Another remarkable point which needs to be underlined is that recent developments of technology intersect with new understanding of aesthetics very sharply, since this advanced technology has direct influence on the perception of the world.

Virtual reality, a new media, focuses on sensory experience of the environment. It is a hybrid environment in which users' brains are placed in vats and they are connected to electronic equipment to experience *a new reality* and users are connected to this new world through their senses, implying that it is profoundly related to aesthetics. With this, characteristics of virtual reality can be described as immersive, interactive and experience base. On the other hand, as virtual reality is a new entity, it raises numerous questions about its

ontology, and there's no doubt that understanding this new technology will increase our comprehension of aesthetics in virtual reality. Because individuals are immersed in three-dimensional space and given immersive aesthetic experiences through the built environment. These encounters are different from experiencing typical works of art. Being not only visitor but also performer in the sense-based environment has a direct influence on the perception on aesthetics. Considering these distinctive characteristics of virtual reality, second chapter will be devoted for deep analysing of virtual reality from different perspectives such as ontologically, experience-base and reformation of body in virtual environment.

CHAPTER II

VIRTUAL REALITY

Virtual reality is the
'ultimate empathy machine.'

Chris Milk

1. VIRTUAL REALITY

The development of new ways to communicate and experience ideas has had a significant impact on the grip of human history. It's a well-known fact that the rise of technology is emblematic of our era,[56] and the use of virtual reality can be the most objective indication of this predicament. Virtual reality is a relatively new medium which has emerged as the result of the development of new technologies. This new medium is now the focus of profound research and development efforts, aiming at yielding more practical applications and effective ways of communication.[57]

The fact that the definition of virtual reality is taken from the concepts of both *virtuality* and *reality* should not come as a surprise. The term virtual implies near; however, the word reality is related to what we, as human beings, indeed go through in our lives. Therefore, *near-reality* is what one should bear in mind when they hear the term virtual reality. It is conceivable that this might mean anything in general; however, in most instances, it is used to refer to a certain form of simulated reality.[58]

[56] J. du Toit, Introduction – Phenomenology and virtuality, Indo Pacific Journal of Phenomenology, Vol.20 (2020), no.1, pp.1

[57] W. R. Sherman, A. B. Craig, Understanding Virtual Reality, San Francisco, Morgan Kaufmann, 2003

[58] R. Diodato, Virtual Reality, and Aesthetic Experience. Philosophies, Vol.7 (2022), no.2
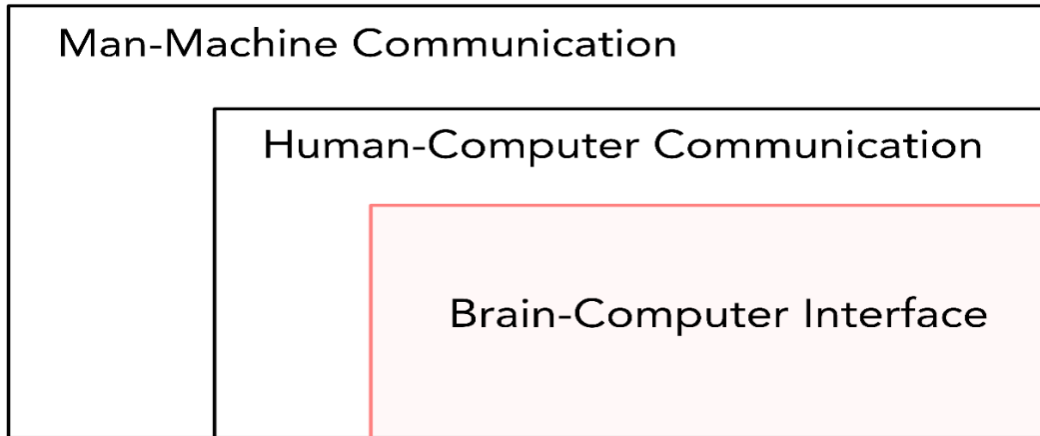
Fig. 2.2

R. J. Rak, M. Kołodziej, A. Majkowski, Brain-Computer Interface As Measurement and Control System The Review Paper, Metrology and Measurement Systems, Vol. 19, No. 3, pp. 427-444
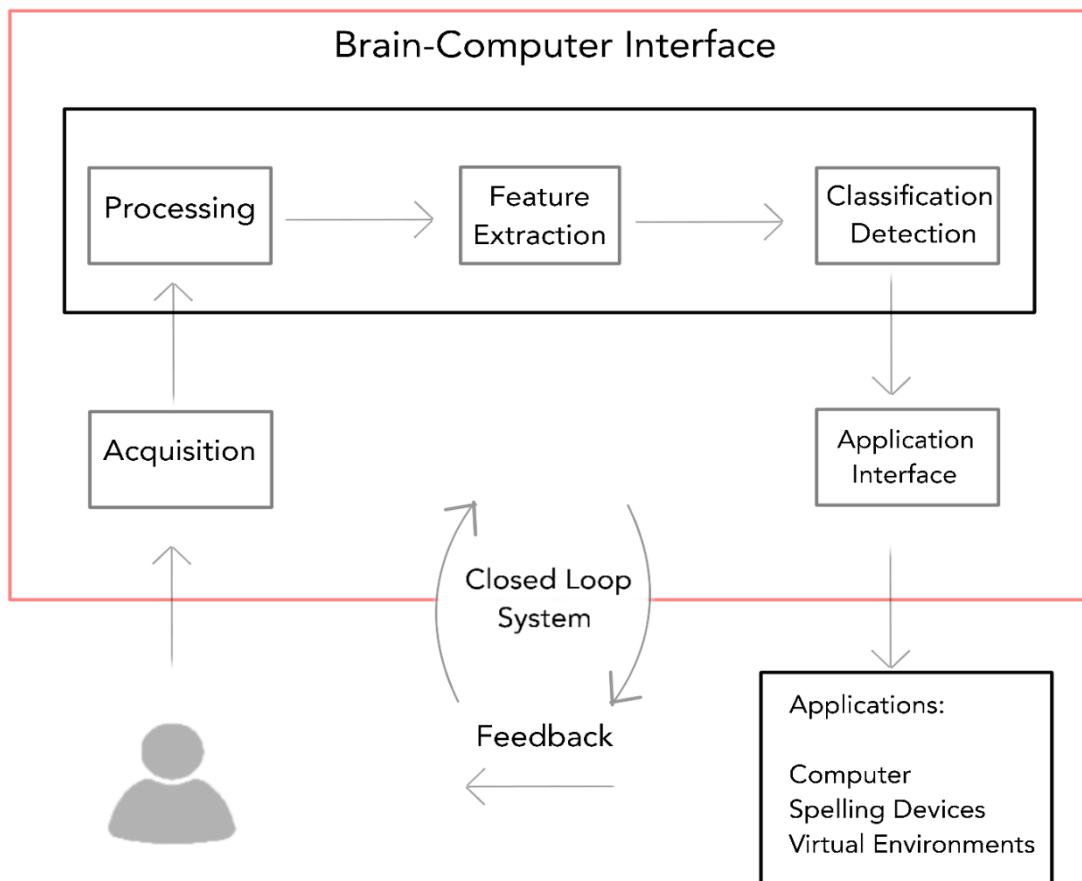
Fig. 2.3

A. Malek, S. Sadeghi, Methodological Note: Recent Advances in Hybrid Brain-Computer Interface Systems: A Technological and Quantitative Review, Basic and Clinical Neuroscience, Vol.9, No.5, pp. 373-388

2.1. ONTOLOGY AND PHENOMENOLOGY

At the very beginning, it is necessary to make a few remarks to set the stage for this research. Considering this goal, the current part is devoted to an evaluation of virtual reality from an ontological point of view. The term virtual reality is a compound phrase that is made up of two words: *real* and *virtual.* Although it may seem ironic to blend these two seemingly opposed concepts, in truth, their meanings are not entirely distinct from each other. It is also supported by many scholars, as Roberto Diodato and Zsuzsanna Kondor, that there is no essential division between the real and the virtual, even though the customary and scholastic approach draws a line between these two words. Before going into an investigation between the virtual and real, it is needed to take a glance at the meaning of virtual in the historical background along with its contemporary meaning. This will provide a context for this study. It is, indeed, possible to think of the antique Latin word *virtus* as a type of skill or ability which works efficiently, and in the scholastic usage, the effect is the same as this definition; however, the form and material may differ. In modern contexts, the word virtual describes a particular type of illusion, impression, or perception. It also refers to the experiences that can be gained through the

use of computational equipments, which can be replaced by real-life experiences.[59] This contemporary depiction enables us to realize a different sort of environment in which we may encounter different things. The assumption that there is a distinction between real and virtual is safe to make. On the other hand, if this difference were completely clear-cut, it would be impossible to use the word virtual reality in the same manner that it is used now. In this regard, giving the word *real* such a broad that there is a distinction between real and virtual is safe to make. On the other hand, if this difference was completely clear-cut, it would be impossible to use the word virtual reality in the same manner that it is used now. In this regard, giving the word *real* such a broad interpretation needs to be avoided, as it would mean nothing more than entities. From this perspective, this study considers what is real in contrast to what is apparent or illusory, or in terms of the thing which is the subject of a hallucination.[60] If reality is not a straightforward concept that can be easily attributed to the environment of entities, then this compels us to search for another environment to understand the reality which we can conceive through senses. For instance, considering the difference between riding a real motorcycle and using a motorcycle-riding simulator, it is possible

[59] Z. Kondor, BEYOND VIRTUAL: MOVEMENT, IMAGES, AND TEXT

[60] R. Diodato, Virtual Reality and Aesthetic Experience. Philosophies, Vol.7 (2022), no.2

to tell the difference between riding a real motorcycle and using a motorcycle-riding simulator; however, there is not a significant difference between the actual and virtual environments in terms of perception and motor responses. In addition to this, it may seem that the virtual world and actual world converge, since the virtual manipulations might lead to discoveries in scientific studies. Allegory of the Cave, which is developed by Plato, illustrates the distinct separation between the bodily-sensations, gained-experiences and the knowledge which is perceivable to one's spirit. Accordingly, the people who are imprisoned in the cave are only able to perceive the shadows; however, the genuine information is unavailable to their senses. In a similar way, this idea asserts that there is a world beyond the everyday life experiences, which can be perceived through deep contemplations.[61]

[61] Z. Kondor, BEYOND VIRTUAL: MOVEMENT, IMAGES, AND TEXT

2.1.1 NEW ENTITY

For establishment of different kinds of realities, either virtual or actual, it's necessary to identify ontologically distinct characteristics. And the pluralistic approach for variation of realities is offered within the framework of modern focus-on-reality philosophy.[62] Evaluating virtual reality as a new entity, which is derived from technology, needs to be examined in different categories such as body/image, internal/external binaries, interactivity, hybridity, and many others to come to an ontological point of view. The virtual being is, in fact, the outcome of human-machine interactions, facilitated by technology. As a result of the fact that this entity can only exist at a certain degree of interactions, the significance of this category cannot be overstated in comparison to other realities.[63]

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[62] O. S. Gilyazova, The Relationship Between Virtual and Actual Reality: Phenomenological Ontological Approach. Journal of History Culture and Art Research, Vol.8 (2019) no.1, pp. 196-204

[63] R. Diodato, Philosophy of Engineering and Technology: Socio Cultural, Legal, Scientific and Aesthetic Perspectives, Cham, Springer, 2020

2.1.1.1 Body / Image

One important part of the evolution of presence is the modification of our own bodily experiences[64]. The term *body image* refers to the sentiments connected to perception[65], and in a general sense, we may characterize virtual as a body image,[66] which can also be described as an interactive digital image where an algorithm interacts with a user through binary representations.[67] On the other

Body Image .... The Highest Degree of Sensation, Perception & Interactivity

Described as an Interactive Digital Image
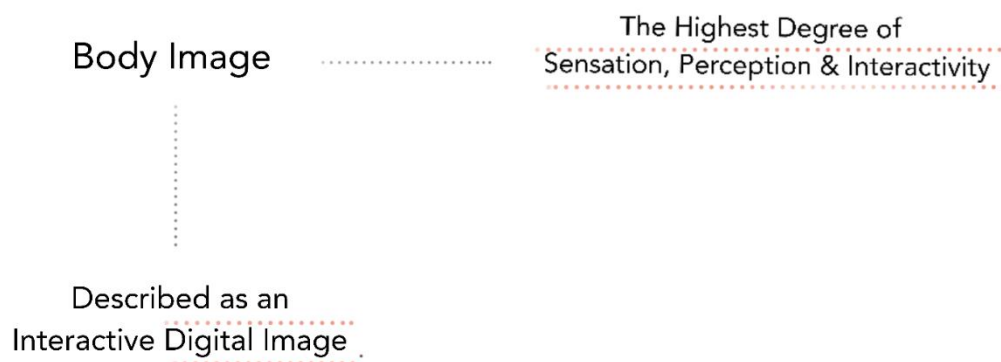
Fig. 2.4
Body- Image, by Author

[64] M. Grimshaw, The Oxford Handbook of Virtuality, New York, Oxford University Press, 2014

[65] M. A. White, "What is body image?", MedicalNewsToday, 2022,

[66] R. Diodato, Virtual Reality, and Aesthetic Experience. Philosophies, Vol.7 (2022), no.2

[67] R. Diodato, Philosophy of Engineering and Technology: Socio Cultural, Legal, Scientific and Aesthetic Perspectives, Cham, Springer, 2020

hand, virtual reality is defined by Heim's[68] as

"…a technology that convinces the participant that he or she is actually in another place by substituting the primary sensory input with data received produced by a computer . . . when the virtual world becomes a workspace, and the user identifies es with the virtual body and feels a sense of belonging to a virtual community."

Users can establish meaningful connections with computers within the context of items, events, and environments thanks to technological gadgets. From a different angle, it might be seen as the development of *biorobotic* implants which provide us access to the highest possible degree of sensation and interactivity. Users may engage with these digital worlds through the use of virtual icons, symbols, or avatars which seem to carry out activities into the digital world, and result in modifications within this (digital) world. On other occasions, the users' role as spectators overlaps with their role as players in

[68] 1998:221, check out Grimshaw's The Oxford Handbook of Virtuality for more virtual definitions

the scenario.[69] This body image is strikingly malleable and has the potential to

be extended beyond the confinements of the biological body,[70] since the virtual

reality has long been known for accomplishing a kind of *sensory*

rearrangement, culminating in the transformed experiences of one's own

body.[71] The entire aesthetic changes or modifications created by users in

digital or virtual settings are conceivable due to the fact that the sense-based

pictures, including sight, hearing, touch, etc., are nothing more than several

phenomenal versions of an algorithmic matrix and multiple aesthetic

actualizations the programs in such settings yield.[72] Nevertheless, another

point which needs to be taken into consideration is that the level of interactivity

of digital objects varies, depending on whether the interaction relies on *rigid*

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[69] R. Diodato, Philosophy of Engineering and Technology: Socio Cultural, Legal, Scientific and

Aesthetic Perspectives, Cham, Springer, 2020

[70] M. Grimshaw, The Oxford Handbook of Virtuality, New York, Oxford University Press, 2014

[71] Grimshaw mentioned this in, M. Grimshaw, The Oxford Handbook of Virtuality, New York,

Oxford University Press, 2014, which is originally cited from Biocca and Rolland 1998; Castiello

et al. 2004; Normand et al. 2011; Riva 1998; Riva et al. 2011

[72] R. Diodato, About virtual experience. Metodo. International Studies in Phenomenology and

Philosophy, Vol.2 (2014), pp. 47–68

or *non-rigid* algorithms. This is a remarkable difference to understand since rigid algorithms organize every interaction in advance; however, non-rigid algorithms are learnt as reveal themselves based on the interaction taking place.[73]

2.1.1.2 Internal / External

Time is measured in *moments*, which refers to discrete intervals of time. This also has implications for the countability of duration. The fact that time is broken up into smaller chunks, which are referred as moments or instants, demonstrates the fact that time is a quantity. Due to the nature of this circumstance, we have a propensity to forge both a direct and an indirect link between the reality and numbers, or the coding languages and the material of electrical devices. Moreover, if a virtual body is a being in its own time and space setting, however, at the same time, it is not attributable since its realization based on any interaction with the user, then, in the same way, it

[73] R. Diodato, Philosophy of Engineering and Technology: Socio Cultural, Legal, Scientific and Aesthetic Perspectives, Cham, Springer, 2020

can be stated that the reality itself is interactive,[74] and this interaction is simultaneously internal and external. Similarly, David Deutsch states the same interpretation at the core of the previously remarked formula:

"What may not be so obvious is that our 'direct' experience of the world through our senses is virtual reality too. For our external experience is never direct; nor do we even experience the signals in our nerves directly—we would not know what to make of the streams of electrical crackles that they carry. What we experience directly is a virtual-reality rendering, conveniently generated for us by our unconscious minds from sensory data plus complex inborn and acquired theories (i.e. programs) about how to interpret them" [75]

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[74] R. Diodato, Philosophy of Engineering and Technology: Socio-Cultural, Legal, Scientific and Aesthetic Perspectives, Cham, Springer, 2020

[75] Deutsch, 1997, p. 120

According to Diodato, Deutsch does not mean anything other than the transformation of an experimental being into another form in an intuitive and spiritual dimension, which refers to the transcendentalisation[76] of the empiric.[77] When considered from a psychophysical[78] point of view, we have an effect on our direct experience of reality, which can be understood as the constitution of an environment rich in sensation. This is the realization that the amassing of this information requires an ontological connection. From this vantage point, it is clear that virtual body seems to have at least one characteristic which is separable from the real body, and which demonstrates its ontology. It is also possible to claim that the reality is not interactive like virtual reality, and those actual bodies are not events like virtual bodies because virtual bodies sidestep the external/internal dichotomy in a manner that is significantly more obvious than that of so-called real bodies. But it is significant to note that the virtual entity is a growing mechanism and process due to its nimble and dynamic character. A scenario of interaction exists whenever one is aware of a body which makes some form of touch-with-me,

[76] Transcendentalisation: knowledge derived from intuitive sources

[77] Empiric: Relies solely on observation and experiment

[78] Psychophysical: Psychophysics is the subfield of psychology devoted to the study of physical stimuli and their interaction with sensory systems

regardless of the nature of that contact. However, it seems that objects, especially external ones, have the distinctive characteristic of not being able to be altered.[79]

John A. Waterworth and Eva L. Waterworth introduced another approach to the topic by distinguishing the difference between self and non-self, which means we present ourselves internally and externally. Since presence is indicated as the sense of being in an existent surrounding, human consciousness derives itself from the things happening from outside, instead of from within. Our physical appearance is one kind of existence, however, on the other hand, our consciousness is another appearance. That leads us to the internal and external divisions of the presence. In other words, the sense of presence is an embodiment which means we arrange ourselves depending on the information we gather from our surroundings, and virtual reality plays a crucial role at that point since it is diverse in our surroundings, regardless of where we are in the physical world. That situation also reforms the term *embodied* to a *distributed embodiment*, since virtual reality enables us to diversify presence, we involve in. As previous publications justify, the meaning of presence is being aware of

[79] R. Diodato, Philosophy of Engineering and Technology: Socio Cultural, Legal, Scientific and Aesthetic Perspectives, Cham, Springer, 2020

what's going on in the environment, being conscious of your surrounding and

being conquered by the consciousness of the external world. The fact of

alteration and new formations in the feeling of presence generates itself when

the border of self is extended by technology. That also creates a background

for understanding how our sense of presence can be transformed into another

body type because mind is not only positioned internally, but also shaped by

the knowledge we gain from our experiences as external confrontations.[80]

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[80] M. Grimshaw, The Oxford Handbook of Virtuality, New York, Oxford University Press, 2014

2.1.1.3 Interactivity

The human sciences have always defined their notions of interaction in response to new technology and media related to the close collaboration with the and foundations emerging from the areas of communication and media studies. On the other hand, technological research is open to ideas of social interaction.[81] Interactivity is one of the most distinguishing features of the virtual world, which may be attributed to the fact that computer technology has made the digital management of technological feedback processes possible and meaningful. This distinctive feature of the virtual stands out from among other digital images. In its most basic form, the virtual is a phenomenal entity manifested through contact. Interactivity becomes something that a virtual body image has in common with any other bodies, however, it is

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[81] To learn more about theories and descriptions defined in interaction, especially midway through the 20th century, how the cybernetic theory began to take hold, opening up fresh viewpoints on interactional processes, check out K. Kwastek's Aesthetic of Interaction in Digital Art, Cambridge, MIT Press, 2013

becoming a distinguishing feature of the virtual body as well.[82]

Another feature that should be highlighted is that since virtual environments evolve as the result of user engagement, we may argue that they are dynamic conglomerates of the forces which desire to manifest themselves in unforeseen ways.[83] The virtual body environment is the consequence of an interaction, and space is produced as the result of the engagement with the environment. Due to this, the environment does not seem to retreat or maintain a distance; rather, it evolves into a pool of immersion. This immersion manifests itself as

[82] Diadato approaches this topic with a special feature, and, of course, ontology of the virtual from the concept of virtual and the difference between virtual and possible point of view. Where he describes virtual as one of the states of reality as well as the revealment of the hidden power of reality, and where, to put it in even more general terms, virtual may, without a doubt, be considered to be a component of the set real. It would seem that there are not problems associated with the usage of the word *virtual reality*. See more about it in R. Diodato's Philosophy of Engineering and Technology: Socio-Cultural, Legal, Scientific and Aesthetic Perspectives, Cham, Springer, 2020, pp. 240.

[83] It is based on Diadato's thoughts, which also originated from M. Heim, 1993 & P. Lévy, 1995. - R. Diodato, Philosophy of Engineering and Technology: Socio-Cultural, Legal, Scientific and Aesthetic Perspectives, Cham, Springer, 2020

the sensation of feelings and the body. Since this immersion is conceived as something different, existence of the sense of reality emerges itself out of both feelings and sensations. It is conceivable to speak about sensory reality when seen from this vantage point. This scenario points to the sense of realism which is conveyed by the virtual world and is relatively based on the degree to which the user's emotions are effectively elicited. This is the conclusion which can be drawn from the facts presented here. According to this perspective, virtual reality is capable of providing its own self-authenticating experience since it can act as reality, as being something distinct from the user, as such an environment in which it may interact with users and as bodies which it can control. The virtual body environment bridges not only the distance between the computer model and the sensory image, but also the gap between the internal and external.[84]

[84] R. Diodato, Philosophy of Engineering and Technology: Socio Cultural, Legal, Scientific and Aesthetic Perspectives, Cham, Springer, 2020

Fig. 2.5
W. R. Sherman, A. B. Craig,
Understanding Virtual Reality, San
Francisco, Morgan Kaufmann, 2003
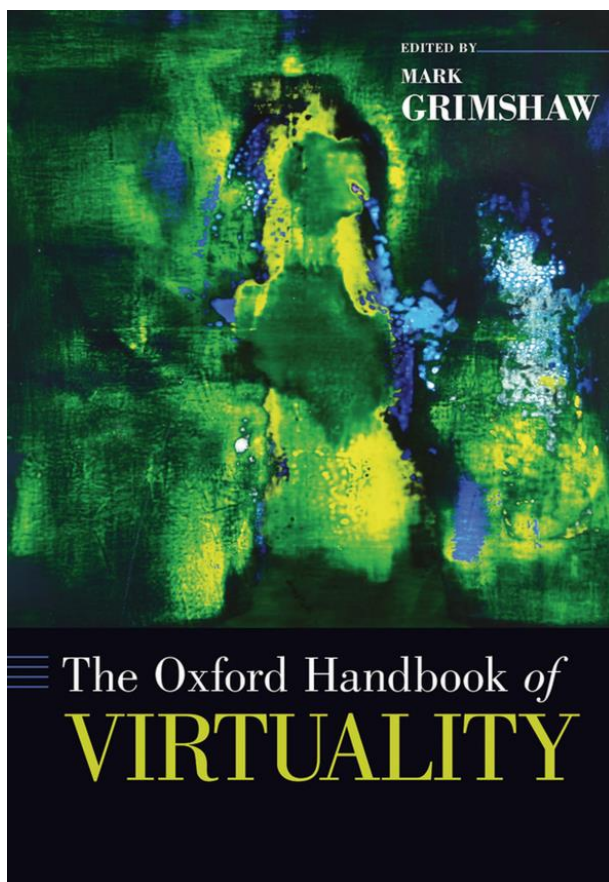
Fig. 2.6
M. Grimshaw, The Oxford Handbook
of Virtuality, New York, Oxford
University Press, 2014
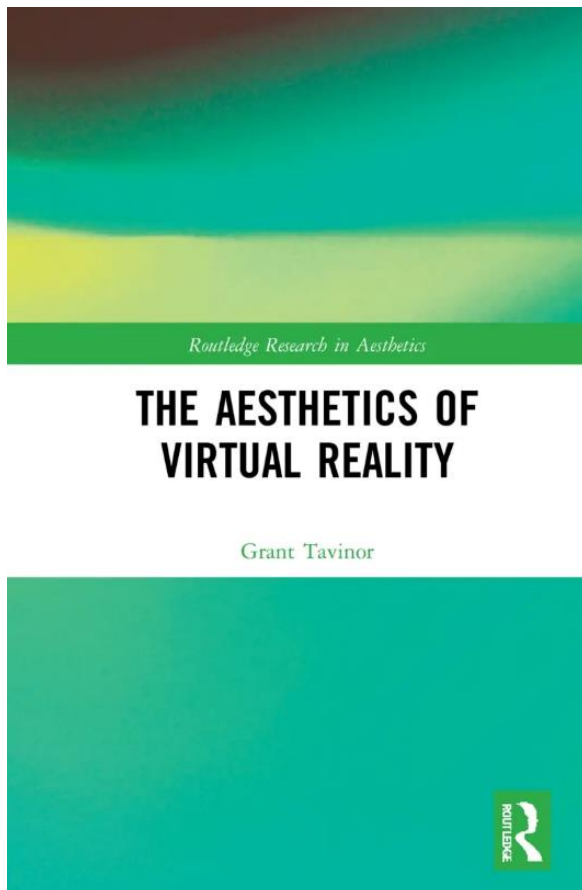
Fig. 2.7
G. Tavinor, The Aesthetics of Virtual Reality, New York, Routledge, 2022, Cover Page
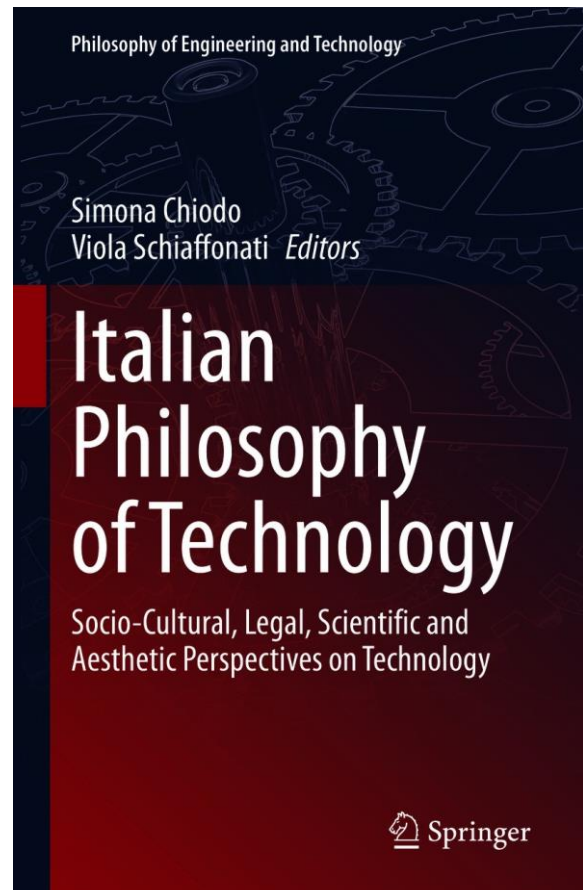
Fig. 2.8
R. Diodato, Philosophy of Engineering and Technology: Socio Cultural, Legal, Scientific and Aesthetic Perspectives, Cham, Springer, 2020
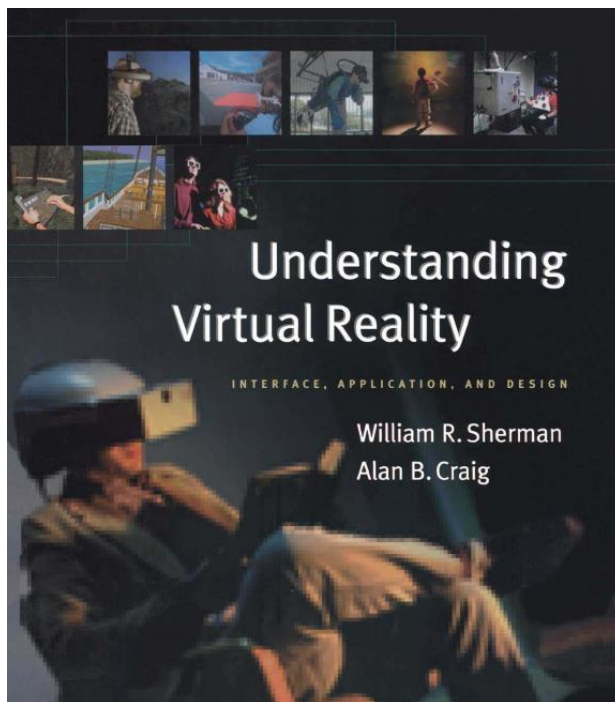
2.2 VIRTUAL REALITY EXPERIENCE

In the book *Neuromancer* (1984), written by William Gibson, a virtual reality experience is defined as being an immersion into a computer world that manifests itself in the form of pictures, feelings, and shapes.[85] On the other hand, one interpretation is that it is an interaction with numbers which results in the formation of a variety of forms. The experience of virtual reality can be subdivided into three categories, which are virtual lebnswelt (world), immersion, and interactivity.

[85] R. Diodato, Aesthetics of the Virtual, Albany, SUNY Press, 2012. Diodato approaches virtual experience as a possible experience. See Aesthetics of the Virtual for more information about this approach where he also justifies that there are differences in this possibility where he also highlights images, the interaction between bodies, body images, and so on.

2.2.1 Virtual Lebenswelt

Virtual worlds refer to the metaverse which transmits information through mathematical notation where sensory perception is an integral part of understanding information. In their book, *Understanding Virtual Reality*, Sherman and Craig define the virtual world as a medium, containing material that lives only in the mind of its creator or may be projected in a manner which allows it to be transmitted to others. One further way to think of it as a simulation is the way through which objects are described (Here, it also refers to interaction). The use of these stimulating items and interactions in virtual environments produces a physically immersive experience.[86] There are two crucial descriptions of virtual world which are pointed out by Sherman & Craig where in the first place, it is described as a fictional place that is mostly brought to life by a medium. And in the second one, in addition to the objects that take place in this space, it emphasizes the connections and laws which control things, turning them into a case.

[86] W. R. Sherman, A. B. Craig, Understanding Virtual Reality, San Francisco, Morgan Kaufmann, 2003

On the other hand, there is another approach to this topic by Roberto Diodato.

He explains virtual world as an environment of life which is made up of all

activities of life that can be perceived through *pure experiences*, instead of

sensible data. In his approach, knowledge is transformed into the shape of

experience, or experience is a kind of package that contains knowledge. Our

everyday experiences are altered by this knowledge in terms of time and

space.[87]

All in all, it is important to note that virtual world is intended to be a new living

environment which includes objects and the regulations between them, and

that gained knowledge regarding their relationships can be carried out

through experience. But it also needs to be pointed that this new entity has its

own history, socio-cultural and ethical features.[88]

[87] For more information about this approach see R. Diodato, Virtual Reality and Aesthetic

Experience, Philosophies, Vol.7 (2022), no.2, pp. 5-6.

[88] For more information about this topic see Virtuelle Lebenswelten: Körper – Räume – Affekte.

It is explained that virtual living environments are no longer a privileged subfield of computer

culture. Rather, virtuality influences our present in a variety of ways. Virtuelle Lebenswelten:

Korper – Raume – Affekte investigates the philosophy and history of virtuality, as well as its

real-world applications, from the viewpoints of media studies, sociology, philology, education,

psychology, and law. S. Rieger, A. Schäfer, A. Tuschling, Virtuelle Lebenswelten: Körper –

Räume – Affekte, Berlin, De Gruyter, 2020

2.2.2. Immersive

It is necessary to examine the meaning of immersive before getting into details regarding immersive experience. This term can be described as making someone feel completely involved and engaged.[89] Through this concept of immersive, we are dragged to the understanding of full engagement with the environment which surrounds us. Considering virtual reality as a new environment that surrounds us, an immersive experience in virtual reality takes place when a user is placed into this new setting which looks and feels so much like their actual surrounding and replaces the so-called real world, which is convincing enough to engage with this new environment.[90] (Being a part of an experience and feeling the mental and emotional repercussions of that participation can also mean being immersed. From this aspect, Sherman and

[89] Macmillan dictionary, ɪˈmɜː(r)sɪv, (accessed 11.16.2022)

[90] I. Wigmore, Immersive virtual reality (immersive VR), TechTarget, 2016

Craig describe immersion as a sense of   presence[91]) The close connection

between the immersed and present needs to be emphasized since immersion

is always associated with a product of technology which helps to integrate

multi-sensorial input to the participant, and from psychological point of view,

the presence is described as being there in the virtual surrounding.[92] When

seen from this angle, virtual reality is an environment in which we, through

the use of various technical devices,[93] can create experiences which are all

immersive, transforming us from observers into participants in action.[94] Since

being immersive is defining characteristic of virtual reality, the degree to which

[91] W. R. Sherman, A. B. Craig, Understanding Virtual Reality, San Francisco, Morgan Kaufmann,

2003. For a more in-depth exploration of the concept of immersion, which may be defined as

the "sensation of being in an environment", check pp. 7-10/380-390

[92] M. Grimshaw, The Oxford Handbook of Virtuality, New York, Oxford University Press, 2014

[93] M. Grimshaw, The Oxford Handbook of Virtuality, New York, Oxford University Press, 2014

[94] R. Diodato, Virtual Reality and Aesthetic Experience, Philosophies, Vol.7 (2022), no.2

it engages participants relies on the degree of immersion. As it is indicated by Oliver Grau, "…virtual realities . . . are in essence immersive."[95]

As Oliver Grau also points out, one of the most prevalent approaches to aesthetics throughout the history of architecture and art has been to attempt to include the observer in a simulated environment which creates more interactions with the user.[96] Virtual reality enables people to go from the position of observer to participant, allowing them to become a part of any action. The goal of virtual reality is to bring the environments which is created closer to us so that we can easily interact with them. These environments are constructed to create the sense that we are living in a world which is distinct from so-called real world, as if it were our home. As a result of this, participants are experience being in an environment which is different from the one in which their bodies are physically situated.[97]

[95] R. Diodato, Aesthetics of the Virtual, Albany, SUNY Press, 2012. To learn about virtual reality from the perspective of the history of immersive images and the influence it has had on modern notions of art, check out O. Grau, Virtual Art: From Illusion to Immersion, Cambridge, The MIT Press,2003. Check here for more information on the types of immersion, Michael Heim, Virtual Realism, New York, Oxford University Press, 1998 pp. 17–19

[96] K. Kwastek, Aesthetics of Interaction in Digital Art, Cambridge, The MIT Press, 2013

[97] S. Incao & C. Mazzola, The Paradox of Virtual Embodiment: The Body Schema in Virtual Reality Aesthetic Experience. Studia UBB. Philosophia, Vol.66 (2021), no.2 Supplement, pp. 131-139

2.2.3 Interactivity

The term *virtual* refers to a dynamic configuration of forces which have an innate inclination to formalize themselves in the forms that have not been constituted to the degree that virtual environment evolves into space that can interact with participants.[98] In light of this information, interactivity is one of the key elements of virtual experience because in virtual environments, the relationship between participant and event exists only in the stage of interactivity.[99] Moreover, it is a crucial element which should not be overlooked when attempting to provide a comprehensive definition of the virtual reality. As interactivity is among the most significant elements, since it is essential for the virtual world to seem genuine, which may be achieved by reacting to the activities of participants, such as by touching the objects, hearing the appropriate sounds from the environment, smelling things, tasting foods, or seeing forms create the impression on the participants that they are entirely integrated into the environment they are in. In fact, the degree to which participants interact with items, persons, and settings in the virtual world

[98] R. Diodato, Aesthetics of the Virtual, Albany, SUNY Press, 2012.

[99] R. Diodato, Virtual Reality, and Aesthetic Experience. Philosophies, Vol.7 (2022), no.2

determines level of interaction since they get closer to the real world.[100]

However, it is essential to keep in mind that the interaction which occurs in the

virtual world goes in both directions. One aspect of this interaction is based on

an algorithmic matrix of programming language. This matrix is responsible for

generating sensorial imagery effects which the participant has the ability to

modify.[101] The other side of this interaction is the capability of a participant to

interact with an environment by moving around, relocating themselves,

smelling and touching the objects, and so on. This capability of the participant

to roam physically throughout the environment and get a different perspective

through the motions of the head is directly related to the concept of virtual

reality.[102] Although some virtual reality experiences are built with rigid

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[100] W. R. Sherman, A. B. Craig, Understanding Virtual Reality, San Francisco, Morgan

Kaufmann, 2003. It is important to note that here, it may seem that here it refers to virtual

reality as the not real world, but it is important to highlight what is meant by the real world is

the world which we know and physically exist. It can be right to call the real world as so-called

real world as we mentioned in the *Virtual World* section, it is another form of the real world

that all information is written in numbers and language and can be perceived through

experience.

[101] R. Diodato, Virtual Reality, and Aesthetic Experience, Philosophies, Vol.7 (2022), no.2

[102] For more information about the interaction in VR check out J. Lanier, Virtual Reality: The

Promise of the Future, Interactive Learning International Vol.8 (1992) No.4 pp. 275–279

environments which the participant is unable to change, it is important to emphasize that the majority of these types of experiences are dynamic and left for the participant to make changes.[103]

2.3 A NEW BODY

Owing to the fact that we are discussing a new reality, or an alternative reality, which one can experience through sensation, we need to also discuss the embodiment of the participant[104] in this new environment. If there's a new reality, there should be a new body as well. What is the description of this new body? Do we need to understand the body in physical dimensions? Or can the body exist beyond the limits we know? There is no doubt that there are, and will continue to be, quite a few more questions appearing on this subject. In sum, it is clear that the virtual reality as a new entity calls many scholars and researchers for debate on its nature, which is open for many novel discoveries and inventions.

[103] W. R. Sherman, A. B. Craig, Understanding Virtual Reality, San Francisco, Morgan Kaufmann, 2003

[104] Although it may seem that we already use the word *participant*, this refers to the person in so-called reality.

2.3.1 The Sense of Presence

It is a very well-known fact that our body is our first home in this universe, which also can be defined as an organic mechanism, functioning as the main tool to interact with our surrounding.[105] It is also the first place where we know our sense of being is located. This capacity to perceive being physically present in the current location of the body is referred to as the feeling of presence. In other words, it is a term used to define the part of consciousness which is related to the location and time at which the body is positioned or being aware of the context. From this point, we can easily associate the feeling of presence with body's location; however, we are not interested in physical presence. In fact, the degree to which we can have the sense of being in our surroundings is the sole matter of discussion in this thesis. Our level of perceptions of the world around us become more mediated as a direct result of the fact that a large amount of our experiences is produced by a wide range of electronic information and communication technologies.[106] This circumstance generates

[105] J. Pallasmaa, The Eyes of the Skin: Architecture and the Senses, Cambridge, MIT Press, 2015

[106] J.A. & E.L. Waterworth, F. Mantovani & G. Riva, On Feeling (the) Present An evolutionary account of the sense of presence in physical and electronically mediated environments, Journal of Consciousness Studies, Vol.17 (2010), No.1-2

a new concept which comes to be known as *mediated presence.* Because of the

advances in digital technology, it is now feasible to come to the point that the

feeling of presence has varied in different versions by quickly crossing a variety

of contexts, ranging from social media accounts and gaming worlds to video

conferences, to virtual environments.[107] After all these, presence may be

defined as a sense of being in an external environment,[108] which includes both

unmediated and mediated presence.

2.3.2 Distributed Embodiment

Theoretical study field of virtual reality needs to pay attention to the concept

of embodiment, which refers to everything associated with or a part of human

body. The physical body has a significant influence on our awareness, and it

also contributes to the establishment of our feeling of the place as well as our

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[107] At this point, it is also necessary to emphasize the fact that the technical equipment that

we are using, such as mobile phones, headsets, and so on, have become a part of our bodies,

which enables us to also state that our bodies have been extended.

[108] What is meant here with the external has a more comprehensive meaning. M. Grimshaw,

Distributed Embodiment: Real Presence in Virtual Bodies in The Oxford Handbook of

Virtuality, New York, Oxford University Press, 2014

sense of time. With current technology, embodiment attracts attention from a different point of view.[109]

The advent of new technology holds the promise of illuminating a fresh, ever-evolving understanding of the new body by shifting our sense of self-presence into new body. As it is stated in the previous section, through technological development, the sense of presence diversifies itself into another form which is called mediated presence and defined as a sense of presence in the virtual digital world. It is also important to emphasize that this new method of being present enables us to have increased the sensory experiences of the outside world.[110]

[109] T. Ribeiro, M. Vala, & A. Paiva, Censys: A Model for Distributed Embodied Cognition, in: R. Aylett, B. Krenn, C. Pelachaud, H. Shimodaira (eds). Intelligent Virtual Agents. IVA 2013. Lecture Notes in Computer Science (). vol. 8108, Berlin, Springer, 2013 check it out also to learn about Embodied Agents and the relationship between mind and body. Another source to see for it, is J. A. Waterworth, E. L. Waterworth, This Mind in That Body in The Oxford Handbook of Virtuality, New York, Oxford University Press, 2014

[110] J. A. Waterworth, E. L. Waterworth, 2 Altered, Expanded and Distributed Embodiment: The Three Stages of Interactive Presence, Interacting with Presence: HCI and the Sense of Presence, 2014, pp.32-45.

This sensation of being present in virtual world led to the birth of a new entity known as distributed embodiment.[111] The concept of distributed embodiment defines how our experience of being present in the world becomes distinct from our sense of belonging to a specific body. The idea here signifies that one can be in a place without owning a particular body.

According to Riva and Waterworth, the idea that something happens from outside the self rather than from within is the foundation for being present in an external world, which may also be referred to as human consciousness and the separation of self from non-self.[112] The sensation of being present is an embodied[113] phenomenon that serves as a reservoir of the information which

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[111] When taking into consideration, the fact that the world in which we reside has just come to be encircled by electronic information and communication technology, it is an undeniable fact that the creation of such formation is very perfectly normal.

[112] M. Grimshaw, The Oxford Handbook of Virtuality, New York, Oxford University Press, 2014

[113] Our physical presence in the physical world embodies us as humans with bodies that allow us to act and move in the world based on certain perceptual and motor capacities. A sense of self-consciousness is also a sense of awareness of our own bodies that enables us to know where we are. J. A. Waterworth, E. L. Waterworth, 2 Altered, Expanded and Distributed Embodiment: The Three Stages of Interactive Presence, Interacting with Presence: HCI and the Sense of Presence, 2014, pp.32-45.

enables us to analyze and alter our responses as well as our level of awareness of the environment, we are in. The same idea underpins mediated presence, which focuses on the extent to which we hold the impression that we are genuinely on the here and now, surrounded by the things which are objectively around us. [114] From this perspective, the advancements in virtuality develop a new way of being aware as well as a method of experiencing actual presence. All of these developments, which are arisen as a direct result of this vantage point, make it possible for us to realize how we may live in another virtual body by adjusting our experience of presence. It is also needed to highlight the fact that it is all about achieving a simple function of realism that determines the degree of presence.[115] Through the use of technology, like virtual reality, we also have the ability to associate another body to ourselves.[116]

[114] M. Grimshaw, The Oxford Handbook of Virtuality, New York, Oxford University Press, 2014

[115] J. A. Waterworth, E. L. Waterworth, 2 Altered, Expanded and Distributed Embodiment: The Three Stages of Interactive Presence, Interacting with Presence: HCI and the Sense of Presence, 2014, pp.32-45. Also check out S.Bouchard, S. Dumoulin, J. Talbot, et al., Manipulating subjective realism and its impact on presence: Preliminary results on feasibility and neuroanatomical correlates. Interacting with Computers, Vol. 24, No.4, 2012, 227-236

[116] R. Miura, S. Kasahara, M. Kitazaki, A. Verhulst, M. Inami, M. Sugimoto, MultiSoma: Motor and Gaze Analysis on Distributed Embodiment with Synchronized Behavior and Perception, Frontiers in Computer Science, Vol.4, 2022

Traditional Agent Model
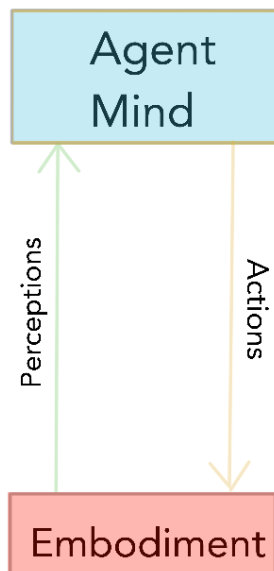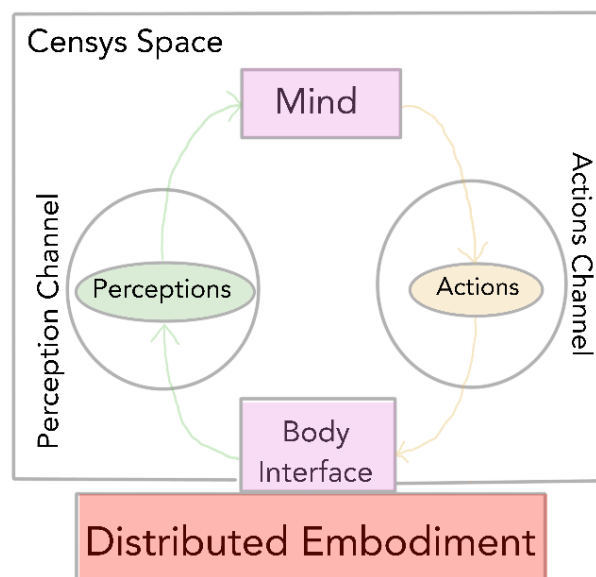
Censys Agent Model

Fig. 2.9
Distributed Embodiment

2.3.3 Virtual Body

The pervasiveness of technology has had, without a doubt, the greatest influence on restructuring and characterizing modern society, culture, and ways of life. When seen from a more holistic standpoint, it becomes pretty transparent that it has a tremendous influence not only on society, but also on individuals since it entails the expansion of living surroundings and concepts beyond their conventional significations. It also brings about a shift in our understanding of the idea of the human body, while, simultaneously, creating new spheres for portrayals, such as cyberspace[117] or the virtual world.[118] This

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[117] The term was first used by the famous science fiction writer William Gibson in his novel Neuromancer. It refers to a world that consists of computers and society are formed around these computers. The region is defined by computer-assisted communication with the human brain and computer network. Cyberspace is creating another world where everything is digitalized a new entity that has its own culture, ethics, and so on. For more information about this topic check out these sources: J. Baudrillard, The Precession of Simulacra, in J. Storey (eds). Cultural Theory and Popular Culture: A Reader, New York, Harvester Wheatsheaf, 1994, pp. 361 –368; D. Cavallaro, Cyberpunk and Cyberculture: Science Fiction and the Work of William Gibson, London, GBR: Continuum International Publishing, 2000; A. Murphie & J. Potts, Culture and Technology, New York, Palgrave, 2003

[118] C. Rocio, (Re)defining the Gendered Body in Cyberspace: The Virtual Reality Film, Nordic Journal of Feminist and Gender Research Vol.22, No.1, 2014, pp.33-47

transformation can be seen as the journey of the body from the organic to inorganic.[119] This study focuses on an inorganic body formation that is subject to these prepackaged pieces of information in a space where the semblance of our reality is created. It is a fact that the advancement of new technology has opened the door for humans' minds to explore the virtual worlds produced by machines (This integration between humans and machines creates new phenomena, which are *post-human*. We can say technology and cultural practices have shaped both the *concept of human* and the *concept of post-human*.[120] But since it is not the discussion of this argument, we will not go further into its details.[121])

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[119] T. De Lauretis, Becoming inorganic, Critical Inquiry, Vol.29(2003), No.4, pp. 547– 570.

[120] N. K. Hayles, How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics, Chicago, University of Chicago Press, 1999

[121] For deep understanding and more information on the topic these sources can be checked out: R. Braidotti, Metamorphoses: Towards a Materialist Theory of Becoming, Cambridge, Polity Press, 2002; R. Braidotti, The Posthuman, Cambridge, Polity Press, 2013; G. L. Mosse, The Image of Man: The Creation of Modern Masculinity, Oxford, Oxford University Press, 1996; C. Springer, Electronic Eros: Bodies and Desire in the Postindustrial Age, Austin, the University of Texas Press, 1996; J. Zylinska, (Ed.) Cyborg Experiments: The Extensions of the Body in the Media Age, London, Continuum International Publishing, 2002

According to what was covered in the earlier chapters, the awareness of place and time is pointed out by the body, and the distributed embodiment is related to the fact that it is not needed to have distinct bodily ownership to have the above stated awareness. When seen from this perspective, it compels us to investigate the connection between the body and mind.[122] Since technology enables our mind to wander around and shift the mind into different bodies,[123] it forms a new version of the body, which is called virtual body.

According to argument of Balsamo, the state of being that one attains while inhabiting virtual reality is what is meant to be understood by the term virtual body. It is a type of body that enable us to connect with the data world which has been achieved by letting the mind roam around the virtual environments.

[122] There are strong saying in the article of Carrasco Rocio where she mentions physical bodies as "hunks of flesh nothing more than that are attached to the machine." On the other hand, some scholars defense the power of the physical body. C. Rocio, (Re)defining the Gendered Body in Cyberspace: The Virtual Reality Film, Nordic Journal of Feminist and Gender Research Vol.22 (2014), No.1, pp.33-47

[123] M. Grimshaw, The Oxford Handbook of Virtuality, New York, Oxford University Press, 2014

Virtual body also facilitates us to escape from concrete limitations, or it is often seen as a means of disregarding the restrictions which are imposed on by actual reality.[124] In the meantime, Diodato adds another layer of comprehension to the above discussion by characterizing a virtual body as an interactive digital image, sometimes known as a *body-image.* Due to the phenomenal qualities of a binary algorithm, —The storage format in which data is stored as ones and zeros— an image can be detected not just through the user's sense of sight, but also through their engagement and interaction with computer program. Diodato draws attention to the fact that we not only see the digital image; rather, we actively participate in the process of deciphering the information which is concealed within image. Diodato also explains that immersive experiences can be produced by digital images where the user is the agent in the situation.[125]

[124] A. Balsamo, The virtual body in Cyberspace, in Cybercultures Reader, D. Bell & B.M. Kennedy eds, London, Routledge, 2000 pp. 489-503

[125] R. Diodato, Virtual Reality, and Aesthetic Experience. Philosophies, Vol.7 (2022), no.2

As a conclusion to this section, it's important to note that, in addition to the disembodiment circulation of the human mind, the depiction of one's identity in virtual reality is also a part of the ongoing discussion about the virtual body, which is a broad topic that includes discussions about gendered bodies, cyborg women, race issues and so on. Since it is not within the range of our discussion, this study disregards any explanation of the stated topics.[126]
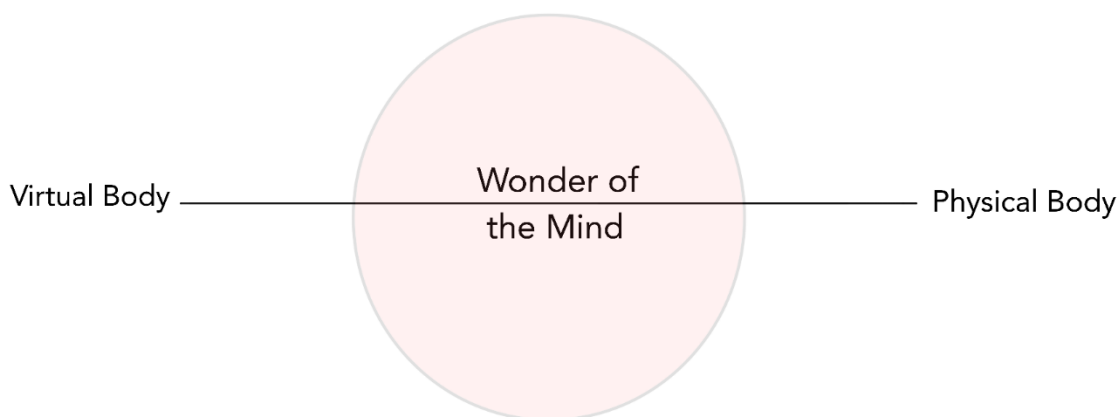
Virtual Body ——————————— Wonder of the Mind ——————————— Physical Body

Fig. 2.10
Virtual Body, by Author

[126] For more information about the topics, check out the recommended sources: A. Balsamo, Technologies of the Gendered Body: Reading Cyborg Women, Durham, NC: Duke University Press, 1996; S. Bukatman, Terminal Identity: The Virtual Subject in Postmodern Science Fiction, Durham, NC: Duke University Press, 1993; T. L. Geller, Queering Hollywood's tough chick: The subversions of sex, race, and nation, The Long Kiss Goodnight and The Matrix, Frontiers, Vol.25 (2004), No.3, pp. 8– 34; S. Plant, Zeros and Ones: Digital Women and the New Technoculture, London, Fourth Estate, 1997

"I believe it's possible that language is a virus, as William S. Burroughs claims. But to believe that language is a disease, first you have to believe that it is alive."

Laurie Anderson

La Camera Insabbiata

There is no question that virtual reality is gaining traction in a wide variety of fields, and this situation causes alteration of experiences and accumulation of knowledge in various topics. In 2017, the Venice Film Festival hosted a category for Virtual Reality movies. La Camera Insabbiata, which is filmed by Laurie Anderson and Hsin-Chien, won the award for the best Virtual Reality experience in Venice.[127]

Fig. 3.3
Laurie Anderson and Hsin-Chien, La Camera Insabbiata, 2017, Studio Installment, https://www.indie-eye.it/cinema/covercinema/laurie-anderson-a-venezia-74-la-camera-insabbiata-un-progetto-di-cinema-vr.html

Fig. 3.4
Laurie Anderson and Hsin-Chien, La Camera Insabbiata, 2017, Studio Installment, https://www.indie-eye.it/cinema/covercinema/laurie-anderson-a-venezia-74-la-camera-insabbiata-un-progetto-di-cinema-vr.html

[127] L. Anderson, "La Camera Insabbiata" Wins Best VR Experience at Venice, Laurie Anderson website, 2017, (Accessed 01.15.2023)

The target of La Camera Insabbiata is to enable users to experience travels through stories, words, and letters, and this concept of the project was implemented in both realities, so-called and Virtual. In so-called real world, plenty of the rooms have covered with words, drawings, and narratives, in addition to this, a variety of activities were placed in these rooms which diverse from 3D sound to sculpting that allow participants to develop more active interactions with the place that they are in.[128]

Fig. 3.5
Laurie Anderson and Hsin-Chien, La Camera Insabbiata, 2017, Studio Installment Drawings,
https://www.artsy.net/artwork/laurie-anderson- the-chalkroom

Fig. 3.6
 Laurie Anderson and Hsin-Chien,La Camera Insabbiata, 2017, Studio Installment-Writings,
https://www.meer.com/en/34390-laurie-anderson

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Fig. 3.7
Laurie Anderson and Hsin-Chien, La Camera Insabbiata, 2017, Equipment Engagement,
https://theculturetrip.com/asia/taiwan/articles/experience-the-worlds-best-vr-artwork-in-taipei/

Fig. 3.8
Laurie Anderson and Hsin-Chien,La Camera Insabbiata, 2017, VR Equipment Experience,
https://laurieanderson.com/2017/09/01/on-display-at-mass-moca/

By using VR, users are getting into new real world where they can fly into words, stories and so on. Furthermore, they reposition themselves from spectators to participants, so that they can have a more intimate relationship with the project as the limitations of the physical body disappears and the conscious of the self remains intact. According to Anderson, dissolution of the body describes the fluctuation of a *disembodied* and expanded consciousness.[129] Participants are not only allowed to roam around those eight rooms, which are *Cloud Room, Anagram Room, Dog Room, Water Room, Sound Room, Dance Room, Writing Room, and Tree Room*, but they can also contribute to the project by making sculptures and so on in some rooms. In the strictest sense of the word, it is a multi-sensory experience.[130]
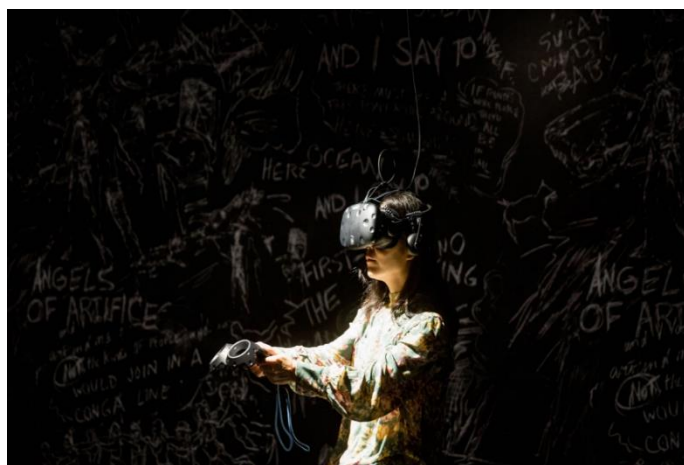

Fig. 3.9
Laurie Anderson and Hsin-Chien, La Camera Insabbiata, 2017, VR Equipment Experience,
https://laurieanderson.com/2017/09/01/on-display-at-mass-moca/

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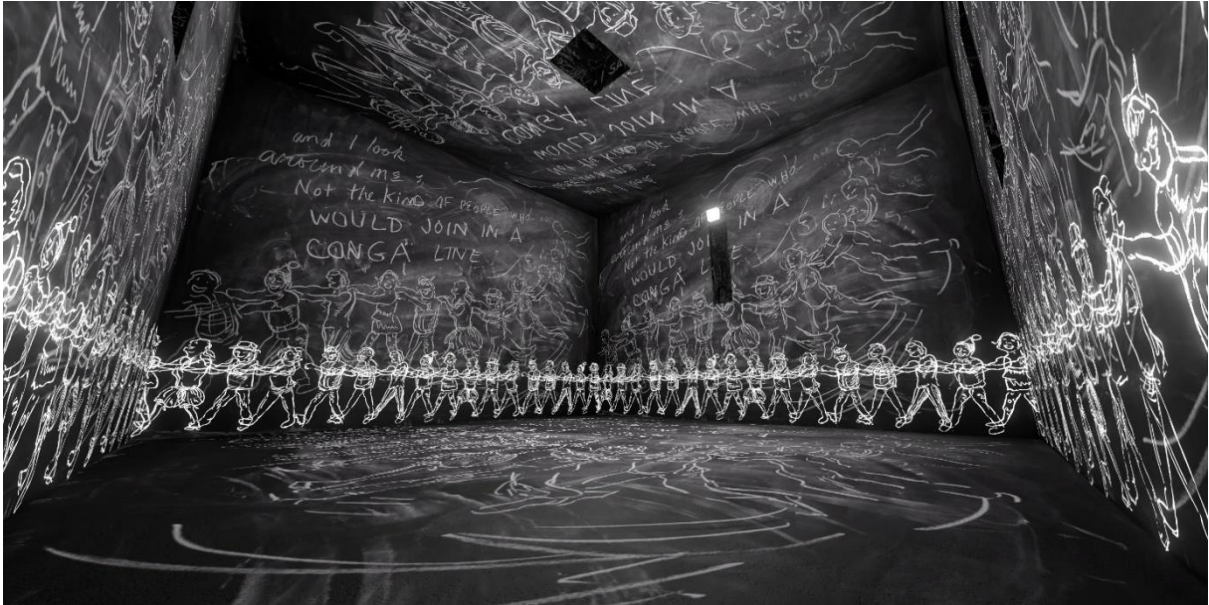
Fig. 3.10   Laurie Anderson and Hsin-Chien, La Camera Insabbiata, 2017, The Dancing Room, https://usaartnews.com/events/fine-art/taipei-fine-arts-museum- presents-virtual-reality-work-by-laurie-anderson-and-hsin-Chien Huang

Fig. 3.11   Laurie Anderson and Hsin-Chien, La Camera Insabbiata, 2017, The Tree Room, https://usaartnews.com/events/fine-art/taipei-fine-arts-museum-presents-virtual-reality-work-by-laurie-anderson-and-hsin-chien-huang

Fig. 3.12   Laurie Anderson and Hsin-Chien, La Camera Insabbiata, 2017, The
            Anagram Room, https://usaartnews.com/events/fine-art/taipei-fine-
            arts-museum-presents-virtual-reality-work-by-laurie-anderson-and-hsin-

Fig. 3.13   Laurie Anderson and Hsin-Chien, La Camera Insabbiata, 2017, The Chalk
            Room, https://usaartnews.com/events/fine-art/taipei-fine-arts-museum-
            presents-virtual-reality-work-by-laurie-anderson-and-hsin-chien-huang

Fig. 3.14   Laurie Anderson and Hsin-Chien, La Camera Insabbiata, 2017, The Writing
              Room, https://usaartnews.com/events/fine-art/taipei-fine-arts-museum-
              presents-virtual-reality-work-by-laurie-anderson-and-hsin-chien-huang

Fig. 3.15   Laurie Anderson and Hsin-Chien, La Camera Insabbiata, 2017, The Dog
              Room, https://usaartnews.com/events/fine-art/taipei-fine-arts-museum-
              presents-virtual-reality-work-by-laurie-anderson-and-hsin-chien-huang

Fig. 3.16   Laurie Anderson and Hsin-Chien, La Camera Insabbiata, 2017, The Sound Room, https://usaartnews.com/events/fine-art/taipei-fine-arts-museum-presents-virtual-reality-work-by-laurie-anderson-and-hsin-chien-huang
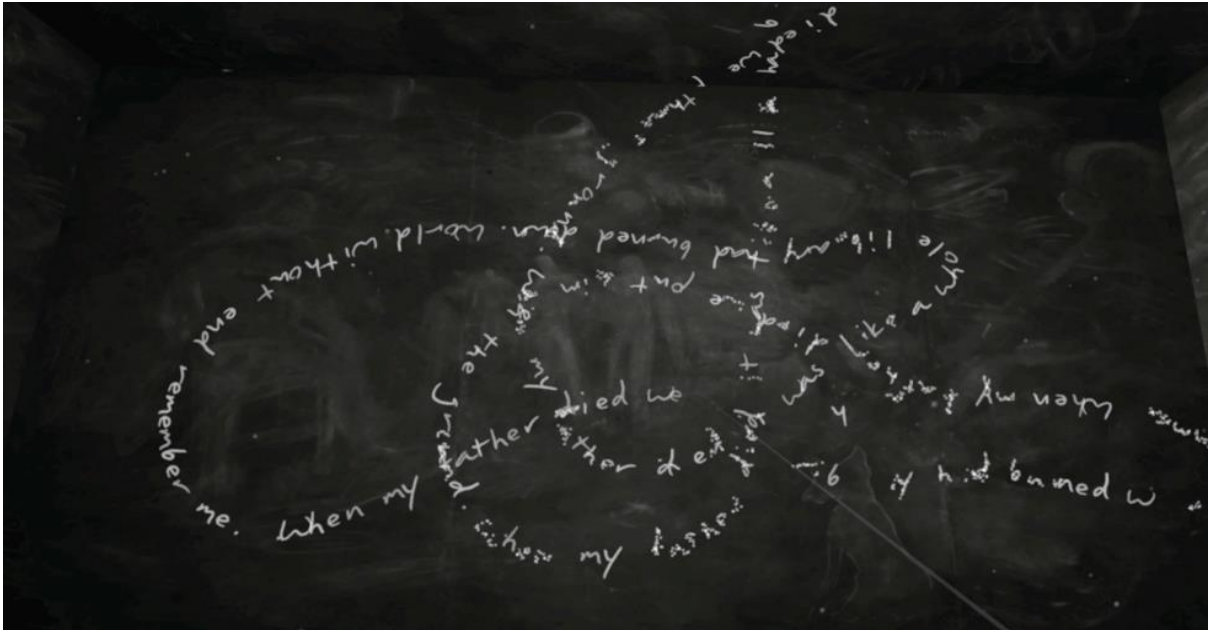

Fig. 3.17   Laurie Anderson and Hsin-Chien, La Camera Insabbiata, 2017, The Water Room, https://usaartnews.com/events/fine-art/taipei-fine-arts-museum-presents-virtual-reality-work-by-laurie-anderson-and-hsin-chien-huang

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