Virtuality of Virtual Reality

> The ultimate display would, of course, be a room within which the computer can control the existence of matter. A chair displayed in such a room would be good enough to sit in. Handcuffs displayed in such a room would be confining, and a bullet displayed in such a room would be fatal. With appropriate programming such a display could literally be the Wonderland into which Alice walked.
>
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There is a significant relationship between the virtual in philosophy and the virtual in digital media due to the ideological correlation between knowledge and vision. In the new media arts and theories, the concepts of virtual and reality in the correlation of human senses, which philosophy has taken as its focus, have been extended, and virtual reality (VR) has become more remarkable with a new space and world made up entirely of data. As a result, VR is a modern technology in which the virtualization process is paramount, thereby eliminating the limits of bodily encounters in the real world's physical space. Despite the dynamic network of relationships in this system, which is heavily shaped by the Affect theory, the virtual and real perceptions we obtain with our senses bring the bodily basis of VR to the fore.

Virtuality of Truth

Rebecca Coyle points out that the reality of meta-media like VR should be determined philosophically instead of being a disconnected area of communication experience. Coyle goes on to further point out that the ethical aspect of this philosophy is very important. The manner in which reality and the virtual are so clearly blurred in VR complicates this

metaphysical and ethical understanding. Brenda Laurel, quoted by Coyle, claims that, although the term "virtual" is appropriate, the sole use of the word reality evokes a cultural prejudice (Coyle, 1993: 162-163).

VR theorist Michael Heim sees a shift in the relationship between VR technology and our perception of reality. This ontological shift goes toward the philosophical examinations of VR and manifests how we understand the knowledge and information by interaction with immersive VR environments. Digital refers to something that occurs far too rapidly to be real. The body is both virtual and real at the same time. The virtual world, with its throng of incipiencies and tendencies, is a realm of possibility. Potential is a place where the future collides directly with the past, where the outsides are folded inward and sorrow is turned into joy. The virtual is a lived paradox in which typically conflicting powers coexist, coalesce, and connect; where what cannot be perceived cannot help but be felt – although reduced and contained (Massumi, 2002: 30).

Affect Theory & Virtual Environment

Affects, according to O'Sullivan, are extra didactic and additional high-intensity reactions in/on the body at the molecular level. They are also said to be imminent to matter, and almost definitely would have to be dealt with (2001: 126).

The number of individuals who have nearly any conversation on affect, a very complicated and contentious term, varies. Affect theory overcome the body mind dualism to synthesize the body and mind. The affect theory goes back to Spinoza's *Ethics* (1677), and affect and affection as a terminology are used in relation to literature, politics and social... and became more problematized in the 90's by Brian Massumi. Deleuze's thinking was influenced by Spinoza's principle of affect, and Massumi articulated this viewpoint by arguing that

prepersonal intensity corresponds to the movement from one experiential state of the body to another, meaning an increase or decrease in the body's capacity to function (1987: xvi)

As a foundational state, the Spinozian affect facilitates numerous contemporary psychiatric and psychological understandings that is related to three states, which are desire, pleasure, and pain (1992: 141). As a result, affect encompasses both the influence that bodies exert on one another, which enhances or reduces their ability to respond, as well as the basic condition that is produced when two or more bodies collide. Affect, per Massumi, is the speed with which the body moves from one state of experience to another, as well as the rise or decrease in bodily capacities that occurs during this process (Massumi, 2002).

Affect, he continues, is an understanding of how bodies communicate, especially in the advanced capitalist world's image and information-based system. By combining Bergson and Spinoza's views of the body, Massumi claims that the impact an image has on the individual attempting to solve it is not a direct product of the image's content; rather, it shows a Deleuzian perception of affect. Our planet, he claims, is flooded with affects. It is important to conclude that the body resides in the field of qualitative transformation, as a moving and sensing being, by separating it from a static perception of materiality, due to the inherent interaction between motion and sensation. The near connection between action and sensation creates a qualitative transition, or the distinction that results from it. Bergson (1912) suggests that we should think about transition in terms of time rather than space. When we apply this understanding of transition to body movement, we get the following picture: "When a body is in motion, it does not coincide with itself. It coincides with its own transition: its own variation. The range of variations it can be implicated in is not present in any given movement, much less in any positions it passes through. In motion, a body is in immediate, unfolding relation to its own non present potential to vary" (Massumi, 2002: 4).

Massumi, who follows Deleuzian philosophy, aruges that this opening relationship is actual, material, but abstract. There is no pre-existing mediating power in this abstraction of the body's relationship to its own potentiality and transformation. It is, therefore, literally identical to the directness of the true relationship and transitivity through which the body joins with its own indeterminacy(i.e., its constant exposure to the outer world or to the possibility of being something other than itself) (Massumi, 2002: 5). When a body is alive and dynamic, namely, when it is in motion as a phase, the indeterminacy in its relationship to the body's potentials is both immaterial and present. "…to think of the body in movement thus means accepting the paradox that there is an incorporeal dimension of the body. Of it, but not it. Real, material, but incorporeal" (ibid.). This viewpoint, however peculiar it might sound, becomes clearer when read in conjunction with Bergson's perception of matter and time, that is, when matter, energy, and motion are seen to be one and the same thing. Energy and matter, in his opinion, are two states of the same reality that can be transmitted. As Deleuze puts it, the problem is abstract enough to grasp this abstraction of the static reality's immaturity. This type of matter and body ontology teaches us that before signs and codings, there is an actual and a material phase. This describes the body's in-between state of affectivity. If we accept affectivity as a transient process that is dependent on bodily movement, then: (1) it operates on the basis of indeterminacy, (2) the changes it undergoes are qualitative rather than quantitative, and (3) the changing affects of the body and its movement are not predefined point displacements with a beginning and an end in spatial terms. It can be interpreted as a genuine natural or qualitative shift.

Body & Affection

The task of the affective transform, according to Massumi, is to consider the source of the immanent discrepancy (i.e., qualitative transition) by bringing it directly through the body or

matter rather than simply destroying it by social or cultural change. Returning to a clear view of the body and its effects, the affective turn will remind us that the body is (1) in a state of indeterminacy and change that underlies its affective development, (2) is never a subject, and (3) but still gives the conditions for the birth of a subject, never final, in motion. It can only be interpreted as a mechanism, as subjectivity, as a relationship. The problem is to understand the affect through the qualitative transformation in the power of effecting and affecting all sorts of beings, including human beings, just as Spinoza defined the body through action and inactivity and explained the movement of the body through the shift in the affecting or affective potentials. The crucial contribution of Massumi at this point is that this sensation is called "affect" by the body and that this feeling has a sensuality before placing these feelings as a specific emotion by accepting a "subject." In other words, by taking them to consciousness, which is independent of cognitive processes, that it sees as a self-contained mechanism that works. Subjectivity, according to Massumi (2002: 15), is the name given to the sensual connection we form with ourselves. This sensuality is "the perceived truth of the bond," according to William James (1996), the founder of radical empiricism, which also influences the affective turn. The affective turn was clearly affected by James's views, especially on emotions. In contrast to a cognitive sense of emotion, which sees emotions as mental entities formed as a result of a brain assessment process, James sees emotions as the sensation of bodily changes that occur in conjunction with non-will and motor functions in the body. Massumi agrees with this viewpoint and says that "affect is most often used loosely as a synonym for emotion. But one of the clearest lessons of this first story is that emotion and affect - if affect is intensity - follow different logics and pertain to different orders" (Massumi, 2002: 27). To have a called emotion, or, to put it another way, to describe a feeling by taking it into consciousness, means to associate it with a subject and subject it to sociolinguistic fixing. Emotions are characterized by the person, and the term "emotion" is widely used.

Feelings are intensity owned and recognized (Massumi, 2002: 28). Thanks to its autonomous existence independent of cognition, affect is more valuable for critical theory than impulse. It is like freezing and analyzing effects by reducing them to an emotion. This can lead to a disregard for the possibility of transformation. In addition, the topic of affect is of concern to many philosophers in the affective turn because it resists the rigid causality with which we make sense of the universe (Hemmings, 2005: 548). Affections are felt rather than read, and they tell us that the thing we call "will" is totally shaped by the body's independent operation, far from the state of consciousness (O'Sullivan, 2001: 126).

Massumi considers affect precisely, as a matter of how intensities combine and shift together, turn and convert into and beyond meaning, semantics, and cognitions. He emphasizes that part of the presumption here is that even in the most reactionary of cases, nothing happens until affective severity has already paid us a visit. This clarifies that land is still "existential territory," whether it is geographical or temporal. It is as much a moving territory as it is an environment where everything is held in its place. It is the act of moving. Territory is "never offered as an entity but rather as intense repetition" for Guattari (Bertelsen and Murphie, 147). Deleuze also said that affect and the body are inextricably linked: "there are no feelings…. There are nothing but affects: that is 'sensations' and 'instincts'" (Bertelsen and Murphie, 148). He argued that cinema is pure semiotics because it is the design and arrangement of images and signs, despite semiology's origins in linguistic studies that included signs. "The affective body identifies hidden and unnoticed facets of human relationships that are more difficult to comprehend and articulate; however, this does not imply that individuals are ignorant of their power" (Featherstone, 2010: 196). Affective bodies can be found on Earth, in space stations, and also in outer space. They have an ongoing life and do not have fully physical organs or artifacts.

Deleuze and Guattari's affect theories are founded on a similar premise. To begin with, affect is recognized as a distinct mode of perception. At this point, Thrift (2008: 175) asserts that affect is a mental state. Second, this way of thought is acknowledged as pre-subjective, meaningful, implicit and takes place at the physical level (Clough, 2007: 1–2). This viewpoint contradicts the notion that cognition is solely a personal, rationalistic, representative, and conscious operation. Third, effect is not the same as feeling. Massumi (1995: 88) defines emotion as "trained force." Another point of view is that empathy is a contextual way of capturing feelings (Schrimshaw, 2013: 31). Fourth, aesthetics are needed for effect. When bodies come into contact with one another, the aesthetic properties of objects disclose sensations.

We live in a material world where everything is cause and effect. Even though many causes are external, there are also internal causes. We have a capacity to represent something in our mind like it was actually present in front of us. These causes are always images of external bodies. An affection is the state of a body being affected by another body. When we consider how VR interacts with sensory motor stimuli, we discover a new aesthetic perception, which Bergson refers to as "affection."

In Bergson's philosophy, matter and the outside world. While discontinuation has the property of volumetric and homogeneous multiplicity, the duration we catch in our inner life is an uninterrupted, continuous, space-free, heterogeneous reality. Duration is the indivisible, monolithic heterogeneous flow that we notice in the flow of our consciousness; it is the fact that allows for innovation, the meaning of which is continuously evolving. While states of consciousness are inextricably linked, we perceive them as distinct in our daily lives. When a needle is inserted into our palms, we first experience a tickle, then discomfort, then agony, and finally a pain that consumes our whole soul. But when we concentrate on these states, we see that the stops that seemed to be independent at first merged into a flow. Like objects in

space, our moods are a set of characteristics that do not stand alone, but are continually evolving and interconnected. Our self, which is made up of our moods, is thus an ever-changing, continuous creation, something fundamentally different from set and distinct things in this vacuum, according to Bergson.

By perpetually changing and distinguishing, pure duration, which is the ontological time of all existence, makes room for creation. This ever-changing and distinguishing principle of life is referred to by Bergson as *élan vital* (Bergson, 1986: 437). All of life's evolution is the movement of the *élan vital*, whose essence is change, and in which innovation and creativity flourish. Its true meaning as a measure of life span is innovation and creativity. On the one hand there is freedom, innovation, and time as a continuous flow, according to Bergson, whereas on the other hand there is inertia, geometry, and essential substance. Ascension and descension are the two movements that make up the universe. The downward movement is that of matter, whereas the upward movement is that of the *élan vital*. A single existence might move in two directions at the same time. Differentiation is created by the collision of its limitless tendencies with matter while advancing by expanding it in the event of explosions. Virtual trends, not condition, are the actors in the evolution of life.

Bergson's Concept of Image

Bergson advances the concept of images as a third way of looking at truth, which is not reducible to matter or idea. The image is a non-phenomenological representation of what is being shown (*présenté*). The idea of image as a modern medium of presence was introduced by Bergson. The image is a representation of reality that is not presented to consciousness and thus has an impartial appearance. The total of all properties is the number of photographs." My body, brain, and nerves are all representations of me" (Bergson, 1912: 19). The body as an image is a focal point of activity that behaves and responds in response to other images. It

returns the movement it receives from external images to them: it is an image that travels with other images, taking and giving movement. In reality, all bodily functions, including the brain, are action-reaction processes that operate with reflex centers. The brain and spinal cord's reflexes are just slightly different in this regard. The nervous system directs, combines, or suppresses gestures during the transition between images (Bergson, 1912: 19). At this point, it is clear that one of Bergson's most significant contributions to philosophy is his idea that everything can be found in a world of images. Eveything is an image for him. Eveything that we see is a representation as well as an image of ourselves. Bergson recommends that we should think of the image situation as matter. Matter, in our opinion, is a set of images, and by "image" we mean a state of being that is more than the idealist's representation but less than the realist's thing – a state of being that is halfway between the "thing" and the "representation." (Bergson, 1912: 9).

Virtual is Real and Potentialy Actual

Deleuze wrote in Bergsonism, "A philosophy such as this assumes that the notion of the virtual stops being vague and indeterminate" (Deleuze: 1988: 96). Today, though, this definition is associated with all things that are not actual, or anything akin to the cosmos, with its unimaginable ambiguity and honesty. These views on the concept of virtual distort the views Bergson made in *Matter and Memory*. What is virtual and physical, according to Bergson, is simply one. He brought up the topic of virtuality to demonstrate that only subjectivity has a virtual existence. Individualized matter evolves in terms of virtual intervention, according to Bergson (1912: 104). In summary, the individualized and living body is the probability state of the virtual. On the other hand, Deleuze states that the virtual is real and has the potential to be actual. The virtual is by no means the opposite of the real. On the contrary, it is a fecund and powerful mode of being that expands the process of creation,

opens up the future, and injects a core of meaning beneath the platitude of immediate physical presence.

Bergson connects the paradox of freedom and necessity to his case about the distinction between matter and memory. Existence, he claims, can be seen as a neutralised and hidden consciousness (Bergson, 1912: 248). By extracting a virtual component from a real whole, this latent consciousness eliminates an impediment. When living matter grows more dynamic, it transforms from virtual to action. As a result, necessity and freedom are inextricably linked. As a result, the sense of the virtual can be deduced from the distinction between matter and memory. Matter is purged of virtuality to demonstrate that memory is revealed; the virtual is described as "life suitable for objects" (Bergson, 1912: 242).

Bergson's Concept of Memory

In the Bergsonian model, memory is divided into three stages: pure memory, mnemonic, and pure interpretation. The only place where pure vision takes place is in space. The body is where memories are stored. Pure memory, on the other hand, is pure thought, a memory that is unrelated to matter, is not stored in the body, and is fundamentally separate from matter. What is the location of pure memory if it is not matter (i.e., the brain and the body)? It is possible to store pure memory in itself, for pure memory remains in its virtual state, separate from the present and the body (Bergson, 1912: 101). That is, pure recollection has nothing to do with the body, while consciousness of the body in the present is the material of being. The past emerges from its virtual state in the present, becomes actual, and corresponds with a part of the body, thereby becoming the image moment (Bergson, 1912: 105). The real world is the past in a virtual state that exists outside the mind and matter. Memory has an ontological reality that exists independently of the body. As a result, true life is defined by time, the past, length, and memory. Being has little significance in the current moment or in memory. The

past does not come from the past; it comes from the present. Memory does not come from imagination, it comes from perception (Lawlor, 2003: 53).

The virtual that makes the present real is the past as experience, not the artifact of the present. The past, which exists as an ontological state, is now the product of the body's real needs in contrast to the virtual history. The present, which actually exists, has passed. It is the way of being hidden in itself (Deleuze, 1988: 86). Memory has a virtual reality, the actual one is emerging in line with the body's needs. Intuition, on the other hand, captures the virtual thing that exists precisely outside the real. The real now is bodily and psychological; the ontological, on the other hand, is virtual. Though ontological memory becomes real in the present moment of the body, every actualization brings the entire virtual past with it. By being compressed into the true, stuck, psychological present of the body, which is dependent upon attention to life, the low-density virtual world of memory becomes actual.

In the actual present, if the present is passing every moment. In fact, the present is already a reality indistinguishable from the past. (Deleuze, 2005: 79.) As the real optical image crystallizes with its virtual image, the time crystal exposes its own genetic feature. This definition refers to a crystal presence in which nature contradictions between the present and the past coexist in such a way that they are undetectable. Is that not how déjà vu works? It is now remembered; it is just remembered in both the present and the past. In consciousness, the pure moment in virtual form becomes real and generates an image-souvenir. The real and virtual unity of the crystal image, on the other hand, is what happens.

Matter to the whole of images, and perception, is the movement and reaction of the body, which responds as a center of action between these images. Bergson, according to Moore, puts experience last. Knowing does not begin or end with perception. The response to images that affect the body is what we call perception. The difference between perception and reflex behavior is that the reaction is delayed, guided, and complex rather than immediate. Per

Bergson, the brain distributes, holds, and transmits image movement in the same way as a telephone exchange does. According to the body's needs, perception selects and limits certain images from all images. In this way, perception has a logical aspect: perception is geared toward action rather than thought. Bergson totally rejects the idea that perception is non-spatial, internal, and representative. As a result, his pure perception theory poses a threat to cognitivist science, which focuses on how the brain generates representation (Moore, 1996: 22, 51).

The body, according to Bergson, is in the world of matter and perception is created there. However, only one image is viewed from the inside, not from the outside, within all images. This image is affection. Affect and experience, on the other hand, are identical in nature. Perception describes how the body, which is an image, interacts with other images, while affection describes how the image interacts with itself. Perception, according to Bergson, is the body's ability to reflect images, while affect is the body's ability to absorb them (Bergson, 1912: 17).

Since they compare a "virtual" perceptual stimulus with an "actual" motor response, VEs produce a "presence" or "truth" impact. Jonas' priority for proprioceptively driven self-movement thus serves to connect Bergson's defense of affection to the tactile basis of vision. According to Bergson, the nature of thought necessitates the existence of affection.

Perception, as we understand it, tests our potential action on objects and therefore, inversely, the potential action of things on us. ... our perception of an entity apart from our body, separated from our body by an interval, never reflects something other than a virtual action. However, as the distance between this entity and our body decreases, simulated action becomes more likely to become real action. Assume that the difference between the object to be perceived and our body is zero, thereby implying that our body is the object to be perceived once more. This advanced vision would then express actual action rather than simulated action, and this is precisely what affection is. The actual movement of our body is

to its potential, or simulated, action, just as our sensations are to our perceptions (Bergson, 1912: 57).

Virtual Acts

Our bodies are distinct from other representations. We are conscious of them not only through observation, but also through our affections, which are the body's own activities or impulses to behave. These activities may involve the entire body or only a small portion of it. They are not the same as pure perception, but they are related to it.

As a result of our embodiment, there is no pure awareness that is absolutely free of affection. However, the fact that these two are together at the same time does not cause us to confuse them. A perception is the properties of an object as they relate to our virtual acts, and thus exists in the object; an affection or sensation is an actual, though possibly mistaken, behavior or operation, or propensity to act, and exists in the body. It is internal, but it is not representational. A feeling, though something of which we are conscious, is not something that we experience (Moore, 1996: 33-34). The body capable of initiating change must interact with its surroundings selectively. This contact is what we refer to as "perception" (Moore, 1996: 14). In a living body, perceiving is not drawing an image of an entity, but rather selecting only some of its properties in light of that body's needs and projects, or what Bergson refers to as its "virtual behavior" (Moore, 1996: 27). Thus, Moore states that Bergson's "virtual acts" are actions that we are capable of doing, or have a proclivity to perform, provided not only by our physiology, but also by our learning and training in a particular environment (Moore, 1996: 29).

New Media Art – Virtual Enviornments

In order to have the first consistent and comprehensive theory of new media, Manovich takes principles from film philosophy. For him, a virtual body of a virtual camera depends on the

body. Although the user can examine the environment on its own, pick trajectories and perspectives freely, the interface privileges the film-based perception – cutting, dolly-like smooth movements of a virtual camera and predefined viewpoints. "... the filmmaker's simulated perception is disconnected from its original content and its historical context ... become an abstract collection of operations. Virtual ... a space ... a display space. Modern visual culture, from painting to film, is characterized by an intriguing phenomenon: the presence of another virtual space, a third-dimensional universe surrounded by a frame within our usual environment" (Monavich, 2002: 90-99).

Nothing is restricted to physical space in VR, thanks to this three-dimensional universe. VR provides a new space, parallel to the living reality of Earth, but an electronic eternity and a new self. The user is trying to "be there" in a digital world generated by a machine in VR technology. When we enter images created by computers, or when they are digitized, we can move around them as we do in natural surroundings. We may conduct action by manipulating virtual images, so that we perform both in the "actual" world and in the digitally current world where our bodies are not present. This virtualization of reality and realization of virtuality brings about the collapse between an image, a reality, and a virtuality.

Virtual realities technology, also called "virtual environments," is an immersive computer technology designed to simulate the presence of the user in this digital world by following the user's current location and behavior and providing input in at least one sense (mainly seeing and hearing) (Jerald, 2016: 9; Sherman and Craig, 2003: 13).

VR offers a weak representation of fact, no doubt, and the high level of truthful replication associated with legacy media might not be achieved in the near future. However, Earth's replication is not sufficient to articulate itself and there is no question that VR reflects the world to some extent, as with all other things in the world (Coyle, 1993: 160)

VR has a technical origin and can be described as a set of tools interacting among the various thresholds of perception. In VR, there are geographic thresholds both in the telex systems globally and the computer body network locally. The computer chip exceeds the information threshold. The thresholds of reality are exceeded by affection and interpretation in the actual sphere. VR can be greatly amplified with all this the variety of its modulation.

The VR world is virtual, so virtually the whole world is already there. The individual in cyberspace has a perception that resonates clearly with one part of that world and less clearly with other parts of that world. The degree of perception provided by the threshold between "net" and "fuzzy" is the power to which the virtual world can be attracted. Perceptual inference of the world is about providing perception and art and is based on the creation of perceptions and affects (Murphie, 2002: 11). In other words, this is an event. The meanings assigned to the world are related to the way it is perceived. It is also the product of the inference of the relationships within it. For Deleuze, there is a meaning that relationships are events and events are relationships. There are relationships within relationships, events within events. It is the beginning of the production of these complex concepts, affects, and perceptions that reveal the virtual world. The world that contains the whole world virtually and reveals the world of relationships perfectly is actually VR (Murphie, 2002: 12). VR is not only a platform where fictions are well presented, but also an opening that allows relationships to be established and new events to occur and connect with each other. So the aspect of VR that differs from other experiences is not technology, but rather its attitude to perception. With this feature of VR, Deleuze makes the following statement:

> "... nothing authorises to conclude in favor of the presence of a body that might be ours, or the existence of the body that would have happened to affect it. There exists only what is perceived ..." (1993: 94).

In contrast to other cinematic technology, VR focuses the body in the immersive VR system as an interface and communicates directly with the image. Because of this framework, VR ha been used by artists and researchers for metaphysical ideas, such as dualism of the body-mind, intelligence, facts, effects, virtuality, and reconstruction of the body's function and effects. However, VR is a technology that opens up the entire virtual world. The individual will engage actively in relationships and activities in this technology. The corporeal alterations and emotional responses encountered upon entering a VR environment can be explained using this reconfiguration of the body into affective exchanges. As a result, affect is not one-sided, but reciprocal. Perception is more complicated than a straightforward interaction between an object and a subject because it is an immersive operation. This uncertainty is a challenge, as it is with all VR interactions. The threshold between "same" and "identical" perception modes, which usually exist as perception styles, differs (Deleuze, 1993: 96). This perception concept and the VR perception interpretation are profoundly similar: instead of reproducing a representation of truth, broad relationships between heterogeneous sequences are required.

The relationships between micro and macro perceptions of virtual reality can be reconstructed in a variety of ways. The first method is to deterritorialize the body in virtual reality. The second approach is to think of virtual worlds as smooth spaces rather than developed representations. The whole body is used for this, just as it is in the physical world, and haptic and optic blend. When we think about our bodies, two ideas come to mind for Massumi. The intensities and powers that drive us are what it moves, sounds, and influences. Massumi's study of the influence and virtuality contributes differently to the perception and reasoning regarding the relationship in VR technology between immersive and interactive bodies. Many of the VR apparatus are virtual: participants, HMDs, joistic, visual or simulated imaging spaces, avatars, and so on.

Philippe Queau, research director at the Institut national de l'audiovisuel (Institut National de L'Audiovisuel), asked the 1992 publication Imagina if "videos" could still exist when we replace miniature displays in VR systems with weak laser scanners that print color images on posts and pins of the retina. According to Queau the pics will no longer be present; instead, the optical nerve will be attached to the cpu directly without the deviation of the optical devices traditionally used to generate simulated photographs (Rotzer, 1993: 62). Florian Rotzer asks this about the argument on-site: Can we still talk about the "visual sensations" or body-image affections?

In her book *The Virtual Window: From Alberti to Microsoft* (2009), Friedberg explores the word "virtual" by taking the framework and using the window as a metaphor to map the image transition and to explore the conflict between matterfulness and immateriality, as well as between virtual image versatility and mobility. "A "virtual image" in the brain is apparent to the eye, but not on its plane surface. Therefore a "virtual view" cannot be retrieved in the Brewster optics. This "virtual" sense means an intangible, uncaptured, unaffordable, and more imaginative presence than a picture. Although the virtual image was originally represented as a retinal image, it was attached as an image descriptor for the secondary image register, the picture. The refracting mediation of a lens or reflective mediation of a mirror also may create a "virtual picture." Both these optical interpretations for "virtual," an image made in the brain without a global reference as well as an image created by some kind of optical mediation, precedes the use of the word in the contemporary vernacular. Both definitions (the simulacra and the mimetic one) mean a different ontological register, a technically but effectively tangible, immaterial type (Friedberg, 2009: 9).

Friedberg questions the concept of virtual ontologically and believes that in cyberspace and the VR technologies of the 1980s and 1990s, the definition of "virtual" has changed. For her, this shift means "an ontological distinction of "the materiality and immateriality of an object"

(2009: 7). She contends that the ontological "virtual" is still separate from any optical and digital representation as "eliminally immaterial."

Florian Rotzer, on the other hand, suggests that the VR methodology is actually very impressive because the interface of an image is significantly modified in a number of important dimensions. The surroundings totally disappear with the data-helmet, in which two miniatures are set so far before the eyes that you can only see images that appear on them. This is also the case when an image is projected with laser rays directly onto the retina. The picture is no longer a planet, marked by a framework, but rather an atmosphere for an outsider traveling in it (1993: 74). Rotzer states: "The observer must be able to explore the environment with sensory-motor functions in order to view an environment as extremely 'absolute' and therefore make it visible that the distinction between the corporal and the actual material world is perceived. If only sensors, without a somatosensory connection, can feel the ambience, an image perception is given – an image... The far meaning alone is not adequate to replicate the first order perception of the incarnated spectator now 'within' an image as in an atmosphere. Aside from the connection between one's corporal activity and the brain, our sense of touch is definitely linked to the formation of a material world. This meaning enables the physical barrier and the 'unbeatenness' of a substance subject to be experienced. Both interactions help to differentiate body and surroundings, and hence to distinguish the relation to external elements. The fact that both can be encountered in virtual environments, while tactful sensations can only be simulated through unrefined mechanisms, is precisely the new thing (1993: 75).

Philosophy of VR Works

The Swedish multi-discipline artist Teresa Wennberg has dealt with the cognitive approach and neurological experimentation of virtual reality in her VR projects: "The Parallel

Dimension" (1997–1998) and "Brainsongs: Welcome to My Brain" (2001–2002). The first one portrays a human body with six "worlds" each virtual representation of some component, easily describing by name: the Brain Chamber, the Breathing Cathedral, the Heart & Blood Room, the Thinking Cabinet, the Cavern of the Dream, the Flesh Labyrinth – some expansive and accessible, some narrow, clustered, and diminutive vein. The second one is a paradigm of seven separate "worlds" in which every world is a physical, visual, or cognitive provocation to taunt the traveler.

Wennberg states that "Brainsongs" had walls moving in one of the "worlds," much like a hypothetical chamber of the heart. A variety of odd things were in this room, moving, apparently breathing. She contends that our memory is the brain's most essential activity and that our brain must contain a coordinating cortical core in our brains if we are to identify who we are or where we live. It is difficult to comprehend and explain the external reality to which we refer. Our sensory input, our degree of awareness, and our memories are what define external reality, but there is no shared reality; it is personal to each of us, as are our individual minds, and thus we need to continually analyze the definition of the circumstances. Neurons are guiding our mental activities – or should we suggest our thinking is the neurons? Is a thought something that arrives from outside of our bodies, or is there already a possibility that an external stimulus can come to life in the brain? In other words, are we living a life in which knowledge comes in from the outside of our body, or is this a result of our inner imagination/chemistry? She refers to what she calls a "meta-reality," a concept that emerges from VR's experience. She asks how will we answer this question in the face of a (virtual) uncertain reality (Wennberg, 2018).

Mark Hansen makes this determination in discussing Wennberg's "Brainsongs" study: Much like Wennberg's "Brainsongs," the purpose of the work is immediately to challenge the difference between interpretation and simulation, which tells the image's conception as an

external, technological context by relating brain behavior to sensory changes in a world-perception. [Errant Eye] gives an environment in which these representations of the inner functioning of the brain problematize the relationship between an apparent world and a perceived world (Hansen, 2003: 189).

Pavel Smetana used a darkroom/space, which is a human organ, in “The Room of Desires” (1996), an interactive installation VR project dealing with the brain and the heart. The viewer, who is linked to an interface between the brain and heart, interacts with peaceful scenery, waves of grain fields, and hears soothing sounds in this VR room. When his state of consciousness changes or he is irritated by an image, other images and sounds are generated, stimulated by the heart/brain interface and activated by the computer and laserdisc. This enables the viewer to merge many video sequences to make entirely individual movies. The viewer of “The Room of Desires” does not stay passive and thereby exclude himself from the interrelation between action and response, as compared with numerous immersive and interactive VR facilities. “The Room of Desires” also designates desire, an active part of the living environment, as a component of the technological world. It also signifies the appetite for technological things.

Hansen makes a determination for Smetana’s VR installation project and says: “the affective dimension is not put in the service of the perceptual construction of a cinematic image sequence, but instead carries out the body’s own self-intuition as an absolute volume.” In this scenario, unlike Wennberg’s attempt to attach digitally to the corpse, the body itself becomes a virtual space. With Bergsonian expression, the body, which is special from other images and where the perception occurs, is directly affecting and being affected. The “zone of indetermination,” a special image place that we can think of as the actualized platform of virtual images, can be considered as VR environments as a response to technological materialism. The “virtual” image consists of digital surroundings of VR that provide

"possibilities." However, Murphy (2002: 17) states that we now know that we all exist both on the virtual and in the present. As said before, all VR gives us a shock in certain respects so that we can realize how close the spiritual is to us. It teaches us that the supernatural is inherent in our corporal relationships. VR environments give us the opportunity to observe the presentation: to seek contact beyond its present boundaries and to maintain new interaction possibilities, create new machines, imaginative or metaphysical in this world of relationships. Artists have long been influenced by abstract ideas by digital and immersive technology. Bergson's universe of images is linked explicitly to the body and body motions. With this cinematic idea, Jeffrey Shaw's ventures were influenced by the coherent world of visual pictures. "Corpocinema" (1967) was an interactive dome structure, an "embodied cinema," a dynamic physical-virtual, true and fictional corporal combination.

Char Davies' project "Ephemère," the continuation of the "Osmose" project, seeks to provide us with the true world that we want to see. Deleuze states that the virtual is not opposed to the real; it possesses a full reality by itself (1994: 211). Davies' works try to actualize these "real" worlds. The images seen in the material world appear virtually in the VR space. This virtualization offers us endless possibilities of matter, a true (more real = virtual) universe. In Levy's words, virtual reality systems convey something more than images; they convey a reality of presence (1998: 39).

Two intertwined topics exist in "Éphémère." One is the ephemerality of being in a vast array of coming, going, and going, with our delicate passing presence as human beings trapped in a breathing, streaming universe. The second focus of the work is the abstract correlation of body and nature (Davies, 1999: 186). Shaw decreases actual movements and simulated movement in "Viewpoint" (1975), real images, and virts by inserting a mirror, which reflects the surface of a projector on a true exterior environment. A virtual picture image is made by this merger between the viewer (those behind the transparency surface and those on the

reflected/projected surface). Hansen points out this distinction: Shaw makes the transformation between the image as an object with a matter and the image as an “immaterial” or “virtual” reality that can only be integrated into showing the synthesis.

Bibliography

Bergson, H. (1986). *Yaratıcı Tekamül.* Tranlated by Şekip Tunç. İstanbul: Milli Eğitim Basımevi.

Bergson, H. (1912). *Matter and Memory.* Authorized Translation by N. M. Paul & W. S. Palmer. G. Allen & Co.

Bertelsen, L. and Murphy, A. (2016). *An Ethics of Every Day Infinitives and Powers: Féliz Guattari on Affect and the Refrain*. Eds. Gregg Melissa and Seigworth Gregory J. Affect Theory Reader, Durham: Duke University Press.

Clough, P. T. (2007). Introduction. In P. T. Clough & J. Halley (Eds.), *The affective turn: Theorizing the social* (pp. 1–33). Durham, NC: Duke University Press.

Coyle, R. (1993). The Genesis of Virtual Reality. in Hayward, Philip, and Wollen, Tana (Eds.) *Future Visions: New Technologies of the Screen,* London: British Film Institute: 148-165.

Davies, C. (1999). Éphémère: Landscape, Earth, Body, and Time in Immersive Virtual Space. In R. Ascott (edt), *Reframing Consciousness* (pp. 196-222), Intellect.

Deleuze, G. (1988). *Bergsonism*. New York: Zone Books.

Deleuze, G. (1993). *The Fold: Leibniz and the Baroque.* Translated by Tom Conley. Minneapolis: University of Minnesota Press.

Deleuze, G. (1994). *Difference and Repetition*. Translated by Paul Patton. New York: Columbia University Press.

Deleuze, G. (2005). *Cinema 2: The Time Image*. London: Continuum.

Featherstone, M. (2010). Body, Image and Affect in Consumer Culture. *Body and Society, 16*(1), 193-221.

Friedberg, A. (2009).*The Virtual Window: From Alberti to Microsoft*. MIT Press.

Hansen, M. B. N. (2003). *New Philosophy for New Media.* The MIT Press

Hemmings, C. (2005). Invoking Affect: Cultural theory and the ontological turn. *Cultural Studies, 19*(5), 548-667.

James, W. (1996). *Essays in radical empiricism.* Lincoln: University of Nebraska Press.

Jerald, J. (2016). *The VR Book Human-Centered Design for Virtual Reality*. ACM Books.

Lawlor, L. (2003). *The Challange of Bergsonism: phenomenology, ontology, ethics*. Translated by Athena V. Colman. London; New York: Continuum Press.

Levy, P. (1998). *Becoming Virtual Reality in the Digital Age*. USA: Plenum Press.

Massumi, B. (1987). Notes on the translation and acknowledgments. In G. Deleuze & F. Guattari (Eds.*), A thousand plateaus: Capitalism and schizophrenia.* Translated by B. Massumi), pp. xvi–xix). Minneapolis: University of Minnesota Press.

Massumi, B. (1995). The autonomy of affect. *Cultural Critique, 31,* 83–109.

Massumi, B. (2002). *Parables For The Virtual: Movement, Affect, Sensation.* Durham &London: Duke University Press.

Monavich, L. (2002). *New Language for New Media*. MIT Press.

Moore, F.C.T. (1996). *Bergson: Thinking Backwards*. New York: Cambridge University Press.

Murphie, A. (2002). Putting the Virtual Back into VR. In Massumi, Brian (eds), *A Shock to Thought: expression after Deleuze and Guattari,* London: Routledge: 188-214

O'Sullivan, S. (2001). The aesthetics of affect: thinking art beyond representation. *Angelaki, 6*(3), 125-135.

Rotzer, F. (1993). Images Inside Images. In Druckrey, T., and Stainback, C. (eds), *Iterations : the new image / exhibition curated.*

Schrimshaw, W. (2013). Non-cochlear sound: On affect and exteriority. In M. Thompson & I. Biddle (Eds.), *Sound, music, affect: Theorizing sonic experience* (pp. 27–43). New York: Bloomsbury.

Sherman, R. W., Craig, A.B., (2003). *Understanding virtual reality.* California: Elsevier Science.

Spinoza, B. (1992*). Ethics: Treatise on the emendation of the intellect and selected letters*. Translated by S. Shirley. Indianapolis: Hacket.

Thrift, N. (2008). *Non-representational theory: Space, politics, affect.* New York: Routledge.

Wennberg, T. (2018). Virtual Reality - Virtual Brain Questioning Reality. *Leonardo, 51*(5), 453–459.