Two Phenomenological Notions as Expressed in the Interactive Art Contained within Myron Krueger and Jeffrey Shaw's Immersive Environment

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The case of Myron Krueger and Jeffrey Shaw epitomizes the paradigm of computing creative experience near the end of the twentieth century, and represents the emblematic vindications of art production synthesis.

To begin I will discuss the installation of Krueger's "Videoplace," which was created in 1974, and enacts the paragon of the phenomenological relationship between body and space, referring to the body as a mediating responsive interface. Then I will discuss the second artist, Jeffrey Shaw, with his work "The Legible City," presented in 1989 in New York, and later in Amsterdam in 1991. In this installation Shaw configures a particular phenomenological relationship of interactivity using the body and architecture.

"VIDEOPLACE" AND THE BEGINNING OF VIRTUAL REALITY AS A PHENOMENOLOGICAL EVENT

Krueger begins in the sixties with experiences uniting technology and visual arts. This was significant because of his scientific background in Computer Science and Engineering. These developments using computers had noteworthy previous involvement through Experiments with Art and Technology (E.A.T) (Krueger 423) in the

1 Artists and the art community responded enthusiastically to E.A.T. By 1969, given early efforts to attract engineers, the group had over 2,000 artist members as well as 2,000 engineer members willing to work with artists (Daniel Langlois Foundation).
mid-sixties in New York. It began originally as a group of artists and computer scientists, including personalities like Robert Rauschenberg and engineer Billy Kliiver.

The need of artists to have "experiences" instead of syntactical readings in the sixties becomes a fundamental category to understand the process of fusion of technology and art. This fact would later provide a resource for the development of a methodological production of artwork, nevertheless integrating novel elements of visual significance (Expanded Cinema, Experimental Animation, Multimedia, and Video Art).

Thereupon the "Virtual Reality" conception emerges thanks to Myron Krueger, becoming the construct that unfolds the dimension of reality within an environment-installation. The quintessential experience of this new approach to reality is "interactivity," an action based on the dualism of interaction-response.

Responses had to set up an effective experience of communication in the context of a stimulating immersive space: "The visual responses should be projected on the dimension of the environment, and other sources of visual stimulation should be minimized" (146).

Citing the theories of Maurice Merleau-Ponty, James Stevees offers a definition that helps to understand this conflict between perception as experience and an artificial environment: "The artist, like mime, is aware of the creative role that the body plays in perception and attempts to return the viewer's attention to the creative power of the body" (7).

In "Art and Existence," Eugene Kaelin Analyzes Merleau-Ponty’s sense of involvement within an art piece; asserting that within the context of an aesthetic theory, “the non-reflective component of human experience represents our basic intuitive or
pre-reflective intercourse with aesthetic stimuli” (318). This will determine our intervention in the interactive piece. However, this intervention would be a product of the experience rather than a mechanical exercise.

Suzan Kobel in her article "Performing Phenomenology" discusses about staying away from preconceived notions and expectations in order to inhabit the immediate moment of perception. This action carried out through our pre-reflective or pre-conceptual notion of the world, will finally help us to reveal what it is implied in the explicit event of our lives (18).

Moving your body is not only a matter of performing a function, it is also an aesthetic experience (Hook 175). James Stevees reflects about this point:

Merlau-Ponty argues that an art form traces the path of the artist's body in relation to a particular way of “seeing" the world that the viewer is invited to explore and revisit by interpreting the art form in terms of her own embodied experience. A work of art arrests the attention of the individual to contemplate the way that its colors and surfaces present a world to the body to interpret and inhabit (7).

Krueger applies the technology for the interactivity, but this is a consequence of an artistic aim to invite participation in lieu of contemplation. Despite this, the entire first stage of interaction is contemplation, because the main act of the viewer's engagement is to become first an observer then a participant. Krueger develops a statement about computer art through 7 points:

Computational Art.1. - Other art is fundamentally interactive computer applications are of interest, but not a new art form based on the
computer... 2. -The quality of the interactive relationship is paramount. Traditional notions of visual or musical beauty are initially high. "Answer the middle! 3. - If the answers are intelligent, is the imperative that the computer captures the behavior of the participant to the fullest extent possible. 4. -Real-time graphics and synthesized sound generated graphical interfaces ensure the most articulate and powerful answers. 5. -Visual responses should be projected on a scale on the immersive environment and other sources of visual stimulation should be minimized. 6. - Participants must be able to understand how personally provoke responses. The experience is stronger when the interaction is between an individual and the computational environment. 7. - It is desirable to think in terms of inventing a tool for exploring the interactive medium, instead of creating a series of discrete objects, each of which is a "piece" (147).

This declaration states that the relationship between actor/spectator and reality is complex because the new instance provided by the artist is a reformulation of reality as a digital model of it. It is the interaction between an artificial environment and a person that implements this behavior driven by the user's customary movements.

Stevees describes the interest of Merlau-Ponty in art and aesthetic regarding the body as a kind of productive interface of responses and behaviors: "Since Merlau-Ponty's essay on aesthetic theory is further extended to the art forms of dance, cinema and music. Each of these aesthetic forms relies on the imagining body to communicate and express new ways of experiencing the sensible world" (8).
For Merlau-Ponty, the meaning of art: "is not the subject, it is the allusive logic of the perceived world" (Steves 8). Krueger describes the Videoplace (See Fig.1) installation adding the statement that explains his piece as a new experience in perceiving the world: “The VIDEOPLACE interactions redefine the human's body relationship to reality. We have expectations how physical actions will affect the world. VIDEOPLACE uses these expectations as a compositional element. By defining unusual relationships between cause and effect, this medium comments on our sense of reality” (150)

Fig.1. Myron Krueger. "Videoplace". 1974. Video still.

The environment created by Krueger is the result of the real-time exchange of men and machines (See Fig.2). Krueger himself in his article "An Easy Entry Artificial Reality," formulates his creations as an "art medium" where cause and effect would be defined by the artist and changed in composed ways from moment to moment (150).
Krueger explains the aesthetic statement of his piece:

The impact of the experience will derive from the fact that each person has a very proprietary feeling towards his own image. What happens to his image happens to him. In fact, when one person's image overlaps another's there is a psychological sensation akin to touch. In VIDEOPLACE, this sensation can be enhanced in a number of ways (Packer and Jordan 113).

Krueger created an environment where pre-conceptual events help us to sense phenomena with no physical existence, where the only physical element is the interaction of the body facing a compelling virtual computer generated stimuli.

JEFFREY SHAW'S LEGIBLE CITY AS AN AESTHETIC EXPERIENCE OF INTERACTION

Jeffrey Shaw began his artistic production in the mid-sixties, first as a painter and then abandoning painting to adopt new expressions within emerging media available at that time such as installations and "Expanded Cinema" (Expanded Cinema: Expanding
the formal terms of a film, to integrate the live spectator experience). 1967’s "MovieMovie" was his first experience in this modality, being a combination of several types of avant-garde expressions. The concept of “Expanded Cinema” was probably the first approach that Shaw would experience using technology.

It was definitely Shaw's ability to assemble a group of features in brilliant displays that made possible to relate conceptually installations, performances, events, situations and environments,

During the eighties he achieved a sophisticated level of development in his work, addressing issues such as virtual space, body interaction, and virtual architecture. His relationship with technology became particularly profuse developing interactivity.

According to Peter Weibel, Shaw in principle could achieve a confluence of visual possibilities foreboding a further evolution in his work:

1. Mobile screens
2. Audience participation
3. New materials
4. Mobile projections, these four conditions brought into being a new equation between image and space, between image and spectator. A dynamic architectonic space for visual events was created by the kinesis of the viewers' bodies and three-dimensional screen structures (10).

Just as Krueger, Shaw incorporates the phenomenological extent of the body interacting primarily with a conceptual space; building an environment in which bodily experience was challenged through multiple sensorial channels. Shaw considered Architecture as a malleable concept containing humanistic and ethnological components: "Architecture and body served as projection screen, the spectators were integrated in the image because they were denizens of the architecture, and
The image could be entered because it was integrated in the architecture " (Weibel 10).

The beginnings of Shaw’s work in interactive environments required the participation of the audience as a collective body articulated through a social component. The shift of "expanded cinema environment" to "extended virtual environment" was the expected evolution of this art form, connecting the actor’s sensing capabilities with a more refined used of technology

Jeffrey Shaw understood the importance of architectural spaces as places of social subjectivity and areas of experiences where the audience could sense the environment in a performing attitude.

Morris Davis in the analysis of perspectives on the phenomenological space says: "As Husserl, Merlau-Ponty, and others point out, we never perceive a thing as fully present all at once; things are present through limited perceptual aspects" (107).

This context offers the possibility of developing a "soft" architecture as Shaw says. This becomes an exercise of tacit experiences living in a particular state of reduction. If we participate in a performing space where interaction demonstrates a level of relationships between individuals and objects, this would imply that the environment does reveal significant experience as a result. Morris says this about this point:

Living things explicitly manifest something implied in our perceptual experience: that things are perceived in place, that the first unit of perception is not a figure-on-a ground (as Merlau- Ponty argues), but a thing-in-a place. We too are evolved, living, moving beings, and we
too have evolved to be perceived in places and perceive other places, so should not surprise us that our perception is geared first of all to thin-place relations. (Our places and ways of beings in them are, though, clothed in cultural significations) (107).

Shaw creates a "place" where the parameters of the environment are prerequisites for carrying out a phenomenology of space. The relevance of the work of Jeffrey Shaw is basically a phenomenological exercise of "Epochē."²

During the seventies Shaw put more emphasis on architectural configuration instead of the image. Shaw had developed installations using slide projectors, mirroring techniques, and "Anamorphosis."³

The concern with space and their interrelations with the body and the social body is one of the main lines of development in Shaw's work. According to Peter Weibel:

If the relationship between image and space is a constant subject running through the different stages and phases of development in Jeffrey Shaw's oeuvre, it is accompanied by the basic method of isomorphism. The term 'isomorphous' denotes a similarity between unrelated forms and indicates the existence of a format similarity, or

² "Epochē. Bracketing reality itself. We should indeed put all things of the natural-empirical world, in "brackets," subjecting them to a transcendental suspension of conviction—to epochē. (Britannica.com).

³ Anamorphosis. Is a reversible deformation of an image produced by an optical method (for example by using a curved mirror), or through a mathematical procedure (Britannica.com).
sameness, between visual and real signs, virtual and real images, virtual and real spaces (14).

We can see in Shaw a concern about the modern definition of contemporary art especially in terms of argumentative exercise of validation and reinvention. Peter Weibel discusses the theoretical framework of Shaw:

Behind this isomorphism lies a fundamental axiom of Conceptual art namely the tautology known from the work of Joseph Kosuth. Other structures of conceptual art - such as self-reference and self-resemblance, loop formations or the circular observer situation based on mirrors and semi transparent glass wall observable in the architectural sculptures of Dan Graham are carried on in Shaw's work (15).

Shaw integrates a wide range of ideas of intellectual dynamic during the sixties; also his works go beyond reality in terms of a situational setting. Shaw emphasizes a perceptual exercise, which highlights the values of the opposite of representation based on the symbolic and the imaginary plane. Different streams of validation are nurturing the theoretical platform of Jeffrey Shaw. To this respect Weibel states:

Shaw's installations aim at the expanded states of consciousness and reality. He used the means of digital technology to pursue the contextualization of perceptual procedures to an extent that surpassed the results of Op art and Kinetic art, at the same time acting on the insights communicated by Conceptual art and Action art. With the narrative presentation of perceptual procedures he so
singly integrated in media art, Shaw offered art many possible ways of breaking out the traditional impasses and opening up unexplored horizons (17).

The "Legible City" is the product of the concerns that arise in the work of Jeffrey Shaw regarding the possible use of new answers offered as opportunities for interaction in virtual space, through its implementation as computational environment. Susan Kozel in her article "Performing Phenomenology" indicates the tension about positivist theories and technology, and how she indicates a way of solution to this tension through the convergence between the body and computers, asserting this engagement, as a methodology will produce knowledge within an ample array of new artistic formulations. (11).

The "Legible City" was a work in which the text simulated real buildings assuming a metaphorical articulation based on architectural-spatial information. To this respect Weibel explains: "The letters join together to form coherent sentences legible to the visitor riding round on a bicycle. This form of representation consummates an idea hinted at the Middle Ages and Baroque, namely that a relationship exists between syntax and structural design, between architectural and alphabet" (19).

Anna Kouppanou and Paul Standish mention a disclosed ethics in Digital Technology that stresses the inseparability of the person from their environment, a relation that is always mediated technologically (106).

According to Jeffrey Shaw this experience is critical for the understanding of a new immersive context: "The composition Shaw delivered using technology shows the interconnection between the observers and the world, in an increasingly complex and
variable relationship, because only such complexity and variety can understand the necessary degree of freedom to model the world as a user's manual" (Morris 19).

Fig. 3. Jeffrey Shaw, “The Legible City,” 1988 -1991. Source: Art facts.net.

Kouppanou and Standish in "Between Information Ethics and Phenomenology," recognize in the individuals an undercurrent "informational ecology," when they immerse in the digital/virtual environments, in the end becomes a merge of users and environment to be acknowledged as the "self " (114). The "virtual" experiences in the work of Shaw are not detached from reality although they offer different levels of perception. For example a bicycle (See Fig. 3), becomes a dynamic intermediary for the user: "In the Legible City, for instance, a bicycle-interface requires the visitor to make a physical effort in order to move through a resistance-free universe, or to slow down in order to read its streets" (Duguet 51).
The interactive piece "The Legible City" is definitely geared towards the status of a mental theater where user's participation becomes essential. The language of the "play" takes on a new creative dimension associated with the body, immersive environment, architecture, interactivity, and narrative structure (See Fig. 4).

It is possible today to recreate the configuration of Shaw and Krueger's environments through different programs and hardware available such as Isadora, Jitter / MaxMSP, Quartz Composer, PureData, Kinnect, Arduino, and I-Cubex.

The iconic work of these two artists represents a paradigm of digital immersion and interaction. The effectiveness of these digital paradigms still endures as masterpiece models.
CONCLUSION

New generations of artists working with technology and new media have reinvented the use of physical interfaces quoting Jeffrey Shaw's framework.

Interfacing a bike for exercising could be as valid for use as a keyboard, a joystick, a touch screen tablet or a 3D mouse. This can be clearly seen in one of the pieces of Stefan Sagmeister’s exhibit “The Happy Show” (See Fig.5) presented at the gallery "La Gaîté Lyrique" in Paris in March 2014.

Sagmeister literally reproduces the interface proposed by Jeffrey Shaw in 1991. The user or visitor rides a stationary bike while pedaling to change the content of a screen furnished in neon text (Fig.5), which is generating different characters and bright words (See Fig. 6). We can say that this would be a kind of homage, but ultimately the original tenets of "The Legible City" remains unchanged.

Gaite-lyrique.net/en/exposition/the-happy-show.
Conclusively, the artists should not fear the exploration of a much larger territory such is the case of the realm of emerging technologies, which is often unfamiliar and usually dismissed because of its ephemeral and evanescent standards. The teachings of Krueger and Shaw show us how feasible it is to discover an aesthetic dimension in the phenomenological practice of hybridization using physical, computational environments, and performing narrative from our “bodies,” to finally create responsive interaction that will become enduring acts of creative intervention.
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