

## THE DEVICE IN INTERACTIVE ART: INTERACTIVITY, GESTURE AND SENSE

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### ABSTRACT

This paper explores the specificity of *interactive art* focusing on the concept of *device*, present in philosophy and other arts, from the perspective of Giorgio Agamben in dialogue with the notion of gesture from the author Vilém Flusser. Taking this theoretical approach, we examine the modes of articulation of an interactive artwork and the different ways of creating sense that are expressed in the public's behavior. Through the analysis of two interactive works of the artist Rafael Lozano Hemmer, we explore the nature of gestures in interaction and the factors that prompt them as part of the device created in the work of art.

### INTRODUCTION

*"With a piece of paper and the twenty six letters of the alphabet, you may write both Don Quixote and a History test in primary school."*

Arlindo Machado

Given contemporary works of art that make use of technology (be it digital, electronic or even analog), the emergence of an artistic practice distinguished by the construction of an unfinished, potential configuration has become evident; its evolution is determined by contact with the public, who is invited to an interaction that is not just interpretative anymore (the secret dialogue in which every work engages its audience) but deliberately material. The act of sculpting a shape during the interaction could be, under some circumstances that we will analyze later, as revealing for the audience as for the author of the artwork. Brazilian theorist Arlindo Machado outlines this situation as follows: *"Instead of having one finished 'work,' you only have its elements and exchange rules defined by a combinatorial algorithm. Now the 'work' is created exclusively in the act of reading and, in each of those acts, it assumes a different form, even though this is eventually determined by the potential the algorithm allows."* [1]

Many artists working in the field of interactive art often make reference to this characteristic when defining their artworks. Prolific artist Rafael Lozano Hemmer states:

*"The idea is for the artwork to be an incomplete platform and to let the integration with the audience interpret and highlight it in some way. In the case of interactivity, one of the main functions is the creation of situations that are beyond the artist's control. For me, this is essential. That is, I cannot prescribe the artwork, I do not want to identify what the ending will be, how it will look, what people will and will not do."* [2]

Interactivity is usually associated with two ideas and values in relation to the public: freedom regarding possibilities of action and the rule of co-authorship, given that the audience, through its participation, determines the final form of the work, which is no

longer a finite object but an event, a situation, an open process. However, while these descriptions manage to identify inherent features of interactive art, they prove to be too general to pinpoint the differences various works present in their evolution (the characteristics that artists associate with their own work, though far from creating a particular genre, may be applied, to a great extent, to many other interactive artworks); furthermore, establishing the final result indetermination as a feature of this type of platform *per se*, associated to an apparent unpredictability of the public's actions, leaves wide areas of uncertainty, failing to interrogate the specific ways they manifest that indetermination in a particular work.

### DEVICES & APPARATUS

*"A device is like a ball of yarn, a multilineal ensemble [...] to untangle the lines of a device is to draw a map, to chart and explore unknown territory."*

Gilles Deleuze

The concept of apparatus constitutes a valuable tool for understanding what is missing in general descriptions of interactive art. The breadth and accuracy of this concept will reveal the multiple ways of creating discourses, opening new areas of reflection in order to transcend the dichotomy between a closed work and an open work, between a univocal work and a participative one. Giorgio Agamben provides the following definition:

*"I shall call an apparatus literally anything that has in some way the capacity to capture orient, determine, intercept, model, control or secure the gestures, behaviors, opinions or discourses of living beings. Not only, therefore, prisons, madhouses, the panopticon, schools, confession, factories, disciplines, juridical measures and so forth (whose connection with power is in a certain sense evident), but also the pen, writing, literature, philosophy, agriculture, cigarettes, navigation, computers, cellular telephones and – why not – language itself, which is perhaps the most ancient of apparatuses, one in which thousands and thousands of years ago a primate inadvertently let himself be captured, probably without realizing the consequences that he was about to face."* [3]

In turn, André Parente, when analyzing the cinematographic device, quotes Michel Foucault's characterization of this concept, for whom:

*"a device has three levels of agency: 1) the heterogeneous set of discourses, architectural forms, propositions, knowledge and power strategies, subjective dispositions and cultural biases, etc.; 2) the nature of the connection among those elements and 3)*

*the episteme or discursive formation in a broad sense, resulting from the connections among the elements.” [4]*

Today, the notion of device is usually associated, initially, with the technological field. If we search Wikipedia, we get references to storage devices, direct access devices and others. And the interactive art argot, particularly in the hardware field, is full of similar descriptions: input devices, output devices, ambient devices, infrared devices, etc. This observation is relevant because it reveals that, in the collective imagination, devices are conceived mostly as objects, as technological apparatus. These notions can also be tracked in the field of artistic productions with new media, even when they are referred to as artworks. For this reason, in many cases, what is said about an interactive work, by the author or the audience primarily makes reference to the elements that form its material side (the technological resources it is made of) or even procedural factors (how it is made in relation to the techniques used). These dimensions seem to fall, though partially, within the first level of agency established by Foucault; however, there are two subsequent levels, which are essential for the emergence of a particular device.

We will analyze two artworks, *Body Movies* (2001) and *Under Scan* (2005), which belong to the same work series (Relational Architecture) from the same author, Rafael Lozano Hemmer. Both artworks are built of very similar elements, apart from some differences. The mechanism for both is the projection of people portraits (with a fixed or mobile image), a strong light that conceals those images and the public's participation through the use of their own shadows as interfaces. Each individual, when coming between the light source and the projection plane, can see the images in the shadowed area, which constitutes a representation of their own body, a mask and, at the same time, an avatar. These common elements will allow us to observe to what extent the experience is defined by its mere inclusion in the artwork and if there are other factors beyond the elements used that establish differences in the evolution of participation.

### BODY MOVIES

In the video that documents this work, we can see passers-by stop in front of a big screen, project their shadows of various sizes and make the projected images visible. When a person decides to emulate the posture of the portrait being discovered, there is even a brief illusion of movement. In one of the scenes, two elderly women are revealed and one of them seems to raise her arm in a victorious gesture; for a moment, her body produces the illusion of movement (“movies”). An adequate coincidence between the scale of the shadow of the person's moving arm and the one of the projected image creates an effect of merger as a consequence of the transference of the body movement to the image sphere.

But along these behaviors expected by the artwork there is an overlapping level of interactivity in which people play with their shadows, no longer as an interface and mask for the fictional

world of the portraits but as a convenient resource for shadow puppetry, creating different situations in combination. The possibility of changing the scale by modifying the distance in relation to the light source seems to stimulate the imagination of the public, who tries various dramatic situations based on the asymmetry of the projected shadows. This dimension that was not contemplated in the objectives of the artwork, however, takes place in actual experience.

### UNDER SCAN

In the video that documents the work, passers-by can be seen wandering around the interactive surface and stopping in front of a video portrait when it is disclosed by their shadow. In this case, we can see that the movement belongs to the image and that the interaction participant becomes a spectator whose body stays mostly at rest and looking down. When the performance ends or if people lose interest in staying still, they continue walking in some direction and the video/character stops the action. In this version we can see that there are no shadow puppets, that interactivity tends to be more individual (or, if socialized, takes place in small groups), that the experience seems to have a more intimate and atomized character.

### THE GESTURE OF INTERACTING

*“The limitations we face today are no longer technological.”*

Jim Campbell. [5]

According to Agamben's definition, a device has the capacity to influence gestures, behaviors, opinions and discourses. In interactive art, gestures and behaviors hold a hierarchical position; the public comes into contact with the artwork by moving their body and performing a set of actions in response to the situations presented by the artwork. When we speak of body and gesture, we refer to an inseparable binomial. But is a body movement a gesture in itself? Philosopher Vilem Flusser tells us that:

*“A gesture is such because it represents something, because it is only intended to give sense to something. [...] If someone pokes me in the arm, I move it [...] there will be a causal concatenation between pain and movement and a physiological theory to explain that concatenation. [...] This sort of movement will not be a ‘gesture’ according to the proposed definition any time the observer can provide an adequate explanation. However, I may also raise my arm in a specific manner when someone pokes me; but this time there will not be a flawless concatenation of causes and effects between pain and movement. A kind of wedge is inserted into the concatenation, a codification that gives the movement a specific structure so that, for those who know the code, the movement adequately communicates the ‘meaning’ of pain. My action represents pain, it is a symbol; and pain is its meaning.” [6]*

The wedge converting movement in gesture implies a code: a code that is fed from two sources; firstly, the cultural heritage that

the interaction participants have and that guide their movements introducing a certain intention; secondly, the particular code that the work proposes and that people apprehend in situ through what they observe, experiment and deduce.

In the case of *Body Movies* the additional, unexpected layer in the artwork is connected to extradiegetic experiences: the ancestral experience of forming images using shadows. In addition, the behaviors of the audience are not casual, unpredictable or mere physiological reflexes; the recurring situations created from the scale difference between shadows let us discern a symbolic universe oriented towards movement. When a person decides to take somebody else's head and move it, he understands before or at the same time he is making the gesture that in order to do it his hand must be larger and the shadow of his body must necessarily grow to break the dimensional symmetry with the body of the other person, so that he may simulate manipulating the other person as a puppet. Thus, his coming nearer to the light source has a purpose: he is searching for symbols that are already rooted in his cultural heritage, the association between the big and strong and the small and weak.

This behavior may take place because of the intentions dwelling within the people who interact, but fundamentally because of the arrangement of elements in space, specifically, the light on the ground and parallel to the projection plane. If these two people were placed at the artwork *Under Scan* and if they tried to perform the same action, they would not find it easy. Since the projector is placed up high in an axle that is perpendicular to the floor plane (which is also the projection plane), people would only be able to reproduce a scale of similar variability in the shadows if they were able to transcend the law of gravity or fly by themselves.

### THE GESTURE OF ARRANGING

*"If we are given a sufficiently virtual representation of freedom and personal autonomy within a limiting structure, we lose awareness of the artifice; we are unaware that we have adopted a belief system and its attendant simplifications."*

David Rokeby [7]

At this point we can start to discern that the arrangement and the articulation among all the heterogeneous elements that form a work generate significant differences in behaviors, which means they become signifiers that produce meanings. This is the second dimension that Foucault makes reference to: *"the nature of the connection among those elements."* It is evident that the nature of the connection is defined at a stage before the individual's participation and is the result of specific settings of the artwork configuration, whether they originated as movements intended by the artist or evolved by chance.

Arlindo Machado develops a brilliant analysis about Plato's Allegory of the Cave, where light and shadow also happen to play a central role:

*"This fire is strategically placed behind and above the prisoners' heads, since Plato knew too well that, if it had been placed somewhere else, the light source would have caused the spectators to be projected on the screen, which would have revealed the device. And given that the effectiveness of the illusion depends, mainly, on hiding the technology that creates it, Plato places a 'small wall' between the prisoners and the 'operators' of the projective mechanism, taking care to protect operators from the prisoners' indiscretion."* [8]

Plato builds a device, on the philosophical plane, that assumes in this allegory the form of a particular situation: a space, heterogeneous elements and subtle arrangements which affect the nature of what is perceived. The critical sense intended to install horror in the reason of the senses needs specific material arrangements and connections for the conceptual construct not to collapse. [8] And this is the third point mentioned by Agamben when quoting Foucault:

*"The episteme or discursive formation in a broad sense, resulting from the connections among the elements."* [9]

David Rokeby, a Canadian interactive artist, makes some observations related to this discipline which may be understood through the lens of the concepts we have developed:

*"It is a mistake to conclude that by presenting a variety of perspectives, the artist is being objective and disinterested. Through selection of the specific points of views offered, how they are linked together and the design of the method of navigation, the artist holds significant expressive power which is enhanced by this apparent objectivity. This is analogous to the situation encountered in hypertext databases which presume to completely cross-reference the information that they contain. The system of cross referencing used remains a powerful expression of the ideas of the creator, emphasizing certain kinds of relationships while effectively discouraging others. Creating such structures is similar to designing the infra-structure of a community or society; it charges the space politically. At the same time, such a structure is comforting because in limiting the options available at any one time, it assists the interactor in deciding how to proceed. It gives one a coherent structure within which and against which one may establish an identity."* [10]

### CONCLUSIONS

The potential of an interactive artwork not only lies in the combinatory variables of the supporting computer code, but also in the potential of its conception as a device.

Connectivity – an operation associated with communication protocols – acquires a new sense when interpreted in relation to other structural aspects of an artwork. Ultimately, it is the arrangement of and connection among the elements forming an artwork that condition and model the audience's sphere of action.

In this sense, absolute freedom of action for the audience would be an illusion, less real than the field of possibilities implicitly suggested by the device. Unpredictability is an intrinsic feature of many phenomena, beyond the artistic and algorithmic plane; unexpected events are part of life and this does not turn all spontaneous manifestations into aesthetic experiences. We may conclude that some areas of unpredictability take place within the expressive sphere of the artwork as a result of the relationship between the device and the audience and other unexpected and surprising events silently disclose unexplored territories outside the expressive scope of the artwork.

The limits that let us determine when a user is within or outside the artwork become invisible if we only consider the material aspects of the work. The outline of experience is the result of an intangible fabric of connections between the instances of the artwork and the discursive formations created. Only by considering all these aspects in combination may we provide a true sense to the concepts of unpredictability and freedom in an interactive work. This semantic fabric is where the new media artists' intentions ultimately sculpt the shape of their work and the poetics of their language.

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