

A conversation between José Luis Barrios and Rafael Lozano-Hemmer

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JLB 1: *Without a doubt the evolution of electronic art, or new media art, presents new challenges for both the theory and philosophy of art. In general, these challenges are analyzed using conceptual perspectives that deal with relations to social, political or cultural facets. However, the connections that these artistic explorations have with aesthetics and epistemology are little explored. In this context, and to get us started, what are the theoretical lineages that nurture or inspire your work?*

RLH 1: I read critical theory primarily for pleasure, as a catalyst, but I never consider it to be a recipe or a manual, nor do I presume to know how any theory might interpret my work while in the process of creating it. I was educated here in Canada where during the 80's and 90's I studied post-structuralist theory on the one hand, and the theory of information and complexity on the other. Through the guidance of Brian Massumi and other teachers I witnessed the takeover of North America by French thinkers like Derrida, Deleuze, Foucault, Barthes, etcetera. For three years (1988-1991) I directed a radio show called "The Postmodern Commotion" that was dedicated to putting into practice what we considered to be post-modern activist tactics. We interviewed a number of thinkers such as Frederic Jameson, Jean-François Lyotard and Terry Eagleton. In the early 90's the term "post-modern" dissolved and it became clear that the new trend was toward the "virtual". In keeping with this shift I turned to thinkers like Geert Lovink, Tim Druckrey, Donna Haraway, Siegfried Zielinski, Peter Weibel, Sandy Stone, Simon Penny, and others who helped me form more critical ideas on virtualization. These days I mainly read about science: Chaos Theory, uncertainty, the strange world of Quantum Mechanics and non-linear phenomena, —authors like Mexican writer Manuel DeLanda and Ilya Prigogine. I think the science of complexity, for example, offers us very fertile terrain for

creativity. Unfortunately, the humanities continue to maintain a rather antiquated, almost 19th century vision of science in general.

Within “Canadian” traditions there are authors to whom I feel a great affinity. Above all with respect to the idea of understanding technology not as a tool, or as something that is separate from us, but rather as a “second skin” to use the words of Marshall McLuhan. After the end of phenomenology people no longer wondered about the nature of pre-linguistic consciousness. In the same way, we now consider it impossible to think about our world without technology simply because technology has become the language or the unavoidable medium for our thoughts. I work with technology not because it is original, but precisely because it is inevitable and commonplace in our global society.

JLB 2: *There is a distinguishing factor that defines modernity and that has to do with self-awareness, or the ability of the subject to both represent and represent self-reflexively his activities and relationships with the world. An important aspect of this is expressed in the Foucaultian concept technologies of the gaze. Throughout the history of art and visual culture various strategies of the gaze have existed. How do you distinguish and conceptualize those strategies that belong to the present and how are they manifested in your work?*

RLH 2: New visual experiments have always been aided, or even initiated, by technological advancements. For example, perspective during the Renaissance, anamorphosis as part of Mannerism, or Eugène Chevreul’s color theory for the Impressionists. In this context my contribution is the following: Walter Benjamin spoke with great clarity about the birth of modernism. For him the image is that which can be reproduced mechanically, a condition that eliminates the aural quality from a work of art. Mechanical reproduction democratizes art, popularizes it, and takes away that privileged point of view born of singularity. However, with digital technologies I believe that the aura has returned, and with a vengeance, because what digital technology emphasizes, through interactivity, is the multiple reading, the idea that a piece of art is created by the participation of the user. The idea that a work is not hermetic but

something that requires exposure in order to exist is fundamental to understand this “vengeance of the aura”.

Today digital art, —actually all art—, has awareness. This has always been true, but we have now become aware of art’s awareness. Pieces listen to us, they see us, they sense our presence and wait for us to inspire them, and not the other way around. It is no coincidence that post-modern art emphasizes the audience. In linguistic theory Saussure would say that it is impossible to have a dialogue without being aware of your interlocutor. Exactly the same thing was said, almost 100 years ago in the art world by Duchamp, for example, when he said, “le regard fait le tableau” (the look makes the painting). What we see happening is that this concept of dependency is reinforced by digital technology. Pieces of art are in a constant state of becoming. It’s not that they “are” but that they are “changing into”. I think the artist no longer has a monopoly over their work, or an exhaustive or total position over its interpretation or representation. Today, it is a more common idea—an idea that I defend—that the work itself has a life. The work is a platform and yes the platform has an authorship, but it also has its points of entry, its loose ends, its tangents, its empty spaces and its eccentricities. In this sense, artworks tend to be eclectic which for me signifies the liberation of art, the freedom to reaffirm its meaning.

In contrast to the idea of creation through the gaze of the public, the other side of the coin should also be mentioned; the panoptic computerized gaze. Artistic interest in criticizing the predatory gaze of the surveillance camera is nothing new; there is for example the work of Dan Graham, Bruce Nauman or Julia Scher, to mention a few. What is new is the degree of computerization that the new surveillance systems, which invade our public and private spaces, possess. Stemming directly from the American “Patriot Act” is a wide variety of computer-vision techniques that, for example, are intended for identifying suspicious individuals or classifying them based on ethnic traits. It is literally about technologies designed to discriminate based on a series of innate prejudices. This new intensification of surveillance is extremely problematic because, in the words of Manuel DeLanda “it endows the computer with the power of executive decision making”. What is also new is the amount of

memory that these systems have thanks to ever-smaller storage units and increasingly efficient compression-decompression algorithms (codecs) that allow for the recording and reproduction of events from the distant past. Lastly, the widespread popularization of cameras by reality shows and the penetration into public and private spaces by means of things like web cams should be mentioned. I have no doubt that a new type of art is emerging in order to confront these technologies of the panoptic and post-optic gaze. The Institute for Applied Autonomy, Harun Farocki and the Bureau of Inverse Technology are some examples of this new line of inquiry.

JLB 3: *This return of the aural that you mentioned establishes a new rule of play: art plays with me and not I with it. This is linked to the fundamental principle that Deleuze also expressed and that is well exemplified by the emergence of new media; tools were never tools but vital currents between nature and us. For Deleuze digital technology demonstrated that there is no separation between the “within” of the representation and the language that forms its exterior. Words are not the expressive wrappings of a concept; rather there exists a constant flow between “within” and “without”. This is made more evident when the “material condition” of new technologies cannot be explained without a link to a sort of pure logic, an algorithm that gives meaning to this “materiality”. Machine is concept and concept is machine, and its mediation is a flow that allows for an algorithm to be interpreted. For example, in robotics a connection is made between mechanism and algorithm that demonstrates that the machine is an expression and an organism and not only a tool. In other words, new technologies deny the separation between concept or rationality and materiality, and this carries with it a series of implications. Among these implications, would you elaborate on the relationship between machine and language?*

RLH 3: What you said about Deleuze reminds me of a chapter in “El Incal”, the comic book by Alejandro Jodorowski and French illustrator Moebius, called “Panic in the Internal Exterior”. What does it mean to enter a space that in reality is “outside”?

The relationship between machine and language in computing is quite clear. Programming is the utilization of a series of symbolic conventions that when translated into binary code, control the behavior of the machine. The computer is a medium for dialogue. When working with Photoshop you are collaborating with hundreds of engineers who have left their choices discernable in the software. In this sense we can say that the programs, and even the programming languages behind them, are not neutral. They come accompanied by an aesthetic of a Nietzschean “will to power”. The same computer using another program, maybe written in another programming language, allows you to simulate musical instruments or to sense the presence of an audience member. Through programming languages the computer becomes a kind of lubricant—or glue— between different media. Another more interesting aspect, at least for some artists, is the possibility of programming without teleology. By means of non-linear mathematics, like cellular automata, probabilistic ramifications, recursive algorithms or chaos strategies it’s possible to write programs whose results will surprise the author. That’s to say the machine can have certain autonomy and expression because you simply capture initial “algorithmic conditions” but do not pre-program the outcome. This for me is a gratifying post-humanist message, a message that invites humility, but also one that marks a crisis in authorship and opens a wide problematic area, and I say “welcome!” to that.

JLB 4: *Another fundamental aspect of the connection between technology and language is that which is linked, and this is particularly important in your work, to society. If the machine is language and a space for play, how can we understand its function or connection with social bodies? Let me clarify; in a large part of your work, interventions into the space of the subject are obvious, whether these spaces are public or private. This is interesting because at the same time that you link technology with language (society), you also introduce a type of “principle of intrusion of technology” to both the subject and their space. What imaginary social space do you believe your work opens? Above all I am asking about those pieces that have a direct link to public spaces.*

RLH4 It depends on the project and how it is received. Often the response to the work is very different from what I had imagined. For example, my installations using giant shadows; the first time I used the projected shadows of pedestrians in a public art piece was when transforming the façade of a military arsenal in the Austrian city of Graz. It happened that in the arsenal there was a painting entitled “The Scourges of God” depicting the three primary fears of the people of Graz in medieval times: a potential Turkish invasion, the Bubonic plague and infestation by locusts. For this installation I invited dozens of artists and thinkers from all over the world to participate in an on-line debate on the transformation of the concept of fear. Perhaps the Turkish threat had been replaced with a fear of an invasion of Yugoslavian war refugees, or instead of Bubonic plague, the current day AIDS epidemic. The debate was projected in real time onto the façade, but I thought I could use the shadows of the pedestrians as a kind of “window” or “scanner” linking the public to the text. I assumed that the shadows would give an expressionistic and lugubrious touch to the piece—I was thinking of Murnau. Also, I wanted the shadows to function as metaphors for fear: for instance fear of the Turkish invasion that never happened but was only a menacing specter. I was totally wrong! As soon as people passed by and noticed the installation they would start to play with their shadows and perform humorous pantomimes. The huge dimension of the shadows allowed, for example, for school children to step on their teachers, or that a man in a wheelchair could roll his twenty-five-meter-high shadow over the others deriving great pleasure from squashing them with his giant wheels. The installation was converted into an ad hoc carnival and nobody thought for one minute about fears, plagues or invasions. This was one of the most entertaining errors of my career. The piece, which was called “Re:Positioning Fear”, opened a Bakhtinian carnivalesque space where the environment was artifice and game, an environment that was completely outside of my control, literally and poetically.

My projects with shadows since then have benefited greatly from this lesson. “Body Movies”, the piece in which shadows reveal enormous photographic portraits, precisely invites people to play with their representations in a public space and to play at being the “other”, like a kind of inverse puppetry. The

plastic potential of the shadow is used not as an absence, loss or darkness, but as a window to an artificial reality. We were trying to interrupt convention, routine, the predominant narratives of power that the buildings represented. Cicero said, “We make buildings and buildings make us”. Our situation in the globalized city says the opposite: the urban environment no longer represents the citizens, it represents capital. Architects and urban developers build with the priority to optimize cost, and from there to the homogenization of globalization, and from there to the unfortunate reality of contemporary architecture which fetishizes the modular, the formula. It has reached a crisis of representation that carries with it a tremendous avidity of connection. In my work I try to encourage exceptionalism, eccentric reading of the environment, alien memories (meaning, those that don’t belong to the site). I don’t want to develop site-specific installations but rather focus on the new temporal relationships that emerge from the artificial situation, what I call “relationship-specific” art.

JLB 5: *In understanding public space as a carnivalesque space it is also understood why communities developed where—and this also happens with Relational Architecture—there is no subject identified as autonomous and independent. Bakhtin explains in his text on the forms of the carnivalesque in the Middle Ages and the Renaissance that in order for the carnival to succeed there has to be an overflowing beyond the limits of the subject’s identity and body. It seems to me that in the examples you provide you reconstitute the carnivalesque condition by means of shadows, not as theatre but as pantomime. What you do is create a carnivalesque space in which the user can intervene and symbolically create a collective body. This is noticeable, for example, in the fact that you intervene façades or the Zócalo Square in Mexico City; by doing so certain symbolic connections to power are deconstructed. In this manner you open a ludic space and deepen the potential of the social body, but you do this via interactive technological supports, reinforcing the imaginary-fantastical aspect of the game. Seen this way, and to delve more deeply into the relationship between the public space and that of the carnivalesque, what place does the orgiastic body have in this game?*

RLH 5: My projects vary so it is difficult to generalize. There are pieces where the body is amplified on an urban scale (Displaced Emperors, Body Movies, Two Origins), others where the body is the canvas (Subtitled Public), and others where it becomes the target of extremely predatory electronic detection (Surface Tension, Standards and Double Standards). There are also others in which the body plays no highlighted role (Amodal Suspension, 33 Questions Per Minute, Vectorial Elevation).

I'd like to make a clarification on a term you used and that is the idea of the *collective*. I run away from this idea. In the world of electronic art there are two competing trends. On the one hand the unbearable utopian vision of Pierre Levy, amongst others. He proposes a "collective intelligence", virtual communities that form a global village, the idea that we are facing the emancipation of the human race all thanks to inter-connectivity. To me this vision, which is promoted by publications like Wired, is corporative, colonial and naïve. I am amongst the ranks of those that reject the notion of community and the collective when it comes to acts of interpretation or perception. I think that we have seen truly disheartening agendas produced in the name of collectivity. In contrast, I really like the concept of the *connective* —a much less problematic word because it joins realities without a pre-programmed approach. What's interesting is that this concept doesn't convert realities into homogeneity. What Derrick de Kerckhove calls "Connective Intelligence" seems more useful as a concept for linking planes of existence that may be extremely disparate even if they coexist at times. I would even go so far as to define the connective as those tangents that pull us out of the collective.

To return to the connection between carnival, body and public space, "Body Movies" is a piece that inspired different behaviors depending on where it was presented. When it was to be shown in Lisbon I thought of the stereotype of the "Latino" who loves to be out on the streets, partying and hugging affectionately so I expected a lot of this type of interaction with the piece. However what we saw was people trying their best not to overlap or interfere with another person's shadow. In contrast, when we presented the piece in England, where I had thought we would see considerable modesty and moderation, people got

drunk, took off their clothes and acted out a variety of orgiastic scenes, which was a lot of fun to watch. This anecdote points out the difficulty of making generalizations about the body in a public space, which seems to me like quite a healthy difficulty.

JLB 6: *In your work you make a distinction between “Relational Architecture” and “Subsculptures”. Does this distinction correspond to certain connections that you maintain or establish with specific aesthetic systems—architecture or sculpture—or perhaps to formal concepts, for example, scale, or is it more about two arbitrary concepts that allow you to explore diverse issues?*

RLH 6: They are more about arbitrary concepts. They are neologisms designed precisely to avoid being classified with other existing concepts. I first used the term “relational” in 1994 in describing my telepresence installation “The Trace”. I found the word in the neurological essays of Maturana and Varela, although I was also aware of pioneering artists like Lygia Clark and Helio Oiticia and their work with relational objects. As well, I was interested in the relational functions of database programs that wove multi-dimensional webs for connecting various fields, a valuable concept when applied to the word “architecture” that for so long has signified solidity and permanence. Lastly, it was a good word in counterpoint to the term “virtual”, which emphasizes the dematerialization of experience and asks us to create in simulacra. “Relational” emphasizes the dematerialization of the real environment and asks us to question the dissimulation. Today the term is already dated, partly because of the popularization of the term “relational aesthetics” by Nicolas Bourriaud, which by the way has little to do with my work and was published a number of years after I used the term. For the sake of coherence with my earlier work, I will probably continue to make Relational Architecture pieces maintaining the two grotesque definitions that I gave to the field: “technological actualizations of urban environments with alien memory” (1994) and the newer “anti-monuments for public dissimulation” (2002).

I started the series of Subsculptures in 2003 with the motorized belt piece “Standards and Double Standards”. I have already added another three to the

series: the kinetic sculpture “Synaptic Caguamas”, the interactive screen piece “Glories of Accounting” and the neon piece “Entanglement”. It’s true that in the majority of cases these are more portable and nomadic pieces than the Relational Architecture installations are, —however I think that at some point I will make huge Subsculptures... so, the scale isn’t the difference. I don’t yet have a definition of what "Subsculpture" is but I think it has to do with contagion matrices. All of the installations consist of two or more interconnected robotic or virtual entities. The rules of behavior for these entities are relatively simple, but they are dependent on and influenced by the status of neighbouring entities or other inputs, for example the surveillance of the public (my installations almost always "watch the watchers", as Daniel Garcia Andújar would say). In this way, they achieve an unpredictable and emergent global behavior, where turbulence and other phenomena that are products of non-linear processes are found. For example, in “Standards and Double Standards” there are between 10 to 100 buckled belts hung from interconnected robots. A computerized camera system detects a visitor and instructs nearby belts to rotate on their own axis until the belt buckle faces him or her. This local movement then spreads in a process of chain reactions that travel throughout the matrix until the entire field of belts has been affected. If a second visitor enters, then those belts closest to this second presence will be influenced and begin to rotate in the same manner described spreading and influencing the orientation of the entire field. The resulting effect are patterns of interference very similar to those that can be seen, for example, in a tank of water into which various drops fall; some belts remain still, others turn constantly (eddies) and others follow the spectators.

Another aspect of Subsculptures is my interest in Barbara Liskov’s "Substitution Principle" that says, in object-oriented programming, that an object of one class can be substituted for another in an inherited class without changing the properties of the program. It’s something like the concept of metonymy in psychoanalysis or linguistics and like the categorical syllogism in philosophy called the “minor premise” or “subsumption”. Liskov’s Substitution Principle is, for me, extremely useful when it comes to making symbolic transferences between disparate or copresent realities. For example in “Standards and Double Standards” the belt substitutes the figure of masculinity, the father,

authority. I'll give you other examples: in "Synaptic Caguamas" beer bottles play at being neurons in an algorithmic simulation of cerebral connections; in "Glories of Accounting" the raised hands are both metaphors of the Fascist salute and of the Spanish anti-terrorist gesture of "manos blancas" ("white hands"), —the hands also simultaneously signify distance (as in a "stop" gesture) and inclusion (as in the expression "show of hands"); and a last example, *Entanglement*, in which the neons connected to the Internet substitute for the photons linked by quantum mechanics.

Contrary to what the Substitution Principle asks for, in my Subsculptures substitution has a formal impact: it leaves a symbolic residue and destabilizes equivalencies. This residue is the strength of the piece, its poetry and its absurdity. For this reason I propose anti-modular strategies for artwork. I like breakdowns, the remainder in a division, and rounding errors. I find modularization boring and homogenizing. Modularization is promoted by:

- Computer science, through object-oriented programming, or plug-ins
- The art world, through the idea of authorship and bienialism
- Capital, as an instrument of control and quantification
- Architecture, using the formula as a solution (see Norman Foster)
- Education, through the modernist idea of specialization

No doubt my work is often quite modular, above all in its fabrication and sale, and it's better to confess it even though it is a contradiction, because one cannot live outside of the zeitgeist.

I think that Relational Architecture, like Subsculpture, can exhibit the anti-modular, symbolic inequalities or develop itself in the matricial space of rules of contagion. So there is no definite line that separates the two series. It is true that the Subsculpture series is slightly more personal; perhaps it is more an investigation of psychological spaces than of urban ones. I have been doing psychotherapy for four years now and maybe that explains that!

JLB 7: *I would like to go back to the problem of non-linear mathematics and its relationship to “Synaptic Caguamas”. When information is flow, a multi-perspectival flow that unfolds in various dimensions, it introduces the notion of “possibility” as a form of construction. It’s interesting to me that this piece is not built on random relationships but that it is more about variables and vanishing lines configuring the system of representation. Keeping this in mind, I would like you to explain how this flow of information operates aesthetically as a system of self-management and self-configuration.*

RLH 7: Recursive algorithms, chaos theory, cellular automata, digital genetics and other descriptions of complex dynamic processes are fascinating because they appear to be alive, to have life. Some exhibit evolution, others morphogenesis, and still others management and self-control. Mathematics associated to this field originate from various places, one of them being Weiner’s postulation of the theory of Cybernetics in Mexico City in 1946, —it’s definitely not something new. If during the Renaissance perspective and Fibonacci’s series were used as media to legitimize the production of representation, today we can and should make dynamic mathematics our media. The Renaissance subject emerges precisely from the privileged vision of the vanishing point. What might be the equivalent impact as we contemplate, say, a fractal pattern? These mathematics shatter humanism, fortunately. They allow artists to design work that disobeys us (and the critics).

Until these mathematics reached the art world one of the only strategies that the artist had to create unexpected processes, for example a kinetic sculpture or automatic poetry, was chance. The people whom I most admire worked with chance in a very serious way —like John Cage or Marcel Duchamp— but I think that randomness is not that interesting anymore. Not even the greatest computer in the world could generate numbers that are truly random. Today we accept that the occurrence of a hurricane isn’t due to bad luck but due to the consequences of a non-linear system of energy distribution (Lorenz’s famous “fluttering of the wings of a butterfly on the other side of the planet”). Of course this doesn’t mean that there is a destiny or that everything is predictable, it’s exactly the opposite. These mathematics show us that uncertainty is

inseparable from the system being observed, and artists love to work with uncertainty.

Today it is possible to create art from seeds, which actually is called “seeding the initial conditions” for a process, and then the work unfolds via mathematics in ways that you cannot control. You’ll notice that every three minutes the bottles in “Synaptic Caguamas” line-up and reset themselves. This is done to give new initial conditions and to generate a variety of behaviors because on occasion the emerging patterns are boring or the bottles remain locked in what is referred to as “dynamic equilibrium”.

Complexity describes processes like neuronal connections, genetic mutations, and the variegation of leaves. There is an infinity of examples of how non-linear mathematics permeate almost all of our natural and social history. Manuel DeLanda writes about how this dynamic flows can be used to understand history in a non-linear way, —it’s not about the selective recording of facts, dates and heroes, but rather it’s about understanding history in terms of fields of attraction, of isobars, of influences, which is how non-linear math works. We want to visualize these flows, animate them, and evoke them so that they can help us give shape to our work.

JLB 8: *“Subtitled Public” is a piece that isolates chance. When we were speaking about the piece a while ago, you said that it was a little like Mallarmé’s roll of the dice. One roll of the dice, as in this piece, puts in motion a mechanism where poetry, theatricality, technology and non-linear mathematics construct a complex space of meaning. A space where language names me and, at the same time, the body is interpreted as a shadow. How do you explain the connection between intrusion and evasion in this piece when it is a metaphor for the society of surveillance? What importance does the interaction of the spectator have with the piece as a sort of “subversion” of the fact that in the contemporary world “I am named”?*

RLH 8: Chance is present in “Subtitled Public”: A visitor is detected by a computerized surveillance system and the computer randomly selects a verb,

conjugated in the third person, and is then projected onto the visitor's body. The visitor cannot get rid of the word that will follow him or her throughout the entire exhibition space, unless physical contact is made with another visitor, in which case they swap verbs. The use of chance in this piece has an important ironic component. Here we have a display of surveillance technology detecting the public's presence with great precision. The system pretends to have the ability to identify moods, gestures, desires and actions, but in the end it is chance that takes this to an absurd level. It's a comment on identification technologies that I spoke about in the beginning of this interview. I use chance, a throw of the dice, when criticizing the ridiculous systems used for example by the Department of Homeland Security in the USA that are trying to identify suspicious individuals.

Surveillance never tires of taking possession of our words and images. In my recent work I ask what would happen if all the cameras became projectors and gave us words and images rather than take them away from us?

In a piece such as this one I like the public's rejection to "being named". When we enter a piece of art or a public space, we all have certain values that are given to us by what we read, who we know, who we have seen etc. What I want is to shake up those values and create something dysfunctional, a moment of resistance and of rejection of those preconceived mantras. I look for the "special defects" that allow me to activate the imperfections, the disruptions; "to disrupt" seems to be the most precise term for describing what I want to do. The system projected the words "se mea" ("she urinates") onto a friend of mine who came to the opening and the words chased her through the exhibition space until I finally showed her how to rub them onto someone else. For me it's valuable that there is a moment of resistance to the assigned label, that people don't accept the subtitle nor see it as an oracle, that they are always conscious of the lie. I loved the comment of one visitor who said, "I got the word 'inválido' (handicapped), and maybe I am handicapped but I don't exactly know in what way" and there was another person who said, "you put on a psychological outfit depending on the word you get".

I think we are not done with exploring the culture of paranoia. I don't feel happy having to make art that works on that level, however I think it is extremely important to do so. What has been happening since September 11th is very, very serious. The authorities believe in the huge fallacy that the solution to terrorism should be technological. I react against that. We must use the distortions of the camera, and underline the innate prejudices of our media, of ourselves. Next time a person stops in front of a surveillance camera they might expect to have words projected on his or her body, and know that it is highly likely that they will not agree with the subtitle assigned to their public body.