

I had a simplistic view of the radical movements of 68: I assumed that they were monolithic, utopian and idealistic. Yet when I studied the material, I realized that they were really sophisticated, creative and tactical in the way they used protest. So the idea for me was to reveal that and make it current. The question of making this event beautiful is one of creating an entitlement and a relationship to your surroundings. I don't have a problem saying that my work is a special effect. There is this intention of amplification to an urban scale. Yet although it's there, it's very frail, ephemeral, and has a tendency to disappear. Strategically the pieces are platforms for participation where the relationship to the political history of the site is as important as the microrelational event between two people who meet in the space and pass a microphone from one to the other.

MPB & PH: So you don't address the massacre itself but almost use it as a pretext to reconfigure relations. In this piece it's obvious that you have a political agenda. Yet you don't necessarily address politics directly in all your pieces. Sometimes it seems that politics is a resulting effect, rather than a departure point.

RLH: That's right. Except for *Voz Alta* and a few other pieces, I have often been criticized for not being political enough. My answer to that is, although I admire their work, I am not political in the same way that Krzysztof Wodiczko or Hans Haacke are. I find that it is very important to work with micropolitics: the personal politics of, for example, a vintage punk guy meeting an evangelical Christian and having an experience to share or maybe talk. I don't think addressing the political explicitly is something I can do. I have no moral lessons. Obviously I have a position, but that's not something that I try to push onto people.

The more connections that we make to historical precedents the more entry points there are for the work. When a friend of mine saw the project, *Frequency and Volume*, a piece that allows you to tune electromagnetic signals with the body, he directed me to one of the texts from the 1920's Mexican Estridentista group: the "Manifesto for Antenna Man" talked about how the radio waves were permeating our space and our bodies so that we were constantly tuning into them. To me, it is so much richer to refer to the Estridentistas than to anything contemporary. Yet the work was inspired by a current political event. On the premise that broadcast permits were needed, the Mexican government had banned and shut down informal radio stations in Chiapas and Guerrero because they didn't like it when indigenous communities set up cohesive agencies of technologies. While the piece does not offer a solution to the problem of access to the electromagnetic spectrum, it does allow one to visualize this otherwise hidden public space. We recently presented the project in London's Barbican Centre. London has had an intense tradition of pirate radio. Many important DJs come from the informal, uncontrolled radio transmissions of pirate radio. To me the question of public space, of course, extends to architectural space, but also extends to the internet and the electromagnetic spectrum. It becomes richer than a geometric question. It becomes a question of other kinds of networks.

MPB & PH: The political seems to somehow percolate to the public space based on interaction. Even though you qualify some of your pieces as being relational, especially the *Relational Architecture* series, you still address interactive themes. In other words, you challenge the boundaries between interactive and relational art. At the same time you tackle the traditional narratives associated with interactive art. By breaking with linearity and by using transformation and variation as conditioners of relationality you not only negate but also reconfigure the traditional linear correlations between actions and reactions. You use a lot of mathematics and algorithms to make visible the qualities of lived relations and the staging of conditions for undetermined events. In light of this, could you explain how you engage with the difference between interactivity and relationality?

RLH: I have a background in sciences. So I always felt that science was a place of very intense experimentation and absolutely weird and beautiful phenomena. Even as I studied quantum mechanics things like the uncertainty principle, the duality of light, the impossibility of a vacuum, and other phenomena were inexplicable to me. Non-linear dynamics with its recursive algorithms, cellular automata, fractals, and so many other mathematics were developed to create enormous complexity. When I joined the art world, the whole field of interactivity was being developed in a way that I would call Pavlovian. It was all about a trigger mentality. We used to call it 1-bit interaction, like an on/off switch. I think that those early steps were really quite necessary because people were exploring these languages for the first time. Everybody who was working with it was trying to understand how the hierarchy of established or predetermined outputs in an interactive narrative, for instance, was really not the way to create what really matters in art. The sophistication came much later, how can we code dissimulation, alterity, contagion, ambiguity, betrayal, interruption, loss?

I encountered the word relational through the work of Brazilian artists, Lygia Clark and Hélio Oiticica. These artists were pioneers in the sixties and seventies of relational objects, sculptures and installations that were intended to be manipulated and played with. To me the word relational, as I heard it, had a horizontality that maybe Simondon was talking about where the aesthetics are opposed to the interface. This challenges the insistence that virtuality and materiality are mirror images of each other. These things are co-present, so relationality allowed me to think of the computer and technology as a potential language with which you can make relationships emerge, as opposed to pre-conceiving the outcomes.

Relational is also connected to the work of Maturana and Varela. I read it (*Autopoiesis and Cognition*) and I was excited about the fact that they used the word. I have a piece that is a homage to them and the idea of autopoiesis, of self-creation (*Autopoiesis*).

The third use of the concept of relational emerged in the seventies with the idea of the relational database. To me, technically, this is the most interesting thing, because the idea of the database is that a quantum of information can be filtered, sorted and reconfigured. A relational database is the same as a database, except networked and with wormholes that allow databases to fold into each other, or to be recursive. They allow a database to become a performative platform.

I started calling my work relational in 1995. Although Nicolas Bourriaud published *Relational Art* in 1997, it's got nothing to do with what I've been talking about. I find his work was more about the moment of artistic creation and presentation. My work is about the moment of the event itself and its creation through perception and participation. My works are always, by definition, unfinished as they are presented, and quite honestly, many times they fail, sometimes quite beautifully. If people don't engage with the work there is no work.

The first time I did a very large shadow play, *Re:positioning Fear*, for a military arsenal in Graz, Austria, I thought of the shadow as an expressionistic, perverse Murnau scene of otherness and subconscious fear. Yet from the moment we opened it, everybody started playing and having a great time. It was really a carnivalesque kind of scene. I thought ok, I BLEW IT!! This has nothing to do with fear. Yet the next time I worked with shadows, we leveraged that performative side of embodiment at an urban scale. In my work, the relational aspect comes out of the emergence of new relations and new connections between disparate realities. There is a real sense of empiricism and experimentality that can allow things to happen. Once a project is out there, I often feel that a fundamental element of my work should be that it is out of my control. If it is in my control, then I have failed miserably.

MPB & PH: Drawing upon this sense of empiricism and experimentality, could you discuss the relationalities between technology and the body that are at play in your work?

RLH: I am coming very firmly from a position (one that I think is very Canadian, even before McLuhan) that technology is not something that is outside of our body but that is part of us, like McLuhan's "second skin." Even if you live in a remote area of the planet and have never made a phone call, your country exists in a globalized economy dependent on virtual capital, your language is about to disappear, and your environment is deteriorating. We are all part of a technological culture. I often say that I work with technology because it is inevitable. The last person to try to be outside of technology was Pol Pot, and he did not do so well. It is just as coherent to say that technology is a language. And as a language it's not neutral, it has its biases and its properties. We can't imagine the world without technology; just as phenomenologists, such as Merleau-Ponty, suggested that we couldn't imagine what pre-verbal thought was because we need language to get there. If the public watch eight hours of screen-time a day, then there is no way that those screens cannot be assumed to be part of their body. The iPod plays the music that I already like, and that reaffirms who I am. As far as the subject of technology and the individual is concerned, these possessive, prosthetic extensions of our perception have been dealt with quite well. The ones that haven't dealt with, and I am interested in exploring through my work, are the ones with more connective spaces. You will notice in my work that I rarely have just one robot. Rather than a singular robot, I am interested in a community of robots interacting or relating to another layer of connection.

One of the things that I have investigated a lot is the idea of interpenetration and co-presence: being inside of someone else's body or of someone being inside of your body. In *Body Movies*, *Under Scan* and *People on People* your shadow is inhabited by somebody else. In *The Trace*, which is composed of light beams that cross in three dimensions, the person here is actually in a different city and yet they see you as light intersections in three dimensions. You can walk into the exact same place where they are and you will get the sense of tele-embodiment. One of the themes that I always return to are the technologies of scanning and of being inside. Being inside is not just about the ultrasonic machine that lets you see. Rather, it is the intersubjective idea that you have inside of yourself all these other things that you have read or seen. You are made out of that which you have experienced.

MPB & PH: You also play with other cultural dualisms, such as private/public, to show that the identities of the terms they relate are not static.

RLH: The dualisms that really matter to me are those of absence and presence. These two things are not antagonistic. They are inseparable. There is a really fascinating field of vacuum studies. A vacuum, by definition, is a place where there is nothing. In space we can approximate a true vacuum where there are only a couple of particles. According to quantum mechanics, if at any given time you take a snapshot of a vacuum where there is "nothing" there is a probabilistic intensity of quantum activity where matter and anti-matter are constantly shooting off in opposite directions. A vacuum is a site of immense quantum mechanical activity. It's just that it is so brief, and that in that interval it collapses onto itself under

Heisenberg's uncertainty principle. What we observe is the net effect of nothingness. The idea that the vacuum does not exist and that absence is in fact a site of intense presence is metaphorically an important part of my work. Sometimes this absence is performed very simply such as in the neon sign *Entanglement* where you turn it on and it immediately connects you to an other place.

Some architects are designing buildings with the objective of their disappearance. Take for example Jochen Gerz's memorial for the Holocaust in Hamburg. Rather than the typical slate with people's names, he built a huge phallic monolith, covered with a dark surface: a big prism. Over the period of a few years, this monolith slowly descended and disappeared into the ground. All that remains is a plaza with the footprint of the monolith with a plaque that explains what had taken place. The absence of that monolith is the strongest presence that I can begin to imagine. I can think of no more elegant, poetic and effective way to connect with something as tragic as the Holocaust as this absence. It's beautiful. The piece that was just done for the Vancouver Olympics, *Vectorial Elevation* is really about projecting an absence. Those people who are participating are not there. There is an incredible construction with an overlapped sense of transactions taking place in virtuality and networks overlaid onto real space. These two things can, should and do coexist. They can be experienced simultaneously.

MPB & PH: You spoke eloquently about absence, but what about presence? In works, such as *Solar Equation*, you seem to be looking to take something absent and invisible from our phenomenological experience such as the sun's rays or the astronomical scale and bring it into the present. What is remarkable about *Solar Equation* is that it was brought into the civic sphere, more or less at the scale of a building. This connects the piece to our civic institutions, which inevitably makes it public. How do you see this question of taking absence and making it present?

RLH: What attracted me to *Solar Equation* was the possibility of visualizing the complex mathematics embedded in the turbulence in the sun. That fascination came out the research that we have been doing here in the studio. We look at materials, equations and especially mathematical concepts that have emerged over the last fifty years such as fractals, reaction-diffusion, Navier-Stokes and fluid dynamics. We are sitting on a moment where math is legitimating an entire movement of art similar to the era when Brunelleschi first worked with perspective. Interactivity is dominated by two modes: causal or random. Today we can look at these non-linear dynamic equations and create experiences that are neither preprogrammed nor arbitrary. Although a lot of people saw this piece very scientifically, nobody is pretending that this is a scientific model of representation. This is a performance event.

I wanted this piece to evoke landscapes of mystery and paradox, an ode to Blake. I think that the images that we got of the solar surface in the 90's defined our era in same way that the image of the earth was the definitive image of the 60's. The Sun is violent, completely out of control, gives life, creates all of the elements, and causes global warming. The piece is a scale model 100 million to one and there is a sense of distance and irony, which I also hope came through. There is something about the processing of scaling that is fascinating and humbling. A long time ago I read a discussion by Derrida, in *The Truth and Painting*, where he talks about the sublime as being very small, in contrast to Kant's understanding of it as very large. Very large and very small are inseparable. The processes of amplification are always at work with any kind of scaling.

In a virtual helmet, you are asked to become small to pretend that displayed virtual buildings are real. There is a suspension of disbelief in order to believe that is happening. In *Relational Architecture* we are doing the exact opposite where we amplify the presence of an individual participant to an urban scale. In this case, it is the buildings that are pretending to be what they are not. Mexico's Zocalo square is the third largest in the world. It fits 260,000 people. In any given day there are three protests on the square, but the size is so huge that nothing really happens there. It is specifically designed, in terms of scale, to allow for protests to happen, but its scale drowns them out. The very first time I used searchlights to amplify individual expressions at an urban scale were in that context. Churchill said, "we make buildings and buildings make us." Globalization has subverted that relationship. A building that is built here is going to be identical to one in Singapore or Mexico City. Rather than representing citizenry, it represents capital. Buildings are designed to be cost effective, formulaic and modularized. Anything that we can do to interrupt the narrative of homogeneity and to create this eccentric moment of unpredictability is the democratic potential of the work.

MPB & PH: Of all the mediums that you work with, light seems to play a dominant role. You are also an interactive artist who has access to the most sophisticated of technologies. Yet in a number of projects, particularly the *Pulse* series, you chose to work with the bare incandescent light. The cultural references are absolutely huge: the racing heartbeat of an interrogation or even film noir. It was obviously a very deliberate choice that you made. Could you elaborate on why you have been working with this medium?

RLH: I've thought a lot about light. I am not so much interested in the materiality of light, but the space of light. Every visual artist works with light. I was recently at a conference called the Meaning of Light. Everyone was referring to light as enlightening and spiritual. As a Quaker artist, I admired James Turrell searches for an inner light, which is great. My interest in light however, is in the light used by American border choppers to find Mexicans. The light of interrogations. The light of the sun's explosions. My parents were nightclub owners in Mexico City. To me light is artificiality. It's connected to drugs and hallucinations. I have a real carnivalesque understanding of it as opposed to something spiritual. It is also controllable, malleable and ephemeral. I work with light to create parties. So I am most comfortable working with disco lights.

Conservation seems to be an issue that I have now when museums acquire my work. I believe that ultimately it is the artist who needs to make the decisions about their commitment in a particular technology. Take for example Nam June Paik's piece where a Buddha watches himself on a short circuit TV monitor. Many of his pieces were about the importance of the cabinet. The question is does that piece die in thirty or fifty years when the TV monitor cannot be repaired? Can a current flat screen replace the cabinet and does it matter? Perhaps this particular work is about the circularity of vision, not the cabinet? The only one who can really answer that is Nam June Paik himself, and he is dead. So in light of that, whenever I make a piece I very carefully specify which parts can and should be replaced easily. When Tate acquired my piece Subtitled Public, they wanted spare projectors in case any broke. But I consider this is more like Sol LeWitt's Art of Instructions. As far as I am concerned, for this piece you can generate the same experience with whatever projectors come up in the future, which will probably have even more resolution.

On the other hand with the incandescent light bulb, I am completely tied to its iconic shape, to the heat it gives out, to the attack of the tungsten filament, to its colour temperature, to its short life span. The moment the incandescent light bulb no longer exists that piece should die. I don't believe in vampire art. I very much believe in the honorable death of artworks. The incandescent light bulb is banned now in half of the world and it will be banned here too soon. Some of Dan Flavin's coloured fluorescent tubes were also banned, but because they were seriously toxic. The incandescent light bulb is being banned because it is inefficient. I fundamentally think that in the future, people will have an artisanal production for artworks like mine and many other people who work with incandescent light. For this reason, the typology of blown glass, inert gas and tungsten filament will always be preserved.