

## Transnational Culture at the End of the Millennium

### Rafael Lozano-Hemmer's "Relational Architectures"

During the period of December 26, 1999, to January 7, 2000, from 6:00 P.M. to 6:00 A.M., Mexico's City's Zócalo was covered by an enormous canopy of light rays, visible from a distance of 15 kilometers. The rays changed position every six seconds, resulting in a new light design. Thousands of participants from four continents and from all the Mexican states created the patterns by manipulating an array of sophisticated technology. These contributions were part of a work of art titled *Vectorial Elevation/Alzado Vectorial* (Fig. 8.1), designed by Mexican Canadian artist Rafael Lozano-Hemmer on the occasion of Mexico's government-sponsored celebration of the new millennium.

Unlike the canonical compendium of Mexican art and architecture, *Vectorial Elevation* was ephemeral and abstract, in fact minimalist in appearance. In the twentieth century artists living and working in Mexico engaged with various modernist expressive currents, but abstraction was unusual, with notable exceptions such as the work of artists Gunther Gerzo and Vicente Rojo. Celebrated modern masters of Mexican architecture such as Pedro Ramírez Vázquez, Luis Barragán, Teodoro González de León, and Ricardo Legorreta frequently incorporate references to local building traditions into modernist idioms. *Vectorial Elevation's* technological sophistication also separates it from much of Mexican art of the twentieth century. Although technology fascinated numerous Mexican visual artists, few experimented with it directly, with the exception of filmmakers. These differences may have made Lozano-Hemmer's work attractive to the Mexican government at the close of the millennium. Literally and figuratively *Vectorial Elevation* integrated Mexico with the rest of the world. The work's cosmopolitanism paralleled the progressive opening of the nation to the outside evident in the increasingly liberal policies toward foreign investments that successions of Mexican governments have implemented since the 1940s. Additionally, *Vectorial Elevation's* fit into the reconfiguration of Mexico as prosperous and technologically competent that the administra-





**FIGURE 8.1.** Rafael Lozano-Hemmer, *Vectorial Elevation: view*, Mexico City, 2000.  
Photo: Courtesy of Rafael Lozano-Hemmer.

tion of President Ernesto Zedillo attempted to promote. But the piece did more than all that.

The work of Rafael Lozano-Hemmer responds to social and political conditions precipitated by recent technological developments.<sup>1</sup> Like *estridentista* writers in the early twentieth century, this artist replies to dominant visions of architecture, the city, the body, globalization, identity, and the future. Lozano-Hemmer's interventions do not consist of statements, prescriptions, or recipes for better living. Instead he creates virtual openings, which he invites the user to explore performatively and in the process to imagine alternative physical, architectural, and urban bodies. Virtual here means not a disembodied data space but a realm of possibility inseparable from embodiment, after Deleuzian theorists Elizabeth Grosz and Brian Massumi.<sup>2</sup> In contrast to traditional media that focus exclusively on the visual, interactive artworks engage the user's body to varying degrees in the instantiation (seldom the creation) of the work. The active physical involvement of the participants with the art underscores their agency and signals the potential of a technologically compatible form of biopolitics. The absence of explicit messages in the works frustrates expectations of a didactic and directly political Latin American art. Lack of directness, however, does not preclude having political potential. To illustrate these points I work here with a selection of examples from the ongoing series entitled "Relational Architectures," the artist's most representative and numerous body of work (fifteen pieces to date) and return to *Vectorial Elevation* in the process.<sup>3</sup>

### Precedents in the Artist's Work

Like other international artists, Lozano-Hemmer spent a significant part of his life abroad. Born in Mexico in 1967, he resided in Spain during his secondary school years. In 1989 he received a PhD in chemistry from Concordia University in Montreal, Canada, with a minor in art history and began his career as an artist in the same year. In 1990 he was already exhibiting his art professionally, including work in nontraditional media such as performance and radio.<sup>4</sup>

Before the commission of *Vectorial Elevation*, Lozano-Hemmer won two honorable mentions in Ars Electronica and in 2000 received the Golden Nica for Interactive Art, arguably the most prestigious awards in the field of media arts. His international success since then has escalated. He won the Excellence Award at the Media Arts Festival 2000; CG Arts in Tokyo, Japan; the first prize in the International Bauhaus Award 2002, Dessau, Germany; and the BAFTA British Academy Award for Interactive Art in 2005, among other honors. He had his first retrospective in Mexico at the Laboratorio Alameda in 2003 and



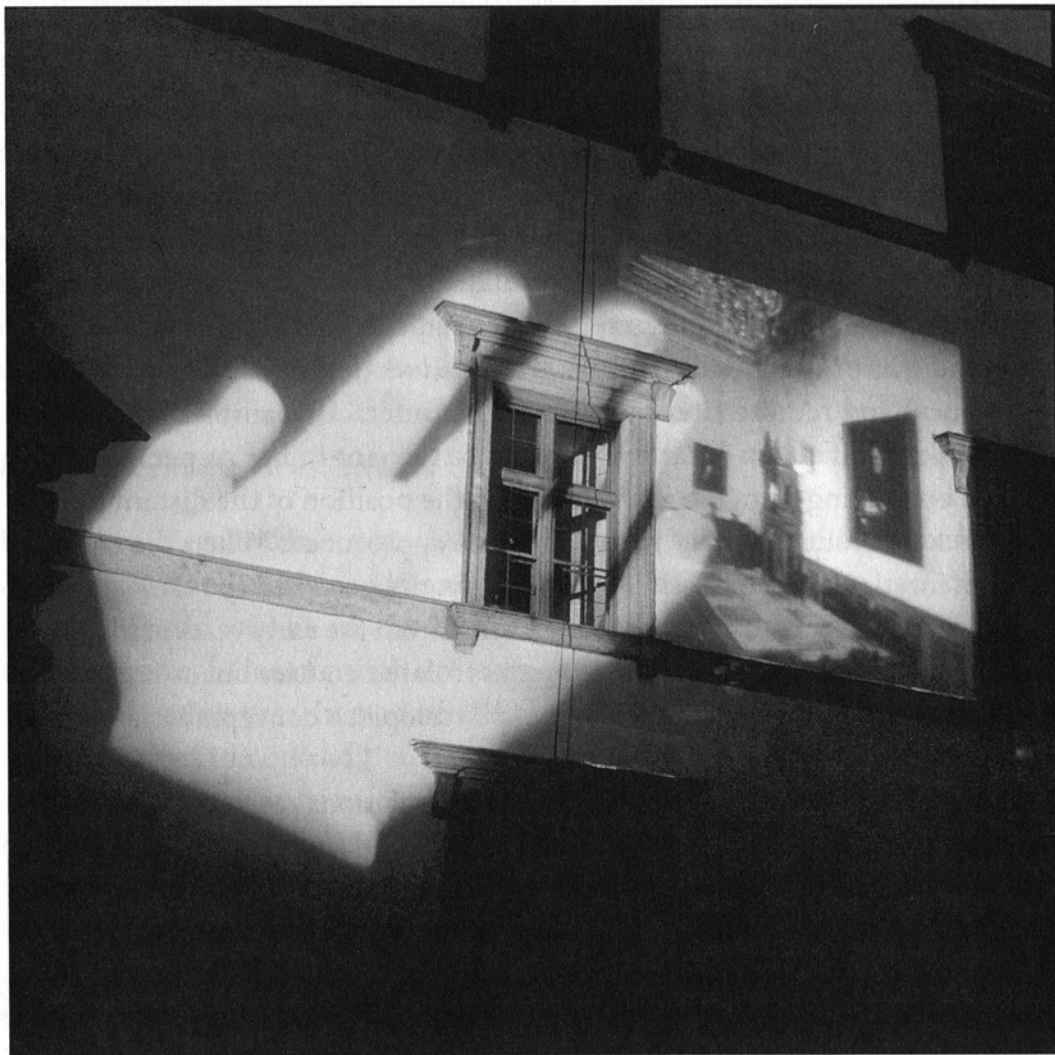
represented Mexico at the Venice Biennale in 2007. His work has been presented at major museums and events throughout the globe.

Issues of identity, subjectivity, space, surveillance, the body, and architectural permanence as well as the multiple expressive valences of light have been consistent interests of this artist. In his telepresence installation *The Trace* (1994), Lozano-Hemmer invited participants in distant locations to share the same telematic space. The term “telematics,” coined by the French government officials Simon Nora and Alain Minc in 1980, refers to the convergence of computers and communication systems.<sup>5</sup> Telematic space is understood as the realm of interaction resulting from this convergence. In providing an opportunity for distant participants to affect each other, *The Trace* resembles previous telematic pieces such as Myron Krueger’s influential *Video Place* (1975) and Paul Sermon’s *Telematic Dreaming* (1992). As Lozano-Hemmer explains it, his purpose was to investigate whether participants kept the same *Lebensraum* or physical distance from others in telematic as in physical space. Two interactive stations were linked via telephone or ISDN (Integrated Service Digital Network) lines. At each location the visitor entered a dark room with a back-projection screen on the ceiling. All participants wore a wireless sensor that monitored their positions. Audiovisual elements such as light vectors, positional sound, and graphic designs indicated the exact location of the distant participant in real time. For example, light vectors coded blue for local participants and white for remote participants crossed when the positions of the users in the local and remote sites intersected. An interactive animation of a ring and a disk specified the locations of each participant in her respective room. Sounds emanating from the icon indicating the position of the distant participant became louder as users in the local site approached. When the ring and the disk interlocked it meant that the participants occupied the same position in the telematic space. This work suggests that from the early years of his career Lozano-Hemmer envisioned bodies not as isolated entities but as realms that could be invaded and inhabited. He would develop this concept further in later works.

In 1994 Lozano-Hemmer coined the term “relational architecture,” which he defined as “the technological actualization of buildings and the urban environment with alien memory.” Technological actualization entails the transformation of buildings and urban spaces by adding audiovisual elements to them through the use of hyperlinks predetermined by the artist and activated by the actions of participants. The new visual and auditory associations encourage viewers to rethink the significance and even the function of the specific building or urban setting and consequently transform its dominant narratives.

In contrast to digital architectures that rely on simulation, Lozano-Hemmer later explained, relational architectures were “anti-monuments for public dissimulation.”<sup>6</sup> In his view, while buildings in 3-D animations and virtual-reality simulations are “data constructs that strive for realism” relational buildings are real edifices that pretend to be something other than themselves, “masquerading as that which they might become, asking participants to ‘suspend faith’ and probe, interact and experiment with the false construct.”<sup>7</sup> The building’s masquerade is the dissimulation.

Although Lozano-Hemmer first used the term to refer to *The Trace*, his series of relational architectures began with *Displaced Emperors: Relational Architecture 2* presented at Ars Electronica in Linz, Austria, in 1997 (Figs. 8.2,



**FIGURE 8.2.** Rafael Lozano-Hemmer, *Displaced Emperors*: Linz, Austria, 1997. Photo: Courtesy of Rafael Lozano-Hemmer.





**FIGURE 8.3.** Rafael Lozano-Hemmer, *Displaced Emperors*: Linz, Austria, 1997. Photo: Courtesy of Rafael Lozano-Hemmer.

8.3). The building selected for the intervention was the Habsburg Castle in the same city, a historic building now transformed into a museum. The piece constructed vectors between two apparently unrelated historical events that link Mexico and Austria: the Mexican empire of Maximilian of Habsburg (1864–1867) and a feather headdress believed to have belonged to the Aztec ruler Moctezuma II, which is now part of the collection of the ethnological museum in Vienna.<sup>8</sup>

Participants standing in a small plaza in front of one of the castle gates interacted with the building by pointing with their hands. Data from two wireless 3-D trackers placed on one arm and hand indicated the direction of the participant's arm movement in real time.<sup>9</sup> A projection of a digitally animated human hand appeared wherever the spectator pointed and moved according to the user's movements (Fig. 8.2). The image was projected on the building by sophisticated motion-controlled projectors. As the digital hand "caressed" the façade of the building, it wiped away the exterior wall, revealing interior rooms matched to the exterior so as to seem to be inside the Linz Castle. The animated hand also activated music sequences, which seemed to originate from

the rooms in view. The superimposed interiors were in fact rooms in Chapultepec Castle, the main residence of Maximilian and his wife, Carlota, during the Habsburg rule in Mexico.

At an improvised souvenir shop near the castle, a computer monitor displayed the location of the participant who carried the trackers. For twenty-five schillings (approximately one dollar) other participants could press a big bright red button labeled “Moctezuma” located next to the monitor and interrupt the ongoing interaction. The lights went off, and a 35-meter projection of the feather headdress appeared on the façade of the castle, accompanied by a Mexican mariachi music track (Fig. 8.3). A searchlight with the cultural property symbol, a sign displayed in buildings and monuments recognized as cultural property by the international treaty of The Hague, followed the participant who carried the tracker. A few seconds later the image of Moctezuma’s headdress disappeared, and a selection of Habsburg jewels paraded across the façade of the castle. This event triggered slow dance music known in Latin America as bolero. After this sequence the participants wearing the tracker could resume their interaction. By enticing participants to “caress” the building, the artist prompted them to explore the interdependence of European and so-called minor histories, in this case Mexican history, even at the level of a shared cultural heritage. Despite repeated attempts by the Mexican government to have Moctezuma’s headdress returned to Mexico, the object is officially part of Austria’s cultural treasures. Similarly, in Mexico the Habsburg palace, transformed into the Museo Nacional de Historia at Chapultepec Park, is considered an important part of the national heritage. As the cultural property symbol tracked the body of the participant, *Displaced Emperors* playfully suggested that even human bodies were vulnerable to appropriation. The piece ultimately proposed that—rather than returning Moctezuma’s headdress to Mexico—Austria should offer some Habsburg jewels as a romantic cultural exchange and the headdress would become an integral part of Austrian identity.<sup>10</sup>

Despite the potential gravity of the subject matter, *Displaced Emperors* never shocked or confronted the participants but playfully seduced them to interact with the luscious imagery and music. The juxtapositions and the effects created by the work were so unexpected that the interaction had the potential to stimulate the participants’ curiosity about the building’s history, the intersections of Austrian and Mexican history, and the logic of national heritage or national identity, among other issues. Many users of *Displaced Emperors* reported feeling a little nucleus of desire for the façade of the Linz Castle in the palm of the hand that gestured toward the building. This reaction may have been linked to the movements of the hand that stripped away the exterior wall of the castle, undressing the building. This was a subtle parody of human erotic involvement



with inanimate objects and machines as well as an oblique reference to the greed that propels imperial and colonial ventures. The experience of Austrians and Germans standing in front of the Habsburg castle extending their arms in the way of a salute may have become conflictual upon learning that Adolf Hitler had designated the building as his retirement residence.<sup>11</sup> *Displaced Emperors* recontextualized the Linz Castle through the addition of alien visual elements and sounds. The artist grafted one building to another, one history to another. The building's "new" associations ultimately challenged the supremacy of its previous historical narratives: rather than illustrating an episode of Austrian cultural heritage, the edifice became intertwined in a nonlinear narrative in which Austria ceased to be the sole protagonist. This could lead participants/observers to question the presumed purity of cultural and ethnic identities.<sup>12</sup>

#### Vectorial Elevation: Relational Architecture 4

According to Lozano-Hemmer, art historian Rafael Tovar y de Teresa, the president of Mexico's Consejo Nacional para la Cultura y las Artes (National Council for Culture and the Arts), saw *Displaced Emperors* in Austria and invited the artist to propose a work for the forthcoming millennial celebrations in Mexico. As in previous state commissions, the government provided the artist directives to design the piece. These derived from an official program titled *Year 2000: From the 20th Century to the Third Millennium*, presented by President Ernesto Zedillo at the National Palace on April 13, 1999. The instructions to the artist specified that the work should depart from an episode of Mexican history. It should promote national unity and peaceful coexistence and impart a positive, festive, and hopeful message. The piece should be designed for the Plaza de la Constitución or Zócalo. The artist should avoid interventions that could damage the edifices in the plaza and be mindful of their fragile state of preservation and their historic character. Finally, the work had to be spectacular and involve the greatest possible number of participants.<sup>13</sup>

From the start, Lozano-Hemmer wanted to avoid historicist narratives that promoted a homogeneous image of the nation. In his view, modern masters such as Diego Rivera promoted a "revolutionary" aesthetic that was characterized by a problematic idealization of indigenous peoples, a militant patriotism, and fascination with linear models of history."<sup>14</sup> Instead he wanted to provide a vehicle that would allow the people to become the protagonists of the work and to have a direct impact on the cityscape.

To meet the government's request that the work be based on an episode of national history, the artist investigated the history of Mexican technological culture. Not only did he find precedents for art based on technology, includ-

ing the electronic music of composer Luis Pérez Esquivel, but to his relish he learned that Norbert Wiener and his Mexican collaborator, Arturo Rosenbleuth, had developed fundamental aspects of the theory of cybernetics at the Mexican Institute of Cardiology in Mexico City. These facts provided him with the historical basis for the piece and allowed him humorously to argue that cybernetic art was a Mexican invention.<sup>15</sup>

Drafting a preliminary proposal for a work titled *100 Million Mexicos*, Lozano-Hemmer envisioned an opportunity to allow the public to write messages on the buildings in the Zócalo, a form of digital graffiti, through a projection of texts submitted via the Internet. He based this idea on his previous work *Re:Positioning Fear: Relational Architecture 3* (1997), in which the bodies of participants and texts from a series of real-time Internet Relay Chat (IRC) sessions on the topic of fear were projected on the façade of Landeszeughaus in Graz, Austria, a building that was originally one of Europe's largest military arsenals. The texts were only visible inside the participants' shadows. Thus both the architecture and the bodies of the users represented by the shadows acted as backgrounds for alien encounters.<sup>16</sup>

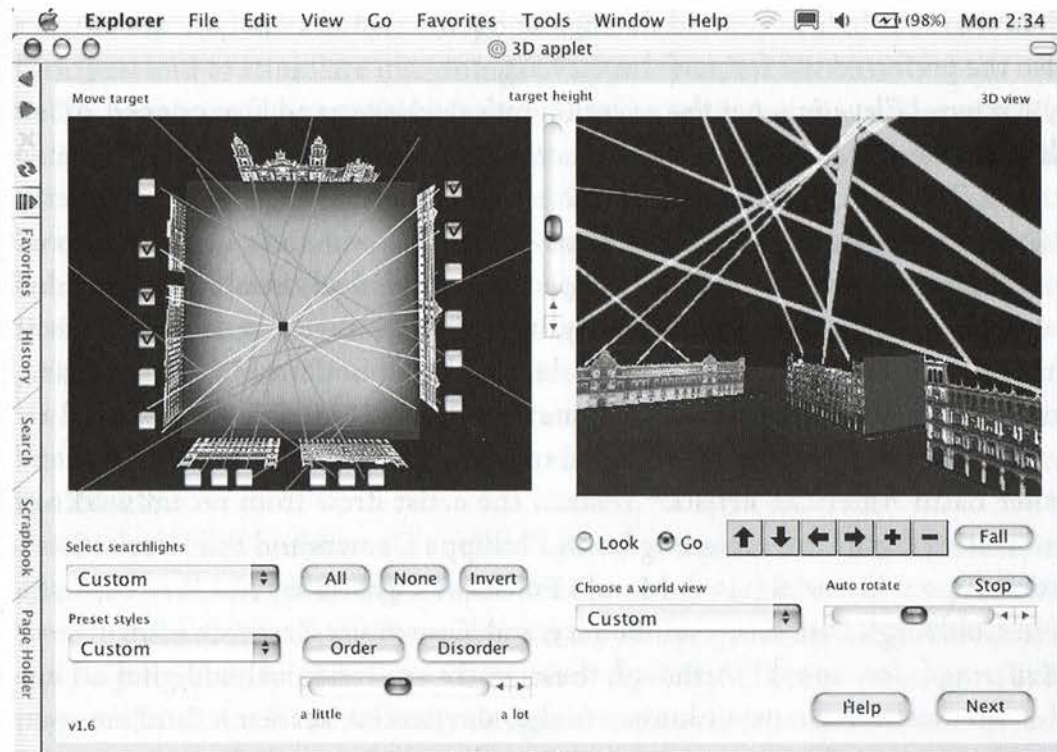
The very title of *100 Million Mexicos* recognized the diversity of the Mexican population. The piece was politically adventurous, considering the ongoing conflict between the government and the Zapatistas in Chiapas and an ensuing student takeover at the National University. The Mexican government rejected the proposal, presumably because the work would be too costly. The artist then suggested using the sky as a background for a light projection. In his view, this was ultimately advantageous because the sky lacked the ponderous cultural coding of the architecture in the plaza and allowed the public to see the work clearly, with no privileged vantage point from any position within 15 kilometers.

*Vectorial Elevation* (Fig. 8.1) began with an invitation to people from all over the world to contribute an ephemeral addition to the Zócalo. The invitation was posted electronically in various international mailing lists and was widely advertised within Mexico through diverse media. By means of a three-dimensional simulation of the Zócalo, visitors to the website <http://www.alzado.net> were able to manipulate eighteen robotic searchlights placed on the roofs of the buildings on the perimeter of the plaza and create a *Vectorial Elevation*, a "roof" or sculpture made with rays of light over the city square (Fig. 8.4). Each design was automatically numbered and entered into a queue, and a web page was made for each participant, including personal information, comments, images, and photographs of the design. Three web cams located at the Torre Latinoamericana, the Gran Hotel de la Ciudad, and the National Palace photographed each design and provided the material for a live net cast. Using



the Internet made the Zócalo accessible to users nationally and internationally. Although at that time the Internet could only reach 2 percent of the Mexican population, it was accessible in all the Mexican states. In order to make participation possible for a wider public, free-access terminals were publicized and installed in various locations throughout the country, including the Centro Nacional de las Artes, the Museo del Papalote, the Museo de Monterrey, and multiple public libraries.<sup>17</sup>

The site of the Zócalo has enormous historical significance for Mexicans and has been the focus of religious and political power for centuries. As discussed in the previous chapter, it was the heart of the Aztec Empire and the ritual center of the great city of Tenochtitlan, founded in the fourteenth century. During the colonial period, the Zócalo included the Metropolitan Cathedral, the Ayuntamiento (Municipal City Council), the Courts of Justice, the National Palace, and the shops of powerful merchants in its perimeter. In the seventeenth and eighteenth century the city square functioned as a stage set for elaborate displays of wealth as nobles competed to exhibit the richest clothes, servants, and carriages. The social functions of the Zócalo changed during the



**FIGURE 8.4.** Rafael Lozano-Hemmer, computer interface, *Vectorial Elevation: Mexico City*, 2000. Photo: Courtesy of Rafael Lozano-Hemmer.

nineteenth century in relation to official policies.<sup>18</sup> In the late 1850s the laws of the Reforma forced the church to sell its real estate, which in this area was located primarily on the west part of the Zócalo. The sale of these properties attracted wealthy residents to the neighborhood, but during the last decade of the century new suburbs developed along the Avenue of the Reforma became more attractive. The exodus of the upper and middle classes from the city center continued during the twentieth century, as Mexico City grew to become one of the largest cities in the world. Despite these changes, the affective value of the great square as the heart and pride of Mexico City prevailed.

The Zócalo and its vicinity attest to the antiquity, complexity, and sophistication of Mexican culture. The Metropolitan Cathedral, one of the earliest in Latin America, is a masterpiece of Spanish colonial architecture that houses notable works of viceregal sculpture and painting. The walls around the courtyards of the National Palace are painted with monumental mural cycles by the renowned muralist Diego Rivera. A few blocks away from the square rise the remains of the main pyramid of the Aztec Templo Mayor as well as the archaeological museum dedicated to that site. In addition to its cultural value, the Zócalo is a monumental space capable of holding two hundred thousand people. Traditionally it has been the focus of political rallies, popular protests, and popular celebrations as well as the locus for all kinds of ambulant merchants to sell their wares and during the twentieth and twenty-first centuries also the preferred site for performance art.

*Vectorial Elevation* met the government's requisites and also opened, albeit slightly, the assiduously guarded space of the representation of the Mexican nation. The work's minimalist character was a dramatic departure for government commissions, which for the last half of the twentieth century favored buildings that recycled locally developed and established visual codes. It eluded referents to Mexican national identity, including abstracted versions of ancient and colonial motifs acclaimed in modern and postmodern Mexican architecture.<sup>19</sup> The work also was a bold statement in the context of an international art world that at that time still demanded referents to ethnicity from Mexican and other Latin American artists.<sup>20</sup> Instead the artist drew from recent works of interactive digital art, including Louis Phillippe Demers and Bill Vorn's installation *Espace Vectoriel* (1993), Masaki Fujihata's *Light on the Net Project* (1996), Ken Goldberg's *Dislocation or Intimacy*, and Knowbotic Research's *Anonymous Muttering* (1996–1997).<sup>21</sup> Although these works are canonical in digital art circles, they remain almost unknown in the commercial, academic, and museum worlds. The use of light as an expressive medium has precedents in spectacular light shows in world's fairs, in Albert Speer's projections for the Nuremberg rally in 1935, and in the 1970s genre of sky art, among many others.<sup>22</sup>



Because the Zócalo holds a privileged status in Mexican culture and is also recognized by UNESCO (United Nations Educational, Scientific and Cultural Organization) as part of the cultural heritage of humankind, permanent interventions in its architecture are strictly managed. In opening the design of a transitory addition to the Zócalo to the public, Lozano-Hemmer temporarily relaxed the official protection of this revered square and made its transformation a celebratory performance. By making the site accessible to anyone in the world who had Internet access, the artist deterritorialized the square. His invitation to participants to comment on the piece had the potential of stimulating individual representation and public dialogue across national boundaries. Both the light designs and the individual websites encouraged the reinscription of symbolic space and signaled the possibility of envisioning the plaza and the nation differently. By placing no restrictions on the subject or the length of the participants' comments, *Vectorial Elevation* implicitly welcomed irony, jokes, and witty interventions into the serious terrain of Mexican politics and history. In addition to having a public dimension, the web pages personalized the Zócalo by recording each participant's own ephemeral design contribution. In its transitory nature and breach of protocol in the context of a celebration, the project was reminiscent of the function of ephemeral architecture during the colonial period. As discussed in Chapter 1, occasionally temporary monuments were used to introduce and popularize new attitudes about Mexico's historic past and to stimulate imaginings of an independent future.

To people on the street of Mexico City, the light designs in *Vectorial Elevation* offered a contemplative experience. Viewers observed the patterns in silence for extended periods, alone or with friends and family. Such opportunities for contemplation in this overcrowded and noisy metropolis are rare. The comments of viewers were overwhelmingly positive. While many perceived the work as innovative in the application of diverse contemporary technologies, they also judged it to be extraordinarily beautiful. One observer asked if the designs were inspired by constellations.<sup>23</sup> Many participants and passersby expressed the wish that *Vectorial Elevation* would be permanently installed in the Zócalo.

The web page archive is a curious hybrid of a governmental database, an *álbum de recuerdos* (personal scrapbook of mementos), and a collection of electronic *retablos*. An *álbum de recuerdos* is a popular genre in Latin America. It can be general or specific to an occasion or festivity. Like the web pages, each page of the album is individually designed within an established book format. Descriptions of festivities frequently published during the colonial period were an official version of the genre. The *retablos* are a Mexican tradition of popular painting that record miraculous interventions—usually attributed to a saint—

in an individual's life.<sup>24</sup> Although the *retablos* are figural and depict individual experiences, they are usually displayed in a public setting such as a church or chapel. The web pages lack allusions to the divine, but like the *retablos* they are simultaneously private and public. The organization of each web page showing the date, name, geographical location, and design of the participant also is reminiscent of various official archives such as social security, driver's license, and police records. This aspect of the work is consistent with the artist's long-standing interest in surveillance; like many of his works, it alludes to the potential of technology to serve both pleasurable and repressive ends.

The comments entered in the web pages of the participants (70 percent of whom were from Mexico) indicate multiple interpretations of the work. For many, *Vectorial Elevation* was primarily a spectacular aspect of a great feast. The renowned gentility of Mexicans was in evidence: some used the space provided for comments simply to wish everyone happiness in the new millennium; many thanked the artist for giving them the opportunity to partake in the celebrations and contribute to the embellishment of the Zócalo. Others employed the work and the area for comments to strengthen bonds with family and significant others. Parents and relatives helped young children to make their designs; some wrote love messages; one expectant mother dedicated her web page to her unborn child. Several participants expressed hope that the new millennium would bring more justice and respect for all living things; and a few hoped that the intelligence and technical ability displayed in the work could also be used to solve Mexico's problems. In addition, *Vectorial Elevation* made evident the resilience of nationalism in the popular imaginary. Many comments expressed great pride in the technological achievements of the Mexican nation and wished for greater international cooperation. Numerous participants congratulated the artist for strengthening Mexico's presence internationally. To Luis Gerardo Cortez from Aguascalientes, for example, the lights could have had better mobility; yet he wrote, "I want to congratulate the designer of this project, that without doubt will make the world see that Mexico has the same capacities as other nations." The dualistic tone of the comments, simultaneously nationalistic and global, echoed the government's vision.

In his speech for the presentation of the *Year 2000: From the 20th Century to the Third Millennium Program*, President Ernesto Zedillo described Mexico as "an independent, sovereign nation with a profound identity that distinguishes us from all others." He also referred to the celebrations as an opportunity for Mexicans to affirm Mexico's national project, reflect on the future, and share "with all of mankind."<sup>25</sup> At the beginning of the new year the government's website for the millennium celebrations described the festivities as a communion of Mexico with the world: "The great celebration that took place the last December



31 in Mexico City's Zócalo had as one of its principal objectives to provide an occasion for unity among Mexicans and to situate the image of Mexico in the world and the image of the world in Mexico. This festivity will have a unique characteristic in history of uniting practically all the nations of the planet."<sup>26</sup> The government's goals for the celebration of the new millennium reiterated the wishes of numerous leaders, writers, and artists since the colonial period: to integrate Mexico with the world while preserving its unique character.

During the late nineteenth century national and international concerns were carefully balanced in Mexico's self-representation at the world's fairs.<sup>27</sup> But while this balance was dependent on the interplay of archaeological motifs and modern building materials in architecture, in *Vectorial Elevation* advanced technology was fundamental to the success of the representation. Then and now Mexico's symbiotic economic relation with the United States problematizes the dream of national strength through technology. It is primarily U.S. technology that drives Mexican industries, *maquiladoras*, and border patrols. Ironically, robotic searchlights similar to the ones used in *Vectorial Elevation* have been used in systems of surveillance along the U.S.-Mexican border.

Coincidentally, *Vectorial Elevation* fulfilled Ernesto Zedillo's vision of his historical legacy. Zedillo identified decentralization of control from the federal government as one of the major achievements of his administration. This involved the transfer of responsibility from the federal government to the Mexican states for services that traditionally were centrally administered, such as health care, agriculture, and construction. *Vectorial Elevation's* deterritorialization of the Zócalo metaphorically paralleled the government's investment in decentralization. Zedillo's term of office concluded in 2000. It is customary for Mexican presidents to commission monumental architecture projects as visual reminders of their legacy. Accordingly, in 1999 Cuauhtémoc Cárdenas, the mayor of Mexico City, opened a competition for nothing less than a renovation of the Zócalo. The project was to be carried out by Mexico City's municipal government in collaboration with the Secretaría de Educación Pública and CONACULTA (Consejo Nacional para la Cultura y las Artes) and completed for the celebrations of 2000. This unprecedented intervention in the core of the city would have been Zedillo's historical landmark. The competition was restricted to Mexican architects and juried by an international team including the architects Fumihiko Maki and Rogelio Salmona and Mexican artist José Luis Cuevas, among other distinguished personalities in the worlds of culture and the arts. Architect Cecilia Cortés Contreras won first prize, Alberto Kalach Kichik second prize, and Teodoro González de León third prize.

The government's award of the first prize to a woman architect was a significant departure from an architectural history that is almost exclusively male in

Mexico and elsewhere. This alone made the project remarkable. The three winning designs fused the Metropolitan Cathedral with the Zócalo by eliminating the cathedral's atrium. Contrera's design closed the plaza to traffic and extended it from its actual location to the Templo Mayor in the north. The new Zócalo included a grove of jacarandas delimited by a *talud* that would also serve as a bench for visitors to sit and a sunken plaza behind the *talud*. A series of luminous and sonorous columns placed in front of the Templo Mayor and the government buildings in the plaza would allow the public to hear the sounds of the wind. A second plaza decorated with stone sculptures was to be placed behind the Sagrario. Contreras reported that her design was based on studies of the Zócalo, Piazza San Marco in Venice, and Greek plazas, among other public spaces.<sup>28</sup> In the opinion of the architect and critic Fernando González Gortázar, the designs of the three finalists were intelligent and responsible and "in contrast to the usual, this competition was a success and in the renovated Zócalo the country will have a beautiful heart." He worried, however, that the project could permanently damage invaluable archaeological remains under the square if carried out in haste (as would be necessary to finish the renovation before 2000).<sup>29</sup>

The competition shared with *Vectorial Elevation* the objective of remodeling the Zócalo, but the two projects differed in significant ways. Most obviously, unlike Lozano-Hemmer's work, the renovation was to be permanent. The appointment of international architects to participate in the jury suggested the government's willingness to engage the outside world in the representation of the nation, but contrary to the openness of *Vectorial Elevation*, the competition was limited to Mexican architects. Despite the foundations of the project on international architecture and the inclusion of interactive elements such as the sonorous columns, the winning design reverted to the use of modernized pre-Hispanic motifs exemplified by the *talud* and the sunken plazas. In short, the competition suggested the government's readiness to depart from tradition but in a more limited way than Lozano-Hemmer's piece did.

Cárdenas resigned as a major in 1999, and the project to redesign the Zócalo was abandoned after Zedillo left office. By contrast, after its opening in Mexico, *Vectorial Elevation* continued its deterritorializing movement. It was later shown in celebratory events in European cities, including the opening of the Basque Museum of Contemporary Art in Vitoria (300,000 participants), the Fête des Lumières, World Summit of Cities, Lyon 2003 (600,000 participants), and the European Union (EU) expansion celebrations in Dublin (520,000 participants).<sup>30</sup> Lozano-Hemmer explains that in his work he does not strive to offer a "collective" experience and even less to promote the idea of a global village facilitated by interconnectivity. In his view such visions are "corporative, colonial and naïve." He explains:



I am amongst the rank of those that reject the notion of community 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 about this concept is that it does not convert realities into homogeneity . . . I would even go so far as to define the connective as those tangents that pull us out of the collective.<sup>31</sup>

Effectively, *Vectorial Elevation* provided avenues for global and local exchange at creative and affective levels, as people were able to access the designs and comments of distant and local participants. The displacement of the actual installation to several geographical locations intensified the internationalizing gesture of its initial presentation in Mexico. In repetition the work seemed to become standardized yet simultaneously irreproducible because of its participatory nature and the specific cultural coding of each selected location. By replicating the structure of his works and offering similar opportunities for participation in diverse settings, Lozano-Hemmer exposes the complexity of the ongoing process of globalization. Like global media his works achieve different effects in each locale. This was strikingly evident in *Body Movies*, his next work of relational architecture (Fig. 8.5).



FIGURE 8.5. Rafael Lozano-Hemmer, *Body Movies*: Rotterdam, 2001. Photo: Courtesy of Rafael Lozano-Hemmer.

*Body Movies: Relational Architecture 6 (2001)*  
*and Select Later Works*

One thousand portraits of people in the streets of Montreal, Rotterdam, and Mexico City were projected on the façade of the Pathé cinema in Rotterdam using robotic scrollers placed on two high towers facing the building. Three networked computers controlled the installation: a camera server, a video tracker, and a robotic controller cued by MIDI (Musical Instrument Digital Interface) signals. The portraits were muted by two xenon light sources located at ground level. Passersby saw their shadows projected on the façade. The photographic portraits only became visible inside shadows measuring 2 to 25 meters in height, depending on the distance of people from the light sources. Participants could embody a portrait by adjusting the size of their own shadows. When shadows matched all the portraits on the façade a computer selected a new set. A video projection on the square displayed the tracking interface.

Most people's attention focused less on the portraits than on their shadows. Participants with large shadows could play with or threaten those with small shadows. People with small shadows could interact with each other or challenge or aggravate the big shadows with actions such as "tickling." These exchanges resulted in a carnivalesque event in which strangers played and together improvised skits (Fig. 8.5). In addition to being fun, the piece offered participants an opportunity to reflect on regulating and repressive aspects of contemporary societies. In industrialized countries, powerful machine vision systems and tracking technologies assist governments, police forces, institutions, and individuals to observe and control the behavior of others. Surveillance systems are now integrated in all realms of life, private and public, from baby monitors and building security systems to stores, banks, highways, prisons, and city streets. In these societies surveillance and regulation of all space, especially commercial space, are of vital importance. Multiple artists including Americans Steve Mann and the tactical art collective Critical Art Ensemble (CAE) powerfully illustrate these conditions. Through his invention WearComp (wearable computer with visual display) and a prosthetic camera that he called WearCam, during the last twenty years Mann has documented surveillance systems and the behavior of business representatives in a variety of establishments and distributed the photographs via the Internet.<sup>32</sup> In a nomadic performance by Critical Art Ensemble entitled *Are We There Yet?* presented throughout the state of Florida in 1992, a performer quietly played with toy cars in nonobstructive locations at selected shopping malls and public spaces. The police invariably intervened to terminate the activity.



Since the advent of modernism, architecture progressively has become standardized and commercialized. Aware of this state of affairs Lozano-Hemmer comments:

Cicero said, “We make Buildings and Buildings make us.” Our situation in the globalized city says the opposite: the urban environment no longer represents citizens, it represents capital. Architects and urban designers 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 for connection.<sup>33</sup>

Businesses capitalize on this need for connectivity. Increasingly, around the globe, screens cover the façades of buildings in city centers. These screens dress the architecture in cascades of constantly changing imagery, with the effect of dematerializing the actual buildings. Like earlier light and neon signs, one of the major purposes of urban screens is advertisement with occasional transmissions of cultural or live sporting events that create an ephemeral experience of community among diverse populations. Although architects, artists, and hackers have experimented with solutions for creating interactive building façades, the screens usually provide one-way spectacles for visual consumption.<sup>34</sup> The spectator watches but does not provide content: the selection of visual material usually is restricted to commercial and civic sponsors. *Body Movies* defies passive spectatorship by letting users spontaneously develop their own content. The piece also counters the regulation of urban centers by opening a space for spontaneous sociability.

Like *Vectorial Elevation*, *Body Movies* was presented in various cities around the globe: Rotterdam, Linz, Liverpool, Lisbon, Duisburg, and Hong Kong. The piece did not function homogeneously, as was evident by the responses of participants in different locales. Lozano-Hemmer recounts: “when it was to be shown in Lisbon, I thought of the stereotypical ‘Latino’ who loves to be out in 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 with other people’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.”<sup>35</sup> Neighborhood residents in Rotterdam regarded the installation as a positive revitalization of the plaza that allowed people who did not know each other to meet and, better yet, to reexperience playing “like children.”<sup>36</sup> This comment suggests that the piece allowed residents to behave freely and to have pleasure in human interaction, an experience that capitalism

constantly attempts to thwart, according to CAE, because it distracts people from consumption.<sup>37</sup>

Lozano-Hemmer also explored issues of surveillance, the body, and personal space in his installation *Subtitled Public* presented at the Sala de Arte Público Siqueiros in 2005 (Fig. 8.6). The movements of visitors in an empty exhibition space are tracked with a computerized infrared surveillance system. As a person enters the room, a computer randomly assigns a label consisting of a verb conjugated in the third person, which is then projected on the participant's body and follows the person everywhere within the space. The only way to get rid of the label is to touch another person: this results in an exchange of labels between participants. Every three minutes the surveillance matrix indicating the position of each person in the room is revealed by a projection on the floor. This work tests the limits of lived personal space by requiring touch in order for participants to free themselves of unwanted labels. Physical touch is risky among strangers and taboo in specific social settings. In stereotyping individuals, *Subtitled Public* emulates routine practices of contemporary surveillance systems that identify potentially dangerous individuals according to physical traits or ethnicity. By replicating the technique of automatic labeling, the work



**FIGURE 8.6.** Rafael Lozano-Hemmer, *Subtitled Public*: Sala de Arte Público Siqueiros, Mexico City, 2005. Photo: Courtesy of Rafael Lozano-Hemmer.



calls attention to the potentially erratic logic of hyperrational computer systems. The piece elicits empathy among the visitors because any participant is subject to random stereotyping. Like other Lozano-Hemmer works, *Subtitled Public* invites participants actively to play: it encourages people to chase each other around the room to touch and exchange labels. The playful aspects of the work mask its sinister content.

Beginning with *Re:Positioning Fear*, the artist consistently employs shadows as vehicles for contaminating the body of the participant with events and entities extraneous to it. In Lozano-Hemmer's opinion, the shadow functions as "a disembodied body part," being inseparable from the body but not of it.<sup>38</sup> In *Body Movies* the participant could choose to embody the portrait of a stranger. Because of the two-dimensionality and immobility of the portraits, however, interaction of the participants with them was limited. In *Under Scan: Relational Architecture 11*, 2005–2006, commissioned by the East Midlands Development Agency in England, the portraits became the principal focus of interaction. Thousands of "video-portraits" of people of at least sixteen years of age taken in the streets of Derby, Leicester, Lincoln, Northampton, and Nottingham were projected (with the consent of the participants) onto the ground of the main squares and pedestrian thoroughfares of these cities. A surveillance system tracked the movements of passersby and predicted their trajectory in order to place the portraits on their path. This allowed for seemingly accidental encounters of the public with the work. As in *Body Movies*, a strong projection of white light washed the images so that each portrait only became visible inside a person's shadow (Fig. 8.7). This time, however, the portraits looked at the spectator, moved, and exhibited a variety of behaviors. Some pretended to sleep; others danced, mimicked, or threatened the viewers. The interaction ended when a shadow moved away from a portrait. Every seven minutes the tracking system was revealed by the projection of the surveillance grid on the square (Fig. 8.8).

Unlike the passivity and distance of the two-dimensional photos in *Body Movies*, these portraits seemed like real people inhabiting the participant's shadow. Contemplating these live "others" inside their silhouettes, the viewers may have been encouraged to imagine what it must be like to be that other or to reflect on the person's reactions to individuals different from herself. These interactions seemed too real or invasive for some of the public to enjoy. Many people reported liking the projection of the surveillance matrix better than interacting with the portraits. This reaction was unexpected to the artist:

I thought the interlude was going to be a scary moment when all the tracking mechanisms are revealed, creating an Orwellian environment that would make people aware that they were being scanned with predatory technology, I wanted some-



**FIGURE 8.7.** Rafael Lozano-Hemmer, *Under Scan*: Lincoln, United Kingdom, 2005.  
Photo: Courtesy of Rafael Lozano-Hemmer.

thing that would break the representation, like in a Brecht play when all the actors stop suddenly and say “wait, this is only a play” and thus make people aware of themselves, of the theatre, of the whole artificiality of the construct. Instead, every time the grids came out, people laughed and ran and often danced.

I think this happened because interacting with the portraits turned out to be quite an eerie experience—where someone you don’t know was in your shadow making eye contact maybe sending you kisses or waving or trying to tell you something or frowning at you.<sup>39</sup>

These responses ultimately suggested the public’s complicity with repressive surveillance systems. To be surveyed was more comforting than to be directly confronted with a stranger. Nonetheless, because the work relies on process and performativity and not on representation, it offers the participants an opportunity to reflect on their own reactions.

The last work in the Relational Architecture series actualized the original objective in *100 Million Mexicos* of giving the public a voice. *Voz Alta: Relational Architecture 15* was presented at the Plaza de las Tres Culturas in Tlatelolco from September 25 to October 5, 2008, to commemorate the fortieth anniversary of the student massacre at the same location on October 2, 1968. The work was



commissioned by the Centro Cultural Tlatelolco of the Universidad Nacional Autónoma de México, an institution that houses a memorial gallery and a multimedia media archive of the event.

The military's brutal attack on a student demonstration, which left hundreds of people dead, is one of the most significant historical episodes in the second half of the twentieth century in Mexico. For thirty years a succession of Mexican governments in conjunction with the mass media obscured the event, with the result that subsequent generations of Mexicans gradually lost memory of it. None of the responsible parties were brought to justice. An investigation finally began in 2001 under the regime of President Vicente Fox (2000–2006). The former president Luis Echeverría, who served as secretary of the interior from 1964 to 1970, was indicted on a charge of genocide; but to the public's outrage, the charges were dismissed in 2009 due to the statute of limitations.<sup>40</sup> In the opinion of writer Carlos Monsiváis, who witnessed the massacre, the



**FIGURE 8.8.** Rafael Lozano-Hemmer, surveillance grid, *Under Scan*: Lincoln, United Kingdom, 2005. Photo: Courtesy of Rafael Lozano-Hemmer.



government recognized that “there was genocide but no one committed it. Either they were invisible assassins or the forces of evil, which, lacking immigration documents, did not reveal themselves.”<sup>41</sup> In 2003 the National Security Archive at George Washington University electronically published a Briefing Book resulting from an investigation of the event and made available to a wide public previously classified documents implicating both the Mexican and the United States governments in the events that led to the slaughter.<sup>42</sup> Lozano-Hemmer’s *Voz Alta* thus arose amid the painful stirrings of a violent past.

A participant standing on the plaza spoke into a megaphone. As the person spoke, a powerful searchlight beamed the voice into the sky as a sequence of flashes (Fig. 8.9).<sup>43</sup> The intensity of the lights corresponded to the volume of the voice. As the light reached the top of the Centro Cultural Tlatelolco (CCT), three additional searchlights relayed the light beam over the cityscape: one pointed to the Zócalo, another to the Monumento a la Revolución, and a third to the Basílica de Guadalupe. The lights reached a maximum radius of 15 km of visibility depending on the weather and smog. Anyone could listen to the person speaking by tuning in to Radio UNAM 96.1 FM, which broadcast the speeches live. When no one spoke into the megaphone, the searchlights in the sky turned off. As music of the period played, archival documentation of the massacre as well as artworks commissioned by UNAM to commemorate the event were projected onto the façade of the CCT. Thousands of people from all walks of life participated. Like other Lozano-Hemmer works, *Voz Alta* is nomadic. In addition to the public version, it can be shown in art museums and galleries via a modified prototype along with video documentation of the public work.<sup>44</sup>

In the public work, the artist’s selection of the sites to which the light beams pointed was significant. As discussed earlier, the Zócalo is not only a cultural monument but also a historic site for social agency. The Monumento a la Revolución by Carlos Obregón Santacilia (1938) transformed the cupola of the monumental Palacio Legislativo into a celebration of the revolution that deposed the Díaz regime. The Basílica of Guadalupe marks the site of the apparitions of the Virgin of Guadalupe to Juan Diego. As the patroness of Mexico, the Virgin is a popular religious icon but is also strongly associated with popular resistance. Her image adorned the banners of the Mexican troops in the independence struggles against Spain. In relaying a person’s voice in the form of light to all of these sites, *Voz Alta* metaphorically refers to the power of the voice across space and time to mobilize other voices and to effect change. The louder the voices, the greater the visual impact on the environment.

The Mexican public represented in the artists’ video documentation read the piece at this metaphorical level. Many were grateful for a work that was





**FIGURE 8.9.** Rafael Lozano-Hemmer, *Voz Alta*: Mexico City, 2008. Photo: Courtesy of Rafael Lozano-Hemmer.

accessible to everyone, contributed to the recuperation of collective memory, and honored the dead. Several participants also interpreted the piece as an “exhortation” to continue the struggle for democracy and justice. For them, *Voz Alta* not only commemorated the past but also inhabited the present with keen attentiveness to the future.

Some may object to this representation and argue that things are not that simple. If the work were allowed to exist in Mexico without censorship, would this not indicate an additional cover-up, primarily a cynical move by the government to give the impression of fairness in the face of the investigation into the massacre then in process? The evidence would seem to support this position: the parties responsible for the bloodbath ultimately went unpunished. But to what extent does this outcome negate the art’s political engagement, and what does the work tell us about political artistic expressions in the current global era?

Like many of Lozano-Hemmer’s works, *Voz Alta* has no single function artistically or politically. It performs a politics of improvisation, ambiguity, and opportunism. It does what it can when it can how it can without explicitly stating what it wants to do. The work illustrates Regis Durand’s understanding of “the voice as a migratory notion”: it can be a vocal production, a psychoanalytic



concept, a metaphorical support for pure time, mobility, intensity, and ultimately, perhaps, a name for the unnamable.<sup>45</sup> *Voz Alta* synesthetically enables the viewer by rendering the voice visible.<sup>46</sup> It could be argued that the translation of sounds into light and color is a recurrent theme in media arts from color organs in the Renaissance onward. But in *Voz Alta* the synesthetic gesture recursively expands as the light beam is relayed across the sky to become movement and communication among the lights and fold into affect. As such it enables a matrix of possibilities. As one participant opined, “brilliant thoughts become words”: the transformation of voices into lights is a way “to complete the cycle between thoughts and voice.” Another commented on the “strange emotion” that he felt as he saw his voice “in photons.” So strong was the unnamable affect that he began to forget the poem he was reciting and became anxious about forgetting.<sup>47</sup>

Ironically, art historian and critic Catherine Spaeth, who saw the prototype at a show of the artist’s work at Haunch of Venison Gallery in New York, described *Voz Alta* as “nostalgic.”<sup>48</sup> In contrast to art about a political situation, which is made inside of this situation, to her the piece suggested that “we can’t think about the political anymore without wrapping it up into the past and feeling the loss of it.” Her impression may have resulted from the isolation of the event as art in a gallery space and the decontextualization of the piece from the site and from the public directly affected by both the massacre and the ongoing investigations; it is also possible that at a distance the video documentation of the work merged with the daily onslaught of media representations of wars, catastrophes, and other people’s joys and sufferings that seldom seem real. From the reactions of the participants documented in the video Spaeth only surmised “this sense of being entranced by technology as an expression of power.” This conclusion implies that technology effectively serves power in the work but that it fails to empower.<sup>49</sup>

However we may choose to interpret *Voz Alta*, one thing is clear: the voice speaks of the body. It is inside and outside the body; it is both presence and absence. It speaks of desire, of unconscious drives and fantasies and also of loss and fall from the body.<sup>50</sup> By amplifying the voice auditorily and visually through technological means and inserting it in a charged political context, the work emphasizes the interconnection of bodies, politics, and technologies and signals the emergence of a technologically engaged biopolitics.

For architect Keller Easterling, the current moment is one in which both the nation-state and transnational forces cultivate obfuscation, a traditional instrument in the maintenance of power. What is important for architects, she argues (and I submit that this also applies to artists and to anyone who wishes to intervene), is not the consolidation of a singular position but the acquisition



of an expanded and agile repertoire, or what she calls the practice of “impure ethical struggles.”<sup>51</sup> Like Siqueiros and Renau’s *Portrait of the Bourgeoisie*, *Voz Alta* performs this impurity by refusing to articulate a singular political message. *Voz Alta*’s simultaneous attention to the past and future while conscientiously inhabiting the present identifies it as a performance of critical cosmopolitanism. By honoring the dead the work also engages with an ethics of visibility, as discussed in Chapter 4.

To conclude, Lozano-Hemmer’s work treats the body, identity, architecture, and the city as constructs open to transformation.<sup>52</sup> His addition of audiovisual phenomena disturbs the stability of each concept so that it connotes relationality rather than permanence. For example, in *Displaced Emperors* and in *Vectorial Elevation*, “nation” stands not for a homogeneous community, real or imaginary, but for a multiplicity that overflows national boundaries. In *The Trace*, *Displaced Emperors*, *Body Movies*, *Subtitled Public*, and *Under Scan* personal identity is vulnerable to invasion and co-optation; architecture and the human body lose their presumed coherence and become hosts to alien presences. The works mimic effects of globalization, which presumably erode national identities, homogenize or/dematerialize architecture, and colonize minds and bodies. Mimicry of these processes in the context of art problematizes the source phenomena. For instance, the artist’s use of technologies of surveillance, far from playing a promotional role, invites the viewers and participants to question the effects of these technologies in everyday life. Lozano-Hemmer’s work is cosmopolitan and transnational, yet it elicits consideration of contemporary conditions that facilitate transnationality. Physically engaging with the work, the user unwittingly becomes involved in the exploration of serious subjects, such as the meaning of national identity, the control of public space, violence, electronic surveillance, and the challenge of political interventions in the age of global media. While users might be unaware of the conceptual bases of the work, their own behavior might later provide them as well as nonparticipating viewers with food for thought.<sup>53</sup>

Lozano-Hemmer is neither the only Mexican artist who functions in an international arena nor the sole Mexican practitioner of digital art. Most contemporary artists today strive to exhibit their work internationally. Artists of international renown such as Gabriel Orozco and Francis Alÿs (the Belgian artist residing in Mexico) occasionally create multiples and tailor versions of the same works to diverse institutions and cultural settings. For a number of years Mexican artists including Arcángel Constantini, Ivan Abreu, Fran Ilich, and Minerva Cuevas have used the Internet to show and distribute their work.<sup>54</sup> Constantini received wide international recognition for his work *Atari Noise* (1999). In a gesture reminiscent of experimental video works by Nam

June Paik and Joan Jonas, Constantini altered an old 2600 Atari video game console randomly to generate audiovisual noise patterns. The nearly obsolete machine was retooled for another purpose. Like Lozano-Hemmer, Constantini is neither interested in representing Mexico through regionally established visual codes nor solely seduced by the newness of digital technologies. Repurposing outdated technologies has always been a tactic of innovators, especially those with limited access to state-of-the-art technologies. It is also a customary practice among tactical media activists and artists who employ an array of technologies for diverse social and political purposes. Although *Atari Noise* lacked overt sociopolitical content, it invited creativity by demonstrating the versatility of technology. Constantini currently runs *Cyberlounge* at the Rufino Tamayo Museum in Mexico City, a space where he curates exhibitions, promotes the work of Mexican digital artists, and organizes online events.<sup>55</sup> The work of these artists, which some critics may view as antithetical to identity-based Latin American art, actively contributes to shape global art and culture networks.<sup>56</sup> Similarly global networks were fundamental to the development of cosmopolitan cultures established with colonization.