A 2.5-metre shadow cast by a man and his wheelchair moves across a public plaza. The wheelchair’s occupant is having an inordinate amount of pleasure as his large shadow crashes smaller shadows cast by others in the area. At another time, a kid enjoys stamping on a little shadow cast over her by her teacher, or a monstrous Chihuahua looms over a small crowd of human silhouettes huddled beneath. These moments happen when Rafael Lozano-Hemmer presents his installation Body Movies. He has shown it in Rotterdam, Lisbon, Turin, Dusseldorf, and now Hong Kong. Though, as far as he knows, it was only in Liverpool that a group of dads pulled their pants down to their ankles and ran across the square while urinating. Perhaps this is not something to mention when discussing an internationally acclaimed work of art, but it highlights the role of the viewer and the level of expressive freedom that Lozano-Hemmer’s work usually incorporates.

Lozano-Hemmer will represent Mexico at this summer’s Venice Biennale. These days his work is divided into two categories: the large-scale public art works in the tradition of son et lumiere spectacles, and works based on kinetic sculpture or installation. The latter involve completely different issues of portability and preservation, but the primary interests remain the same: surveillance, presence, and absence.

Thanks to the Patriot Act and homeland security, the artist’s gaze has been drawn to the new powerful generation of computer surveillance that can recognize which ethnic group you belong to and match your image against a database of suspicious individuals. The ominous potential of this technology requires a new kind of art. On encountering Submerged Public (2005), shown in Madrid, Mexico, and Luxembourg, you might at first believe you are entering an empty space, but a surveillance system has already detected you and projects a word onto your body that cannot be removed. All you can do is touch somebody else, thereby exchanging labels with him or her.

In Under Scan (2005) 1000 video portraits are activated by the shadows of people walking across a public square in England. The effect is intimate and uncanny, with viewers constantly seeing people in their shadows. Lozano-Hemmer always situates his public pieces in places that people naturally cross as part of their daily routines. The public is never assembled or bussed into one special location, though this does not limit the size of his audiences. When Vertical Elevator (2000) was presented in Mexico’s impressive Zocalo Square, 800,000 people participated by submitting light designs via the Internet to be actualized by 18 robotic searchlights in the sky above.

A project now under development involves bringing 12,000-watt searchlights inside, which create bright columns of light. It makes you think of enlightenment, celebrities caught in the spotlight or, in Mexico, darker associations of helicopters beaming down on illegal immigrants along the border. If visitors try to walk into one of the columns the system automatically moves the ray a little, refusing to illuminate them. Similarly, in Standards and Double Standards (2004) another work that explores fear and humour, 50 leather belts, suspended in midair, turn to face the viewer in a predatory manner, while Plasma screens on the wall reveal the tracking system. Typically, I like to include the mechanisms of surveillance,” Lozano-Hemmer explains, “so it is not just an effect but also an understanding of how it works and why. I don’t use technology because it is new, I use it because it is inevitable.”

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