Wandering Without Wondering

P. J. Williams[1] and S. Wong[2]

[1]California State University Sacramento, USA
[2]Indiana State University, USA

Abstract
*Wandering Without Wondering is a hybrid-media installation distilling and chronicling artists Sala Wong and Peter Williams'
collaborative walking practice. The project uses various digital technologies to augment human senses, metaphorically linking
and complicating the concepts of immersion and interaction through disruptive and hypermediated approaches to technologies
such as 360-degree imaging, projection mapping, virtual reality and spatial audio produce an expressive, visually-saturated,
physical/virtual hybrid space through which visitors journey between states of technologically-facilitated expression.*

1. Collaborative walking practice

While in different geographic locations (California and Indiana, USA), Williams and Wong simultaneously walk, connected to each other and world events through mobile technologies and using Ricoh Theta 360 cameras to capture images from their respective surroundings. The artists' improvisational image-making process arises through cognitive and motor processes of walking and communicating.
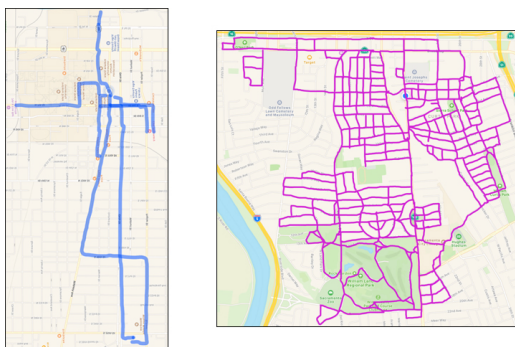
Figure 1: *Walking paths, Indiana and California.*

2. Imaging and animation

Photographs taken with the Ricoh Theta camera are equirectangular projections of 360-degree images. From photographs taken throughout the artists' collaborative walking practice, images of flowers are extracted and isolated as the primary subject matter - common yet regional and temporal components of each urban landscape, while also referencing broader themes of contemplation and desire. The flower image extraction is done using a masking process in Adobe Photoshop, so that the subject matter of interest is separated from the surrounding imagery. The extracted content of each

chosen photograph is placed onto a layer of a separate Photoshop canvas, with care taken so that, when recombining elements from one spherical image into another, the spherical distortion resolves consistently. This imposes limitations on the positions at which elements can be placed within overall compositions, as they must align with the pixel coordinates at which they appeared in the original photographs. However, such limitations support the concepts of the project related to wandering and the creative and cognitive aspects of motor processes: *Wandering Without Wondering* metaphorically prioritizes imagery that emerges out of the physical movement of the body through the world, rather than through the visual senses most commonly employed in photography.

Figure 2: *Screen capture of computational animation, showing layer separation and phasing.*

The extracted flower images are further manipulated and animated using custom X3D/VRML applications which computationally animate them at varying speeds in real time, on individual layers of virtual geometry. The dynamic phasing and alteration of image layers results in continuously-changing visual compositions and representations of depth.

2.1. Installation and physical interaction

Visitors to *Wandering Without Wondering* wear active stereo 3D shutter glasses, explore the installation space, interrupt the dual projections, and cast their shadows onto the surrounding gallery walls and the balloon, becoming physically involved in an expressive flow of physical and virtual spaces. Touching the balloon affects the projected video on its surface and its cast shadow onto the walls. Generative sounds surround the space, supporting the cycling, animated images, and evoking a sense of digital/mechanical processing, emergence and transitional spaces.


Figure 3: *Installation view, and visitor interaction with balloon and projection.*

2.2. Physical and virtual separation

Visitors can also wear VR goggles, provided within the installation. The VR component represents a further journey into a contemplative, penumbra-like space, visually and metaphorically connected to the large shadow cast by the balloon into the projections of the physical installation space. Upon entering the VR penumbra-space, visitors encounter a more solitary environment, with traces of distant figures walking within the void and unaware of the floral spectacle that surrounds them. The 360-degree videos were filmed in a shopping mall in Hong Kong during the summer of 2018. This footage is manipulated to emphasize the physical act of walking in contrast with the distancing effects of technology and consumer spectacle within an urban space. The VR environment also includes a distinct audio component that further transports the visitor: here, the sounds of raindrops contrast with the generative sounds primarily heard within the physical installation environment. The VR "penumbra" represents the most personal, and yet distancing and isolating effects of technology. Collectively, the various spaces, images, interactions and sounds presented in *Wandering Without Won-*

dering depict the technological facilitation of journeying into the unfamiliar, and a range of expansive modes of self-expression.
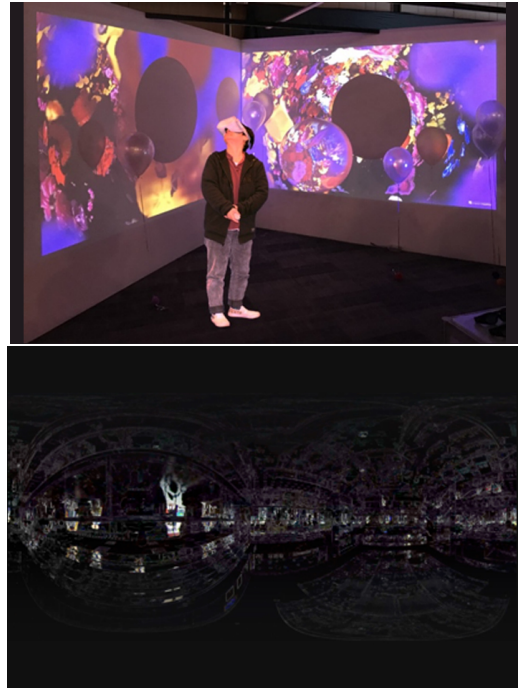
Figure 4: *Visitor wearing VR goggles within the installation, and 360 screen capture of 360 video seen while wearing VR goggles.*

2.3. Navigating distance

Immersion within physical environments varies through degrees of (un)familiarity. Virtual Reality stands apart in its unique and alternative form of immersion, dis-integrating participants from their physical surroundings. As we approach the unfamiliar, we become more aware of our surroundings and rely more intently on our physical senses. Becoming oriented, we internalize our environments through mental abstraction, and our sense of sensorial immersion dissipates. Digital illusions, composed of light, provide us with endless options for encountering the unknown, and it is light through which we appreciate shadow, or, the known. Projection and VR use light to present fantastic and unusual experiences, which can be broken and remade through, for example, breaking a projection beam or being physically touched while experiencing VR. At the same time, this experience might produce a sense of being "immersed" in the physical world. The every-day use of mobile technologies situates us in-between the states of light and shadow, familiar and unfamiliar, illusion and reality, such that distance becomes ambiguous and closeness becomes uncertain.

As technology moves us further and further from the familiar, we experience distance to ever-more profound degrees. Reaching this point of departure, we recognize our disappearance and the distancing effects of journeying itself. *Wandering Without Wondering* interprets this phenomenon, presenting visitors with an expressive, exploratory environment composed of projected light, tactility, color, movement and sound within continuously shifting physical and virtual spaces.