Chapter 4
Shifting Perceptions—Shifting Realities—Shifting Spheres

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4.1 Introduction

As an artist working in a practice of criticality and portraying psychic dilemmas, I am interested in perception, portraiture, how dilemmas express themselves, and how the thoughts and events fueling dilemmas reconstruct reality. Virtual objects offer a methodology for shifting perception and evoking a sense of other-worldliness that allows us to cognize our perceptions, their shifts, and affectations.

The construction of 3D computer graphical imagery in virtuality, and the placement of objects in space situates a navigational juncture for the visitor. The virtuality emulates a recuring memory that immerses the visitor, prompts subsequent action, and promotes a shift in consciousness. Augmented reality (AR) incorporates the act of placing computer-generated imagery in locative space for visitors to discover. AR is an experiential phenomenon that must be positioned and subsequently located or discovered. AR is fleeting as it is oscillating between being invisible and being made visible by situating a device and pointing the body into the artificial cognitive space.

The computing device, a data processor, a configuring machine, recognizes its location in the real world and retrieves an artificial entity to introduce in our presence. The device combines the physical movement of our body in synchronicity with the virtual body which energizes the moment: The corporeal and the machine are bound in a virtual entity being born. A visitor recognizes the AR entity in the viewing device and perceives it as an articulation between self and world. One must suspend their disbelief in order to integrate the virtual information within the real environment. In turn, the apperception of the AR object causes one to become complicit with the device and reconstruct their understanding of the space. The presence of virtual objects redefines space. Moreover, direct confrontation and assimilation with

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the virtual object causes the repositioning of physicality and acclimatizes neuronal activity. As a result, the real world transforms into an augmented reality.

4.2 Shifting Perceptions

The creation of AR situations requires a methodology of a creative process for exposing art motifs and formulas, exploiting locative space, and generating experiential discovery, in order to situate consciousness (Dolinsky 2004). The aesthetic moments in an AR experience are multi-layered ascertainments of locative spaces, artistic designations, and psychic dilemmas. It is in the process of locating the artwork and identifying its existence that generates experiences that are geographical, corporeal, and subjective. A confrontation with AR combines the experimental moment with conscious awareness and offers a shift in perceptions. Offering heightened awareness, this sensation becomes an extra-marginal moment in an intellective engagement, or a perceptual shift (Dolinsky 2004).

A perceptual shift is the cognitive recognition of having experienced something extra-marginal, on the boundaries of normal awareness, outside of conditioned attenuation. Promoting a "perceptual shift" for the visitor is a historical tradition in some art forms that aim toward altering perception. Perceptual shifts are often provoked by such art as trompe l'oeil, Cubism, Cornell boxes, labyrinth gardens and Brecht's political theater. These motifs are a motivation to exploit AR as a virtual environment. As a type of interactive media, AR has a quality that requires a specific engagement unique to the peripheral devices and its ability to situate particular artistic performances. Once the visitor becomes complicit in his or her role within that interaction relationship, possibilities are expanded for cognitive recognition and perceptual shift. The work may not necessarily attempt to shape emotion in particular; however, confrontation with the AR experience shapes perceptual possibilities and alters how we situate our self in relation to virtual environments.

The most important performance measure of effectiveness for media experiences is psychological immersion. Psychological immersion occurs when a visitor's senses are so aroused by the virtual experience that their emotions and intellect react as if they are in the actual world or participating in another world event (Rosen et al. 1994). We are most familiar with this phenomenon as we tend to weave ourselves into the plot of a film or a drama, and more recently, we may weave ourselves into the real and/or imagined plot of a video game or an XR (extended reality) performative event. AR art offers a sense of immersion when a locative activity engages the visitor in transforming a seemingly neutral, albeit public space into a subversive and aesthetic communication scene.

AR art allows us to incorporate virtual objects into our physical space and promote psychological immersion by repositioning our body's physical relationship to the world and moreover, affecting our emotional thinking. As a result, AR can restructure mundane existence. In AR, we must construct an understanding of how the 3D computer graphical object consummates with our world. Through psychological

immersion, we gain an understanding of how we function in relation to its ubiety. We consider rules that were previously transparent and permutate them to orchestrate a shared sense of augmented reality. The integration of imaginative virtual art objects in public spaces not only gives us the opportunity to experience an "other" type of "being" in the world, the space itself exists as both real and virtual (Virilio 2002). This recognition of the transformative environment allows us to reconsider representations in our everyday world and our own relationships to them (Dolinsky et al. 2005).

In order to achieve psychological immersion, action is key. Interactivity is critical for optimized enjoyment. Action enhances the sense of immersion and the efficacy of the aesthetic expression. Here, the confrontation precipitated by AR art stands as an action reaction chain of events of discovery and integration. The AR sets up an opposition between physical and virtual, the material and the computer generated, reality and extended reality. Starobinski (2003) carefully articulates the coupling of action and reaction and writes how the metaphoric use of action and reaction "lends an air of normality and naturalness to the relationship between idea and motion, that is, between the soul and the body." The work, Heart to Heart, presents a psychic dilemma through search and recognition (the action of finding the answer to "where is it?") and situates the visitor through a conceptual integration: the reaction of incorporating the action into one's knowledge and life experience.

Standing alongside the AR art, "Heart to Heart," in People's Park in Bloomington Indiana amidst the global Occupy events, I chanced upon an encounter and confrontation with a stranger. This struggle to remain immersed within an augmented environment and to integrate strange questions led to what seemed to be an exponential disruption. During the engagement in the virtual world, a conversation occurs in the real world and situates myself as an extension of the virtual world with the other who is a stranger in the real world—here, a park. The stranger pointedly asks the AR seeker and device holder what they are doing in the park. Both persons' thoughts are dovetailing in a strange manner, but they seem to understand one another all the same. The dream like descent into an AR experience and the indulgence into its reverie can be infused by the proximity of a stranger. This nose-to-nose juxtaposition intensifies the immersion of the space for both parties. Somehow, they each stand their ground and stand together while parlaying a conversation. They are listening to one another, engaged in a discursive rhetoric where they ultimately establish a private interconnected network. They achieve real-world immersion through location, aesthetic expression, and poetic discourse—sharing a multiplicity of complicity. Immersion occurs between the person and the AR object through the magic and the discovery of the artwork. Immersion also occurs on multiple realities as persons who are acting in relation to the existence of the AR artwork, some understanding its presence while others are reacting to their own presence without ever knowing that the world is actually augmented, as in the encounter when the interlocutor began our conversation.

A psychological connectedness to the art occurs when the immersion augments an emotional response between the grounding in the real world and the suspension of disbelief in order to integrate the AR world into our lives. This is gauged by the sense of presence. The efficacy of presence can be formulated in different ways.

Typically, presence is defined by a sense of being in the virtual environment instead of being in the space where the physical body actually resides (Draper et al. 1998; Slater and Wilbur 1997). Another definition of presence occurs when the experience is "tantamount to successfully supported action in the environment" (Flach and Holden 1998; Zahorik and Jenison 1998). AR can offer a multiplicity of types of experiences. The formost occurs in the initial situation with recognizing the AR art. The visitor becomes complicit in a magical moment that fuses oneself with the existence of the object and creates a shared space called augmented reality. My heart was racing in reaction to seeing it. I was mesmerized by the movement of the emotional mobiles or "emotables" hovering in the air (Dolinsky 2014, 2019). My emotions are lofted and aroused: the type of presence that depends on action and locates oneself within the virtual environment. This occurs when AR art becomes a part of physicality and conversation with another person, regardless of who realizes its existence. The AR emotability is a felt a presence.

By focusing attention, shifting perception, and directing consciousness, the AR objects become a localization of a virtual volume in space and a metaphorical ink mark that combines with the environment to lead to a type of virtual painting or aesthetic overlay integrated into the real world. The emotable objects can be realized as creating a virtual environment and establishing the action of a theatrical moment. The visitor has the responsibility to inculcate their degree of presence and assimilate the object accordingly. In effect, the creative process augments reality by incorporating AR art into the active experience of locative awareness and situates consciousness.

"The phenomenon of presence is based on the transportation of consciousness into an alternate, virtual reality so that, in a sense, presence is consciousness within that virtual reality" (Sanchez-Vives and Slater 2005). So, despite an object being simulated and not real at all, visitors can respond as if it is real by eliciting an emotional response and genuinely engaging with the virtual object. According to Dixon, "Virtual reality is all about illusion. It's about computer graphics in the theater of the mind. It's about the use of technology to convince yourself you're in another reality" (Dixon 2007).

4.3 Shifting Realities

A young skateboarder rolling past circled several times and slowed down long enough to ask "Is that a computer?" I was surprised by the question, perhaps some people do not know what this iPad is. I felt like an alien, holding an alien object, rendering myself an outlander and alien in the world. It was a surprise considering we were practically on campus. Regardless, standing, searching, the computer pointing up at a tree, reveals an illusion of a heart-shaped entity. The with the image of Lenin raising his finger is pointing toward the sky. The balloon is there! Lenin is there! Suddenly my heart was pointing to the sky: It is the arOCCUPY May Day exhibition and the "Heart to Heart" gently hovers with a sense of vulnerability (see Fig. 4.1).

Fig. 4.1 "Heart to Heart" arOCCUPY May Day 2012. Bloomington, Indiana, USA. Photo © Dolinsky 2012

Then, suddenly, out of nowhere, someone moves adjacent to my shoulder. With a slight swivel of my face, a warm breath pulses against my cheek. Turning completely, he comes into view. His breath reaches into my mouth like an ominous shadow rolling across a plain. Simultaneously, his voice is a soft growl and a matter of fact Indiana-Southern style whisper: "You're scaring people."

Alongside marking the scene with AR is now a newfound sense of presence. To be certain that presence is accompanied with disquietude, the man repeats himself. Taking stock of the situation in the People's Park, a place where transients come to linger during the day, I see the world continues to pass by. Now I pass from that world into the park, space invading alongside AR art and brandishing a compswauter device in the air. Clearly my swashbuckling antics are not appreciated. Perhaps it is the computer that concerns them: an object waving around, a screen exploring the environment and a stranger creating an unknown quiddity. The people in People's Park feel screened. I am a surveyor that is being subject to surveillance.

We look straight ahead, nearly nose to nose, eyes in essence touching. His sunburned skin, long hair and military garb appear war torn and weather beaten. He stands not much taller and he means business. He repeats himself, "You're scaring people." I do not move. My body is still as my mind registers standing close to this stranger. Our locked gaze continues, I reply softly, "I'm not scaring anyone. I'm looking for my heart." Immediately his body relaxes, he withdraws ever so slightly, makes a bow and returns to me. Moving in close, he replies, "Well, I'm looking for

my heart too." We began to have a consensual hallucination in a conversation of soul quest, symbolic language and sententious poetry. We each profess a type of pronunciamento regarding hearts. Two disparate sensibilities dove tailing around one another through conversation and confrontation and summing up with a profound sense of moment and space. It helps to further understand crazy. Contemporaneously, the discourse makes broken nonsense and perfect sense and ends in mutual satisfaction. It is as if there exists a private acquiescence to recognize a heart when it is present.

4.4 Subversive Confrontation

The discovery of AR artwork in a People's Park situates the visitor not only in a location but within a social structure that is transforming with both particular and random circumstances. The community transubstantiates the public area creating an ever-changing dynamic established by a flow of situations. The AR experience is situated not for this marginalized group of people but those who travel there in order to recognize the affordances of the computer graphics as presence, action, and relationships intrinsic to the reconfiguration of reality by the introduction of virtuality. Ascott states that "virtual reality corrupts and absolute reality corrupts absolutely, whenever the constraints and limitation of its construction are preordained, predefined or preset." (Ascott 2003) The search for AR art is a search for delimitation within space. One must begin to negotiate the space with an intrepid sense of exploration. One begins by searching the space slowly and more intimately than one would who is not brandishing a device. The AR visitor becomes aware of the space to discover the AR art but in turn may realize how fully present in the space we can become.

We can intensify our worlds experientially through an act of discovery with AR. AR systematizes Lenin as he hovers over People's Park in a heart-shaped computer-generated hallucination. Lenin becomes visible through a device and digital window that situates him toward the visitor in a relationship wrought with multiple interpretations of private, public, and social identities. The visitor is being fused in a subversive confrontation with a virtual object that references a history of social systems in a place called People's Park, a circumstantial public space. The majority of the visitors to the park are among the AR uninitiated and will never know of the heart's existence. Through an adventure in search of AR art comes a way of knowing a city, a neighborhood park, and its inhabitants. Moreover, AR upheaves a mundane occurrence in a park. By repositioning the visitor in the park with Lenin's effigy, a distance forms between the sense of self and the park. AR causes the visitor to recognize the existence of the object, assimilate the object with not only space but self, and form a reaction. The reaction modifies self, park, and self with art. Step-by-step, beginning with an invitation to discover the AR, the visitor finds a way to identify the work and identify with it alongside the streets. Each of the elements of this process intertwine one with another to create an experience of multiplicity and action that involves space—artistic space, cyberspace, and mental space. Virtual reality enhances reality (see Fig. 4.2).

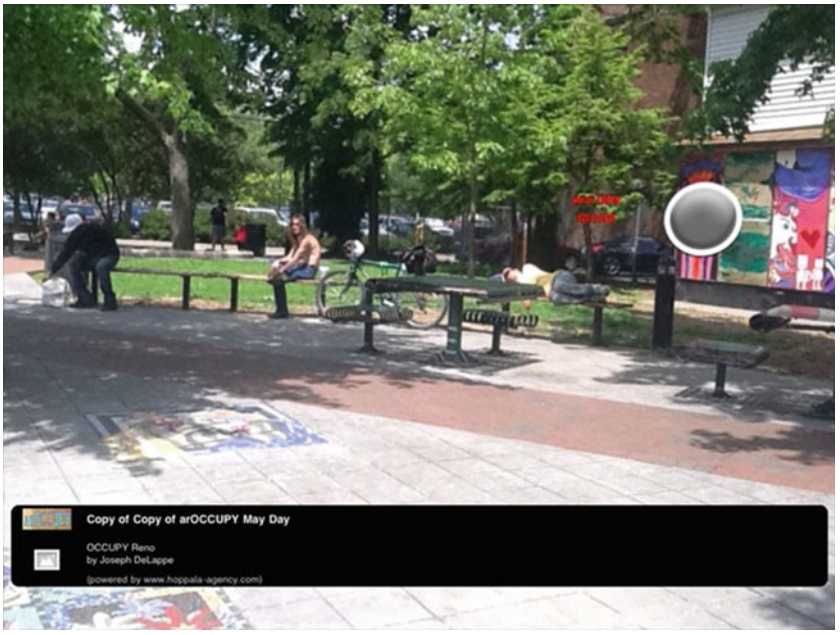

Fig. 4.2 People's Park in Bloomington Indiana during the art exhibition, arOCCUPY May Day 2012. Many of the people gathered to the left side of the park when they saw a stranger in the park walking around pointing an iPad. As a result, the benches and tables on the right side of the park are empty. The upheaval in the air can be seen literally, figuratively and virtually with the hovering AR objects. Photo: c. 2012 Dolinsky

The visitor becomes complicit in the AR artwork by attending its exhibition in the park. The visitor is yet another entity, hovering among with virtual entities, recognizing the existence of others. The visitor, through the act of a sojourn, becomes the augmentation of the day. The AR visitor becomes the extra (XR) entity that affords discovery and assimilation for the regular inhabitants of the park. AR and its acolytes are shifting the reality and the perceptions of the people in the park. Those who visit AR have the potential to be labeled as an outsider and to become suspect in their activity.

The irony compounds itself as these events occur on May Day. May Day coincides with International Workers' Day and typically involves rallies and peaceful demonstrations in support of laborers and labor rights. On May Day 2012, there were two different demonstrations occurring in the People's Park. One demonstration was the exhibition of AR art, and the other was the demonstration by the people who rallied to complain about the presence of a stranger, specifically the AR acolyte in the park.

"arOCCUPY May Day" was an AR art exhibition and subversion directed and produced by Mark Skwarek, a faculty member and researcher-in-residence at Polytechnic Institute of New York University. Inspired by New York City's Occupy movement, Skwarek re-built the encampment in AR. He extended the encampment by

inviting artists to create AR pieces that would enhance efforts to support the Occupy Movement. AR allowed him to situate the protest in cities across the USA as well as across the world in such cities as Sydney, Australia, Brasilia, Brazil and Hammam Sousse, Tunisia in Africa. The exhibition reached as far as Shanghai and a photo was smuggled out of China in support (see Fig. 4.3) (Skwarek 2012). Lenin is being reintroduced to a new generation of social activists (Žižek 2002, 2004; Kellogg 2014) through reprints of his critical writings composed from the overthrow of the tsar. The choice of using the image of Lenin on the arHEART is motivated by a Ukrainian heritage. Ukraine was an independent nation in 1917 when it was invaded by Lenin's Red Army. By 1921, Lenin began to give Ukrainians back some of their independence by allowing a national revival movement that celebrated their customs, language, arts, music, poetry and Ukrainian Orthodox religion. However, this was short lived when Ukraine was devastated in 1929 by Stalin who imprisoned and/or executed leading scholars, scientists, and cultural and religious leaders by falsely accusing them of armed revolt. This was followed by the Holodomor, Stalin's forced extermination by hunger in 1932–1933. The arHEART at arOCCUPY MAY DAY is a testament

Fig. 4.3 Documentation from Shanghai arOCCUPY MAY DAY of the HeARt. This was a very difficult photograph to secure and was sent to the USA from Shanghai, China during the May Day worldwide protests.
Photo: © 2012 Anonymous

Fig. 4.4 Heart to Heart arOCCUPY May Day nestled in the trees of Bloomington, Indiana. Photo: © 2012 Dolinsky

to the strength of heart of Ukrainian people. The ephemerality of the arHEART is a pointer to the extreme changes of heart that the Russian leaders demonstrated toward Ukrainians. As a result, the arHEART flutters in many cities, in the air, in the park and in the sanctuary of nature, pointing toward a place of renewal (see Fig. 4.4).

The creation and placement of AR art is integral to provoking an experience and causing a shift in perception. Presence, realization, and communication are established through an aesthetic juncture. Placing the object in a particular setting colocates aesthetic production, social milieu, and subversive confrontation. AR affords an opportunity for an experience that facilitates an earnestness of space and place in the community. AR artwork helps to establish a relationship to a location, alters that space, and invites spectacle. That experience situates consciousness and forms memories of the artwork that reconfigures the self, the emotable, and the location.

4.5 Shifting Spheres

The shifting of spheres between reality and virtuality is evoked in the AR artwork displayed at the Adler Planetarium in Chicago called “Seed Robots.” Aptly positioned in a museum that focuses on the spheres moving about in the sky, the Adler Planetarium in Chicago investigates the universe.

Moon Lust, as described on the website, "is a speculative project that explores global interests and issues pertaining to lunar exploration and habitation" (Moon Lust 2012). The curated exhibition was organized by Tracy Cornish in collaboration with Todd Margolis and augmented reality visualizations were shown at the Adler Planetarium in Chicago during the summer of 2012. The show facilitated a dialogue about space exploration and habitation by introducing AR on such topics as lunar mining, space tourism, celestial territories, space ecology and policy.

"Seed Robots" is one of the installations in Moon Lust, and it focused on robots that enable joyous living in the lunar atmosphere. The Seed Robots plan, organize and build a person's lunar comfort zone. Part artificial intelligence, part architectural unit, the Seed Robot is a companion, a home and a workspace. Their motto is, "We have grown the Seeds to meet your future needs." See Fig. 4.5.

The Seed Robot will arrive on the moon before its corresponding occupant does. The Seed Robot sees to all human needs while anticipating the occupant's arrival. The Seed Robot begins their life as a tiny pod that is connected to the occupant's mobile communication system. As an auxiliary information data collection device, the Seed Robot accumulates and processes personal information. This information is collated, examined, and translated to determine an occupant's ultimate pleasure zone. As the data is being processed, a small display will appear above in the occupant's mobile communication system that indicates information is being processed in order to hone the occupant's preferences. There is no work on the occupant's part, this information collection system happens effortlessly and provides entertainment fully unique to individual personality style and body movements.

Once the seed is fully calibrated to a specific biographical and psychological profiles, that seed is launched with other seeds to its destination in a dedicated section

Fig. 4.5 Seed Robot shown as a digital painting and as an augmented reality visualization at the Moon Lust exhibit on speculative lunar exploration at the Adler Planetarium, Chicago (2012). The exhibit was curated by Tracy Cornish and the collaboration of Todd Margolis. Digital image: © 2011 Dolinsky

of the lunar surface. It is implanted in the moon's soil. This seed develops into a small robot that propagates other small robots who in turn build larger robots. These robots generate energy sources and raw materials. They then collect, design and arrange various building materials. Some robots manufacture these building materials on the spot. Others use those manufactured building materials to create the personal dream lunar location. In effect, the tiny Seed Robot builds a slightly bigger robot that in turn, builds an even larger robot and this occurs generatively. Creating their own evolution based on the personal data, the robots are exponentially generating and evolving to become a final robot which is the proper home.

In this installation, augmented reality is used as speculative device with a promise to improve our lives. The Seed Robots provide an augmentation to our world by providing a window into a future world where devices that are similar to those in use today will provide for all of our needs. Indeed, in our world of devices that allows us to assimilate multiplying images, the future with the Seed Robots promises a world that tranforms a human/machine duplicity into a world where the device feeds, clothes, and houses the entire being. In effect, we are ever lusting after a place to occupy, and for that destination, that space, to fortify and occupy us.

This subjugation between human and device is a reflection of the dynamic found in virtual worlds, augmented reality and extended realities. By inhabiting virtual spaces, we seek a place to occupy. This occupation can help establish an admirable identity, and we longingly hope that it provides us with much needed solace. Since that solace is fleeting or unobtainable for the moment, the thrill of the chase or the seeking becomes the constant dynamic and devices provide a safe space to exercise our desires and reveal some portion of our identities with an authentic voice.

The Seed Robot's design begins with a drawing that becomes a digital painting and then transforms into a three-dimensional design which lives in augmented reality. The act of drawing helps the artist to process the world and its accompanying emotions and becomes the vehicle for design and a revelation for expression (See Fig. 4.6). That expression becomes dynamic through dimensional software and locative entertainment that is augmented reality. The entity becomes a gateway back to the real world as the artwork is shared between artists and visitors to the virtual world. The visitors catapult themselves with a sort of trepidation onto a path of intentional and directed discovery in order to approach the augmented world. Once in AR, the visitors confront the virtual entity to have a virtual conversation which can be a visual moment or a personal dialogue or a shared moment.

4.6 Conclusion

Artistic expression through portraiture is a strategy to bridge socio-political confrontation in a specific location using augmented reality. The conceptual ideation of exploring an expressed opposition to social and economic inequality by employing socio-political confrontations with aesthetics by using AR is explored during the

Fig. 4.6 Seed Robot shown as augmented reality artwork at the Moon Lust exhibit on speculative lunar exploration at the Adler Planetarium, Chicago (2012). Image: © Dolinsky 2012

Occupy movement and the Moon Lust exhibitions. Although they are unrelated exhibitions, the methodology of combining portraiture, AR, and subversive confrontation allows technology to be a point of exploration and a moment to contemplate the world, our place in it, and the future. Augmented reality as a moment in space and as a speculative reality in place is invoked by data machine economies, artificial intelligence, and data mining robots. The technology locates us as beings and places virtual emotables into our conciousness. Augmented reality allows us to explore how virtuality informs our reality and AR's aesthetic poetics allows us to create a multiplicity of interpretations for our perceptual, social, economic, and conscious awareness.

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