# Inside the Image-Sphere

A new kind of digital photographic material has emerged inconspicuously characterizing an image-based virtual reality. Slipping through the cracks of proper categorization, 360º photography, or spherical photography is both a photograph and virtual reality space unlike VR gaming environments or panoramic images with similar aesthetics. Opposed to other forms of virtual reality, 360º photography is closely related to cartography in that it is processed as a flat, equirectangular image, with the ability to spherically wrap around the viewer when experienced in a VR headset. This type of photographic-VR-environment contrary to alternative virtual reality media is representative of a physical place, and is therefore tied to geographical perception, and map projections. I will refer to this specific form of photography as an "Image-sphere" throughout this paper, attributing to both flat and spatial qualities.
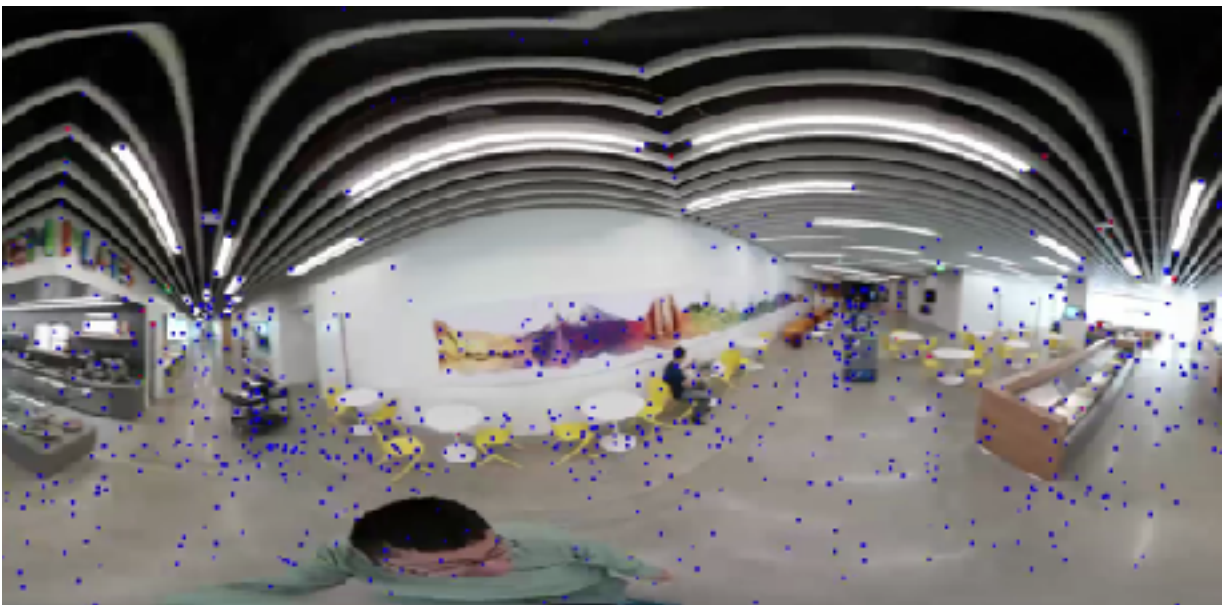
Adobe creates volumetric VR video from flat 360º captures, Jingwei Huang, Zhili Chen, Duygu Ceylan, and Hailin Jin. 2017

The most notable platform that hosts photography of this kind is Google Street-View, and although Image-spheres can simultaneously be experienced on a browser window (rather than a virtual reality headset), the implications of inhabiting, or navigating a photograph as a space represent cognitive shifts in perspective for both the image maker, and viewer. Differentiating this kind of photographic-VR-environment from VR-environments constructed in programs is not only fundamental to understanding the malleability of new-media, but crucial to comprehending its similarities to the world map. For instance, VR gaming environments developed in programs never exist as a two-dimensional equirectangular images in their development, nor do they simulate a physical space through the act of photographic capture. Furthermore, the viewer-as-camera within a VR gaming environment moves fluidly through the programs architecture, rather than anchored to the center of a seamless spherical image depicting spatial depth. The apparatus employed in VR gaming environments is a replica of the photographic apparatus, but it does not manifest a photographic environment that's inhabitable. For these reasons the Image-sphere is a spawn of virtual reality media with completely unique associations, and should be understood as an evolution of the photographic image rather than misinterpreted as another virtual reality space. However, the Image-sphere also signifies an evolution of the photographic apparatus itself; from a single lens reflex system to a dual, or multi-directional lens based system. The image-sphere may be compared to VR gaming environments developed in programs through similar interfaces (using a VR headset, or a computer browser and mouse). Nevertheless, to completely comprehend the semiotics of the Image-sphere

one must understand its mode of capture in comparison to single-lensed photographic apparatuses rather than media with similar interactiveness.

The Image-sphere does not involve framing nor a specific subject. It is instead a medium focused on spatial understanding rather than perspectival authorship. As a single-lens based apparatus may exert power over its subject through the direction of its author, the Image-sphere reduces its author as subject to their domain. Image capture through a dual or multi-lensed apparatus in all cases is an act of centering the self in circumference of the image-as-environment— the "frame" in this context becomes ones understanding of the spherical space in which they exist in. Singular-lensed photography on the contrary, can be understood as a directional exchange— one that flattens space as a product of perspective. Rather than signifying a spherical world from which the framed image is appropriated from, single-lensed photography compresses space as a directional viewpoint of understanding and subjective focus. In this regard, the single lens reflex (SLR) camera divides the author from the subject in hierarchy of lens, mirror, sensor— metaphorically separating one from a perception that they are already occupying a geographical image. Unlike single-lensed cameras, the Image-sphere subconsciously sets the image maker and viewer in relationship to the world-as-image, which is arguably more environmental and connotative of world ecologies in both form, and representation.

Distinct from any other kind of image making, the cartographic-map-projection of the Image-sphere emerges adjacent to another form of cognitive environmental awareness known as the athropocene. As the planetary impact of carboniferous era fuel sources provoke a transition to a green power, the economic structure of energy

distribution in western civilization also shifts from vertically scaled to laterally distributed. Aesthetically, the Image-sphere fulfills an omnidirectional sense of perspective inherently more democratic in its interactiveness than how single lensed cameras exert power and understanding of space. However, the Image-sphere also poses new questions about ones proximity to nature, isolation in a spherically flat image depicting depth, and how the human is represented in this "image", or not represented at all. As a deployment of private enterprise this niche technology can seem somewhat irrelevant in its static capture and navigational attributes that feel divergent from reality. Application in this case, is almost strictly tied to geographic location— wrapping territory into a bubble to be occupied. The question may be, is this new bubble interior its own democracy? In parallel to a stranglehold of digital surveillance-capitalism tactics, a new form of bubblewrap-image-packaging is developing— one that again reshapes the public realm for consumption, or potentially suffocation.
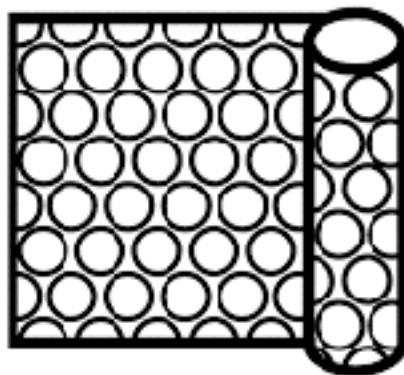
Capitalism— A Single Lens Reflex

prisma

lenses

view finder

Perception

Subject

shutter

mirror
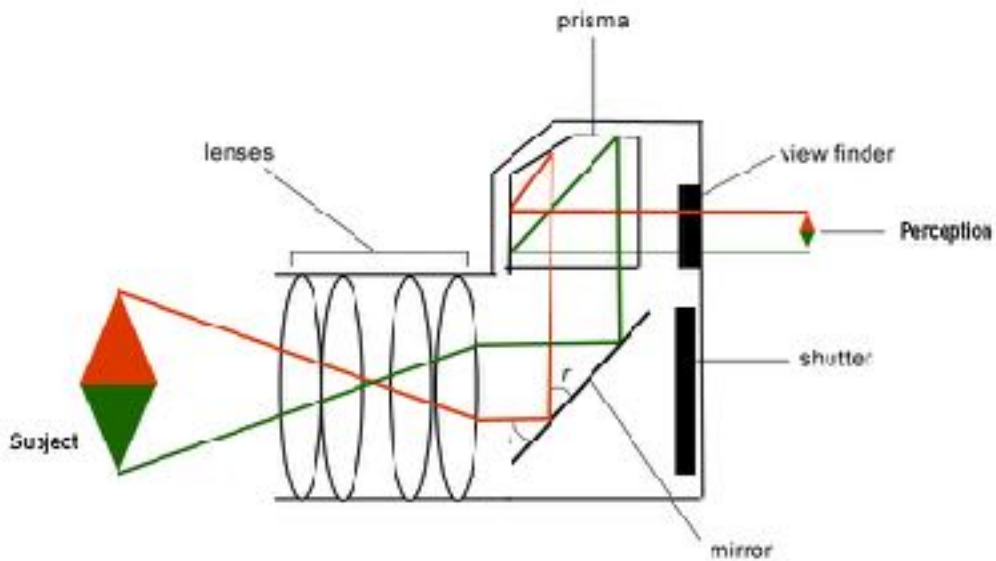
"Energy regimes shape the nature of civilizations— how they are organized, how the fruits of commerce and trade are distributed, how political power is exercised, and how social relations are conducted"[1]

Emerging as a result of the first industrial revolution, the SLR camera has been a tool of perception and territorial occupation. As Paul Virilio writes "On board the airplane the cameras peephole served as an indirect sighting device complementing those attached to weapons of mass destruction. It thus prefigured a systematic shift in target-

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[1] Rifkin, *Distributed Capitalism Pg 107*

location and growing derealization of military engagement"[2]. One can imagine how a

downward directing camera surveying a geography could become a central hierarchy of

power, as well as one that reduces a sense of reality through distance and viewpoint.

Motivations behind the old power elite in western civilizations have been in energy—

fossil fuels, coal and oil. However, these energies are only found in select locations, and

therefore require a military investment to continually access them. Much like the SLR

apparatus these are command and control systems. The SLR camera acts as a

mediator to the environment isolating one from the subject being captured in a

directional funneling of light through singular perspective framing. Likewise, energies

that power western civilization require large concentrations of money to move them from

underground to the final user in a blackbox supply chain of value extraction. Jermey

Rifkin explains "The ability to concentrate capital—the essence of modern capitalism—

is critical to the effective performance of the system as a whole. The centralized energy

infrastructure, in turn, sets the conditions for the rest of the economy, encouraging

similar business models across every sector"[3]. Energy distribution has modeled society

much like the camera surveying geography from the sky— as a pyramidal authority

from the top down. Correspondingly, the SLR camera apparatus sets up a hierarchy

between the subject and author with the subject on one side of the authoritative

apparatus, and author on the other— a direct exchange that employs subjective license.

As Vilém Flusser states "A technical image radiates, and at the tip of each ray sits a

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[2] Virilio, *The Sight Machine Pg 1*

[3] Rifkin, *Retiring Adam Smith Pg 194*

receiver, on his own. In this way technical images disperse society into corners"[4]. This sediment from Flusser can be understood adjacent to capitalisms role in separating ownership from management. The mechanics of the apparatus is itself a structure of the program administered by the operator. Similarly Rifkin uses the railroad (arguably the centerpiece of the first and second industrial revolutions) to contest that "A new genre of professional administrators took to the helm of these giant enterprises, while ownership was diffused to the far corners of the earth"[5]. As the corners of the SLR frame symbolize the contrast of large enterprise over family proprietors (or the image producer and societal image receiver) the concept of centralization is prevalent. After all, the corners of the image symbolize its constraint from the rest of the world— where a story ends, and the clutching of the shutter-trigger stops reality to be contained as a parcel of instance. One can understand the conditions of capitalism as a vertically scaled economy based on gigantic business models, which echo in every sector of a western civilization's commerce. Unsurprisingly, the nature of verticality may be derived from laws of physics, which classical and neoclassical economic theory has been derived. Adam Smith, the father of modern day capitalism among others used Sir Isaac Newton's methods of discussing mathematical mechanical motion to fashion ideas about emerging markets powered by coal in the late eighteenth century. Newtons three laws of physics state:

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[4] Flusser, *To Scatter Pg 61*

[5] Rifkin, Distributed Capitalism Pg 108

A body at rest remains at rest and a body in motion remains in uniform motion in a straight line unless acted upon by an external force; acceleration of a body is directly proportional to the applied force and in the direction of the straight line which the force acts; [and] for every force, there is an equal and opposite force in reaction.

As Rifkin writes "Picking up on Newton's observations that "for every action there is an equal and opposite reaction," Smith and others argued that the self regulating market operated in the same fashion, with supply and demand continually creating and readjusting to one another"[6] It seems that Newton's laws of physics only represent speed and location without understanding the true mechanics of energy extraction, distribution, and disposal. As the flattened photographic image has evolved to a curling, circular, and inhabitable Image-sphere, so have ideas of economic theory. The Image-sphere in contrast, sets the author at the center-bottom of the image, elevating the camera apparatus above them. Although this may seem like the peephole camera looking downward the dual, or multi lensed apparatus produces a complete image of 360º space the author is occupying. The author in the Image-sphere is governed by the space— unframed, but seamlessly enveloped.

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[6] Rifkin, *Retiring Adam Smith Pg194*

Image-sphere's and the Lateral Economy

"There is ever growing proof that the navigator-priests of 4000 B.C. knew by secret legend that we occupy a spherical planet around which, their verbal records reported, humans had long ago navigated. This fact was memorialized by the navigator-priests of Egypt, who designed a symbol worn on the Egyptian pharaoh's brow. This golden device was a sphere around which two snakes headed in opposite directions but came together as planet Earth. It was a closed system sphere."[7]

The prominence of spherical media, along with photographic mapping have emerged in unison with digital communication, and internet connectivity. One can determine this model as a neural prothesis of the physical world, connecting everyone with everything virtually. While the Image-sphere continues its transformation to seamlessly encompass the human body (making it the subject of its atmosphere), what becomes apparent is a closed-system ecology. The bio-sphere on earth, relative to the laws of thermodynamics, is considered a closed system because it does not exchange matter with the outside world. Earth gets plenty of energy from the sun, but as far as the fixed matter on the planet there isn't much else coming down here. Similarly the Image-sphere isn't a typical virtual reality space that one moves through, but rather a geographical image to be self-contained in. The image-sphere represents an equilibrium stitched together by familiar pixels of locale forcing an awakening of adaption. As the Image-sphere-producer presses the shutter of their dual-lensed apparatus the drape of

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[7] Fuller, *Historical Underpinnings Pg 91*

environment seals around them. Confined to understanding this environment in

omnidirectional perspective, both the image maker and viewer (occupier) of the image-

sphere become an equidistant core of their habitat— essentially the heart of an

ecosphere. The connotative implications of understanding the Image-sphere as one that

becomes a self-sustaining environment mirrors ecological concerns arising in the 21st

century about the impact of burning fossil fuels and the growing awareness of the

anthropocene. Unsurprisingly, the verticality of a capitalist economy doesn't account for

the casual nexus of earths cycles, and is therefore much less productive in its energy

usage than it appears to be. With existential climate crisis a cost of industrious activity

this economic system becomes unsustainable. Simultaneously, as the world looks to

enhance its productivity and energy management a new economic paradigm emerges

in renewable energies harnessing the power of the sun and wind. However, like the first

and second industrial revolutions, this economic paradigm reshapes distribution, social

relations, and power dynamics, but not in directional authority like an SLR camera,

instead rather, in circularity like the Image-sphere. Mimicking laws of thermodynamics,

the new economy is laterally distributed not vertically scaled. Stating the laws of

thermodynamics Rifkin writes "The first law, the "conservation law" posits that energy

can neither be created nor destroyed—that the amount of energy in the universe has

remained the same since the beginning of time and will be until the end of time."[8] While

this law is true the second law of thermodynamics states that the energy always

changes form, but as Rifkin notes "According to the second law, energy always flows

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[8] Rifkin, *Retiring Adam Smith Pg 195*

from hot to cold, concentrated to disbursed, ordered to disordered"[9]. Entropy is a

measure of energy, but not available to do useful work. For example, when one burns a

lump of coal that energy isn't destroyed, but rather changes form to carbon dioxide. It

still flows through the air, but it's essentially disordered energy unavailable for capture.

Similarly, the projection map of the Image-sphere is a flattened form of virtual reality

prior to how it becomes cylindrically wrapped around the viewer within a VR headset.

Understanding the economics of ecological systems is a corner stone in anticipating

how the new lateral economy is structured. The SLR camera and centralized electric

grid of the second industrial revolution distribute energy in one direction. However, in a

green economy (the third industrial revolution) energy is no longer opaquely excavated

from the ground, but harnessed from the sun and wind— a notably more immersive

understanding of power. In fact, the sum of beams coming from the sun, 470 exajoules

of energy to the earth every eighty eight minutes equals the amount of energy human

beings use in one year.[10] What this simply means is that solar energy can't be captured

in one place— it needs to be captured in multiple places because of its variability. In

turn, an electric grid must be able to accept energy produced by smaller entities or

individuals in order for the system to work as a whole. As this economic system

encourages transparency and collaboration in all sectors so does media of navigation.

Gestures in networked environments become intuitive connections shared among

groups in online environments. Similarly, business models shift towards cooperatives,

and non profits that are synergetic. Emerging VR technologies, arguably more

[9] Rifkin, *Retiring Adam Smith Pg 195*

[10] Rifkin, *The Green New Deal Pg 56*

democratic in their perspective, allow the viewer to become the camera. Oliver Grau states that "the principle of immersion is used to withdraw the apparatus of the medium"[11] Could this mean that the apparatus represents the power structure of centrality? How does this relate to a virtual reality experience of the Image-sphere when the medium renders the viewer bodiless? The Image-sphere's typical use in location based articulation, (uploading an image to a place where it was taken from) becomes a distributed network of environments to interact with. Although, this instance becomes questionable, based on its benefit to private enterprise over its purpose as a public utility. The Image-sphere in this regard is a device of isolation fabricating reality as spherical-image-wall with familiar space plastered on it. Here, human existence is omitted but centered, as the spectator may be in a sleep-paralysis of Image-spheres they travel in-between.

[11] Bakk, *VR Productions as Seamed Media Pg 144*

Skewing the Frame— Early Attempts at Molding Media

Still from Jaques Tati *"Playtime" 1967*

As Manny Farber wrote in the first sentence of his famous essay *White Elephant Art vs. Termite Art* "Most of the feckless, listless quality of today's art can be blamed on its drive to break out of tradition while, irrationally, hewing to the square, boxed-in shape and gemlike inertia of an old, densely wrought European masterpiece"[12]. While camera technology has enabled films to become wider to a degree, Jaques Tati's Playtime seems to be stuck in the old "boxed-in shape" of the square as Faber would put it.

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[12] Farber, *White Elephant Art vs. Termite Art Pg 1*

Nonetheless, Playtime seems to act as a map projection of an enveloping environment unfolded into a two-dimensional plane. In this respect, the original public misconception of Jaques Tati's Playtime could be due to the limitation of singular perspective camera technology used to convey an immersive experience both physically and metaphorically. Upon "Playtime's" French release In December 1967, Jaques Tati had been known for his slapstick comedic performances, which included mime-like movement, and comedic curiosity. Under a massive construction budget for a set the size of a small city Tati had created his own augmented reality— a corporate modernization of future Paris where his character navigates unfamiliarity. The sterile and subdued environment known as "Tativille" was a contradiction of high resolution color film Tati employed, but most notably, its field of view was 70mm wide—the largest film available at the time. This aspect ratio, reminiscent of the equirectangular format fundamental to processing Image-spheres symbolizes a cartographic understanding of cinema meant to mimic binocular vision. In scene after the scene the viewer is met with actions taking place throughout the frame simultaneously directed by sound— it's as if Tati is orchestrating a separate cinematic experience in the peripherals of the viewer. Although nothing in particular seems to be happening, its Tati's navigation of reality and the objects in it that reflect how one orients themselves within virtual spaces. As a constellation of isolated corporate cubicles act as partitions of character engagement, Tati maps a hyperawareness of choreography found in the corners of everyday life. Much like the virtual experience of an Image-sphere within a virtual reality headset "Tativille" simulates an isolation of virtual reality media that reveals the banality of physical space. Each character acts preoccupied within their own node-like bubble which Tati's character

bounces between. It's within the gaps of isolation Tati disposes of a singular narrative, focusing on the particularities of boundaries. Often times viewers are left outside the structures looking inside, much like how one enters a spherical orb in a virtual environment. In what could be considered an attempt at democratizing authorship to a single field of view it's the medium itself that mistranslates Tati's genius. Naturally directional, and in contrast to his approach of simultaneous frame viewing the rectangular sequences counter both movement and sound aesthetically fitted for an immersive experience. Despite the physical size of the film employed, and Tati's reluctance to shoot a medium or closeup shot, immersion in Tati's augmented reality is flattened. Tati, metaphorically molding two-dimensional media into a cylindrically skewed narrative, explores the possibilities of film as a navigational map. Here, rather than "watch" a film the viewer must scan the surface of it for activity— counter to being served a combination of frames that make up an emotional chronology. In anticipation of the image-sphere "Playtime" can be seen in relation to a new form of cinema spatially shaping the human figure. While this film remains on a two-dimensional, equirectangular plane, Tati's curiosity is a reflection of Farber's definition of termite art as one that "feels its way through walls of particularization, with no sign that the artist has any object in mind other than eating away the immediate boundaries of his art, and turning these boundaries into conditions for the next achievement."[13] In a contemporary context "Playtime" is understood as Tati's greatest work and undoubtedly unique. It's the kind of film where environment becomes the muted backdrop for the performativity of the banal, and yet, this is the performance that continues after the film concludes.

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[13] Farber, *White Elephant Art vs. Termite Art Pg 1*

<u>Architecture as Aspect Ratio— Reformatting Understanding</u>

Marshall McLuhan states "Men live in round houses until they become sedentary and specialized in their work organization. Anthropologists have often noted this change from round to square without knowing its cause."[14]

"Villa of Brule the great hostile Indian camp on River Brule near Pine Ridge", S.D / photo. and copyright by Grabill, Deadwood, S.D, 1891

McLuhan touches on a key factor of directional media, and its relation to modern living in that square dwellings do not follow dynamic lines of force as circular dwellings once did. The triangle for instance, (an element of the geodesic dome, and CGI

[14] McLuhan Housing: *New Look and New Outlook Pg 123*

technologies) distributes kinetic pressure economically as opposed to the square—much like a tepee would disburse force from a single point outward. This understanding of modern structures exemplifies a cognitive abstraction of manifest tensions adversely prompting a new understanding of equilibrium that's unnatural to organizing systems of power. Mirrored in the use of SLR cameras, the frame becomes an appropriation of the spherical environment without becoming subject to it. As the square dwelling model has expanded into clumps of pixel-shaped landscapes the contractual navigation of the specialized worker has followed horizons into corners. Direction becomes a discrepancy of fluidity, as top-down vertically scaled environments programmed by economic apparatuses of trade regurgitate rectangular images of decor as singular perspective media reappropriates the world tailored to quadratic notions of space. The frame similarly adheres to the image-sphere as a browser window that clings to spherical media. The modern day specialized worker practices circularity in networks as a contradiction of format based on the anatomy of the physical grid. The image-sphere symbolizes the trimming off of right-angled edges that bound omnidirectional thinking. As Buckminster Fuller notes from his encounter with Albert Einstein "From all the conceptioning, considering, and conceiving of Einstein, I concluded what he has discovered was what I refer to as "Scenario Universe," an endlessly evolving complex of dissimilar filmstrips, in contradistinction to the exclusive "single-frame" picture of the Universe adopted by classical science. A scenario is an aggregate of overlapping introduced episodes, characters, themes, and only locally included births, lives, deaths, and other events"[15]. Here, Fuller references the similarities to rectilinear-aspect-ratio

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[15] Fuller *Historical Underpinnings Pg 105*

media to an understanding of life as a cinematic experience— one that does not shape understanding, but instead overlaps it. Naturally, one can imagine image overlapping becoming a node-like knot, however the Image-sphere is a seamless plane to be scudded across. The contemporary notion of circular media within the aspect ratios reminiscent of single-lensed apparatus's echo the modern home (square dwelling) of the specialized worker within the biosphere. Sedentary frameworks unconsciously defining perimeters of societal understanding for both purpose and distribution connote the stagnation of progressing forces of new-media. It's time to break the corners of quadratic architecture, hammer out the boundaries of commons, and arch the vertical lines of force confining enclosure.
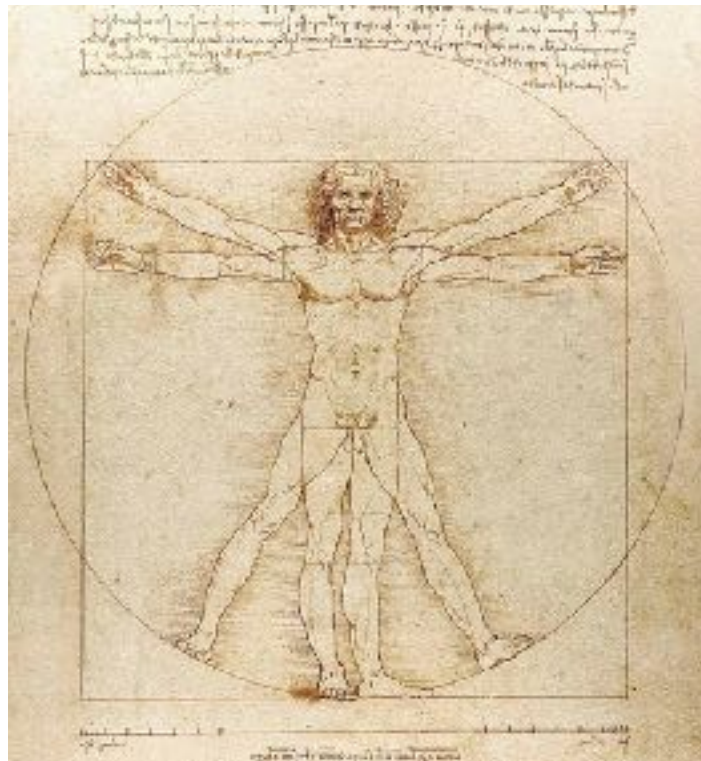
Vitruvian Man, Leonardo da Vinci, Ink on Paper, c. 1490

Overlapping Shapes: The Browser as Camera

I've often thought of the drawing "Vitruvian Man" by Leonardo Da Vinci as an accidental gesture towards the aesthetics of digital media. In respect to its intention, it's a drawing of what's meant to be a proportionally idealized man in relation to classical architecture. In a contemporary context, I find it difficult not to consider how the figure conforms to the square and circle in relationship to how one occupies aspect ratio's of the screen and virtual environment. In this instance, the circle may represent the spherical environment of the image-sphere while the square represents the entrapment of the browser screen. We can understand man as multiplied through these shapes in which he fits into each perfectly. Much like a window out into the world, the screen now acts as a window into virtual media— media of navigation. Within this window the viewer frames its subject as one would with a camera apparatus except now ones own perspective within the browser screen is the camera. In contrast to the immersive qualities of the image-sphere experienced in a virtual reality headset this is the preferred mode of viewing based on accessibility. The frame therefore orbits the circular environment of the image-sphere in autonomy of occupied pixels arresting the civic realm. As Vilém Flusser writes on instructing programs "For from now on, human freedom no longer consist in being able to shape the world to one's own desires (apparatuses do this better) but to instruct (program) the apparatus as to the desired form and to stop (control) it when this form has been produced". One must click, hold and drag their mouse simultaneously to operate an omnidirectional viewing of the

spherically wrapped image. The single frame perspective in this regard is the browser window, however the image-sphere is already a static environment that's been captured. While one could use a screen-shot command on a keyboard to appropriate a frame from it, (claiming ownership of a singular-perspective) the image-sphere represents an image-based reality that's manufactured. This reality isn't just a single spherical habitat, within Google Street View it's a constellation of connected orbs forming a sequence. Much like "Vitruvian Man" demonstrating movement through outlined forms, the viewer is engaged with motion through the browser-as-camera, and the sequence of circular environments— a reality of overlapping shapes. Now, the viewer is the director, but of what film? While the sequence of spaces has been captured, the Image-sphere may represent a new kind of visual confinement meant to mimic embodiment. The only problem is, the viewer in the Image-sphere has no body. As Hito Steyerl points out in her lecture titled "Bubble Vision",[16] in virtual reality spaces the image revolves around the viewer who is always centered, but whose body is missing. Granted that the Image-sphere experience is artificial, Steyerl refers to "Bubble Architecture"[17], specifically the experiment *Biosphere 2* documented in "Spaceship Earth"[18], in comparison to being isolated in one's own environment. Unfortunately, the participants of Biosphere 2 (a closed system geodesic dome environment) were unable to sustain healthy levels of oxygen over the course of two years, pushing the group of eight people to near suffocation. While this simultaneously may be considered a

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[16] Steyerl. *Bubble Vision*. University of Michigan

[17] Steyerl. *Bubble Vision*. University of Michigan

[18] Wolf. "*Spaceship Earth".* RadicalMedia.

success and failure in attempting to recreate earth's natural conditions, a more profound artificiality may have been produced in the surveillance of the group's activities within the dome— reality television. As overseers of the project tuned-in to video transmissions of the groups activities, real life drama unfolded accentuated by diminishing oxygen levels. If *Biosphere 2* truly prompted reality-television maybe the viewer in the browser window of the Image-sphere is directing a new reality-film— one where corporate entities occupy territory strangled of breathability, while the the viewer fills a missing body in the environment they're no longer in control of.

Virtual Public Space— The Bodiless Cinema

Google Street View screen capture 2021-04-24 at 9.13.0 9 AM

Virtual public space, Google Street View specifically, is the new cinema. As a clunky click-through-frame experience, the technology is a nostalgic twist on early forms of stop-motion film without any intention, or interest in the performance of the everyday. The goal of Google Street-View is to capture images of the world at the lowest layer of hierarchy in an ever evolving augmentation of the online civic realm; setting out to clench proprietary ownership over a surveillance-capitalism[19] economy. How did virtual public space become another flattened appropriation of reality? Centered in the street in a socially distanced sensation of the commons, the user becomes the spherical apparatus of a post-industrial gig workers endless road trip— the driver of the Google Street-View vehicle acting as camera. Similar to film sets where cameras are set on dollies and tracks, the street-view driver is a laborer of the apparatus, inhabiting it as a mechanism of functionality. While the laborer is subject to their environment through the 360° cameras articulation of space, they also represent an abstraction of data capture— a black hole of missing information directly under the camera represented as a mis-stitch of the Image-sphere's seamlessness. Here is where the Image-sphere decapitates the user from a notion of the body, just as the street-view laborer is un-authored from their experience. As the street-view driver peers through their windshield like a oneway mirror, their surroundings-as-byproduct are translated into graspable pixels of public good. The user equipped with a white-glove-shaped cursor stewards their own flattened reality while filling the bubble-image produced by not just a multi-lensed camera, but the encapsulation of the laborer within the vehicle. One could think of this like the 'black box" of a camera obscura, except this void doesn't render an

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[19] Zuboff, *The Definiton Pg 1*

image, but rather a click-through rate of the stop-click-drag-motion-film of banality. The 'blackbox" of the Google apparatus represents vast sets of algorithmic predictions based on behavioral data. Through targeted advertisements, a click-through rate is measured on efficacy and placement, generating revenue for both the advertisers and Google at large. As Shoshana Zuboff notes, "Google's customers, its advertisers, complained that the quality score was a black box, and Google was determined to keep it so. Nonetheless, when customers followed its disciplines and produced high scoring ads, their click-through rates soared"[20]. So where does this leave the user-as-director of the reality-film? While the user finds interest in deciphering moments of performativity, it may be orientation linked to placement that is the true contribution of the user-as-director. Using the cursor to "point" at moments of interest within the Image-sphere, one may be pointing at priority placement for the next targeted advertisement augmenting a future reality. Metaphorically sharing the black box with the street-view laborer, this stop-motion film could be considered another "Theater of Attraction" originally coined by Tom Gunning. Gunning describes the "Theater of Attraction" as its "ability to *show* something contrasted by the voyeuristic aspect of narrative cinema— this is exhibitionist cinema." Gunning goes on to state that "emblematic of this different relationship, cinema of attractions constructs with its spectator: the recurring look at the camera by actors. This action which is later perceived as spoiling the realistic illusion of cinema, is here undertaken with brio, establishing contact with the audience— this is a cinema that displays its visibility, willing to rupture a self-enclosed fictional world for a chance to

[20] Zuboff, *The Discovery of Behavioral Surplus*, Pg 83

solit the attention of the spectator"[21]. As both moments of attraction, and fuel for the laborer, the rest stop may symbolize a rupture of the self-enclosed vehicle-black-box. Similar to the tantalization of shinny advertisements for a frankfurter and coca-cola off the highway, the rupture of the Image-sphere is the coming theater of advertisements dictated by attention. The user-as-director is then the locator— pointing to a potential hotspot of attention in a mundane reflection of the physical world. However, it is the duty of the artist to disrupt the apparatus— to over-expose, blur, and draw with the camera. The unanticipated interventionist, a rouge laborer inserts themselves into the narrative — if not for any reason, but to eat away at their own boundaries.

The Radical Cartographer

The radical cartographer knows no orientation, reimagining space as an altered object to escalate. They are an explorer of sorts, except the map their constructing isn't about defining physical space, but rather deconstructing it. As Lize Mogel and Alexis Bhagat point out, in the simplest of radical cartographies flipping the world map "upside-down" is more than a neat trick[22]. They note "This picture of the world has a historical basis in medieval world maps that were sometimes oriented with East or South at top. The modern north-oriented map continually reproduces an idea of a global North and a global South. The "inverted" map calls into question our ingrained acceptance of this

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[21] Gunning, *The Cinema of Attraction*, Pg 1

[22] Mogel and Bhagat*, An Atlas of Radical Cartography,* Pg 6

particular "global-order".[23] Radical mapping may present an alternative perception of the landscape to unveil deeper understandings of power structures camouflaged within it. This can be understood as utilizing mapping as a form of a self portrait, or a film narrative to create a new kind of visibility through trajectory. Drawing a path or line of direction can also be a form of disruption within an existing system. The rouge street-view laborer may attempt to create a map based on the ritual of space— inserting themselves into the Image-sphere to redefine the experience of the spectator. While Google Street-View may assemble the public realm as a layer to be augmented upon, the radical street-view laborer may discompose the system by creating a form of augmentation in physicality— traversing the virtual experience as a manifestation performance rather than a reflection of the structures defining it.

Jason Isolini "Spinning Wheel of Death" 2020

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[23] Mogel and Bhagat, *An Atlas of Radical Cartography,* Pg 6

It may be fair to say that one's experience of public space does not happen from the absolute center of the street. Therefore, the aesthetics of virtual public space that constitute the Google Street-View experience are alien to permeating a space through physical movement. The public realm is filled with objects and instantaneous feelings that create sensations for materials, people, and flow. The rouge street-view laborer doesn't think about creating environments that adhere to distanced ideas of facades confining space, but rather objects one comes in contact with as a new architecture. Here, the rouge street-view laborer is the multi-lensed apparatus that's been detached from the Google Street-View vehicle. The sphere-like-camera rolls down the street capturing an experience that's an esthesia of the environment alternative to a reproduced veneer of it. Of course, hacking a preexisting infrastructure isn't a new theory. Interventionist art, or tactical media as described by Institute of Applied Autonomy is "less a methodology than an orientation".[24] Continuing, " it is fundamentally pragmatic, utilizing any and all available technologies, aesthetics, and methods as dictated by the given action. Tactical media are often ephemera and event driven, existing only as long as they continue to be effective. They vanish into thin air once their utility has been exhausted, leaving only traces in the form of memories, documentation and journalistic accounts"[25] The radical cartographer's creation is visibility that affects spacial meaning. However, like the bodiless street-view laborer who remains a mis-stitch of data, these forms of representation can evaporate as technologies evolve to distinguish disruptions. As Mckenzie Wark writes, "Tactical media is a rhetoric for

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[24] Institute of Applied Autonomy, *Tactical Cartographies,* Pg 29

[25] Institute of Applied Autonomy, *Tactical Cartographies,* Pg 29

bypassing the theory of representation, if only to sneak up on it from behind. By claiming no strategic leverage for a particular subject doing the representing, or a certain methodology for doing the representing, or even any particular veracity for the representation, tactical media unblocks the flow of practice."[26] The rouge street-view laborer's attempt at redefining the Image-sphere may be a form of their own escape out of it. And that escape, is itself a practice of creating beauty that makes up a spatial understanding and gives a place meaning. For the radical cartographer unblocking a flow of practice is an art of unlocking possibilities— it's an act of treating a map like a narrative with no set direction, beginning, or end— a potential to stitch together a new reality.
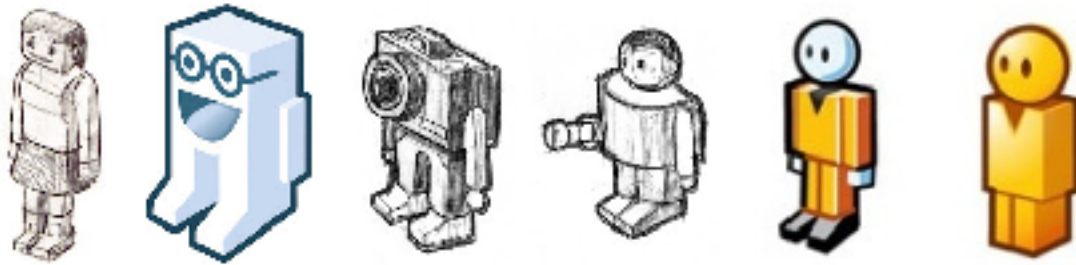
Original drawings of Google Pegman's conception by Ryan Germick, head of Google's Doodle Team. 2008

[26] Wark, *Strategies for Tactical Media. Pg 10*

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