Dis/orientation Machines

Journeys into labyrinthine landscapes

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Introduction: the art of getting lost

'Life,' quipped Guy Debord, 'can never be too disorienting'.[1] Fascinated by the creative possibilities of consciously losing orientation, Debord and his Situationist comrades saw the city as an urban labyrinth in flux to be engaged through the aimless wandering of the 'drift'. To enhance the ground-mind experiences of these vagrant journeys, the Situationists came to speculate on how the city itself might be physically manipulated. According to Benjamin Constant, a new type of creative inhabitant would emerge; one whose existence gains value from loss of orientation, and who consequently shapes time and space in novel dynamic ways.[2]

While these sentiments were all very well for a restless bunch of avant-gardists, such reverence for disorientation does not extend into society at large. Popular visions invoke the comic-strip scenario of the desert trekker who is lost and travelling in great circles.[3] Such is the fate of the hapless detectives in *The Adventures of Tintin*, who lose their way in the vast Arabian sand seas. Careering their jeep desperately over endless dunes, Thomson and Thomson finally chance upon and begin to follow a set of tire marks. Soon, a second pair of tracks joins the first; later, a third, a fourth and so on. With the sun circling overhead, the detectives unwittingly retrace their own tracks in the mistaken belief that help, in ever increasing numbers, lies beyond the next dune. Upon stumbling across the

gathering 'motorway', Tintin declares to the ever-loyal Snowy: 'it's only too obvious… There's just one vehicle going round and round in circles. Following his own tracks… The driver has lost his way'.[4]

As they stalk their own footprints, not recognizing their own backs, Thompson and Thompson become devoid of direction in the most complete sense. Nevertheless, disorientation need not be so acute or enduring; our disoriented experiences are most often fleeting slippages between assumptions and actions in everyday life. Intuitive examples of mild disorientation are a common experience; an abrupt awakening from an intense dream, driving through an unfamiliar street layout, flying into a foreign city at night, wandering aimlessly through extensive parkland or forest, immersed in a series of exhibits at a zoo, museum, or gallery, distracted in a shopping arcade, or engrossed in a film or computer game. In each instance, disorientation tends to occur at the interface of a change in conditions. For example, it is when we go to leave a zoo that we may find the outside world temporally disjunctive to expectations. Tricking, depleting, or saturating the senses forges a misleading communication between our minds, bodies and the world. In a complex environment of distractions, we are often hard pressed to stay fully in control of our directional faculties.

In the original sense, to *dis-orient* quite literally means 'to turn from an eastward position' (as the primary cardinal direction, east was placed at the top of medieval maps). Definitions have expanded with the evolution of language to include the more general 'confusion of one's bearings' and the morality of a 'sense of what is correct'.[5] To not know in which direction we are headed is to be bereft of fundamental information with which we historically ground the relationship between body and world. Losing direction involves a cognitively unrecognized spatial change. To instigate such a shift, physics distinguishes between two basic movements; turning in place (rotation) and change of locus (translation).[6] The easiest way to become lost is simply through rotation; when a turn goes unnoticed, moving away from a location only tends to compound the resultant disorientation.

Spatial-cognitive research positions the disoriented state as a negative base condition, from which orientation is a positive construction. Indeed, our sense of orientation is a tentative fabrication, constructed and reconstructed each time we wake up. With a strong connection to the fragilities of our emotions, it takes the omission of only one important detail to trigger a counterproductive feedback loop that between anxiety and disorientation.[7] The physical alarm that we sense when we realize we are lost is our body registering a rupture between the visual and proprioceptive senses. The visual is associated with the external cognition of distance, while the proprioceptive is an internal body-based register of angles through sensors in joints and muscles. With distance and direction coded separately, our sense of place is primarily formed through a flux of congruence and conflict between these senses.[8] It would appear that we orient, and hence disorient, more through habit and internal predictive simulation than through direct cognition.

Triumphs over disorienting events permeate historical records and myths. History may be characterized as the struggle for individual and collective orientation, fighting to retain order within a confounding world. From the grotto to the grid, the history of landscape design charts a course between two extremes, reflecting the general ebb and flow of a society's degree of comfort with orientation and disorientation. In the great parks and gardens of the French Baroque and English Picturesque, orienting, and disorienting effects were unfurled in ways that often disguised each as the other. Similarly in the twentieth century, the absent ground of modernism and the destabilized semiotics of postmodernism proved a fertile context for the shifting disorientations of design culture.

Although the creative fields have entertained more extreme forms of disorientation, these experiments are typically performed under controlled conditions. The maze is one such device, which as the sanitized embodiment of the archetypal labyrinth retains our fascination. As Ralph Selby remarked on the unexpected popularity of his maze installation at the 1971 Nottingham Festival:

> 'I was surprised by the way a usually cynical public was prepared to suspend their disbelief – and of course it was the most confident who found themselves more quickly trapped than the cautious. Most visitors reported that moment of heightened awareness when they realized they couldn't find an immediate exit'.[9]

In a letter to Lucilius early in the first century, Roman writer Seneca had already come to such a conclusion; 'when you hurry through a maze,' cautioned Seneca, 'the faster you go, the worse you are entangled'.[10]

We accept the thrill of disorientation within the safety a controlled environment but are less predisposed towards the increasingly disorienting speed and complexity in everyday life. As we struggle to stay abreast and make historical sense of the global phenomena of instantaneous communications, information saturation, and ubiquitous capital exchange, Paul Virilio flags a *loss of orientation* as a new phenomenon facing us in our time. For Virilio, the uncertainties pertain to finding the 'limits of a world in the grip of doubt,' where in the face of progress, 'the markers of position and location are disappearing one by one'.[11] Similarly, Fredric Jameson notes that the individual human body is losing the capacity 'to locate itself, to organize its immediate surroundings perceptually, and cognitively map its position within a mappable external world'.[12] The disjunction here involves a world mapped in more ways than ever before, juxtaposed against a body less able than ever before to make personal use of this information. Virilio goes a step further, sounding the warning that 'a total loss of the bearings of the individual looms large'.[13]

Ironically, the same mechanisms that enabled the gathering paradigm that Virilio and Jameson presage also augment our lives with ever more sophisticated orientation devices. As a timely mitigation to a collective loss of bearings and landmarks, Global Positioning Systems permeate our daily routines. Where we once oriented off town halls and hilltops, our landmarks have now taken to the skies as we triangulate off satellites to find the local store. Certainly, celestial navigation is as old as the night, and indeed for Virilio, GPS usurps the sextant as the tool that captures the imagination of an entire society seeking to know its place.[14] The paradox lies in the inability of such a sophisticated contraption to cope with an existential disorientation; the machine tells us our location, but not our *place* in the world.

Research aims and methods

In contrast to the convention of positioning disorientation as a negative condition from which orientation is a positive construction, the essay is premised on the notion that landscapes and gardens often deliver a type of disorientation that is constructive in its own right.[15] Although confounding on its own terms, the disorienting experiences that certain gardens and landscapes elicit is potentially valuable for engaging the increasingly disorienting and dislocating aspects of global urbanism.

Playing on Kevin Lynch's description of the 'Directomat' way-finding devices installed in 1950s Manhattan as 'orientation machines', I refer to landscapes that exhibit particularly potent spatial effects as *dis/orientation machines*.[16] *Dis/orientation* denotes a type of *re*orientation through *dis*orientation. When placed in solely the context of the city, this apparent oxymoron is likely to be counterproductive to all but a handful of Situationist revivalists. However, when placed within the history of designed and discovered gardens and landscapes, *dis/orientation* captures a recurring landscape experience that revels in its apparently paradoxical nature. *Machine* is premised on the idea that landscape does work that is as instrumental as any technological device, whether it is a plough or a smartphone.[17] Whereas landscape machines are typically applied to the productive or ecological landscape, the instrumentality of the landscape dis/orientation machine is realized through spatial-cognitive and spatial-poetic effects.

These themes are explored through my experiences of and reflections on a selection of four distinctively disorienting landscapes. Spanning the globe between the 35th and 42nd parallels and visited over the course of a decade, each dis/orientation machine elicited a transformative experience that challenged my own keen sense of

direction and lingered after I left the site (figure 1). Although none of the case studies are gardens in a traditional sense, they nevertheless share commonalities with regards to artifice, representation, framing, spatial compression, botanica, and so forth. Therefore, the essay's elevation of experience speaks to Bernard St-Denis's critique of the tendency for contemporary garden scholarship to place semantic interpretation ahead of the reward that investing time in a garden offers.[18]

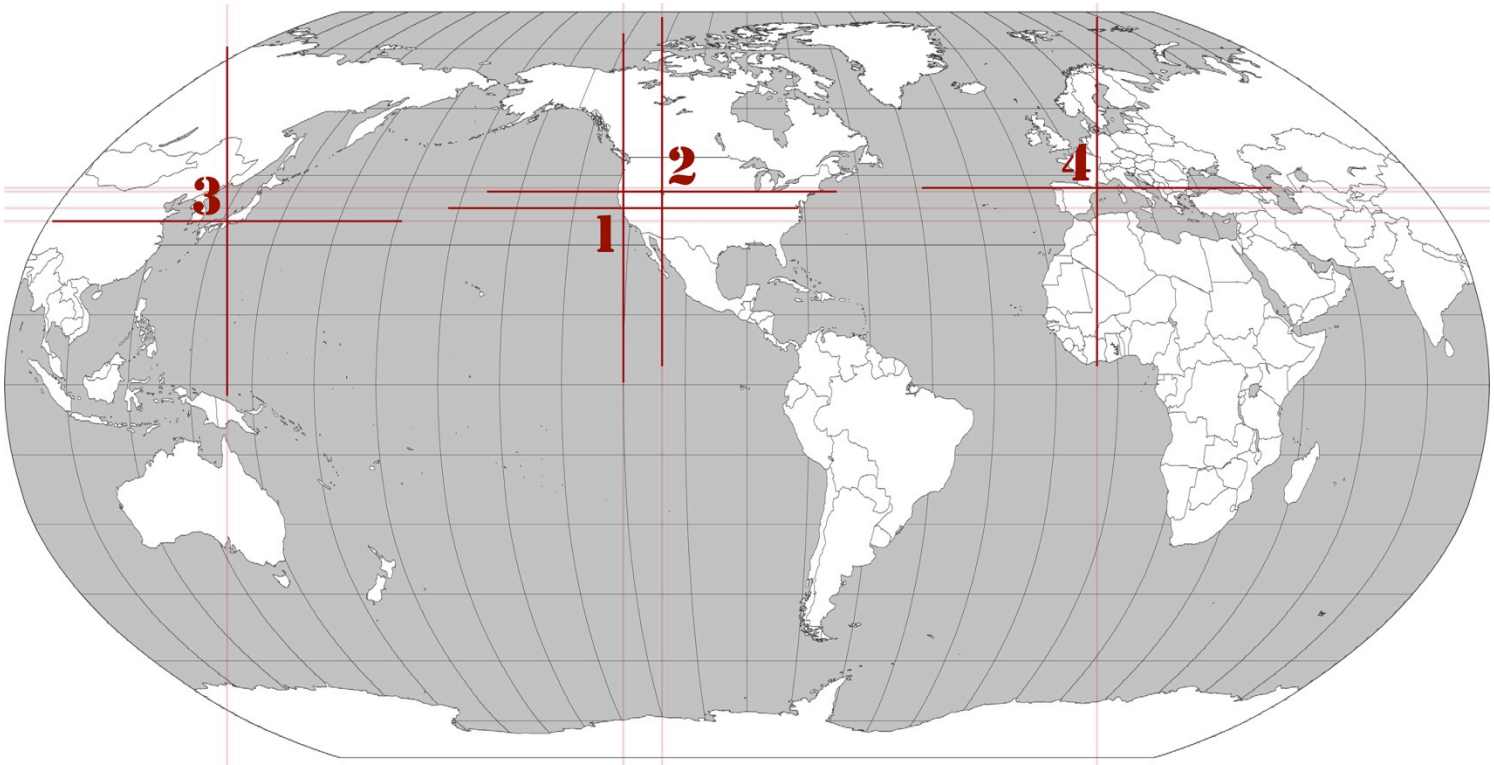

Figure 1. World map indicating locations of the four dis/orientation machines discussed in this article: (1) Albany Bulb, San Francisco Bay, California; (2) Spiral Jetty, Great Salt Lake, Utah; (3) Site of Reversible Destiny, Yoro, Japan; (4) Passages, Portbou, Spain (map projection produced by the Cartographic Research Lab, University of Alabama).

My use of an experiential approach for deciphering these disorienting landscapes falls within auto-ethnographic methods. Although deeply personal, auto-ethnographic methods can provide rich and meaningful interpretations with the capacity to resonate with the experiences of others in the public realm.[19] Following Simon Swaffield and M. Elen Deming's classification of research methodologies in landscape architecture, the interpretive nature of auto-ethnographic research involves an iterative back and forth between theoretical constructs and empirical observations. In research of this nature, the investigator places phenomena in context so as to reveal meanings that may not be self-evident within a given landscape.[20] The agency of these meanings resides in their capacity to crystalize the spatial experiences of others that may be unconscious or unexpressed.[21]

Each of the four dis/orientation machine case studies are organized into three parts. The first part, *Spatial-poetic concepts,* sketches out theories and poetics relevant to the particular disorientation theme. The second part, *Machine description,* provides contextual and specific information regarding the landscape in focus. Finally, the third part, *Machine experience,* shifts into a first-person narrative of my disorienting experience while visiting that landscape.

First dis/orientation machine: the thicket

Spatial-poetic concepts

The closed, dark, repetitive space of the thicket is historically synonymous with the deviation of becoming lost. In contrast to the clear sightlines and visual landmarks of open landscapes, the vegetal entanglements of the thicket fragments views and confuses potential routes. Gaston Bachelard observes the sense of immensity that results, noting that even though this impression often openly contradicts geographical reality, it does not take long for us 'to experience the always rather anxious impression of going deeper and deeper into a limitless world'.[22] Yi-Fu Tuan concurs that even if small, the thicket gives the appearance of being limitless to the person who is lost within it.[23]

Tuan questions the nature of what it means to be lost and feel completely disoriented in a dense and apparently limitless thicket. Although space is still organized in relation to the body so that regions remain to the left, right, front, and back, these bodily orientations appear arbitrary without external points of reference as an anchor. From this state, it takes only the faintest of recognizable landmarks to set the orienting faculties back in motion, which Tuan illustrates as 'a flickering light appear[ing] behind a distant clump of trees'.[24]

Even in the absence of Tuan's flickering beacon, our body-based axial directions are rarely projected onto a neutral and directionless Cartesian space. Instead, the body's referenced sense of direction operates in communication with the finely textured features that are innate in any landscape. This body-based and landscape-oriented relationship is manifest most acutely in motion so that we negotiate the apparent limitlessness of immersive space through the continual discovery and rediscovery of an appropriate direction. Such a tactical and immediate form of navigation orients us in many little ways within a general disorientation.

When immersed in a thicket with everything close at hand, space loses its visual construction. Under these circumstances, the eye assumes a more tactile role to cope with the constant variation of landmarks and linkages.[25] Close vision becomes body-based in the sense that when judging distances and textures, the eye does not visually control or indulge a scene but guides the immediacies of movement. In this regard, the eye becomes more responsive to its environment and less predictive in the manner of distant vision, which offers advance warning as future events enter a person's event-horizon.

Machine description

Like snagged suitcases on an over-laden airport carousel, the islands and peninsulas of the San Francisco Bay are akin to left luggage, drawn in over eons on the subducting conveyor belt of the Pacific Plate. Alcatraz, Angel Island, Tiburon, and the Marin Headlands all have foreign and discordant geological DNA. The *Albany Bulb* is different again. This ungainly protrusion from the East Bay shoreline is alien, in the sense that it does not conform to the tectonic and hydrologic processes that shaped the rest of the Bay. Yet it is also local, in the sense that it is the piecemeal assemblage of construction and garden detritus from across the East Bay. The result is an undifferentiated and ill-compacted micro-geology of debris that has barely begun the process stratification over a geological timeframe.

The clumsy shape of the *Albany Bulb* is technically a peninsula in the sense that it remains connected to the 'natural' land of the East Bay shoreline. However, it doesn't function like other peninsulas, which ordinarily taper down towards the tip, with diminishing surface connectivity leading to declining biodiversity along its length. At the *Bulb*, this ecological *peninsula effect* is reversed, with the farthest reaches of the peninsula actually expanding in area and diversity. With the *Bulb* reading more like an island than a peninsula, *tombolo* (an island connected by a sand spit) or *halbinsel (half island,* the German term for peninsula) are more descriptive terms.[26]

In 1984, following the cessation of a quarter of a century of incremental dumping, the site succumbed to its toxic substratum. Methane venting caused the ground to burn in numerous locations, while erosion exposed concrete, rebar, and other slow-degrading construction materials from just beneath the surface. Despite this contamination, the buried urban garden waste carried biotic stowaways in the form of seeds and bulbs of exotic and endemic flora. Nurtured by the mild foggy microclimate, these seeds germinated and gradually colonized the site. Heath of acacia, fennel and broom laid down a canvas for stands of date palms and Eucalyptus, interspersed with blackberry thickets, plum trees, and grapevines.

By the early 1990s the process of ecological succession achieved a vegetal height and density sufficient to protect humans from the elements and, importantly, from view. Concurrently, human colonization of the Albany Bulb gathered pace as itinerant people built progressively more elaborate and firmly embedded camps. By the mid 1990s, inhabitation grew to a dispersed community of approximately 50 campsites hidden among the heath and interconnected by a web of narrow paths that became second nature to the locals who trod them but remained disorienting to outsiders. A barter economy was established, as was a small free-to-all library. A home-grown art scene flourished, with numerous structures and sculptures created from the flotsam and jetsam that littered the area.

Then, in 1999, the entire clandestine encampment was forcibly removed. Emerging from tidelands over a compressed timespan of 40 years, new (waste)land was created, naturalized, colonized, cultured (insofar as it supported the emergence of a place-specific society) and vacated. In the time since the enforced decampment, the Albany Bulb endured as a noble ruin comprising residual abandoned structures, deteriorating artworks and a complex web of interlinking paths amongst the heath (figure 2). Originally forged through the thick vegetation by the Bulb's first fossicking colonizers, the paths have no hierarchy, are riddled with complex changes of topography and direction, are often bereft of significant destinations

Figure 2. The 'thicket' at the Albany Bulb (photograph by the author).

and frequently either fade out or bounce back from impassable landforms.

Machine experience

I circumnavigated the half-island on foot, conflating the cyborgian shore of cement and re-bar with concrete knowledge, much as Captain Cook commandeered the World for the Empire by charting every coastline the Endeavour sighted. Picking my way through concrete and jetsam, I walked out along the furthest reaches of the numerous tidal protrusions and looked back to triangulate off internal landmarks. With key structures, sculptures and trees habitually disguising their identities from new angles, I soon became aware that to encircle something is not to know it. As the marooned buccaneer Alexander Selkirk discovered in the South Pacific three centuries ago, to truly the explore an island, one inevitably must make for the interior.[27]

On volcanic islands the interior rises to a summit from which to seek an overview, all the way to the horizon. The *Bulb*, however, is more like an inverted atoll, with a low heavily thicketed plateau spanning most of its breadth. The ill-compacted substratum of this amorphous terrain is riddled with fissures that absorb runoff and offer no topographic structure with which to read—and navigate—the landscape.

Without a familiar topographic structure to fall back on, I was beholden to the many paths that entangle the Bulb (figure 3). In the thick of it, I was unable to judge the character of a path before I trod it. I ventured down paths full of promise that tucked and wove, traversing some obstacles and circumventing others, but always pushing onwards through the brush. Or so it seemed; often my chosen path began to narrow, imperceptibly at first, its diminishing width cunningly concealed within a direction change, the outer edge of the trail tucking in more tightly than the inner, shaving precious inches in the process. With each inch that the way tapered, and vegetation encroached, more of the walkers who preceded me had harboured doubts and decided to turn back, compounding the gathering narrowness in a feedback loop.

Those doubts were contagious, with my confident gate shifting tentatively onto my toes and into a timid lean. A path's first mandate is to lead somewhere, and so for a succession of retreating walkers to decide that a path goes nowhere is to undermine its fundamental purpose. We prefer to delegate cognitive responsibility for our passage to the authority of the path, and so when a path lets us down, our first instinct is to retreat to our last known place of divergence. A path's second mandate, then, is to lead us home.[28] But a path that takes us home assumes a domicile to return to and omits those who seek a new home, as was the case with many of the path-makers at the *Bulb*.

Rather than going home, I reimagined each diminishing path as a threshold that filters out those not yet sufficiently immersed to make a particular discovery. When I pressed on sideways through these

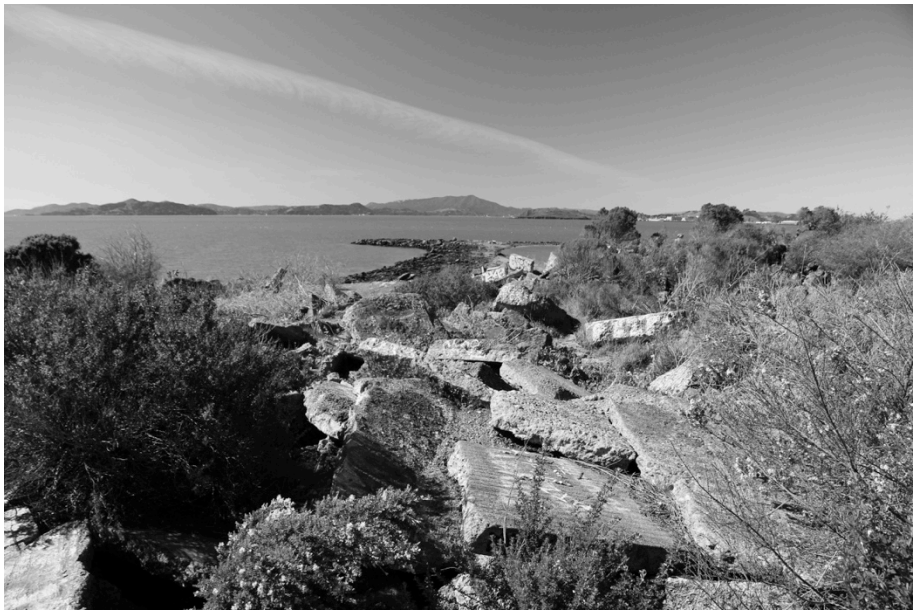

Figure 3. Immersed amongst the heath and concrete at the Albany Bulb (photograph by the author).

filters, the revelations were mixed to say the least. One path led to a pile of rubbish, another to a stinking bush-toilet, and others simply dissipated as though chronicling the thought experiments of a hundred pairs of feet. But another path led to sodden relics of the lost library, and numerous others terminated at ragged precipices on the edge of the plateau.

Emerging out on to these bluffs from the thicket placed me in the position of not being lost *per se*, but also not knowing exactly where I was, nor the best way to proceed or retreat. On the edge of this open labyrinth, I was able to temporarily regain my composure and partially re-establish my bearings. With the benefit of distant vision, my spatial-bodily relations such as left and right resumed their meaning. Using the familiar topographic features of San Francisco Bay and the Berkeley Hills I visually triangulated my approximate position in relation to the outside world. And then, because the only way onward was indeed backward, I cast-off this navigational epiphany and returned headlong back into the thicket.

Since my original exploration of the *Bulb*, I also decided to stay—or at least to take up residence nearby and to regularly return. But even repeated traversals seem to defy Walter Benjamin's edict that to truly know a place we must experience it in as many dimensions as possible, and approach and leave by all four cardinal directions (and a fifth direction if we add the satellite's vertical approach).[29] Although I have never owned a sextant, over time I tested all manner of orienting machines on the *Bulb*; from aerial photographs, to my orienteering compass, to hand held GPS, and most recently, mapping drones. Despite illuminating some new angle on this nuanced landscape, each device revealed and concealed in equal measure. My deepest map of the *Albany Bulb* remains the cognitive one in that I keep in my mind's-eye.

Second dis/orientation machine: the desert

Spatial-poetic concepts

In the desert, one is opened and free, but also exposed and vulnerable. In contrast to the thicket, there is no frame of reference in unbounded, opened space, only an endlessness that clouds the orienting faculties through an absence of landmarks. As Captain Roald Amundsen discovered on the first ever approach of the South Pole, 'however keenly [we] stared, [we] could not decry anything but the endless flat plain ahead of us'. Even the team's sled dogs 'had dropped their scenting and appeared to have lost their interest' on the frozen waste.[30]

Without trodden paths or signposts, everything becomes transitory and negotiable. The poet Edmond Jabés wrote of a desert without avenues, boulevards, blind alleys, or streets. Nothing, only 'here and there, partial footprints, quickly wiped out and belied'.[31] When confronted by the immensity of the desert, we cannot simply stand to one side and consume or evaluate as with traditional landscape gardens or works of art.[32] Immersed in a fusion of ground and sky, every attempt to step back and 'take it all in' becomes futile as the horizon diligently follows every move. Each effort to picture-frame a moment dissolves seamlessly into the last; when we turn our backs the desert covers its tracks.

For Tuan, space without a fixed, established pattern of human meaning, 'is like a blank sheet on which meaning may be imposed'.[33] However, the desert is blank because meaning does not readily stick to its hydrophobic surface. In the desert, subject and object dissolve into each other without offering a clear alternative. Bereft of the capacity to establish orientation, the immanence of the ego is eroded; we lose a sense of ourselves and become the desert. Jabès observed the lure of the desert to be not a search for identity, but a desire to dispose of it:

> 'to lose your personality, to become anonymous. You make yourself the void. You become silence. […] And then something extraordinary happens: you hear silence speak'.[34]

Just like the desert, in which Jabès's fragmentary imprints are soon effaced and rebuffed, Benjamin observes that the most prominent feature of the city is 'the obliteration of the individual's traces in the big city crowd'.[35] The attraction of the desert also lures the stranger to the city, with its continual erasure of the past and reinvention of the present. For Jean Baudrillard, the attraction of the city and the desert lies in its capacity to deliver the visitor 'from all depth'.[36]

In the depthless desert, the horizon becomes more omnipresent but paradoxically less useful as an orienting device. With the horizon line providing a datum, and the sun and the stars a general alignment, the desert puts us in the strange position of being simultaneously oriented but displaced. In the absence of a middle ground, distant landmarks resist approach, appearing stationary despite our progress. These vectors are elastic in the sense that they stretch as we move, appearing to tether us to a landmark, before our efforts at travel bear fruit and the constellation of landmarks suddenly snaps into a new configuration. Passage is witnessed not a landscape rolling past a consistent rate, but as a series of jumps between one set of landmarks and the next.

Recent spatial-cognition research reveals just how confounding the desert is to our navigational cognition. Whereas we are quite cognitively adept at forging new shortcuts while traversing a dense thicket, we are far less successful at taking shortcuts in a desert.[37] In theory, we should be able to proceed like a sailor or aviator, who use dead reckoning to track their vectors across vast empty oceans. But even as we keep a mental ledger of the angles and distances of our traversal across featureless space, in reality we continually underestimate scale and drift offline. Indeed, as the wavering pedestrian desire lines worn into park meadows attest, even with clearly visible goals we struggle to track in straight lines. Without any such waypoints to recalibrate our position along the way, in the desert these errors of spatial judgment quickly compound.

Machine description

For an artist seeking to breach the gallery walls in the 1960s, the desert offered a blank canvas with which to work. To be certain, as it repels meaning from sticking and dissolves the ego into the silence, the desert is no neatly woven linen canvas. And yet, if one cuts deeply enough into the surface, or piles rocks high enough (and captures it all on film quickly enough) meaning can be coerced to stick for sufficient duration to stall the dissolution of the self into the vastness of geological time. This is what the first generation of land artists did with enthusiasm—predominantly men with earthmoving machines carving out monuments to themselves—and subsequent generations of environmental artists, and feminist artists in particular, reacted to with more ephemeral, corporeally scaled landscape interactions.[38]

Protruding from the northeastern shore of the Great Salt Lake in Utah, the enduring charm of Robert Smithson's *Spiral Jetty* resides in its capacity to be simultaneously monumental and ephemeral (figure 4). To be sure, the apparently quintessential desert setting that the *Jetty* occupies is no pristine wilderness. To the south, the 100-mile-long Lucin Cutoff railway causeway bisects the lake, with the severed northern portion rendered super-saline as evaporation far outstrips inflows. With typical salt levels artificially elevated to nine times

Figure 4. The 'desert' at Spiral Jetty (photograph by the author).

higher than the ocean, only brine flies and (in certain conditions) brine shrimp thrive here—and Pink Floyd, the solitary escaped Chilean flamingo who wintered along the shores of the lake for two decades up until the mid 2000s.

When Smithson's lorries first laid down their rubble in the shape of a naïve, almost hand scrawled spiral petroform, they did so to breach the water line of 1970. However, unlike the ocean (even as sea levels rise globally), a salt lake offers up no mean sea level with which to calibrate a fixed article of marine infrastructure. It is a characteristic of all endorheic lakes to rise and fall in tune to the balance of hydraulic inflows and atmospheric evaporation.[39] With the early 1970s proving to be a relatively dry period, a return to more typical inflows soon submerged the jetty, and there it lay, in suspended animation, for three decades.

With the new millennium bringing record drought, the saline tide emphatically reversed. *Spiral Jetty* re-emerged and more, left high and dry as though awaiting one of those marooned fishing boats that

missed forever the retreating tide of the vanishing Aral Sea. In wetter times, J.G. Ballard pondered what kind of caravel might have berthed at *Spiral Jetty* and what precious cargo might have been dispatched to such a remote landlocked harbour.[40] In a scene that steam-punk pantomime pirates now unwittingly re-enact 350 miles to the west on the Black Rock Desert playa, Ballard deduced the vessel to be a rare craft captained by a Minotaur.[41] The *Jetty* he concluded was a labyrinth, Smithson its commissioned architect, and the cargo, a clock.

As though staking out a fatalistic and cyclical life-path, the archetypal *labyrinth* spirals inward to a point of enlightenment and then turns inside out, spiralling back outward to the beginning.[42] Today we find this form archaic, as we expect labyrinths to harbour the blind divergences and dead ends that reify our life-paths as a sequence of progressive decisions. Yet the partial spiral that Smithson devised for his client issues neither choices nor returns. It offers only a one-way tariff that delivers the expectant wayfarer into the eye of the vortex and provides no circular journey. With no ship or sea in sight, the only way onward is to close one's own eyes, and take a step of faith, off the *Jetty* and into the salt.

Machine experience

I stepped off the *Jetty*, half expecting to breach through the encrusted cap into a thinly veiled subsurface sea of subversion. The cap held, and I walked for a while, and nothing happened. The horizon tracked me relentlessly, so that each step put me in precisely the same place as the last. In the absence of a middle ground, distant landmarks resisted my approach. It was a though I was running on a giant circus ball, the ground simply passing under my feet like a conveyor belt; the far-off landforms, like cardboard cutouts, holding their ground. With the late afternoon sun as a reference, I retained a general sense of alignment but was quickly becoming displaced. It felt like I was losing grip, as though slipping along a frictionless Cartesian plain.

Figure 5. Navigating by salt crystals on the Great Salt Lake near Spiral Jetty (photograph by the author).

Then I looked down and noticed that the floor of the saltpan was infested with detail, bringing the finest texture into the milieu (figure 5). Each footfall was impressing onto a completely unique tapestry of crystals. I did have grip and was moving somewhere after all, and to perceive it I just needed to recalibrate my receptors to the infinitesimal; quantifying distance not by remote hilltops, but one crystal at a time. When I looked back up, everything was different, as though the distant landmarks that I had been repelling had moved past in an instant, reordering into a new constellation. It was as if the invisible vectors tying me to my landmarks had been stretched to capacity and suddenly recoiled, erasing one scene, and installing another in its place. And then, in this new assemblage, I walked for a while, and nothing happened.

When I turned around there was no trace of my footprints. Then, as the sun neared the horizon, the acute angle of the light began to cast shadows off the imprints my foot falls had made into the salt—one

shadow arc leading to the next, altogether illuminating an Ariadne's thread leading me out of this open labyrinth of my own delineation. As the sun set it dawned on me that the Minotaur's precious clock was not some long-lost steam-punk contraption of over-scaled cast-bronze cogs and pinions corroding away on the playa. It became clear in a briny kind of way that the timepiece *is* the salt lake; a giant quartz clock powered via the electrolysis of the salt crystals, its timestamp registered in the compounding of every molecule, the twitch of every brine fly, and the crunch of every footfall.

The desert's ultimate deceit was finally revealed to me. The desert is not blank, awaiting the architect's inscription of meaning; perceived from the right angle, it is already thick with significance. As Edward Casey notes, 'upon scrutiny … even the most barren wasteland displays a considerable variety of things'.[43]

Third dis/orientation machine: the hollow

Spatial-poetic concepts

Both on the ground and in the collective imagination, hollows are abnormal. Carving fractal systems of converging flows, water is the primary shaper of landform across the majority the Earth's surface. In these familiar tree-like dendritic landscapes of gulches, gullies and valleys, water and gravity literally lead the way. If we become lost in this common terrain, survival orthodoxy tells us to follow the flow downhill; rivulets become streams, streams flow into creeks and creeks merge into rivers and deltas, along which humans are likely to reside.[44]

Hollows occur in *other* landscapes that do not conform to this fluvial logic. In sandy, karstic (limestone), volcanic and often landfill terrain, water is absorbed into the porous substrata before it can converge into major systems of surface flows. Amidst these complex topographies that are not primarily shaped by water, orientation and way finding are more complicated. To follow water here is likely to lead one further astray into a topographically encircled hollow and possibly (as often occurs in karst landscapes) the deeply disorienting fissures of a cave.[45] Instead, long-range navigation is most prudently undertaken on the high ground, with hollows circumvented as they are encountered.

As landforms go, we don't entirely trust hollows, since they are historically places where refuse and other 'problems' that people have sought to rid themselves of are deposited. Hollows have also historically been co-opted as readymade sites of control; certainly corralling for livestock, but more disturbingly for incarcerating 'uncooperative' indigenous peoples. On the other hand, hollows have proven secure places to hide from forces of subjugation, as Captain Jack and his tribal members did so effectively in the 1870s amidst their Modoc lava field stronghold in northern California.[46] In essence, the Janus faced nature of hollows depends on our perspective; hollows may provide constructive containment in the sense that the inflected landform cradles us within the landscape, or negative containment in the sense of feeling vulnerable to the landform that has us surrounded on all sides of the compass.

Hollow landforms manipulate our sense of containment by substituting the distant real horizon with a nearer constructed horizon that encircles the rim of the hollow. As we comprehend it, the real horizon (as formed by the curvature of the Earth) encompasses our field of visual perception and tracks us as we move across the ground.[47] With the notable exception of the horizon's owner—who remains tethered to its focal point—objects, forces, and events pass through this threshold and into or out of play. In a hollow this convention is dissolved, as we can move about while the constructed horizon stays firmly tethered to the landscape. When we pass through this threshold and emerge from the hollow, the real horizon resumes normal operation, and the wider landscape comes back into play.

Machine description

Located at Yoro in Gifu Prefecture, Japan, the open-air *Site of Reversible Destiny* is the landscape-scaled fulfilment of artists Shusaku Arakawa and Madeline Gins's almost half-century exploration of the relationship between body, world, meaning and time. The project is

described in the visitor brochure as a 'crater-like cosmos of opportunities'.[48] From the perimeter, the five-acre elliptically shaped crater presents an eclectic concoction of elements that resemble a sculpture park hybridized with a theme park, mini-golf course and garden trade-show (figure 6). In keeping with the ambiguous nature of the project, a new onus to 'amuse oneself' replaces the age-old theme-park visitor's mandate to 'be amused'.

Visitors are challenged to align to 'a new horizon' with which to 'escape from normal mental captivity and find a new destiny'.[49] To fulfil these goals, the artists invest in the ability of meaning to reside in an individual's engagement with the real world rather than a universal body of knowledge.[50] Accordingly, when moving around the hollow landscape of *Reversible Destiny*, practical measures such as predictably level paths and vertical walls are absent. Without these familiar datums, the maintenance of a regular sense of balance and a clear line of thought becomes more difficult. In a controlled return to infancy, the visitor is instructed to become reacquainted with their intuition and adjust their body to relearn everything from the environment at hand.[51]

In orchestrating this landscape, the artists seek to un-tether the visitor from the fixed horizons of their established perceptions. While immersed in the physical effort of negotiating the uneven ground and mentally mapping the complex topography, the visitor is primed for losing track of their location within the larger context. When the visitor pauses to look up and take stock, they are likely to discover a disjunction between their assumed progress and actual position.

By eliminating external landmarks and orthogonal references, the hollowed shape of the crater is calibrated to amplify this disjunction. Constraining view but not physical passage, the crater rim functions as a semi-permeable constructed horizon. When crossing the rim, the visitor is likely to be unable to readily reconcile their point of entry into the crater with their point of exit. In this moment, the artists exploit the temporal and spatial slippage that is fleetingly created when the

Figure 6. The 'hollow' at the Site of Reversible Destiny (photograph courtesy of Yoro Park Field Office).

constructed horizon neutralizes the real horizon and neither predominates as the primary mechanism for re-establishing the one's bearings.[52] For Arakawa and Gins, this gap that the visitor experiences before re-orientating to landmarks within the larger landscape is a state of being 'more body and less person'.[53] Being 'more body' refers to the heightened state of the non-visual senses and in particular, touch.

Machine experience

Engrossed in the blistering mounds and ghoulish paths of *Reversible Destiny*, I clambered around in a state of haptic immediacy. As the sole visitor that afternoon, my route tracked a wayward course, meandering with a catatonia of care and abandon across the crater. Soon everything was familiar enough, and yet as I crossed over the same junctions from disparate directions, I was surprised by situations that remained foreign.

Figure 7. Entering the grotto at the Site of Reversible Destiny (photograph by the author).

Twice I entered grottoes through impossibly narrow portals (figure 7). The first was placid enough. I accessed a small cavern, waited for my eyes to adjust to the darkness, and then returned confidently toward the light. In the second grotto, everything was different. As I felt my way into a more complex web of folded walls, each handhold was different from the last. Abruptly, the wall—my lifeline—stopped dead, and I felt around it and followed it back along its other side, or so I thought. Then the wall simply ceased altogether. This time, like a Möbius Strip, there was no 'other' side. I reached out, gesturing haplessly into a void as black as nightshade ink, and then took the plunge and let go of my Ariandne's thread. My eyes open but useless in the persuasive darkness, all mind, and no body.

I sensed the faintest flicker of light, and relieved, edged towards it. As the elusive glow moved overhead, it dawned on me that this was a false beacon. I was now in a dull chamber, eyes readjusted to the pinhole skylight above, effectively a prisoner in the 'black room' of my own poor proprioceptive memory.[54] I tried to recall my twists and turns, the choreography of every footfall and handgrip that I had just performed but just as quickly discarded. Mild panic fuelled rampant doubts and self-referential brain activity; 'I am an oriented person; how hard can this be? It's just a theme park in Japan! It's sanitized and safe, right? Someone would come searching for me at closing time, right? There *is* a closing time, right?'

Later, in the gathering dusk, still disturbed by my transformative experience in the grotto, I decided that the amusement was over, I wasn't playing anymore, I was going back to my hotel in Gifu. I headed up to the lip of the crater, passed over the horizon-threshold, and crossed the map of Manhattan. Then, as I marched along a footpath, thinking only about making the train, I realized that I hadn't left the game behind. All body and less person, I was completely and utterly lost.

Fourth dis/orientation machine: the tunnel

Spatial-poetic concepts

Tunnels are physically and philosophically distinct form grottoes and caves. Depending on one's circumstance, the cave is encountered through curiosity, refuge, or incarceration, with only Plato's shadows of the outside world cast onto the walls for company.[55] In a tunnel, on the other hand, there is no time to play games or ponder the meaning of shadows. In a tunnel we are continuously escaping or arriving, as we collude with rocks and gravity to evade situations above ground that challenge or inconvenience us. Even the most unassuming tunnel acts like a wormhole as it compresses time and space and brings the distant close to hand.

However, this convenience comes at the price. Whereas paths are readily traversed for the experience of their own meandering enjoyment, tunnels imply a high-risk venture undertaken for the reward of the ends and not the experience of the means. In tunnels, we trade an increase in reachable space for a decrease in the possibilities of movement.[56] In these conduits, our bodies are often restricted and contorted in uncomfortable and claustrophobic ways;

we associate tunnels with hunching, crawling, tripping and bumping in the darkness.

Kevin Lynch describes the experience of emerging from the disconnected world of a road or railway tunnel or subway exit as profoundly disorienting.[57] When exiting a tunnel, we are abruptly confronted with new conditions on the other side. As our night-eyes readapt to the sunlight, we scramble to re-assimilate our cognitive maps with our cartographic ones. We are vulnerable in this disorientated state to all manner of distractions and threats that stand between our onward passage and us. Moreover, those who congregate around the exit may seek to make the reverse journey. This impulse, coupled with the sheer effort required to bore a tunnel through rock and space/time, intensify efforts to control tunnels. When these controls break down and a tunnel is inundated, the fates of the territories at each end are irrevocably entangled.

Machine description

In 1940, Walter Benjamin encountered a tunnel while escaping occupied France for the comparative safety of Franco's 'non-belligerent' Spain and, eventually, America. Set at the Mediterranean toe of the Pyrenees, this tunnel served a dual geomorphic and geopolitical purpose; to bore through the foothill shales and to forge a direct rail conduit between France and Spain. At each end of the tunnel, elaborate contraptions for switching trains between the Iberian and Standard railroad gauges intensified the paired bureaucratic border towns of Cerbère and Portbou. Within this microcosm, the stone tunnel had remained under the vigilant control of the Spanish and Vichy border guards. Divested of the full complement of required documents, Benjamin was permitted to exit this tunnel in Spain, but not to enter it in France. Presented with this spatially impossible scenario, he chose the high path over the Pyrenees.

Escaping over the mountains was not without peril. Near the more popular and less physically demanding coastal routes, the ridgeline-border swarmed with Gardes Mobiles ready to capture fleeing refugees. Evading this fate necessitated traversing much higher and less guarded ground. Benjamin was guided along this high route by the resistance passeur Lisa Fittko, who in turn followed a rudimentary map sketched by the sympathetic mayor of Banyuls-sur-Mer. In places barely formed, the old smuggler's path had previously been used in the reverse direction to evacuate Republican Army troops into exile at the end of the Spanish Civil War.

As Fittko recounts in her memoirs, the journey presented an immense challenge to Benjamin's constitution, which was far more cerebral than physical.[58] Cognizant of the task ahead, Benjamin gauged the amount of energy needed for the journey and expended it in calculated amounts. This self-pacing extended to their initial reconnaissance, where he insisted on sleeping alone and exposed on the ground rather than returning to the village and repeating the first third of the journey over. Even so, as Fittko's small party of émigrés scrambled between boulders and up vineyard terraces, Benjamin's fading energy budget was tested to its limits. The heavy black briefcase that he hauled along the route only compounded an already demanding traverse.

After parting ways with Fittko near the border, Benjamin and his briefcase did make it down to Portbou. But in a cruel bureaucratic miscommunication, stateless *apatrides* with entry papers to Spain—but without exit papers from France—were, for a brief window in time, to be returned whence they came. The rail tunnel that a day earlier Benjamin could exit but not enter was now inversed, with its inescapable entrance disgorging into a landscape of almost certain annihilation in occupied France. As history records, Benjamin's body was discovered in his cheap Portbou hotel room the next morning. The contents of the briefcase—which Fittko recalls contained a manuscript more important to Benjamin than his life—were never recovered.

From the unmarked grave, mislaid body, and lost manuscript of an unknown and penniless intellectual, Benjamin became posthumously influential. Following Theodor Adorno and Hannah Arendt's

Figure 8. The 'tunnel' at Passages (photograph by the author).

introduction of his extant work to German and American readers, respectively, Benjamin's narrative and celebrity rose to the lofty status of memorialization. While Benjamin's life is commemorated in several locations, it is the memorial at Portbou by Israeli sculptor Dani Karavan that most vividly embodies Benjamin's journey. Situated just out of town at the entrance to the cemetery where Benjamin is interred, *Passages* comprises a 100-foot-long weathered steel tunnel that descends through the headland and terminates precariously out over the sea below (figure 8). At this point, an inscribed sheet of safety glass that dedicates 'historical construction' 'to the memory of the nameless' marks the only concession to visitor safety.[59]

In contrast to the unfathomably deep tunnels of Bernard Lassus' *Well* concepts that poetically probe the centre of the Earth, Karavan's *Passages* does not seek the secrets of the abyss.[60] Glancing the shale like a flesh wound with shallow entry and exit points, the potency of this tunnel is contingent less on its depth and length than on its connection. By opening an unexpected portal between the sky and sea, *Passages* plays on the blinkered nature of out spatial assumptions. With our environments filled with obstructions to direct passage, we automatically compensate by recording cognitive maps that distort directions, proximities, and adjacencies from the spatial reality. When these assumptions are short-circuited—as the 'anarchitectural' ruptures of Gordon Matta-Clark achieved with such intensity—the effect is often astonishing.[61]

Machine experience

Like most tunnels, the entrance portal at Passages reveals little about the price or reward of entry. At Vaux-le-Vicomte, André Le Nôtre shrewdly exploited this uncertainty, contriving the grand axis as a tunnel that lures the visitor away from the palace. With the tunnel-axis retreating into the shadows at its conclusion, the visitor's attention is rotated around to reveal of an overview of the palace from whence they came.

Like Vaux-le-Vicomte, *Passages'* axis acted as a lure, enticing me down its stairs toward a diminutive promise of the sea. However, about three-fifths of the way down—like passing over the pivot on a seesaw—my experience started to destabilize. Momentarily caught in this position, the promise of a conduit to the sea was withheld. Turning around, the point of origin was now substituted with framed sky. In between, the world tilted up at an impossible angle, with the water replaced by atmosphere, and the weather resembling the tides (figure 9). Somehow simultaneously below and above ground, I lost the horizon as an orienting datum and began to take leave of my senses. The symmetry of the treads and risers of the staircase contributed to the confusion, appearing to neutralize the influence of gravity. Left suspended vulnerably off the cliff, I entertained my own private vertigo.

We might imagine that this unbalancing catapulted me from the tunnel like Benjamin's Angelus Novus; face turned to the past, wings flung back in the storm of history.[62] The reality was far less furious as I tentatively retraced my steps and emerged back out through the portal. Here in the daylight—released from the tunnel's horizonless

embrace—I hurried to re-establish my bearings by locking back onto the real horizon that lay out across the Mediterranean Sea. In a fleeting moment of transfer, my fragile sensing apparatus was primed for recalibrating the horizon's terms of engagement. Insofar as we customarily perceive the future as being dispensed from 'over the horizon', we are habituated to the real horizon's elusive delineation of time and space. However, while momentarily untethered, I dared to disregard time as a linear and receding chain of events.

In short time—with my eyes re-adapted to the daylight and bodily gyroscope re-assimilated to the real horizon—I was ready to continue with my onward journey. A tunnel that initially appeared as a shortcut turned out to be a detour. And yet even as I walked back into town, somehow, I couldn't just casually compartmentalize the experience; like the caged fox that decides it is free while the rest of the world is incarcerated, was I actually still in the tunnel without comprehending it?

Conclusion: Gruen Transfers

When entering a shopping arcade in the city, we become unwitting prisoners to our own desire.[63] We may begin in a goal-oriented mind-set with eyes only for the items we need, but as we progress deeper into the arcade, the immersion and disorientation of the space coerces a transition. Our resistance to external distractions dissolves and we become primed to indulge in spontaneous purchases. This transition, through which the consumer unwittingly defers control of their orienting faculties to an artificial environment, is termed the Gruen Transfer.[64]

Although the term's reluctant originator Victor Gruen disavowed the practice in his own architecture, enacting the Gruen Transfer through increasingly elaborate floor plans became an established design feature of spaces of consumption. In an extreme example on the Las Vegas Strip, Ceasar's Palace forms a twisting, tapering portal that draws the unwitting visitor into an incomprehensible spiral of dazzling shop fronts, where every half-attempt to leave drives one deeper into the labyrinth. Unable to locate an exit, unsure of which way to turn,

Figure 9. Experiencing sky/sea inversion at Passages (photograph by the author).

and now stripped of intent, we are primed to take our chances at a gaming table while we gather our senses.

Although now generally positioned pejoratively in critiques of consumer culture, the Gruen Transfer nevertheless encapsulates the capacity for a potent sequence of spatial effects to transform behaviour and experience. Transposed from the polished shopping arcade out into the gritty landscape, the lens of the Gruen Transfer aptly describes the experiential mechanisms of the four dis/orientation machines. In each instance, the transfer from *orientation* to *disorientation* and finally to *reorientation* does not occur at a single precise physical threshold, such as at the tunnel entrance at *Passages*, or stepping off the jetty onto the salt at *Spiral Jetty*. Rather, the transition is constructed across a patchwork of overlapping experiences, each compounding the last. The hollow at the *Site of Reversible Destiny* is a persuasive example of this, wherein the grotto serves as a compression point for the prior and subsequent acts of discovery and exploration that the rest of the site impels. At the

Albany *Bulb*, the Gruen Transfer subtly builds as paths are traversed and denied and may even durate across several visits to the site before it's dis/orienting impacts are fully disclosed to the visitor.

These experiences are not constrained within the physical territory of the site itself. Some experiences precede the site in terms of anticipation fostered through the influence of prior information that may have been read, heard, or viewed.[65] Functioning as an over the horizon radar, these preconceptions are legitimate component in a visitor's construction of their experience of a landscape. For example, the experience of *Passages* potentially begins all the way back at head of the old smuggler's trail over the Pyrenees, or even on the pages of Benjamin's account of disorientation in the *Arcades Project*.[66]

And lastly, these overlapping experiences often linger beyond the site encounter, sticking to the visitor after they move on. If the Gruen Transferred consumer emerges from the shopping arcade carrying products of desire rather than necessity, then the landscape equivalent subverts this premise. Leaving a dis/orienting landscape, the Gruen Transferred visitor carries with them a set of perceptions that unexpectedly interact with the everyday experience of the wider landscape. If we leverage the ancient entwinement of gardens and cities and conceive of dis/orientation machines as gardens within the city, this transfer becomes particularly potent.[67] The visitor may have entered one of these gardens anticipating packaged stimulation and release from the city. But beneath its disguise as a *Hortus Ludus*, the garden of earthly desires carries an altogether more constructive purpose. The garden machine becomes a perceptual training ground for negotiating the accelerating, disorienting and immersive qualities of the contemporary global urban condition.

From Directomats to GPS, orientation machines have historically been presented as increasingly sophisticated navigation devices for finding our way in the city.[68] Although he could never foresee a world in which nearly one third of the global population carry GPS, half a century ago Lynch warned of the precariousness of relying on a device that could be lost or fail. Circumventing this technological escalation of diminishing returns, dis/orientation machines leverage low-tech—but nevertheless equally sophisticated—garden and landscape experiences to assist in the construction of a more durable image of our environment. That is, whereas orientation devices merely locate us in time and space, dis/orienting machines help us find our place.

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Notes

[1] Guy Debord and Gil J. Wolman, 'Mode d'emploi du détournement,' *Les Lèvres Nues,* 8, 1956. Published in English as Guy Debord and Gil J. Wolman, 'A User's Guide to Détournement', in Ken Knabb (ed. and trans.), *Situationist International Anthology* (Berkeley CA: Bureau of Public Secrets, 2006), pp. 14–22.

[2] Benjamin Constant, 'The Principle of Disorientation', in Libero Andreotti and Xavier Costa (eds.) *Situationists, Art, Politics, Urbanism* (Barcelona: ACTAR, 1996), pp. 86–87.

[3] Research shows that people are more likely to walk in great circles when they cannot see the sun. See: Jan L. Souman, Ilja Frissen, Manish N. Sreenivasa and Marc O. Ernst, 'Walking Straight into Circles', *Current Biology* 19, 2009, pp. 1538–1542.

[4] Hergé, The *Adventures of Tintin: Land of Black Gold* (London: Mammoth Books, 1993, c1950), pp. 29–30.

[5] J. B. Sykes (ed.), *The Concise Oxford Dictionary Of Current English* (The Clarendon Press, Oxford, 1982), p. 276.

[6] Hermann Schöne, *Spatial Orientation: The Spatial Control of Behaviour in Animals and Man* (New York: Princeton Jersey, 1984), p. 7.

[7] J. Allan Hobson, *The Chemistry of Conscious States: How the Brain Changes its Mind* (Boston MA: Little Brown and Company, 1994), p. 83.

[8] Alian Berthöz, Michel-Ange Amorim, Stephan Glasauer, Renato Grasso, YasuikoTakei and Isabelle Viaud-Delmon, 'Dissociation Between Distance and Direction during Locomotor Navigation', in Reginald G. Golledge (ed.) *Wayfinding Behavior: Cognitive Mapping and Other Spatial Processes* (Baltimore MD: Johns Hopkins University Press), pp. 328–348.

[9] Ralph Selby, 'Getting Lost', *Art and Artists,* 6/6, 1971, pp. 166–169.

[10] Lucius Annaeus Seneca, 'Letter 44', in Richard M. Gummere (trans.) *Moral Epistles: Volume I.* (Cambridge MA: Harvard University Press / The Loeb Classical Library, 1917).

[11] Paul Virilio, *Open Sky* (London: Verso, 1997), p. 62.

[12] Fredric Jameson, 'Postmodernism, or, The Cultural Logic of Late Capital', *New Left Review*, 146, 1984, p. 83.

[13] Paul Virilio, 'Speed and Information: Cyberspace Alarm!', in Arthur Kroker and Marilouise Kroker (eds.), *CTheory*, 27th August, 1995, www.ctheory.net/articles.aspx?id=72

[14] Paul Virilio, *The Art of The Motor* (Minneapolis: University of Minnesota Press, 1995), p. 155.

[15] The article advances themes initially developed in Author 2012 and Author 2015.

[16] Kevin Lynch, *The Image of the City* (Cambridge MA: MIT Press, 1960), p. 11.

[17] Paul A. Roncken, Sven Stremke and Maurice P. C. P. Paulissen, 'Landscape Machines: Productive Nature and the Future Sublime', *Journal of Landscape Architecture*, 6/1, 2011, pp. 68–81.

[18] Bernard St-Denis, 'Just What is a Garden?', *Studies in the History of Gardens & Designed Landscapes*, 27/1, 2007, pp. 61–76.

[19] See: Nancy Vance, 'Seascapes: Shaped by the Sea: Book Review', *Landscape Review*, 16/1, 2015, pp. 76–78. Christine Phillips, 'Experiencing Constructed Landscapes: the Use of Autoethnography in the Practice of Architectural History', in Antony Moulis and Deborah van der Plaat (eds.), *Audience: Proceedings of the XXVIIIth International Conference of the Society of Architectural Historians, Australia and New Zealand*, (Brisbane, Australia, 2011), pp. 1–17.

[20] Simon Swaffield and M. Elen Deming, 'Research Strategies in Landscape Architecture: Mapping the Terrain', *Journal of Landscape Architecture,* 6/1, 2011, pp. 34–45.

[21] As a garden designer and scholar, my predisposition towards the transformative capacities of gardens and landscapes is clearly keenly honed and primed beyond that of a non-specialist visitor. However, any implication that the relevance of my perceptions is likely to be restricted to a select group of suitably schooled garden- or art-philes underestimates the capacity of the general public to assimilate spatial experiences, even if they remain unconscious or unexpressed.

[22] Gaston Bachelard, *The Poetics of Space* (Boston: Beacon Press, 1964), p. 185.

[23] Yi-Fu Tuan, *Space and Place* (Minneapolis: University of Minnesota Press, 1977), p. 56.

[24] Ibid., p. 36.

[25] Gilles Deleuze and Felix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia* (Minneapolis, MN: University of Minnesota Press, 1987).

[26] Latin root, *pæninsula*, also literally means "almost an island."

[27] The insubordinate sailing master Selkirk was marooned by Captain Thomas Stradling on the South Pacific island of Más a Tierra, which was later renamed Robinson Crusoe Island after Daniel Defoe's novel.

[28] Kevin Lynch, *The Image of the City* (Cambridge MA: MIT Press, 1960), p. 9.

[29] Benjamin on discovering the city:

> 'One only knows a spot once one has experienced it in as many dimensions as possible. You have to have approached a place from all four cardinal points if you want to take it in, and what's more, you also have to have left it from all these points. Otherwise it will quite unexpectedly cross your path three or four times before you are prepared to discover it…'

Walter Benjamin, *Moscow Diary* (Cambridge MA: Harvard University Press, c1986), p. 25.

[30] Captain Roald Amundsen, The South Pole: An Account of the Norwegian Antarctic Expedition in the Fram, 1910-1912 (New York: Cooper Square Press), p. 120.

[31] Edmond Jabés, *A Foreigner Carrying in the Crook of His Arm a Tiny Book* (Middletown CT: Wesleyan University Press, 1993), p. 19.

[32] Yi-Fu Tuan, 'Desert and Ice; Ambivalent Aesthetics', in Salim Kemal and Ivan Gaskell (eds), *Landscape, Natural Beauty and the Arts* (Cambridge MA: Cambridge University Press, 1993), p. 155.

[33] Yi-Fu Tuan, *Space and Place* (Minneapolis: University of Minnesota Press, 1977), p. 54.

[34] Edmond Jabés, *The book of Margins* (Chicago IL: The University of Chicago Press), p. xvi.

[35] Walter Benjamin, 'The Paris of the Second Empire in Baudelaire', in Howard Eil and Michael W. Jennings (eds), *Walter Benjamin: Selected Writings Vol 4. 1938–40*, pp. 3–92 (Cambridge MA: Harvard University Press, 2006), p. 23.

[36] Jean Baudrillard, *America* (London: Verso, 1988), p. 12. I owe the connection of Jabés, Benjamin and Baudrillard to Zygmunt Bauman, 'Desert Spectacular', in Kieth Tester (ed.), *The Flâneur* (London: Routledge), pp. 138–157.

[37] Patrick Foo, William H. Warren, Andrew Duchon and Michael J. Tarr, 'Do Humans Integrate Routes Into a Cognitive Map? Map- Versus Landmark-Based Navigation of Novel Shortcuts', *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 31/2, 2005, pp. 195–215.

[38] See: Gary Shapiro, *Earthwards: Robert Smithson and Art after Babel* (Berkeley CA: University of California Press, 1995).

[39] *Endorheic* basins are internally draining landforms that offer no outflow, with collected water typically evaporating to leave salt deposits.

[40] James Graham Ballard. 'Robert Smithson as Cargo Cultist', in Robert and Brian Conley and Joe Amrhein (eds.), *Robert Smithson: a Collection of Writings on Robert Smithson on the Occasion of the Installation of Dead Tree at Pierogi 2000* (New York: Pierogi Gallery, 1997).

[41] Black Rock Desert, Nevada, is the setting for the annual Burning Man festival.

[42] Penelope Reed Doob, The Idea of the Labyrinth; From Classical Antiquity Through the Middle Ages (Ithaca NY: Cornell University Press, 1990), p. 41.

[43] Edward S. Casey, *Getting Back into Place* (Bloomington IN: Indiana University Press, 1993), p. 214.

[44] Search and rescue organizations have reported a recent trend whereby lost people counter intuitively head *uphill* to seek mobile (cellular) phone reception. See: Bradford McKee, 'What Would Joachim Do?: What the Science of Lost Person Behavior Means for Public Space', *Landscape Architecture Magazine* 105/4, 2015, pp. 32–34.

[45] Daniel R. Montello and David S. Lemberg, 'The Minotaur's Revenge: Geographic Disorientation in Caves', paper presented at the *International Conference on Spatial Analysis in Environment-Behavior Studies* (Eindhoven, The Netherlands, 1995).

[46] Martin A. Peacock, 'The Modoc Lava Field, Northern California', *Geographical Review* 21/2, 1931, pp. 259–275.

[47] James J. Gibson, *The Ecological Approach to Visual Perception* (Hillsdale NJ: Lawrence Erlbaum Associates, 1986), p. 164.

[48] Japan National Tourist Organization, *Site of Reversible Destiny* (JNTO, 2008), visitor's pamphlet available in hard copy from Yoro Park field office.

[49] Ibid.

[50] Michael Govan, 'Introduction', in Shusaku Arakawa and Madeline Gins (eds.), *Reversible Destiny* (New York: Guggenheim, 1997).

[51] Shusaku Arakawa and Madeline Gins, 'Gifu – Critical Resemblance House and Elliptical Field', *Architectural Design Profile*, 121, 1996, pp. 27–34.

[52] Shusaku Arakawa and Madeline Gins, *Architecture: Sites of Reversible Destiny* (London: Academy Editions, 1994).

[53] Shusaku Arakawa and Madeline Gins, 'Gifu – Critical Resemblance House and Elliptical Field', *Architectural Design Profile*, 121, 1996, pp. 27–34.

[54] The 'black room' refers to psychological research in the 1960s that examined the effects of sensory deprivation on volunteer subjects under controlled conditions. With the aim of remaining as long as possible, participants were seated on a comfortable chair inside a totally dark and sound proofed room and were fed a 'ration' of sensory input at progressively declining intervals. After sleeping off the first ten hours or so subjects were faced with the stark reality of rampant self-referential brain activity. Hitting the release button commonly revealed spatial and temporal disorientation. With too much time to think, some participants conjured elaborate tales for why they had to get out. In stripping back everything until it reaches the insensate, the black room goes beyond the labyrinth; it is a machine without output. See: Jack A. Vernon, *Inside the Black Room* (London: Souvenir Press, 1965).

[55] Plato describes the fate of prisoners, who, having never left a cave, can only comprehend the outside world from which they are forbidden through the shadows cast onto the walls. It is an allegory for our own entrapment within a cave of sensory ignorance, mistaking the shadow for the real. The Philosopher's task, argues Plato, is to lead us from this darkness and into the illumination of truth and reason. See: Nick Huggett (ed.), *Space from Zeno to Einstein; Classic Readings with a Contemporary Commentary* (Cambridge MA: MIT Press, 1999), p. 4.

[56] Roberto Casati and Achille C. Varzi, *Holes and Other Superficialities* (Cambridge MA: MIT Press, 1994), p. 174.

[57] Kevin Lynch, *The Image of the City* (Cambridge MA: MIT Press, 1960), p. 57.

[58] Lisa Fittko, *Escape Through the Pyrenees* (Evanston, IL: Northwestern University Press, 2000).

[59] Etched onto the glass in four languages, the complete quote is sourced from Walter Benjamin's unpublished notes from around the time of his death:

> 'It is more arduous to honour the memory of the nameless than that of the renowned. Historical construction is devoted to the memory of the nameless'.

[60] Lassus's *Well* concepts from the 1970s comprise a deep vertical shaft into which stones could be thrown to infinity. Lassus's speculations explored the psychological space of depth; not in terms of the abyss that reveals the feared absence of foundations, but rather, as a refuge for the imagination in a world without uncharted spaces for the mind. As a counterbalance to our conquering of 'immeasurable verticals' of outer space, Lassus invests poetically in the depths beneath out feet, which are also 'immeasurable, vertical and obscure'. See: Stephen Bann, introduction and translation, 'The landscape approach of Bernard Lassus', *Journal of*

Garden History, 3/2, 1983, pp. 79–107. Bernard Lassus. *The Landscape Approach* (Philadelphia: University of Pennsylvania Press, 1998).

[61] See: Corinne Diserens, *Gordon Matta-Clark* (London: Phaidon Press, 2006).

[62] In a memorable passage, Benjamin reflects on a painting by Paul Klee:

> 'A Klee painting named 'Angelus Novus' shows an angel looking as though he is about to move away from something he is fixedly contemplating. His eyes are staring, his mouth is open, his wings are spread. This is how one pictures the angel of history. His face is turned toward the past. Where we perceive a chain of events, he sees one single catastrophe which keeps piling wreckage upon wreckage and hurls it in front of his feet. The angel would like to stay, awaken the dead, and make whole what has been smashed. But a storm is blowing from paradise; it has got caught in his wings with such violence that the angel can no longer close them. This storm irresistibly propels him into the future to which his back is turned, while the pile of debris before him grows skyward. This storm is what we call progress'.

Walter Benjamin, *Illuminations: Essays and Reflections* (New York: Schoken Books, 1968), pp. 257–258.

[63] Walter Benjamin, Rolf Tiedemann (ed.), Howard Eiland and Kevin McLaughlin (Translators), *The Arcades Project* (New York: Belknap Press, 2002).

[64] See: M. Jeffrey Hardwick, *Mall Maker: Victor Gruen, Architect of an American Dream* (Philadelphia PA: University of Pennsylvania Press, 2010).

[65] See: Donald Appleyard, 'Understanding Professional Media: Issues, Theory, and a Research Agenda', in Irwin Altman and Joachim F. Wohlwill (eds.), *Human Behavior and Environment* (New York: Plenum Press, 1977), p. 58.

[66] Walter Benjamin, Rolf Tiedemann (ed.), Howard Eiland and Kevin McLaughlin (Translators), *The Arcades Project* (New York: Belknap Press, 2002).

[67] The geometries of gardens historically anticipated the layouts of cities, while the garden in its purest Western form harbors the memory of a (lost) city (Paradise). See: Bernard Tschumi, 'The pleasure of architecture', *Architectural Design* 47/ 3, 1977, pp. 214–218.

[68] Kevin Lynch, *The Image of the City* (Cambridge MA: MIT Press, 1960), p. 11.