

COVER THE SPREAD

RESILIENCE AND A SURREPTITIOUS DISPERSION SYSTEM
FOR URBAN FLORA.

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Abstract

Cover the Spread is a series of kinetic vehicles constructed from found materials, each designed to be interactive and transport a living plant. The work is meant as a personal, lo-fi hack of the city, infilling plant life into small fractures in the urban environment. The plants chosen for this project are locally foraged varieties of Asteraceae which utilize wind driven seed dispersal, require little soil or care to thrive, and are able to germinate in small verge habitats. Vehicle movement triggers the broadcast of plant seeds to random, unutilized public spaces. Spreading resilience through the growth of small, unobtrusive plants transforms idle sidewalk cracks into temporary sites of change and micro-sequestration of carbon. The exhibition encouraged activation of the machines and the plants they carried, both inside and outside of the gallery.

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Chapter 1. Introduction



Figure 1. *Coaster Car*. Installation Detail.

“Nature is no longer a setting, but the subject” (Solnit p.92)

Humans and the ecology in which we exist are interdependent systems. We live in a natural world that has been shaped by a myriad of human and social decisions on the environment. Likewise culture constantly develops in response to nature. This has created a feedback loop throughout time that has rendered a clear intersection between the two indistinguishable. Nature is a construct of both our ideas of it and its actual essence. Human actions are manifesting notably deleterious effects on the biosphere, and the interpretation of feedbacks within these relationships ever more crucially underpins long-term resilience and well being.

We are currently responding to ecological issues with fractured and myopic approaches. Increasing population and urbanization is further altering the relationships between people and nature. We swim in a giant sand sculpture we call a beach and fail to think of trees every time we pen a note or discard a cereal box. We have modified our food chain at virtually every level, to boost yield and lower the costs, while large stores isolate us from modes of growth and production. Long distribution chains and individual packaging sanitize our experience and create waste. Consumption and extraction of resources are manifesting a significant toll on the organisms of the planet. We are expending tremendous resources on retrospect efforts to save species whose existence is only marginally possible given our transformations to the biosphere as we mediate their demise. Human-made disasters are now capable of severely

debilitating ecosystems on a global scale, irrespective of political boundaries. Events such as Fukushima loom as oppressive rejoinders to our complacency and progress. Environmental change in our era is both compounding and massive.

Individual agency is diminutive in the now, and yet chaos theory tells us that seemingly insignificant actions can act as triggers. Indeed, all actions bear some influence upon the constant changes that become the status quo from which further change progresses. This is the contemporaneous undercurrent within which I made this work. This project is meant as a series of human mediated actions, absurd and insignificant, to infill the fractures in the city.

Through the dispersal of the seeds of small, relatively unobtrusive plant life in sidewalk cracks and other verge habitats, idle public spaces become micro-sinks for carbon sequestration. The project examines resilience as a metaphor by spreading seeds and disseminating surreptitious temporary gardens of a resilient, useful plant that is largely undervalued.



Figure 2. *Cover the Spread*. Installation Interaction Sequence.

Resilient species such as weeds have the potential to serve as an antidote as well as a disruption within ecosystems. We are at a point in human history where misguided attempts to maintain the status quo, when in reality no such stability has ever existed, must compromise with the new ecology. The environment, as well as the policies and attitudes that affect it, exist within an historical context. Examination of precedent is a prudent approach, although adaptation is slow and change is gradual. As humanity careens towards major

shifts in our ecosystem, we are reticent to take a more integrated look at what is actually a new paradigm, and what is capable of thriving within a rapidly shifting environment. Plants have the capacity to sequester carbon in the soil with minimal negative effects for the other planetary fauna, notably humans. The thesis is photosynthesis.

Cover the Spread is an exhibition and performative actions with a series of kinetic vehicles constructed from found materials, each designed to be interactive and transport a living plant. The plants chosen for this project are locally foraged varieties of Asteraceae that utilize wind driven seed dispersal, similar to a dandelion. The project and exhibition garden is comprised of foraged *Youngia japonica* plants, with low

edible leaves and a tall stalk of delicate yellow flowers that turn to a small white ball of seeds. The plants require little soil or care to thrive, and are able to germinate in small habitats. This work is meant as a personal, lo-fi hack of the city,

broadcasting plant life into verge habitats in the urban environment. Growing small, unobtrusive plants

transforms idle sidewalk cracks into dynamic temporary sites of change. The exhibition encouraged interaction with the machines and the plants they carried, both inside and outside of the gallery.

Within the gallery, a wooden structure mimicking an amusement park invited a visual and physical interaction. A central rollercoaster track descended from the meeting point of a pair of staircases. A modular garden comprised of 120 plants in individual containers in welded steel stands stood along each side



Figure 3. *Cover the Spread*. Installation Interaction Sequence.

of the track. Each container was thermoformed from clear acrylic plexiglass to hold a single plant and fit into the various vehicles. The shiny clear bubbles are lined up like small prizes. The gravity and interaction of the coaster on the track broadcast seeds to the garden below. Opposite the rollercoaster structure was a semi-circular wooden platform cut and assembled from scrap lumber in a pattern reminiscent of traditional boardwalk decks. On the platform were 5 small vehicles on chain leads, created at a scale that mimics pull toys and pets. Visitors could interact with the work by launching the coaster, or take a plant out for a walk by choosing a plant and a vehicle to tote it. The vehicles each have offset wheels and axles that facilitate irregular motion, and even crash with human movements and variations in speed and surface. People that engage with the plants also attract and shed seeds on their clothing along their subsequent paths. These actions can trigger the broadcast of the plant's seeds to random, unutilized public spaces as the plants and people move about.

Walks with the vehicles were taken at multiple locations both on and off campus.

Each of us delineates our own margins of comfort within the world. We relate to flora in often-unconscious ways. Cultivating is a way in which we seek nature, yet we manipulate it. This contact with plants is foundational to our notions of nature, and the lens through which we understand a wide variety of concepts: beauty, flavor, health, amusement, shelter, and even danger. How we see ourselves, and our immediate environment, what is cultivated and what is

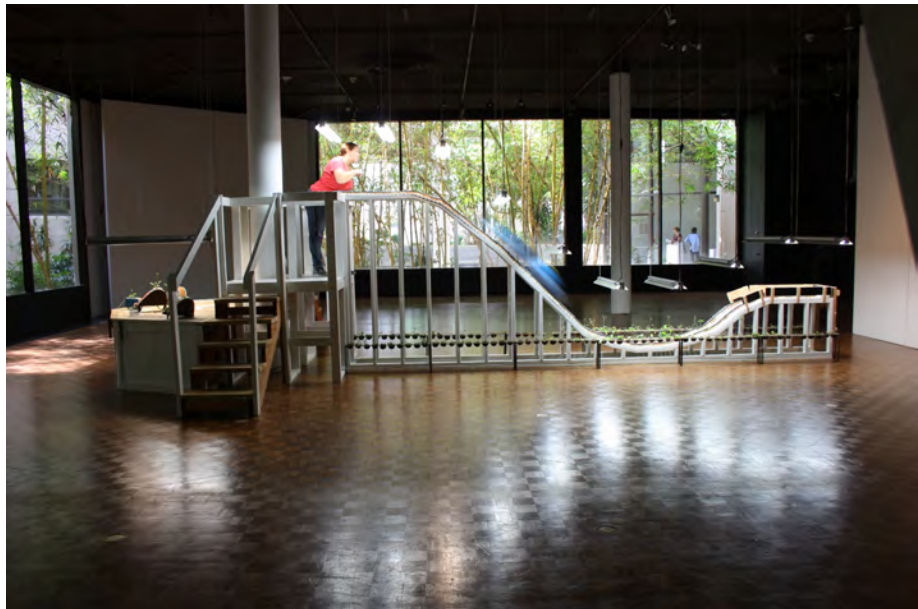


Figure 4. *Cover the Spread*. Installation Interaction Sequence.

wild, is a matter of one's point of view. Yet, we all interface with 'gardens' daily, from the horticulture we consume to the liltling houseplant we forget to water.

Cover the Spread explores a fragment of this place where nature and culture coevolve. Through this project, I sought to facilitate a catalyzation and alteration of the norms of engagement and action within public places. I have gained a greater understanding of the relationships, boundaries and responses to the environment embedded within the social framework. My hope is that through kinetic play, the project engages a familiarity with local habitats and flora, and thus examines considerations of beauty, adaptation, cultivation, resilience, belonging, change, and the environment.

In the garden, weeds are a metaphor for both life and artistic practice: they are really good at hiding in the open, they inosculate, their ideas are always spreading, they thrive wherever, they make their own sustenance, they make the world better for the next inhabitants, they send out a gazillion seeds, and reincarnate frequently in unexpected places.¹



Figure 5. *Cover the Spread*. Installation Interaction Sequence.

¹ Adapted from the prose of Nance Klehm. An interview with Nance Klehm. *Journal for the New*

Chapter 2. Walking & Weeds



Figure 6. *Verge Line.*

As my work often does, the inspiration for this project began on a walk. Sometimes, I walk simply to see. Walking offers a unique perspective on one's habitat and the range of human movement. The landscape and the growing things around us aren't static; they change at a pace that usually escapes our notice. Our attention seems inversely proportional to speed. Walks along known pathways foster a familiarity, a type of pattern recognition. In this sense change emerges as an outlier, prompting novel glimpses within the routine. Walking reframes the view; different things are more readily noticeable at one's own pace.

To make walking into an investigation, a ritual, a meditation, is a special subset of walking, physiologically like and philosophically unlike the way the mail carrier brings the mail and the office worker reaches the train. Which is to say that the subject of walking is in some sense, about how we invest universal acts with particular meanings. Like eating or breathing, it can be invested with wildly different cultural meanings, from the erotic to the spiritual, from the revolutionary to the artistic. Here this history begins to become part of the history of the imagination and the culture, of what kind of pleasure, freedom and meaning are pursued at different times by different kinds of walks and walkers. That imagination has both shaped and been shaped by the spaces it passes through...
(Solnit p.3-4)

I began to notice things growing in improbable habitats. Plants growing in cracks, gutters, or tree hollows; I pass a flowering vine growing out of a street sign pole and my feet graze clusters of green seedlings packing the gaps where the asphalt road meets the concrete sidewalk. I see the busted remains of a plastic pot ring a tree, growing stout into an improbable but sufficiently hospitable crack in the hardscape corner of a restaurant parking lot.

Superimposed on the urban environment I encountered out walking, patterns of resilience caught my attention. The cracks, corners, and edges of human efforts sprout weeds as ephemeral odes to the wild will of things to persist. Space is precious in the densely populated city, yet the cumulative potential of these micro sites to support botanical growth and photosynthesis is notable. The shadow garden of the metropolis is opportunistic and temporary, and yet, a substantial alternative ecology can and does subsist on the verge.



Figure 7. *Inosculated tree in the hardscape.*

Sprawl and large-scale deforestation have accelerated global environmental disruption. Photosynthesis may be one of the best options to capture and sink carbon and positively affect climate change. Planting and growing things is one of the actions available to individuals.

If humanity is to avoid a future in which the deadly heat waves, floods, and droughts of recent years become normal, we must lower the existing level of carbon dioxide in the atmosphere. To be sure, reducing additional annual emissions and adapting to climate change must remain vital priorities, but the extraction of carbon dioxide from the atmosphere has now become an urgent necessity. Under this new paradigm, one of the most promising means of extracting atmospheric carbon dioxide is also one of the most common processes on Earth: photosynthesis...This approach would take advantage of a physical reality often overlooked in climate policy discussions: the capacity of the Earth's plants and soils to serve as a climate "sink," absorbing carbon that otherwise would be released into the atmosphere and accelerate global warming...the Earth's plants and soils already hold three times as much carbon as the atmosphere does, and scientists believe that they could hold a great deal more without upsetting the balance of natural systems.²

The city dweller may lack the ownership of sufficient land on which to plant a tree, but through both active and passive engagements within their local ecosystem, small actions inserted into daily routines can help propagate surreptitious micro gardens. The flora requires little investment, no ongoing commitment. The plants can infill the untidy fascia that overlays our neighborhoods. There is little detriment, waste or lost in its demise. Alternate ecologies and verge habitats within the city have the potential to return a small portion of urban hardscapes into a distributed and disruptable network of green space.

² Hertsgaard, Mark. *Could Photosynthesis Be Our Best Defense Against Climate Change?* Posted Jul. 19, 2013. <http://www.motherjones.com/environment/2013/07/photosynthesis-biochar-climate-change?page=2> Accessed 7/2013

A new consciousness, galvanized by the end of nature as a separate category, compels design vocabularies dedicated to context production – the formation of topological structures or design patterns that define a project through its network of relations. Recombinant design provide new programming approaches to core environmental problems in context-production collectively yielding an ecology of the city. (Parr p.66)

Small, personalized DIY actions are well suited to environmental activism in the here and now. Three quarters of American adults self identify as environmentalists.³ The majority of people have at least a small degree of understanding as to the downside of environmental degradation, but the potential outcome is overwhelming.

Today every new glimpse of reality, every new understanding of connectedness, all further information which we take in, is accompanied by the fear that further knowledge could mean further knowledge of deterioration. (Thurmer-Rohr p.20)

Missing in the motivation of individual action towards environmental change is both agency and joy. By and large, “green” actions available to individuals are punitive and require uncompensated effort and drudgery. Turn off, turn down, conserve, reduce, reuse, recycle.



Figure 8. *Warning...Recyclable. Vivarium.*

³ “Three-quarters of adult Americans have identified themselves in Gallup polls as environmentalists.” (Moran. p.37)

In the daily calculations of people's lives, the payoff for engaging in environmental action is murky and extraneous of the present. Even persistence in such individual efforts is unlikely to spur tangible benefits. Personal deeds seem trivial contrasted against the supersized mechanisms of global business, the purchased inertia that is politics, and the metabolism that underlies all large-scale decision making in the modern era.

*The evidence for human-caused climate disruption is increasingly clear. The magnitude of future disruption is a matter of scientific debate. But when the stakes are high, uncertainty is not a good justification for complacency. Which explains the existence of the insurance industry. The main problem in dealing with climate change is not scientific uncertainty. It is the inability of political systems to deal with a certain type of risk and reward.*⁴

Meaningful action on climate change involves a calculated series of choices interacting on a multitude of scales: microscopic, personal, communal and global. A disconnect from the ecology of our lives and our habitats is the reality for much of the population. Instincts and knowledge honed by interaction with the natural world are dulled by our daily experiences in mediated indoor climates and concrete outdoor hardscapes. As demographics show a swift rise in urban populations,⁵ we are disengaging from our relationship with the land as well as the array of organisms that have made their way alongside of us.

⁴ Gerson, Michael. *Politics is poorly suited to address global warming*. The Washington Post, Published 10/10/2013. http://www.washingtonpost.com/opinions/michael-gerson-politics-is-poorly-suited-to-respond-to-climate-change/2013/10/10/870c1138-31d0-11e3-9c68-1cf643210300_story.html Accessed 10/2013

⁵ "In 2008, the world reaches an invisible but momentous milestone: For the first time in history, more than half its human population, 3.3 billion people, will be living in urban areas. By 2030, this is expected to swell to almost 5 billion...While the world's urban population grew very rapidly (from 220 million to 2.8 billion) over the 20th century, the next few decades will see an unprecedented scale of urban growth in the developing world. This will be particularly notable in Africa and Asia where the urban population will double between 2000 and 2030: That is, the accumulated urban growth of these two regions during the whole span of history will be duplicated in a single generation." UNFPA, *State of the World Population 2007*. <https://www.unfpa.org/swp/2007/english/introduction.html> Accessed 4/2014.

Chapter 3. Interventions & Interlopers



Figure 9. *Collected Seeds.*

What is a “weed” but a cultural designation for something uncultivated, sprouting uninvited? Much like domesticated animals, pets and other creatures; weeds are a product of people, a co-evolutionary companion to our agriculture and entropy. Weeds are bound to people.

...weeds are not superplants: they don't grow everywhere, which explains why, for all their vigor, they haven't covered the globe entirely...They grow where we live, in other words, and hardly anywhere else. Weeds, contrary to what the romantics assumed, are not wild. They are as much a product of cultivation as the hybrid tea rose, or Thoreau's bean plants...weeds have evolved with just one end in view: the ability to thrive in ground that man has disturbed. (Pollan p.109)

Humans and animals walking and moving through a habitat are vectors of plant dispersal. It could be argued that the true adaptation of any weed is that it follows people. Disturbed sites, human-made landscapes and the verges in between, weeds tend to thrive where people aggregate.

The abundances of most plant species are broadly predictable from the extent of their habitats. Many common plants are ruderals or competitors exploiting habitats in agricultural, industrial or urban areas, whereas a high proportion of rare species are stress-tolerators occupying small parcels of land in more ancient parts of the landscape. (Carrier p. 218-219)

The more common something is, the less valuable it is in the grand scheme of things. However, the flipside is that with regard to many weeds, commonness belies a tendency for resilience. Resilience is a skill, learned and evolved. Unsurprisingly, such plants, ephemeral and opportunistic, are viewed as somewhat disposable. In this alternative ecosystem, plants that by and large escape notice and hide in plain sight, can occupy serendipitous niches in the landscape.

For this project, I chose a plant, *Youngia japonica* (Asiatic False Hawksbeard) that rides the edge between weed and cultivar. A member of the Asteraceae family, it is a petite yellow flowering plant that is endemic to tropical climates and found throughout all Hawaiian Islands, Guam, the Mariana Islands, Micronesia and the Western Pacific as well as the Gulf States on the mainland.



Figure 10. *Container Garden*. Installation Detail.

Here it is considered naturalized although non-native. It has perhaps had a few hundred generations here and variations of flower size and leaf characteristics were observed within the campus populations of the plant I interacted with over the course of the researching and tending the plants.

Youngia japonica (Asiatic False Hawksbeard or Oriental Hawksweed) is classified as an annual herb and has a long history in traditional medicine. It is used as an anti-viral, anti-bacterial and anti-inflammatory when extracted in a tincture - both topically and internally. The leaves are edible although slightly bitter, similar in both appearance and taste to dandelion greens and arugula. The plant behaves as a weed and is considered a nuisance in that its seeds are capable of spreading via wind and animal carriers to uncultivated reproduction, and this characteristic can overshadow its other utility.

The plant has a small root system relative to the overall size of the plant itself. The leaves stay close to the ground and the flower stalk rises high above the plant, which sways and enables seed dispersion. It favors growing in disturbed and marginal habitats such as roadsides and sidewalks and they are able to survive in minimal and poor soil conditions and without human intervention. However, they rarely germinate in established or crowded landscapes and are most likely to take root in rocky areas and uncongested landscapes. Although climate and soils have played a historical role in controlling the identity and abundance of plant species, current changes in land use have now become the dominant controllers of rarity and abundance.

...the results of such investigations show that a high proportion of most seed populations are dispersed only very short distances and indicate that many critical long distance colonisations depend on rare events...

(Grime p.160)

The plant is relatively petite and is not excessively competitive or capable of overtaking established larger native plants.⁶ It thrives mainly because of the

⁶ "As Rabinowitz et al. (1984) have suggested, sparse, but better competitors cannot overtake more common plants because disturbance may set back interactions." (Bock and Linhart, p.440)

sheer numbers of seeds it is capable of producing and their ability to become windborne and migrate.

The notions of low valuation and disposability contributed to the concept of this work. A plant that isn't valuable could be easily appropriated for the project. It could be found in multiple places on campus and foraged in quantity, with little notice or harm. In a subtle adoption of underutilized public space and resources, the plants were encouraged to grow in sites where they were found. It was a regular practice to walk by the sites of these populations and "help" distribute the seeds nearby. The plants for the exhibition were then foraged from those sites. The sites were frequently interacted with and periodically received the destructive attention of the gardening staff.



Figure 11. *The Plant Coaster in Motion*. Installation Detail.

A plant that is walked on, mowed, and inhabits temporary or volatile locations, can be expected to be itself. In this case, the disturbances in the gallery: vehicles overturning, the coaster derailing, light, water, and stress, all conflated as a system to which the plants reacted. In ways, the actions of the plant machines mimicked the instabilities and various trajectories that are common in the plant's urban habitats. A gravity powered coaster or winds will both dislodge seeds from the plants. In either case, another generation is sent scouting for a chance encounter with a hospitable site to grow. Whether stepped on along a pathway or thrown from a plant roller coaster, some poor outcomes were similar as well. However, most of the plants did what plants do in their lifecycle; they thrived or not. They responded, they flowered and they produced seeds. Several containers generated additional sprouts in the duration of the exhibition.

Chapter 4. Cultivation & Change



Figure 12. *Youngia japonica* flower.

Organisms adapt and this is true of both things cultivated and those who cultivate them. Cultivation is a collaboration with a living thing. It is a relationship among people, plants and elements such as light, soil, water, etc. Rules are fluid in such relationships. Change is constant and influenced by external inputs as variable as weather, animals and insects. However, the gardeners and their landscapes both respond as they will, crossing to a state that is predicated on each other's adaptations, another iteration. Gardens and art practice conflate nicely along such ideas.

Any kind of reality is an observed reality. There is no unconditional access to reality. Whatever we believe to be reality is already shaped by our perception and interpretation – knowledge, ideas, concepts, theories, emotions and explanations – which are culturally defined, historically changeable and selective. This also goes for the perception and interpretation of nature or of the relationships between people and nature. (Littig p. 39)

There exists a connection between makers and cultivators, as both curate and transform resources. The garden has a long history of personal and civil expression. Gardening is like earthworks and landscape painting. The garden offers feedback in the form of nourishment, shelter, resource and aesthetic pleasure. To create involves gathering, forming, and observation. The garden, like any other material, is 'ground' for ideas, knowledge and invention.



Figure 13. *Garden Contained, Garden Mobile*. Installation Detail.

The exhibition garden had each plant in a clear container, slightly elevated in steel stands laid in a row. They were individuals now, no longer a patch. The needs, responses, and aesthetic qualities of each plant were now apparent and autonomous, endowing each with a personality. The living garden evokes human responses. Anecdotally, I had assumed it would be the more charismatic flowering plants that would always be chosen. However people often chose the weak or stressed plants to interact with. Maybe there was the underlying notion of wanting to fix the plant, get it out long enough for a little sunlight and water. To intervene on its behalf. Play is another motivation of engagement. It can take the form of meaningful experience, or an irreverent play undertaken for play sake, regardless of outcomes.

Sometimes, games just seem unwinnable. Turns out, that helps explain why we keep playing them and try so hard to win.

“With these types of games — and with most addictive games — as we play them, we’re trying to fix something,” said Ian Bogost, a video game designer, critic and professor of interactive computing at Georgia Institute of Technology. “We’re saying to ourselves: ‘If I can just get this bird past these pipes, I’ll fix it. I’ll save that little bird, and everything will be O.K. in the world.’ ”

If only life were that simple. Mr. Bogost said game-makers capitalize on our desire to “fix it” by offering us ways to buy ourselves out of seemingly intractable problems...We know the odds are against us, but we play anyway.⁷

Gardening, not unlike game playing or making, is essentially working out a set of relationships. It is deciphering an individuated structure for physical interactions with the natural world. Places are shaped by a complicated mixture of adaptations and inputs. Cultivations and cultures are constantly negotiating within a dynamic process.

⁷ Bilton, Nick. *Disruptions: Using Addictive Games to Build Better Brains* The New York Times. Posted February 16, 2014. http://bits.blogs.nytimes.com/2014/02/16/disruptions-using-addictive-games-to-build-better-brains/?_php=true&_type=blogs&_r=0 Accessed 2/14.

Chapter 5. Antidotes & Absurdity



Figure 14. *Vehicles*. Installation Detail.

Increasing population and rapid urbanization is altering the relationships between people and nature. Charismatic species act as placeholders for the whole spectrum of things on the brink. The truth is, from the production of Panda pornography to the constant ‘replenishing’ of eroding beaches, humans attempt ludicrous antidotes in part, as penance for this expansion of people and change into old and wild spaces. The rapid transformation in ecological relationships is mitigated with a patchwork of interventions, both collective and individual. Regardless of intent or result, these form awkwardly fabricated feedbacks with the natural world. This project reflects such absurdity. The work takes a somewhat Rube Goldberg approach to activism. The vehicles function as an idealized and farcical bulwark against apathy as action. It is within the experience of the ridiculous contraption that play seeks to trigger engagement.

The scholarly model of understandings of the environment that concerns me reflects the growing appeal of phenomenological and bodily orientations within anthropology. The model asserts that it is people who are engaged with their surroundings in material and practical ways who have a meaningful and consequential relationship with their environs, and that over the course of human history, and especially with the rise of Modern society, this sort of engagement and relationship has faded. The result is that Modernism is the realm of the disengaged person, the flaneur, the tourist gaze. (Carrier p. 120)



Figure 15. *Teardrop Vehicle*. Installation View.

A personal, kinesthetic experience can incentivize a reconnection to the natural world and activate a further series of actions and engagement within that realm.

The accumulation of small, persistent actions can put transformative concepts within the realm of real possibility. If chaos theory holds true, small actions can indeed catalyze improbable change. As go butterfly wings, airborne seeds will follow.

Nature has no grand design for this place. An incomprehensibly various and complex set of circumstances-some of human origin, but many not-will determine the future...whatever that future turns out to be, it would not unfold in precisely the same way twice. Nature may possess certain inherent tendencies...but chance events can divert her course into an almost infinite number of different channels...even the concept of an ecosystem is only a metaphor, a human construct imposed upon a much more variable and precarious reality. (Pollan p. 183)

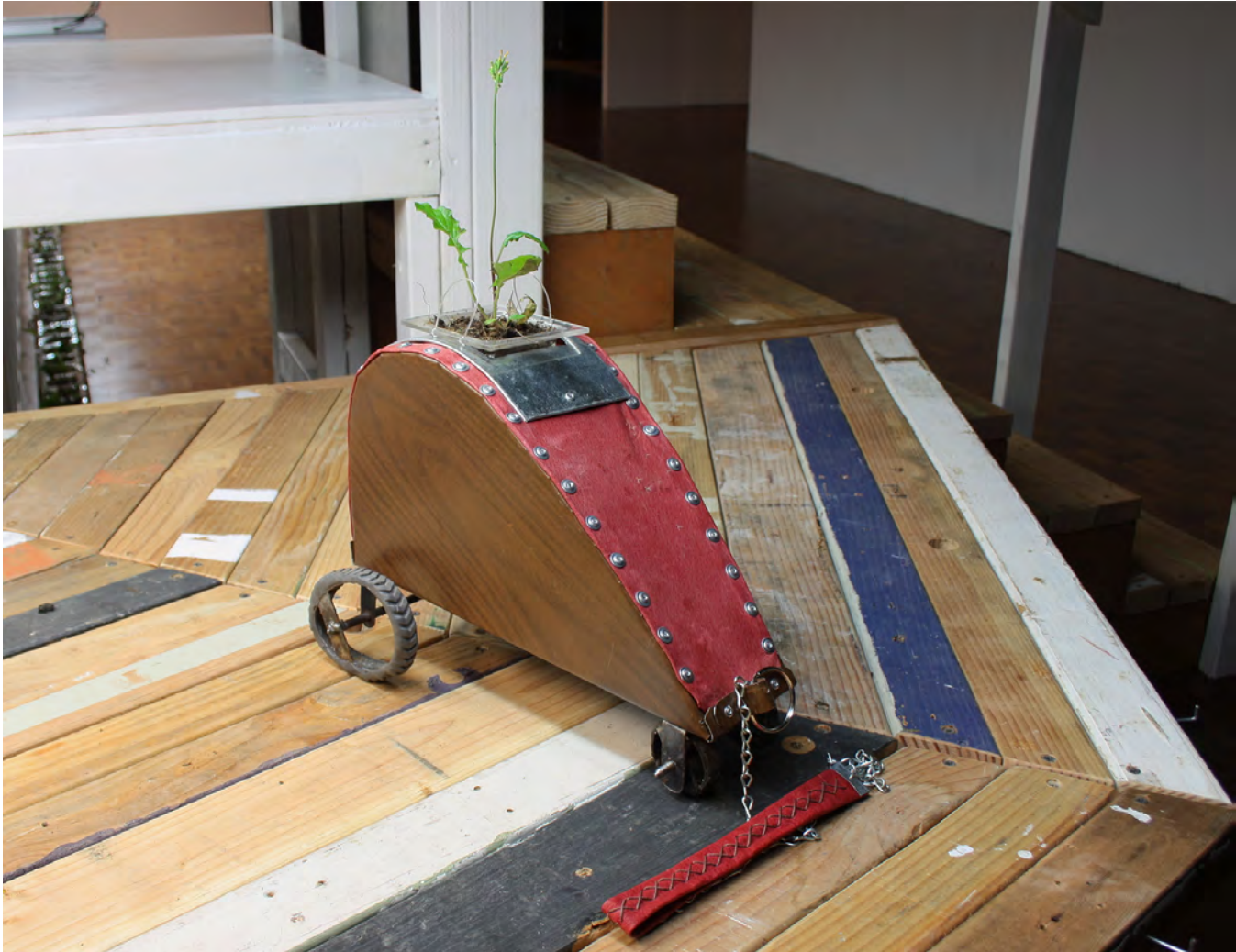


Figure 16. *Teardrop Vehicle*. Installation Detail.

Ultimately, the vehicles riff on a foundational faith that small actions have the potential to be a nucleus for substantial transformation. The enjoyment of the objects can itself be sufficient motivation for interactivity. Engagement sustains attention, which lingers as memory. Play potentially conscripts the viewer into that reality, and thus actions and consequence can unfold irrespective of the participant's interest in the eventual outcome of their individual action or the project.

Perhaps the single most important contribution from this volume is a consensual and documented recognition in all of the case studies presented here that calls into question and ultimately refutes popular

notions of a simple cause-and-effect relationship between people and their environment. The studies here reject the notion of people as either hapless victims of unstoppable forces or as inevitable destroyers of natural harmony. Instead we see repeatedly how culture intercedes in both the material and ideological connections between people and the landscapes they inhabit. Human culture invariably structures the way environmental change is perceived and acted upon in particular historical settings, and environmental conditions are increasingly managed to fit culturally structured human desires. (Fisher et al. p. 249-250)

Toting a plant that is fertile is an unruly proposition. The plant in a mobile toy acts as a permission to engage, an associative connection to the larger ecologic framework. In fact, what the ultimate momentum of such an intervention is unknowable until it happens, and perhaps even much later. The permission to interact however is not common, even in public spaces. The plants leave the gallery as potential. The dispersal system has a range and is capable of making a mark, spreading a graffiti of plant life. The familiar and personal connection to local spaces informs the walks, which in time germinates an interactive map of this collaboration with living things.

Chapter 6. Rollercoasters & Revisions



Figure 17. *Re/Pair Project, Site 3*. 2012. Detail. Recycled Paper, Baobab Tree.

Imprinting memory is an impetus of the work. Memory is a connection to latent knowledge, often stored in perspective of the events during which it forms. Significant occurrences have an oversized place within the hierarchy of memory. Ruptures of experience tend to be transformational; the feedback loop is irrevocably altered. All things are a sum of these processes.

People and organizations act with regard to their surroundings, for different reasons and in different ways. Some act to conserve aspects of those surroundings, some act to exploit them; some are concerned with nature, some with landscape, some with the built environment. But none act naively. Rather, the situations in which they have in the past lead them to understand their surroundings in the present in particular ways.
(Carrier p.3)

The project took inspiration from this idea of adaptive wayfinding, with pliability informing the process. Most of the material for the exhibition was foraged and repurposed. The practice of finding materials as well as the materials found influenced the final look and shape of the work. Rather than setting out with a rigid idea for the exhibition, the installation components were adapted to the available waste stream.

Kintsugi is the Japanese practice of visibly mending broken objects with gold. This act exposes both the fragility and resilience of an object, and is widely regarded as enhancing its value. It is a mark that remains embedded, a reiteration. In a conversation with artist Ichitaro Suzuki, he saw this as having

parallels within my work, both the thesis project and an earlier series, Re/Pair. In that work, I was experimenting with compostable graffiti, returning the paper fiber back to the trees, infilling recycled pulp into man-made scars in the trees. Bright, obvious patches in the bark scars and hollows, dyed with the urgent shades of the printed flyers posted nearby. For this project, I am infilling the cracks in the concrete with golden flowers. It is a visible mapping, infill, and repair at a different scale.

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Throughout this time I was researching the dynamics of ecological resilience and the capacity of systems to rebound. Such data is often mapped as a curve on a diagram, and a pattern of feedback loops emerges.

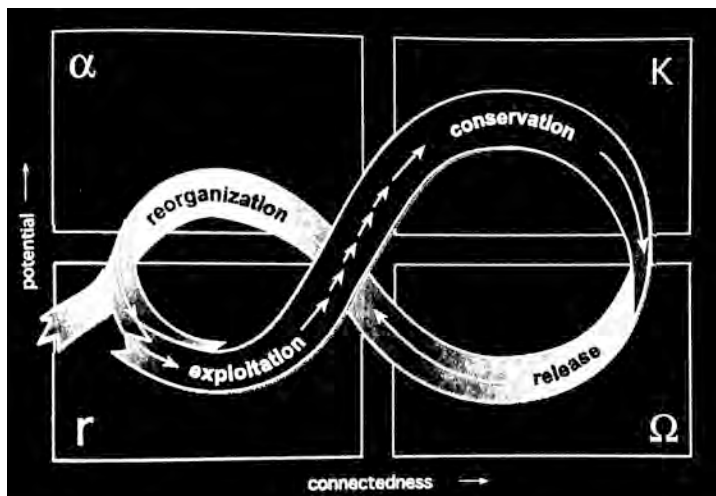


Figure 18.
Resilience Curve

A stylized representation of the four phases of an adaptive cycle as discussed by resilience theorists⁸

In their “Resilience Theory,” Gunderson and Holling (2002) conceive of socionatural systems as self-organized systems consisting of a relatively small set of essential processes that create and maintain such organizations. Many other processes can be superimposed on these, few,

⁸ Adapted from Holling and Gunderson 2002. (Fisher et al. p. 23)

essential ones, but they depend on the latter for survival. According to Holling, the trajectories of such complex systems consist of an endless reiteration, at all hierarchical levels, of a cycle that moves through four states: “exploitation or growth,” “conservation and accumulation,” “creative destruction or re-structuration” and “reorganization or renovation.” The level at which these cycles occur not only range from individual cells to the biosphere but also from the local to the global in space, and from momentary to millennial (or more) in time, and whatever the state of individual levels, there are interactions between all levels.
(Fisher et al. p.46)

It turns out; as it often does in nature, many processes when simplified, share similar patterns. A rollercoaster hill is essentially the same shape as a resilience curve. This seeded the idea for the roller coaster as a visual mnemonic metaphor of resilience.

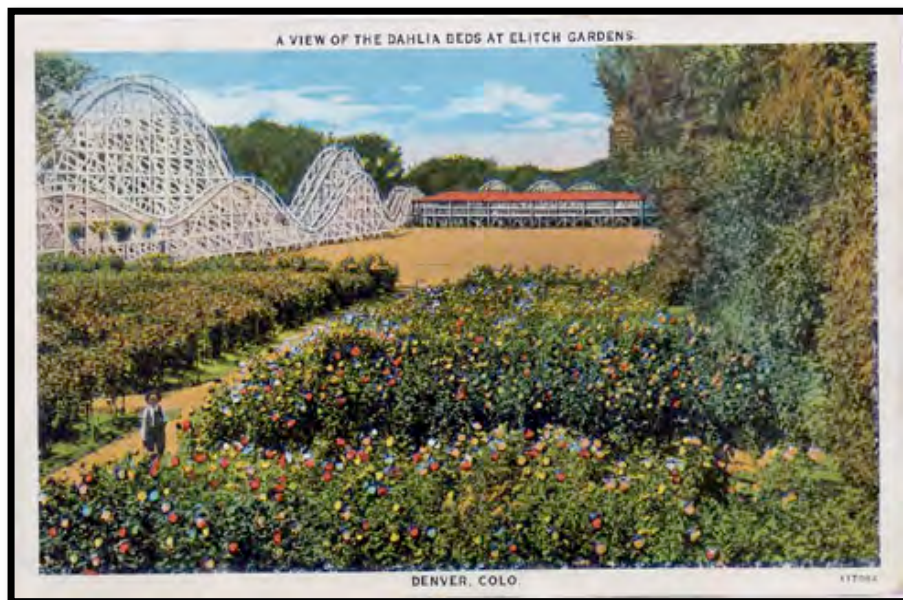


Figure 19. *Elitch Gardens Postcard*. C.1940's
Curt Teich "CT Art-Colortone" Postcard

As a child, the amusement park I went to every summer was originally a botanic garden. It added a carousel early in it's history, a Ferris Wheel and arcade followed, and later rollercoasters. Over the course of eight decades, it transformed primarily to an amusement park, however much of the underlying

gardens remained intact as part of the space. There were large trees and decorative flowerbeds interrupting the paths of pavement. This cultivated and odd hybrid space juxtaposed things in visually stunning ways: the framework of a white wooden coaster rose above a field of dahlias, a magnificent tree was covered in a colorful mosaic skin that on closer inspection is thousands of pieces of chewed gum covering every reachable surface of the trunk, goldfish were lined up in small glass bowls, and at night it all glowed in an incredibly fluorescent artifice. To say this place was a locus of memory would be an understatement.



Figure 20. *Elitch Gardens Postcard*. C.1940's
Curt Teich "CT Art-Colortone" Postcard

It was this memory that I took as inspiration for the elements of the installation. As a place, it had become a product of itself, a series of evolutionary decisions reactive to its unique nature and culture. Chaos is, at its essence, iteration. The theory is that it stresses process over product and is a dynamic interaction of multiple things. Panarchy is the oscillation between adaptation and change, the unpredictability in the pattern. A system evolves in relation to itself, sensitive to disruption, driven by its own inputs and logic. Gardens and art follow chaos. The reenactment is the revision is the repair.

Chapter 7. Materials & Metamorphosis

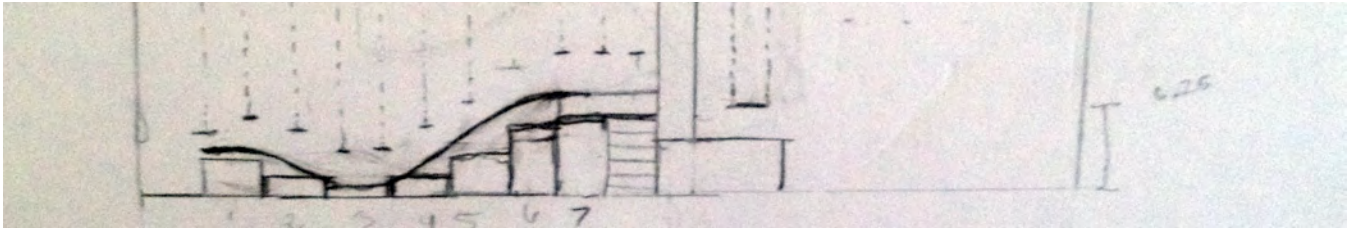


Figure 21. *Installation Sketch*. Graphite on Paper. Detail.

There now exists an overwhelming accumulation of discarded and remnant materials as well as the environmental impetus to acknowledge and utilize them. Production has far outpaced need. Found materials carry residues, intrinsic mutations and markers of their previous existence. Appropriated and revised, they denote an intersection between past and present, and in this project are incorporated as a means for reconnecting fragments of cultural memory. In my artistic practice, these residues do not materialize in a state of silence; the materials are selected because they have an intonation. Imbedded in found things are visual cues capable of mapping a narrative of temporality and existence.

Interrelating memories, beliefs and personal experiences into tableaux seemed to necessitate... foraging for minute elements with which to create a historical, temporal or spatial atmosphere. (Greenfield p.22)

A relationship is formed by the aggregation and juxtaposition of previously unconnected ideas. Playing on the prior intrinsic knowledge of both the maker and the viewer, the assemblage of found materials can stimulate a dialog of associations and function as a distillation of collective experience. The viewer's response to the work and its inherent material stimuli can be intensely personal, it can be culturally informed, or a hybridization of both.

In this project, I incorporated the aesthetics from places of otherness, and the ways we encounter and experience them. The amusement site acts as a temporary suspension of disbelief and dismissal of the quotidian. The teardrop

trailer serves as a mobilizing agent, an implicit ability to set up home wherever. Here the container garden becomes like a pet or a houseplant with nature as souvenir in shiny transparent containers. The vehicles are machines made from obsolete machines, and are themselves designed to incite regeneration and response. Intervention and time reset cycles of metamorphosis. The materials used for the installation are a like a palimpsest, both a remainder of the original resource and the substrate to direct attention to environmental concerns related to their extraction and industrialization. They bear a visual notation of displacement and a certain persistence of things, both animate and not.

The underlying concept of the project is a thread of universal existence: place, belonging, migration, beauty, resources, response, adaptation, and resilience. These are the conditions and processes to which every organism is subject. The work attempts an arousal of our individuated and imperfect familiarity with these plants and materials.

As an artist I do not try to control the experience of the viewer. I simply reveal... What I propose is that everything that takes place in that space, once I have finished the work, occurs within the viewer's own space. Each person will -or will not- approach an artwork according to his or her spirit. What the viewer might come to feel, to remember, or to comprehend, is entirely dependent on their internal code. (Salcedo. P.142)

Just as the materials function as a collaboration with past, the viewer's participation becomes layered into the work. Experiential knowledge is explored through this communality. The vehicles emerge and engage as both relic and

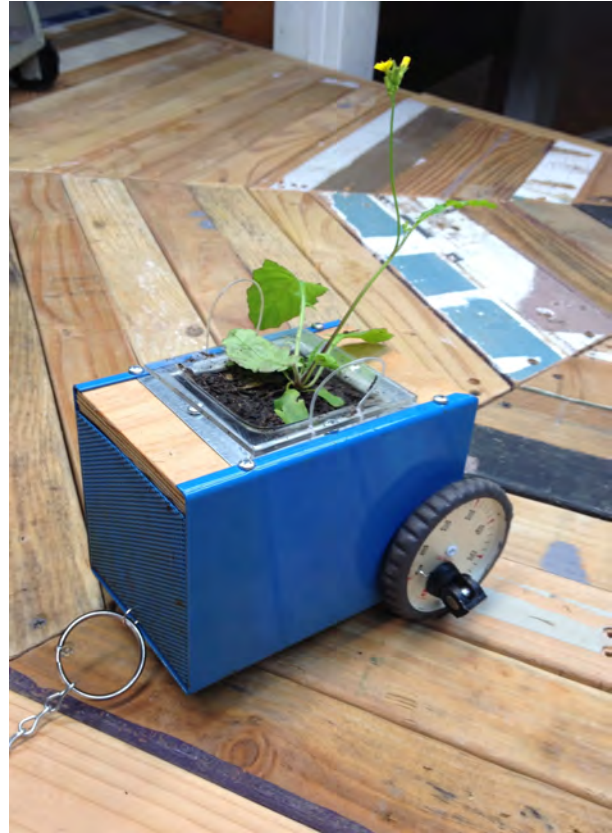


Figure 22. *Re/Machine*.
Installation Detail.

intervention. The interactions are self-delineated responses to an environment. The placement of the work in a gallery setting engages yet another set of unspecified, yet broadly understood social norms.

In ways, the installation and the vehicles made it awkward to intervene and interact. The consequence of any action was not certain. Dirt scattered about and it was evident that things did not always perform neatly. There was no apparent retrieval mechanism on the coaster and it was heavy. Launching it required deliberate action, and essentially made the actions of the piece less perpetual, and more intentional. The garden implied a promise of growth, yet the piece was designed to mimic a type of movement and displacement in nature. Paired with the expectation of restraint in a gallery setting, the irregularities and malfunctions of this unruly assemblage made for uncertainty. This discomfort is an interesting thing to emerge from my work on this project. Things don't always go according to 'plan', even when they function exactly as they should.



Figure 23. *Cover The Spread, Exit*. Installation View.

It is perhaps here that the project veers more towards nature and chaos and away from the tempered experience of theme parks and galleries. Rollercoasters offer a kind of certainty; they provide us an extraordinary experience albeit rendered safe, in a perpetual and predictable loop. In the installation, the coaster is a one-way proposition. It may rebound or crash, but it can't return without willful intervention. The action of taking the coaster back up the hill is an act of conservation, the system's potential energy is restored. The playfulness of the interaction mocks the perception of irrevocability, infusing the dialog between concept, material and viewer.

The installation garden was a living dynamic thing, and while some viewers were engaged in play, in others there was an urge to nurture, fix or tweak. There is a perceptible connection to the plants in this context. The most common conversations were about the plants themselves. Like the familiar visual language of the machines, the ubiquitous plant is also universal force to which all humans respond.

Unique issues arose installing and maintaining within a system of live and mechanical elements in the exhibition. A bent axle is not unlike a broken stem and in this case, both required replacements. Maintenance was ongoing for both the machines and the plants. The installation was never static. My interaction with the piece was an additional layer of sympathetic magic, a hopeful act not unlike the rubbing of a rabbit's foot. Watering, adjustments, walks, and reiterations were all daily performative responses to the personal diorama I had set in motion.

Chapter 8. Contemporaries & Conclusions



Figure 24. *Arrow.*

Art practice that engages activism in particular acts as a lens or focal point within society. The artist's role is to observe, point, react, and perform a tinkering of sorts. Interactivity with the public can be a catalyst for understanding, and even change. The latent effect of these actions is a form of cultural maintenance. Hélio Oiticica declared that, "*The museum is the world: daily experience.*"⁹ Beyond the white walls, interactive and performative works can be a conduit connecting popular culture to contemporaneous issues and ideas through experimentation and explorations of experience.

Francis Alÿs work takes this "*what if*" approach to point at, and play with contemporary issues through the documentation of small, presumably trivial actions. A sense of the absurd pervades the work. It engages less as seeking an answer than just seeing what happens when you, poke, roll, drizzle, push and pull things around in the public square. Often casting himself as the subject, he appears in his films as the flaneur. The actions occur as public conversations in real time as they happen. A record of them is later disseminated and viewed. His 2007 exhibition titled *Sometimes Doing Something Poetic Can Become Political, and Sometimes Doing Something Political Can Be Poetic* addresses the value of such interventions:

*The following questions appear in capital letters on one wall of the gallery:
"Can an artistic intervention truly bring about an unforeseen way of*

⁹ Oiticica, Hélio. "Position and Program," in Alberro, Alexander and Stimson, Blake eds. *Conceptual Art: A Critical Anthology* (Cambridge, Mass.: MIT Press, 1999), p. 9.

thinking? Can an absurd act provoke a transgression that makes you abandon the standard assumptions on the sources of conflict? Can those kinds of artistic acts bring about the possibility of change?” The very long title of Mr. Alÿs’s exhibition boils down to a short, provisional reply: Sometimes, maybe, yes.¹⁰

Walking as part of an ambulatory interaction began with one of his early works, *The Collector*, in which he pulled a magnetized toy dog on wheels through the streets of Mexico City accumulating debris along the way.

In so doing, he creates a story that tells itself and a witty case of hyperliteral realism. And absurdity. Alÿs has explained that as ridiculous as the townspeople considered him, they remembered his action long after it was over. Out of this was born an urban legend—he’d become part of the city...In many ways, Alÿs’s practice has become an “urbanism of the imagination,” observes curator and art historian Cuauhtémoc Medina, a close friend of the artist. “The idea is to reinvent the city on the level of stories.”¹¹

Mr. Alÿs and others set up impromptu interventions and see what happens. Engaging the Zócalo, he had become an irrevocable part of it. Couched within narrative, conceptual and aesthetic frameworks, art can work with a certain unmitigated permission to enter and alter the fringes of what ‘we all know’ and agree to be the way of things.

...it is fair to say that the boundaries between art and life continue to dissolve, now more rapidly than ever...It seems to me that though the assertion “The museum is the world” is still valid and current, the corresponding inverse is even more important: now, the world is also a museum. That is to say, in an increasingly globalized world dominated by the service economy—in which tourism and cultural activities play a key role—we are witnessing the museumification of cities. In my view, the non-

¹⁰ Cotter, Holland. Thoughtful Wanderings of a Man with a Can. New York Times. Published 3/13/07. Accessed 12/13. www.nytimes.com/2007/03/13/arts/design/13chan.html?_r=0

¹¹ MacAdam, Barbara A. *Francis Alÿs: Architect of the Absurd*. Art News. Posted 07/15/13 <http://www.artnews.com/2013/07/15/architect-of-the-absurd/> Accessed 12/13.

*places and the predominance of the spectacle in the generic contemporary city have a leveling effect and induce a kind of aphasia—the antithesis of the vacant lot pointed to by Oiticica. In contrast to the generic city, the wild terrain vague [wasteland] of the vacant lot, although barren by nature, is endowed with a latent power of transformation. ...Though obviously different from the artistic appropriation of empty city spaces imagined by Oiticica, today, the world has been appropriated, arrogated entirely by consumerism and spectacle.*¹²

Interactivity as spectacle allows for an experimental art practice that flits on the margin of larger concerns by engaging and potentially conscripting the individual. In this sense, art can be constructive as a bottom up remedy and a spark of change. Environmental art predominately engages at a local level.

Contemporary artists like Nicole Fournier, Critical Art Ensemble, Natalie Jeremijenko, and Steiner/Lenzlinger have extended the cultural role of gardens into the contemporary era. They are expanding a tradition that can be traced back to the World War I ‘Liberty Gardens’, Depression era ‘Relief Gardens’, and World War II ‘Victory Gardens’ that were all motivated by necessity. Wars, poverty, and economic depression convinced practitioners of all three kinds of gardens that grand strategic plans could neither liberate people from oppression, nor guarantee the safety and security of the populace. Because each of these historic events disrupted the production and distribution of necessities, masses of people were motivated to garden in order to ensure their own sustenance and to share scarce resources. The success of these movements demonstrates that horticultural skills were broadly disseminated throughout the population. However, the popularity of these gardening movements did not survive after World War II ended. People who were no longer “digging for victory” began to associate gardening with disagreeable reminders of

¹² Wisnik, Guilherme, Curator of the Tenth São Paulo Architecture Biennial, *Museum=World* Translated by Gillian Sneed. Posted 10/16/2013. <http://www.newmuseum.org/blog/view/museum-world> Accessed 2/2014.

*shortages, dangers, and conflicts...Toiling in the soil faded as Pop culture boomed.*¹³

Natalie Jeremejenko's practice merges the mad scientist with a Martha Stewart-esque sense of DIY. Her Environmental Health Clinic, or the dispensed 'prescriptions' as she calls them, target this notion of enabling participation and agency. They occupy a border between ludicrousness and possibility. The prescription for "No-Parks" engages the no parking areas adjacent to fire hydrants to create miniature gardens within the rarely used space. The plants act as a filter to keep gutter pollution and runoff from entering the storm drains. The green spaces improve urban vistas, while not causing significant loss should a fire truck roll over them. In another, she plants pairs of identically cloned trees throughout San Francisco to determine the social effects of each neighborhood on nature. The prescriptions emerge as a surprisingly palatable response in a culture that values handy improvisation. Necessity may be the mother of invention, but outlandish and simple inventions reinforce and inspire a duct-tape sense that our individualism and ingenuity can manifest and matter.

Environmental art in the contemporary era engages the landscape not as view or even site, but as an issue that demands attention in the context of our time. Machines and gardens hold a place in the history of both activism and art practice. Mark Dion's Neukom Vivarium is both.

I think that one of the important things about this work is that it's really not an intensely positive, back-to-nature kind of experience. In some ways, this project is an abomination. We're taking a tree that is an ecosystem—a dead tree, but a living system—and we are re-contextualizing it and taking it to another site. We're putting it in a sort of Sleeping Beauty coffin, a greenhouse we're building around it. And we're pumping it up with a life support system—an incredibly complex system of air, humidity, water, and soil enhancement—to keep it going. All those things are substituting what

¹³ Weintraub, Linda. *Gardens: Patriotic/ Subversive/Artistic*. 11/26/2013. <http://lindaweintraub.com/blog/category/blog-artists> Accessed 11/2013

*nature does, emphasizing how, once that's gone, it's incredibly difficult, expensive, and technological to approximate that system—to take this tree and to build the next generation of forests on it. So, this piece is in some way perverse. It shows that, despite all of our technology and money, when we destroy a natural system, it's virtually impossible to get it back. In a sense, we're building a failure.*¹⁴

The tree is both an idealized representation of the landscape and a parody of its former self. An elaborate ruse of a system was set in place, and no one, including the artist and the institution, knew what it would actually do until it happened. Unsurprisingly, all interested parties in the system adapted.

Artists Mel Chin, Germain Koh, Andre Woodward and Laura Beloff also approach their artistic and environmental practice within this permissive space of experimentation. Through conversant and interactive actions, artists directly respond to climate issues in novel ways. The land is material, the outcomes unknowable. Contemporary artists are engaging, questioning and even physically revising our relationship to nature.

Perhaps this is where the art of now is further diverging from the trajectory of modernism. The edge is pushing forward by digging in. The notion of the garden as redemptive, and a locus of resilience has followed humanity throughout its adventures with anthropogenic disequilibria. Environmental art, much like gardens themselves, rarely exude a certainty. The work is more likely to generate questions than answer them. The seeding of ideas is compounded onto the seeds themselves. Actions are meant to spawn.

¹⁴ Art 21: Ecology. 11/07. *Mark Dion. Interview: Neukom Vivarium.* <https://www.pbs.org/art21/artists/dion/clip1.html> Accessed 12/13



Jen Thario
Cover the Spread
MFA Thesis Exhibition

University of Hawai'i Art Gallery
January 26-February 14, 2014

Opening Reception: Sunday, January 26. 2-5pm
Closing Reception: Thursday, February 13. 6-8pm

www.jenthario.com



Cover the Spread is a series of kinetic vehicles constructed from found materials. Much like a pull toy or a pet, each is designed to transport a living plant. The plants chosen for this project utilize wind driven seed dispersal, require little soil or care to thrive, and are able to germinate in sidewalk cracks and other verge habitats. This project seeks to hack the urban environment through the distribution of undervalued plant life and transform the fractures in the city into micro sites of carbon sequestration and resilience.

Figure 25. *Cover the Spread*. Exhibition Postcard.



Figure 26 (above) *Cover the Spread*. Installation View.

Figure 27 (below) *Cover the Spread*. Installation View.





Figure 28 (above) *End of the Line*. Installation Detail.

Figure 29 (below) *Waning Momentum*. Installation Detail.





Figure 30 (above) *Jumping the Track*. Installation Detail.

Figure 31 (below) *Track Repair*. Installation Detail.





Figure 32 (above) *Cover the Spread*. Installation View.

Figure 33 (below) *Cover the Spread*. Installation View.





Figure 34 (above) *Vehicles on the Boardwalk*. Installation Detail.

Figure 35 (below) *Garden*. Installation Detail.



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Figure 36. *Youngia japonica* flowerhead. Installation Detail.

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