# SITEATIONS STUDER STUDER STUDER STUDER STUDER STUDER





#### **IMPTION**



## S / COLONIAL FOREST PRODUCTS

SOUTHERN EUROPE, AFRICA 11.705 TONS WEST INDIES 242.175 TONS BRITAIN, INELAND BR.CA2 TONS destinations 364,767 TONS

A 20% compared to mathemal SSACHUSETTS OMESTIC MANUFACTURE 1,280,572 TONS

construction 1,987,420 TONS

1,939,049 TD

16.4

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## Trained as a 'reader,' 'researcher' and a 'maker,' I aspire to craft visualizat exhibitions, and courses that both inform and invite engagement. My recent focus has been on pedagogy, combing constructivist exercises wi

Trained as a 'reader,' 'researcher' and a 'maker,' I aspire to craft visualizations, recent focus has been on pedagogy, combing constructivist exercises with landscape canon and theory. I enjoy explaining socio-material processes, but am always interested in collaborative projects and inquisitive peers.

## AGENDA

My research focuses on landscape logistics, media ecologies, and computational constructs. The first explores the operations and resources that underlie public works. The second examines the territorial politics indexed by land-art's media manipulations. The last historicizes data formats and information forms (Babbage on) as well as coding applications for working with contemporary environmental and site data.

## EXPERIENCE In the been teaching at City College of New York and University of Pennsylvania's Landscape Architecture programs. In tandem, I've been building Siteations, a research studio, and cultivating coding skills at

NYU's Interactive Telecommunications Program. Before that I was at Stoss Landscape Urbanism for 4+ years where I led design and competition teams as well as coordinating internships and proposals.

## EXPLORATION Isplit most of my time between classroom, code, and archives; seminars, stacks, and stats. If this sampling intrigues you, please stop by my portfolio site, www.siteations.com, for additional project links, course sites, and

I split most of my time between classroom, code, and archives; seminars, writing samples.

## PORTFOLIO CONTENTS ORDER & ORGANIZATION





## RESEARCH GRAPHICS MATERIAL CULTURES

My research falls into the overlapping territory of material culture, media studies, and infrastructural urbanism. I use infographics and mapping to address the lost or forgotten socio-material operations behind both seemingly stable infrastructure and communication networks. Coming out of art and architectural history, emblematic objects and specific sites act as my lens onto the intersection of big, bureaucratic data and mundane resource usage. On-going works are noted with ~



5

11

# EDGE OPERATIONS WALDEN 27

### **AUTONOMY & AUTODIGESTION** ECOLOGIES 23

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## SOLITARY SOCIABILITY PRISON

## **ENABLING EMPTINESS** SALT

## ENABLING EMPTINESS Road Salt

This project excavates road salt, one of New York's many ubiquitous, geologic engagements, unpacking the logistical networks enabling seasonal use. Part of a collaboration with Smudge Studios, we exhibited boards, booklets, and annotated environments as on-going research into the anthropocene appropriation of lithics. Initially hosted at Columbia's Studio X in New York, the series was republished in Scenario Journal (www.scenariojournal.com) in 2013.

Zooming in and out in scale, these salt infographics elaborate on the energy, envelopes, agents, trips, trade, territories, mechanisms and symbiotic scenarios lodged behind salt's annual margin of melt.

**DATE** 2012, 2013

**ROLE** collaborator, designer

#### EXPOSURE

- 2011, Studio X, Columbia U.
- 2011, BldgBlog, Edible Geographies
- 2013, Scenario Journal

#### TOOLS/DATA

- gis
- ai/psd
- mixed: usgs, state contracts, logistics records







IMAGE: Cover of Geologic City, by Smudge Studio.

Geologic City Book Launch and Exhibition with Smudge Studio, Kevin Allen, and Meg Studer Thursday, September 8 – Thursday, September 22 Launch: Thursday, September 8, from 6:00 – 8:00pm, Studio-X NYC [map]

Join us at this launch party for artists' Jamie Kruse and Elizabeth Ellsworth of <u>Smudge Studio's</u> new publication, <u>Geologic City: A Field</u> <u>Guide to the GeoArchitecture of New York</u>. In addition to the opportunity to purchase this invaluable pamphlet, which will take you to twenty urban sites and equip you with the tools to detect their geologic history, Kruse and Ellsworth will also guide you through an interactive installation based on their guide.

Alongside their work will be that of two of their collaborators, <u>Kevin</u> <u>T. Allen</u> and <u>Meg Studer</u>, who will offer you the chance to listen to New York's geology as experienced by the Brooklyn Bridge, and to trace the temporal and geographic trajectory of one of the city's most ubiquitous imported geologies: road salt.



BLDGBLOG: Salt It.html G, Digital Line... 🗍 Card Center Dire... 🍾 Truck traffic fro... < U.S. Standard Wi... 🗍 Digital Design +... 🚻 A Veggie Ventu Blog»

## **BLDG BLOG**

Designer and cartographer Meg Studer will be presenting her maps of the global road salt trade tomorrow night at Studio-X NYC; more details here.

SALT

PREVIOUS POSTS

DECEMBER 2011

Portfolio Futures House of the Cave Bear

Mine Plug Psychometric Drawing Experiments, Architectural Non Sequiturs, and Free Association Urban by Nature Sutured San Francisco The Architecture of Banana Control The Rounds

#### NOVEMBER 2011

Horizon Repair The Limits of Preservation Brick Swarm Detection Landscapes Aerial Sheriff Debt Cemetery Infra Pole Farm Architecture at the Breaking Point Project Ice Shield Unnatural History





## ENABLING EMPTINESS Road salt

Salt has long been synonymous with imperial reach and mobility. Salt monopolies fueled and financed Venice, Portugal, the Mayans, and the British in India (for a time). It funded Napoleonic wars (the Gabelle), the rise of industrial Liverpool and corporate colonization.

Salt's ability to preserve meant that whoever controlled the flow of salt controlled internal markets (internal labor forces), cargo and shipping, as well as profitable, political alliances. The analogy of historic salt monopolies and contemporary petrol politics derives from these exaggerated, geo-political dependencies and their obvious spatial impacts.

Today, salt is readily available due to industrial mining, brine extraction and commercial chemistry. Of course, ubiquitous access underpins more than just food preservation. Our everyday interactions with salt fall in the processed form of chlorinated water, paper products, neoprene fabrics, vinyl upholstery, acrylics/plastics, detergents, digital semiconductors, and (at 52-3% of U.S. use) road salt.

As the later, it is a thoroughly modern mineral: It keeps freight moving. It opens arterial routes. It sets speed in the wintery north. Millions of tons, millions of moments, millions of dollars are finally figured as emptiness and access.





# ENABLING EMPTINESS



#### New York City, Boston, Philadelphia and Baltimore, all fight snow with imported salt, waterborne local distribution networks, and extended sanitation shifts.

NYC's annual allowance – about 300 thousand tons of Chilean rock salt – is supplied by International Salt Ca. through the port of Newark. From there, International's feeder barges transport stock to major depots in Brooklyn, Albany, and up to New Haven. In transit between (and pulling from)these stocks, International is able to deliver to roughly half of New York's salt sheds (about 20 sit direct on the water). The city sanitation department uses its 282 loaders and 149 'cut-down' trucks to transfer supplies to the remaining 16 inland domes and sheds.

In a storm event, the average depot has a little over 200 miles of road to cover and clear. Even with concentrated attention to emergency routes (152 miles with 2–4 lane clearance) it takes 5 plow/spreaders almost 3 hours to loop the emergency routes once, distributing approximately 82,08 short tons of salt per loop. Covering all the streets takes3 salt spreaders a full 6 hours and 5 salt re-fills. An average driver clears around 450 miles, plowing just over 9,000 tons of snow in a single 12 hr shift. When a storm dumps 223,000 tons of snow per depot in a single day, complete clearance can require almost 7 days of continual salting, vehicular clearance, and mechanical melting.

#### sources:

 DSNY: Garage Locations, Proposed Garages & Salt Sheds. NYC budgets 08–10 (capital for shed repairs). Shed/depot locations (not all 36 locations determinable).

 DSNY: Annual Report, 2009. Equipment/salt use/crew shifts/ melter speeds.

International Salt/Empremar Shipping
 Services- Business Line 1. Salt Transport.

° Water Quality Research: Reinosdotter, et. al. Road Salt Influence on Pollutant Releases from Melting Urban Snow. Disturbed vs. still salting melt speeds.

## ENABLING EMPTINESS Road Salt

Today, the N.E.'s consolidated yet complex salt distribution system covers nearly 90,000 miles of highway. Eight major corporations supply salt to over 1200 state DOT depots and countless municipal buyers. Approximately 51% of the N.E. de-icing market (over 4.5 million tons) arrives annually from the Caribbean, S. America, Europe, and N. Africa. The efficiencies of water transport lower costs, less congestion, larger loads and better fuel efficiency— are supplemented by trade agreements and 'return' goods from the East Coasts' major free trade zones.

Norden, hired by Empressa for International Salt Co, provides an interesting example. Norden's ships run salt from Societas Punta de Lobos in Chile north to Boston. From there, they back turn south, making further deliveries at Newark, Philadelphia, and Baltimore. As they unload salt, handi-max cargo holds are re-filled with grains bound for Columbia and hard coal destined for South America. In Columbia, Norden 'top's up' with more coal, which is finally delivered in southern Chile, for electric generation.

In this trade triangle salt is the 'backhaul' good. Thus, Norden capitalizes on salt's inelastic demand to offset shipping costs for more lucrative wheat (\$200-400/metric ton) and coal (\$100-150/metric ton). In doing so, the North East becomes entangled in Chilean energy politics.





# ENABLING EMPTINESS



At Baltimore, Newark, and Boston, over 4.5 million tons of salt arrives annually from the Caribbean, S. America, Europe, and N. Africa. The efficiencies of water transport- lower costs, less congestion, larger loads and better fuel efficiency- have been critical in driving NYC's barge feeder alliance as well as capturing 51% of the N.E. de-icing market.

The instruments of modern bulk loadingmechanized belts and massive gantry cranesenable between 2–16.000 tons/hour to be loaded into 40,000 ton cargo holds, operating with a scale and speed lacking in land transfer. These industrial loading mechanisms, often built into today's standardized handvsize and handimax vessels, make any deep river or mid-sized berth into an ideal drop or pick-up point for multimodal cargo. To a certain extent, the rise of industrialized shipping has drawn production towards the sea as well, making the traditional and time intensive production of salt in solar pans and evaporative pools economically viable. For instance, in Sfax, Tunisia a series of inland shallows created by the port's post–war extension was opportunistically tiered by Salins for use as commercial salt pans, capitalizing on adjacency to reach European markets.

Room-and-pillar salt mining, where possible, has also evolved to profit from water-borne transport. Like the Detroit works beneath the Great Lakes or the Gulf–Coast domes of Louisiana, most of the N.E.'s Canadian and European imports come from mining operations adjacent to or directly under-seas. At ISME and Union (UK), Morton and N. American (CA) belt loaders snake directly from production shafts to shipping berths and customized canals. While Union's mines date from Roman and Victorian eras, the majority of the works supplying the N.E. (and all those with internal docking facilities) have been developed in the wake of post-war shipping standardization. One can say that, as a driver for today's salt market, the need for open roads has only been matched by the advantages of the open seas.

#### sources:

 USGS Minerals Information: Salt Mineral Yearbook 2008. adjusted import + use volumes.
 Newark Port Authority vessel tracking.
 Confirmed liners/routes and turn-around times.
 Salina Corporate website. Tunisia: The Sfax salt works.

Misc Google Earth facilities locations.

## SOLITARY SOCIABILITY EASTERN STATE PENITENTARY

These diagrams plot the Eastern State Penitentiary (ESP) warden and prisoners testimony before the state legislature in 1834/35. Drawing out mundane, material continuities and condoned collaborations, they examine the architectural feedbacks within the drive for atomized Quaker reflection. Expanding on Foucault's study of penitential discipline, this inquiry elucidates the operations embedded between openings—the inert, but generative material resistances of early solitary incarceration.

Initially a graduate research project, a second version of the infographics were posted at imagined prisons.org, Caleb Smith's companion blog to The Prison and the American Imagination (Yale U, 2009).

**DATE** 2008, rev. 2009

ROLE researcher, designer

#### EXPOSURE

- L780 Da Cunha
- 2009, imagined prisons.org (ed. Caleb Smith)

#### TOOLS/DATA

- gis
- ai/psd
- mixed: The History of ESP (1836), HAB/HALS reports, misc. Philadelphia urban histories



# SOLITARY SOCIABILITY



## SOLITARY SOCIABILITY EASTERN STATE PENITENTARY

Far from neat erasure and re-formation of delinquents in strict solitary, ESP's banal bio-power assembly cultivated prisoners' professional continuities with the outside world: Incarcerated tavern owners were sent, with supervision, to market to haggle. Musicians serenaded as waiters served state inspectors. Pharmacists assisted the infirmary and oversaw the apothecary. This arrangement lent a distinctive and spatial intensity to technique. A prisoner's skill could open up staggered scales of prison, city, and region to social circulation.

Yet more than consumable services, the actualization of cellular isolation and the (uneven) advancements in climate control meant that ESP was prone to symbiotically exaggerated externalities. The early central heating required a supplemental, satellite system of franklin stoves. The plumbing, sitting above the city's reservoir, required a secondary water-tower and coal-fed pump to maintain pressure. And yet, because of inadequate valves, the lowest and last cells in this gravity-fed system frequently flooded. As a result, the well-aired hilltop prison became a haven for malaria.

From extra infirmary workers to constant stove stokers, the temperamental material feedback between location, urban utilities, and HVAC innovation served as generative social infrastructure requiring more, rather than less, interactive labor and site circulation. The site's servicing and products form a fine web, circulating between the shops, service corridors, and cells; a limited but potent means of commerce and communication. Thus, at ESP, a whole condoned choreography of maintenance tasks and internal goods production was intertwined with the official ideal of social segregation and boundary construction.









Aerial Arts; Defense Discourses, Cartographic Critiques was an exhibition and lecture series I coordinated at Columbia University's Studio-X NYC. As well as orchestrating the show, I developed the graphics seen on the following pages.

The project explores Air-Age cartography, Arctic geopolitics, and their critique in 60s post-minimal art. Infographic boards and mid-century maps chart the polar projections, oblique 'over-views,' and immersive geographies shared between (civil) defense discourses and the 'Aerial Arts' of Robert Smithson, Walter de Maria, and Stewart Brand. In drawing out cartographic responses to the space and arms races, the show traverses a moment of global, intimate, and militarized mapping which resonates with our own.

#### **DATE** 2013, exhibit (on-going, article)

ROLE researcher, designer

#### EXPOSURE

- 2013, Studio X, Columbia University
- 2013, misc. publicity (right)
- forthcoming, "Aerial Arts in the Space Age" (article on Smithson)
- 2015, College Art Association Conference

#### TOOLS/DATA

- gis/xls
- ai/psd/ae/ind
- mixed: MoMA & Smithson archives, misc periodicals, period globes, aerials, maps, and satellite data









With the advent of goggle maps and mobile computing, most genealogies of our intimate (and oft aerial) embrace of cartography begin with Apollo 8 and Stewart Brand's Whole Earth Catalog. In fact, several artists of the period choose to engage the fundamentally ambivalent, oscillatory structure of aerial imagery; each capturing and contesting the convergence of global imagination and individuating address in their own way. Oscillating between alternate space-race responses and Air-Age antecedent forms, the show explores the intimate, tactile address of cartographic ephemera in cultivating a corporeal,yet national 'space' of aerial, atomic anxiety between WWII and the 1960s.

The initial board examines how the 'Whole Earth' framing of polar maps and satellite scans isolated images from their militaryindustrial origins, (not shown). The second and third boards then explore the 'Air-Age' popularization of similar polar maps and aerial-obliques in pursuading the public of immanent bombardment and the global geographies of aerial warfare. Scattered through Life, grade-school curricula, and academic international studies, these maps of flight made international engagement appeared inevitable by emphasizing northern, 'flight-line' proximity, across a closed, continuous, and shrinking sphere. Finally, the fourth board examines Robert Smithson's early cartographic-collages and his literal disassembly of Air-Age cultural/cartographic projections, playing with the tropes of aerial, technological progress and polar, defense discourses.

A second series, on De Maria and Satellite imagery, followed a similar trajectory- moving between art/media discourses and popular projections of space.











In terms of curatorial stategy, the exhibit incorporated a wide array of original, period publications meant to be handled, skimmed, and, for the enthusiast, studiously inspected. Such materials, in McLuhan's terms, would be 'cool,' absorbative and non-linear. I wanted, on one level, to provoke that absorption, inviting visitors to reflect on their own naturalized engagement and sedution by such propoganda.

On another level, I was hoping to address art-history. Within its discourses, magazineart is often treated as a textual, not sensorial, strategy for conceptual art. When seen (or handled) historically, the explosion of magazine-art in the post-minimal era reads less a medium break and more as the continuaton of a critical engagement with Modern art, offering spatial interaction and negotiation with imagined, mass 'publics.'

Extending such absorption, the infographic incorporation of everything from maps to exhibition models and mass-market atlas publication numbers called attention to the much wider spectrum of abstract orientation woven not only into 1940s and 1950s propoganda but also our everyday immersions in space and place.







Thus, through mapping of mapping, analytic infographics and original serials, the exhibit brought together precedent and appropriation, examining how old 'aerial' ideology addressed disciplinary debates on space, media, and immersion as well as the wider, spectacular politics of the late 1960s.

In addition to curating *Aerial Arts'* period materials and graphics, I was happy to coordinate a series of conversations on aerial imaging in art, architecture, and urbanism. Lectures and discussions included:

William Fox, director of the Center for Art + Environment, on aeriality;

Enrique Ramirez, from Princeton, and Sonja Duemplemann, from Harvard, on the paranoia of reconnaissance photos and camouflaging camouflage;

Laura Kurgan, director of the Spatial information lab at Columbia and Bradley Samuels, a partner at Situ Studio, on the politics and forensic practice of remote sensing;

and Annette Fierro, from Penn Design, on post-blitz urbanism in London.

Plus, Nicola Twilley, director of Studio-X NYC, ran with the aerial emphasis and hosted a great roundtable on urban air, discussing everything from suspended particulate to air rights (bottom right).

I also gained a healthy array of fundraising and marketing skills: running a kickstarter funding drive, constructing email campaigns, making quick, responsive landing-sites, and aiding Studio-X with publicity measures.























## AUTONOMY & AUTODIGESTION THE ECOLOGIES OF 60'S INFORMAL ARCHITECTURES

A recent collaboration with Lydia Kapolliti, 'Autonomy & Autodigestion' was an exhibit designed for the 2015 BI-CITY Biennale of Urbanism/Architecture in Shenzhen, China. Structured as a series of timelines, it traced the forms and ideas of ecology in 'informal' architecture since the mid-1960s. Within each of the seven geneaologies or discourse networks, Lydia prepared a textual manifesto; I developed a paired visual manifesto, summarizing each lineage's structural and ecological aggregations in the visual lanuage of Rand's 1960s systems diagrams.

In addition to the infographics, I conceptualizing the formal manifestation of the networks, developing the exhibition design and detailing its construction from prints to armature. A coauthored article, "Seven Cities, was published as part of the exhibition catalog and the exhibit was awarded an honorable mention by the Bi-City Biennale jury.

#### **DATE** 2015

**ROLE** exhibit design, infographics and construction documents

#### EXPOSURE

- 2015 BI-CITY Biennale of Urbanism/ Architecture (Honorary Mention)
- 2016 "Seven Cities" in UABB 2015 Catalog (v2, Radical Urbanism)

#### TEAM

- research lead Lydia Kalpolti (ANAcycle think tank/RIT)
- design assistance- Kyong Kim
- research help Royd Zhang, Ellen Wong

#### TOOLS/DATA

• rhino, cad, illustrator, indesign

#### RADICAL URBANISH MENTRE

#### MICROBIAL CITY MANIFESTO #2

Most revolutions start from the streets. However, the one called for in Microbial City does not begin in the streets nor in public demonstrations, but from the inner city: the domestic interior of the urban fabric. To battle the highly structured detritus of metropolitan imagination, a radical urban practice can start from the nouse and the way of inhabiting the land. *Microbial City* suggests that we may effect change in the city as a whole, through tactical changes in small pieces – islands of habitation taken 'off the grid' of energy supply.

In the late 1960s and early 1970s, amidst debates over pollution, the overpopulation of the earth, global catastrophe and the social role of science and technology, tinkering with biology – or managing the living matter of humans, animals and plants – was examined as an alternative and radical model of urbanisation. At the time, political radicals learned how to milk a cow rather than how to fire a gun. The cow's excrement could be used as an engine, in order to produce methane. Essentially the cow was a tool that would enable the city's resident to detach from the grid of energy supplies and the authoritative mechanisms of the state. At the time, biotechnical research brought close two fields that had been considered disjunctive: high technology, in the form of

















## AUTONOMY & AUTODIGESTION THE ECOLOGIES OF 60'S INFORMAL ARCHITECTURES

The main structure of each section was composed of wall-mounted, vertical timeline bars. A grid of standard holes allowed different size bar to be paired, with tension wires pulled between verticals. This flexible base allowed for a range of image-editing and positioning decisions to be accomodated (quick turnaround). It also aligned with the 'informal' emphasis of the urbanism exhibition, as the minimal structure's flexibility drew on the simple, accessible, public tradition of hanging newprint, zines, and ephemera for general browsing and appropriation.

The case-studies and precedent projects in each section were hung, top to bottom, working genealogically back from the present. The size of the different folded panels was keyed to their importance and canonic status in counter-culture experiements. The projects were coded, according to color, based on their original type: light green were pamphlets and design discourses; yellow were demonstration projects and staged situations; etc.

Embracing the 'informal,' we developed several ways for visitors to interact with the show itself. In addition to the hanging structure, postcards of two sample projects were available in each timeline section. Additional 'informal' elements, at the design phase, included using additional, folded newspaper pamphlets in between the colorful boards and along supplemental, lower tension wires.







## EDGE OPERATIONS OR LOGISTICS IN THE WOODS

This project, Edge Operations, 'runs the numbers' from Thoreau's Walden, mapping out an alternate history of conservation, climate control, and the 'quantified self' in the nascent industrial age. Appropriating Thoreau's acerbic accounting and peri-urban position, it diagrams the shifting resource networks and the spatial, programmatic, even political feedbacks within industrial, urban development.

In drawing out the material intensities and distributed impacts of metropolitan metabolisms, such mappings explore the intertwined history of pastoral prospects and political arithmetic, excavating the conditioning tropes, quantitative quirks, and spatial contributions of resource-accounting in industrializing America. On the following pages are graphics from the initial chapters in Edge Operations, exploring refrigeration and heating at Thoreau's homestead.

DATE 2012, On-going

**ROLE** researcher, designer

#### EXPOSURE

- 2012, Van Alen Institute, ASLA Change Agents, Pecha Kucha
- 2013, landscapeurbanism.com
- 2013, LAF, Water Issue
- 2015, Society of Architectural Historians
- 2016, GroundUp, Delineation Issue
- 2016, Council of Educators in Landscape Architecture

#### TOOLS/DATA

- gis/rhino/grasshopper/xls
- ai/psd/ind
- php/js/html/css/gis api/d3.js +





#### Van Alen Institute, Change Agents

activities, programs, and exhibitions.

in ins	Stitute - Events - C X Change Agents: Landscape Arch X +
2	☆ = C 318 Kr Google
azi	🗌 SONATRACH 🔀 Google Earth Sat 👬 National Geogra 📋 Land Arts of the Tisch-ITP ap 🔅
	VAN ALEN INSTITUT PROJECTS IN PUBLIC ARCHITECTUR ABOUT PROJECTS SUPPORT CONTACT INDE
	EVENTS EXHIBITIONS COMPETITIONS FELLOWSHIP READING ROOM DESIGN ARCHIVE PUBLICATIONS
	BACK TO EVENTS. PREVIOUS   NEX
	CHANGE AGENTS: LANDSCAPE ARCHITECTS ON THE INNOVATION FOREFRONT Landscape Architecture Pecha Kucha Night
	Today's landscape architects are pushing the boundaries of the profession, advocating for positive change and creating quality spaces for civic life. To examine the current state of landscape architecture and uncover new directions, experiments, and accomplishments, the New York Chapter ASLA and Van Alen Institute will co-host a Landscape Architecture Pecha Kucha Night or Thursday, October 18 at 7:00 p.m.
	Pecha Kucha is a lively presentation format, featuring a lineup of twelve speakers presenting twenty slides at a rapid-fire twenty seconds per slide. Most of all, it's an inclusive atmosphere of camaraderie and sharing.
	Thanks to everyone who submitted ideas for Pecha Kucha Night presentations! We're pleased to announce the evening's exciting lineup:
	Richard Alomar, "Urban Sketching"
	Martin Joseph Barry, reSITE, "reSITE: Collaborative Ideas for Livable Cities"
	Taewook Cha, Supermass Studio, "Think Differently"
	Gareth Mahon, Robin Key Landscape Architecture, "Serviam Gardens: Collaborative Design for Senior Housing"
	Catherine Seavitt Nordenson, Catherine Seavitt Studio, "Adaptive Sediments: Dredge & Drift"
	Nancy Owens, Nancy Owens Studio, "Green Retrofit of Urban Public Spaces in New York City"
	Ian Quate + Colleen Tuite, GRNASFCK, "Against Homogeneous Landscape! And Towards a Local Wilderness"
	David Seiter, Future Green Studio, "Resilient Landscapes"
	Amy Stroud, Building Foundations, "Build.Found.Haiti"
	Meg Studer, Siteations, "Edge Operations_Re-Surveying Walden"
	Denisha Williams, "Geometry, Hydrology & Spirit of Leadership"
	Lydia Xynogala, The Cooper Union, "Dark Ecology"
	Please join us for the show! Just RSVP to rsvp@vanalen.org.
	Landscape Architecture Pecha Kucha Night is presented in association with Archtober, NYC's month-long festival of architecture

Landscape Architecture Frontiers



#### GroundUp

he also hints at the larger, u industrial alliances of ice. Instead of looking toward Boston's interna consumption, Thoreau imagines that Walc ice is consumed by "the sweltering inhabi



RADING TRAJECTORIE



## EDGE OPERATIONS RE-SURVEYING WALDEN

This first series, "Re-Surveying Walden," examines the 'coldscapes' of the antebellum era. In 1846 and 47. Thoreau recounted dual demarcations of "The Pond in Winter" (Chpt. 14), contrasting his minimal survey markings with the ice-extraction crew's invasive, "unroof[ing] the house of fishes." Supplementing his description with commercial records and policy documents, these boards map the regional industry and its rail-based network of extraction, storage and glocal consumption. Moving from pond harvests to international exports and trade triangles, the graphics emphasize the novel territories nested together by ice - from storage sites to the frontiers of colonial trade and urban industrialization - as the commodification of climate.

From Maine to Philadelphia and across the upper midwest, local and regional ice harvests blossomed in the 1840s, underpinning urban growth. Preserving foods and controlling chemical distillation, ice remade markets as it provided dairy, meat, fish, lager, and pharma to urban customers. Beyond chilled drinks, theses boards register the impacts of ice in the radical reconfiguration of Boston's 'refrigerated' milk-sheds and the sanitary reforms of the 1850s.

As cheap backhaul, ice exports also indexed the growing global logistics of Thoreau's day. As exported from Boston, ice subsidized the northern import of plantation sugar, tobacco, and cotton, and, by extension, enabled more traditional forms of northern industrialization and urbanization. As the first-leg freight, ice shipments supported the East Indies and Liverpool cotton trade as well as Argentinian supplies (meat, etc.) for the Gold Rush in San Francisco. Lecture Version





#### Web Version



QUES IN ARTING OF 18 67 AUTOMATED TRA





## EDGE OPERATIONS CORDS & COMBUSTION

The second series, "Cords & Combustion," examines domestic heat and the 'cordwood crisis' of the 1840s. As part of "House-Warming" (Chpt. 11), Thoreau scavengers his fuel from the cut-over lots of Concord, imaging himself the Warden of Walden (Forest). This series starts from his allusions to British park and timber management, tracing those international trade triangles and older export drives to their intersection and impact on antebellum domestic industries and energy. While exploring the novel commodification of cordwood, the graphics emphasize the relative and mixed demands for wood - from habitat and rail supply to its consumption aside coal.

As the earliest inland town in Massachusetts, Concord (and its agricultural clearances) had long been part of the British timber trade. It provided masts to the crown, under the Broad Arrow Acts (1691-1776), staves to the Spanish Wine Islands and fuel to Trinidad. Timber was a long-standing, if undocumented, colonial commodity.

In aligning his woodlot perch with the king's parks, Thoreau not only alludes to these colonial, captialist endevors. He also sets the contemporaneous conflict - between domestic, market, and novel rail-based cordwood use - into comparison with Britian's persistent fuelwood scarcities and its mixed energy markets - coal, oil, bituminous.

#### Lecture Version













## EDGE OPERATIONS INTERFACE & INQUIRY

In addition to the visual narratives, seen on prior pages, the background research - into contemporaneous material culture and accounting - is also being developed as a series of databases for interactive queries. Not only does this provide a wider lense onto Thoreau's critiques, in terms of social and economic context, it allows students to explore other indices of industrial development and international trade, finding their own links between common landscapes, consumptive habits, and the centralizing markets of internal improvement. Reading Thoreau, amidst the age of nascent statistics and biopolitical tabulations, is also calculated to help students reflect on their own assumptions when sampling state statistics and big data.

This series, right, are from the 1845 Manufacturers' Census of Massachusetts ('The Statistics'), which has been my test for developing parsing tools in processing and simple cvs-based interactions with d3.js. Working off with dirty google orc, I've managed to get error down to 1%, mostly through identifying, scraping, and reformatting elements with regular expressions. While significant trends in tabulation and contents will be visible once I've competed longer series (from 1832 to 1895), these simple comparisons allow for an alternate view of individual goods, clustered industries, and, eventually, localized resources streams and import/ export-indexed goods.

Ultimately, this series, along with the project's other digitized tables, will be donated to Inter-University Consortium for Political and Social Research (ICPSR) for public use.

#### ORC Hathi Trust Text, Prepped CSV





#### 1845 Industrial Census: Item/Cluster Queries





#### HTML + CSS + D3.js Front-end



1845 Industrial Census: Comparative Item Queries



## LANDSCAPE PROJECTS DESIGN PROBLEMS

These landscape projects present a mix of my work, from independent and academic charettes to my position as a designer and project manager at Stoss Landscape Urbanism (noted by \*). I tend to generate form from the integration of typological variation, material processes and social scenarios. My design graphics balance diagrammatic, iconic explanation and 3-D component articulation with evocative, synthetic renderings.



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# PROSPECT PARKING FEEDBACK 37 EPHEMERAL FRONTS \*WWI FORMS 41

## MERKSEM RE-MIX \*AGRO-ALTS 47

AQUA-CULTURE \* RETAINED REC 53

**DOCUMENT SETS** \*DWG'S



## PROSPECT PARKING Suburban Feedback forms

A snarky, humorous project from my graduate work, Prospect Park(ing) offers an alterante vision of sustainable, recreation ecologies and social space.

Context maps trace the site's ideal situation as neglected, exploitable niche in both the megachurch and consumer marketplace. Waste-water becomes a critical component, turning car-driven development from curse to constraint, while seeking to critique the idealized, isolation of romantic nature.

Symbiotic structuring devices thus combine development incentives and forms. The code manipulates interstitial space, generating feedback between built magnets and ephemeral program. The subtractions (waste water transpiration swales) guide formal development, generating more programmatic occupation and ecological diversity. The remaining soil is then tied into adjacent Pennypack Park, funneling audiences there for mutual redevelopment potential.

DATE 2006, U Penn studio work

ROLE designer

#### EXPOSURE

L502 Marcinoski

#### TOOLS/DATA

- gis/psd/ind/cad
- mixed: water volume & species transpiration calculations







## PROSPECT PARKING Suburban Feedback forms

The plans play out one scenario, showing the feedback between built, ephemeral, and ecological attractions. The voids (be they 'green' or paved) foster multiplicitous programs, publics, and continuous, atomistic development that could regenerate indefinitely as different social/institutional occupations.

Citing contemporary branding, the iconic graphics explore the oft repressed relations and mutual ecological participation of everyday urban animals, human 'lifestyle,' and adaptive planting. It seeks the 'public' in the diversity and multiplicity of the ubiquitous.

Closer examination of the prototypical waste-water striations reveals a specialization of diverse planting schemes, each keyed to the wet/dry run-off spectrum. Fauna and programmatic development are then created by differential access/internal occupation and microclimate effects.

Evoking affective spatial qualities aside conceptual juxtaposition, the meeting of Venturi's vegas strip with picturesque parkland captures the project's tapping of contradictory popular demands.Its' spaces become an index of the systematic exploitation of x-urban organizations for critical cultural projects and development potentials.







## EPHEMERAL FRONTS WWIFORMS

War and its aftermath have had significant physical and ecological impacts on the Westhoek landscape of Flanders; from the flatlands through the bombarded fields and farmlands. This Stoss project makes the territories of war legible, if fleetingly; crafting evolving itineraries of remembrance. Reorienting paths along the war's parallel fronts, the park's organization echoes the way the war played out, drawing attention to the new ecologies and occupations spawned by the war.

In the north, interperative moments recall islands formed during the war-time flooding and, in the south, itineraries re-trace the shifting fronts, approaching the hilltop encampments craved-out by shelling and mining. With seasons and cycles, the proposed landscape installations foreground the precedents, histories, and ecologies of the Flanders Fields.

#### DATE 2010, Stoss Team Entry

#### ROLE designer

#### EXPOSURE

- Herrinerings Shortlisted
- BSA 2012 Planning Award

#### WIDER TEAM

- manager- Scott Bishop
- design team-Jill Desimini, Andrew Tenbrink,
   Eric Prince, Kimberly Garza, etc.

#### TOOLS/DATA

- gis/ai/rhino/psd/ind
- mixed: memorial/state gis, historic texts & photos

#### FLANDERS, DISTRIBUTED WWI MEMORIALS







#### MEMORIAL ROUTES: EXISTING CIRCUITS TO PROPOSED PARALLEL FRONTS

## EPHEMERAL FRONTS wwiforms

Throughout, the site is a multivalent, multilingual experience. Non-visible, site-and-userspecific networks of information layer upon the existing physical landscape.

Strategies include message delivery to mobile devices as audio and text, proximity sensing, using mobile gps and equivalent technologies to deliver information as visitors traverse landmark borders and messages that respond dynamically to the native language of park visitor's mobile devices.

In terms of specific, spatial techniques and itineraries, in the north, bermed pathways follow the wartime rails. They play off the diking techniques utilized across contemporary plodders, guiding visitors through the northern territory.

By-passes occur opposite new boardwalks and existing ruins/remnants from the war. They help to reduce congestion at points of interest, and their lower elevation affords a protected view out, into former enemy territory.Viewing areas and rest stops are positioned to look out over the former floodlands, towards island groves or other places of note.

#### TOURS: INTERFACE OPTIONS









## EPHEMERAL FRONTS WWI FORMS

In the south, volunteer groves that have sprouted around crater-sites will be doubly enhanced and overplanted.

At the edge of the craters, native tilia species will be planted and self-limb as they reach quickly for the sky, forming a ring along the edge of the blast-pools. Within the outer scrub ring, native elms (the namesake of leper) will be planted, die back, and regenerate as the plants wage their own battle with outside forces. Local roses and bramble will then be sheared along the outer edge, forming a clear identifier and intimate interior for the crater sites.

And between, timed to the centennial anniversary of allied and axis positions, floral fields are ephemeral over-plantings of agricultural crop-lands. They bring to light, if only temporarily, the territories of war.

In the spring, the no-man's-land (between allied and axis fronts) are rendered in the bold reds of flanders poppies. These pre-crop plantings give way to linear perimeter crops during the summer and harvest seasons, keyed to farmers' specific crops. In the winter, outside the no-man's-lands, chalk-lines and plowed winter wheat patterns trace former trench locations and layouts.

#### BOMB CRATERS: ACCESS & PLANTING ARTICULATION







FIELD FRONT: ROTATIONS & TRAILS ALONG THE IEPER SALIENT

## MERKSEM RE-MIX AGRO-ALTS

Merksem is a suburb at the edge of Antwerp. The site—largely leftover spaces on the edge of twentieth-century transportation infrastructures—is vast and fragmented, yet it already hosts a rich combination of uses and activities: sport, allotments, working fields, habitat. These activities, however, are not structured to address questions of overall function and accessibility, nor do they create a meaningful civic experience.

This Stoss projection proposes a new type of productive park for Merksem, an important new civic and ecological link in Antwerp's Green Ring. Working the earth and working the body are the two primary goals for the park, and they expand upon the popularity of sporting fields and allotment gardens that are scattered across the site. Building on the canals, the park extends these program tendencies to integrate and intensify habitats, flooding, and create a connected, re-mixed civic space.

DATE 2010, Stoss Team Entry

ROLE project manager, designer

#### EXPOSURE

Competition Shortlist

#### WIDER TEAM

• designers- Margaret Graham

#### TOOLS/DATA

- gis/ai/rhino/psd/ind
- mixed: city gis, historic maps & site photos







# RE-MIX, RECLAIMING POLDERS FOR PROGRAM POTENTIAL

## MERKSEM RE-MIX Agro-Alts

Laagland starts with water, in terms of both its functionality and its potential to catalyze new ecological and social life.

The park re-contours the ground so that it may better accept fluctuating levels of stormwater from the site and from adjacent highways and building parcels. This strategy creates a full gradient of wet to dry and low to high conditions.

These terraced fields are rendered dynamic by the different ways they are occupied and by the different ways water acts on them over the course of the day and of the year. Fluctuating water levels and varying intensities of use and activity (both on a single terrace and on aggregations of adjacent terraces) create a new type of dynamic park for the city, finely tuned to both environmental and social oscillations.

#### EXISTING STRUCTURE



#### PROPOSED PROGRAM + HYDROLOGY







## MERKSEM RE-MIX Agro-Alts

Plant succession strategies also allow for the building up and emergence of new habitat areas over time. Initial plantings of native elms (which will die back over time and never mature) will provide necessary shade for the establishmentsof oaks and other upland species.

Field rotation strategies also address issue of soil compaction (from intense human use) and nutrient depletion (from farming and gardening). Over the long-term, different activities that occupy the same terrace elevation can rotate with another, alternately activating and de-activating the park plots.

The vision for Laagland emphasizes the programmatic and ecological potential of hybridizing water management, sport plateaus, habitat corridors, community agriculture, and pedestrian and vehicular circulation.









Taiwan is currently facing two major hydrological issues: one of water quantity and one of water quality. Despite abundant rainfall, a lack of reservoirs and inadequate wastewater facilities contribute to general contamination.

This Stoss project integrates water cleansing within the contemporary Taiwanese city, Taichung. The sculpted terrain of pools, paths, and cultural nodes weaves together the recreational, cultural, and ecological uses of the park.With simple cut and fill, a constructed valley runs from the Gangwei River to Xiashibei River, providing aquatic program anchors and cleansing water. The forest stretches from the pools to the higher elevations, providing shade, habitat, and areas of sheltered program. The circulation and infrastructure network provides access and widens to create cultural nodes and recreation spaces.

#### DATE 2011, Stoss Team Entry

ROLE manager, designer

#### EXPOSURE

- Competition Shortlist/Finalist
- BSA 2012 Honor Award

#### WIDER TEAM

 Jill Allen, Fiona Luhrman, Emily Schlickman, Thomas Clark, Iggy So, Andi Adler

#### TOOLS/DATA

- gis/ai/rhino (laser, cnc)/psd/xls
- mixed: city/state gis, taiwan water & resource data, water processing calculations











The Living Machine at the heart of the park uses biological metabolism and digestion to cleanse water in a safe, ecologically rich setting. An adaptive, evolving entity, the park's topography of basin and hills forms a flexible gradient of wet and dry spaces. Inundated in monsoons, the pools are calibrated for increased usage, greywater, and a growing Gateway District.

In the increasingly exposed dry season, it offers enlarged terraces and new edges for program-from skate parks to football fields. This responsive form and framework allows it to transform based on the changing needs of Taichung. Combined pedestrian and auto circuits cross the park, the pools offer various programmatic possibilities. All of the cirulation systems cross between, open areas, dappled canopy enclosure and structured shelters for a wide range of gatherings and activities.

The forest zones of the park broadly cover the area, mitigating Taichung's sometimesharsh climate and tying together sustainable cultural and program points. Built up conifer hillsides house on-site institutions including the Taichung City Cultural Center, the Taiwan Tower, the Museum of Taichung, and the Taichung Movie City's studios and Museum. By embedding a significant portion of these institutions into the earth and integrating treatment water with their cooling, plumbing and supplementary solar heating systems, the park serves as a model for sustainable building technologies.

#### Aqua-Armature (Starting & Seasonal Variations)

Settling Basin early stage greywater cleaning method 沉砂池 Refiltration + Aquaculture reed filtration + algae-culture 再過濾+水產養殖 Botanical/Faunal Wetland + Retention + Detention 植物/ 動物濕地+儲水+滯洪









Pools and forest come together for an array of programmatic opportunities. Water's edge conditions vary based on access, views, and water quality. When greywater first enters the system, large programmatic plinths extend over the pools, allowing visitors to safely take in expansive views of the park. As the water is cleaned, these plinths lower to the water table, allowing for activities such as fishing and kayaking. When a transportation corridor intersects the system, a hydro-boulevard emerges, allowing for inundation below the surface of the road. In separate pools, visitors can swim, splash, and wade. In these areas, the edge is terraced, making room for lounging, sunbathing, and gathering.

In the Forests, broadleaf transplants create an established landscape immediately, with clearings for sports fields, staging areas, and at the edge of pools, piers and pavilions. Conifer stands create a one-of-a-kind landscape and profitable nursery with moments for collection, education, and interpretation. Bamboo areas create visual screens, forming intimate areas.

More than structure programs or support city systems, the park performs as an ecological and economical producer. The dense vegetation is a carbon sink, (sequestering 400 metric tons of carbon annually) and source of revenue, providing nursery stock for both common and rare plant varieties. Pools and forests form a refuge for endangered plant species and local wildlife, habitat for a range from microbes, mollusks, milkfish, sika deer, grass lizard and Taipei tree frogs.

In all, the planting, pool and circulation network creates a range of social and habitat intensity, weaving ecological opportunities and eidetic moments throughout the park.

#### **Pool + Program + Aqua-Product Types**







#### Circulatory & Civic Spaces (Wood & Wetland Armatures)



More than structuring programs or supporting city systems, the park performs as an ecological and economical producer. The dense vegetation is a carbon sink, (sequestering 400 metric tons of carbon annually) and source of revenue, providing nursery stock for both common and rare plant varieties. Pools and forests form a refuge for endangered plant species and local wildlife, habitat for a range from microbes, mollusks, milkfish, sika deer, grass lizard and Taipei tree frogs. And, the green infrastructure system requires significantly less maintenance and will cost less than a conventional grey infrastructure system designed to treat similar quantities of water.

In all, the planting, pool, and circulation network creates a range of social and habitat intensity, weaving ecological opportunities and eidetic moments throughout the park.

#### Park Phasing









## DOCUMENT SETS CONSTRUCTION DWGS

#### SELECT DOCUMENT SETS

In addition to managing competition and design teams, I've worked on a variety of construction document sets during my time in architecture and landscape firms. Below are three projects suggesting my detailing experience on a range of projects, scales, and types of DD-100% CD/ bulletins .

#### CITYDECK Green bay, wi

My contribution to the CityDeck project included drawing corrections and revisions (5 subphases) for the initial construction of the boardwalk and developing details for the first Fox River overlook (right). Changes ranged from altered soil profiles, decking layouts and bench placement/articulation to additional rails and donor signage.

#### DATE 2009-11, Stoss project

**ROLE** designer, drafting team (CD revisions, phase 1)

#### EXPOSURE

- LAM, 2011 Feature
- Source Books in Landscape Architecture, Ohio State

#### INTERNAL TEAM

- project manager- Scott Bishop
- designers- Steve Carlucci, Adrian Fehrmann, Jill Desimini, +

#### TOOLS/DATA

- rhino/cad
- mixed: city/army corp site data

#### **CA: DETAIL REVISIONS**











## DOCUMENT SETS CONSTRUCTION DWGS

#### COMMON SPACES CAMBRIDGE, MA

My contribution to the Plaza at Harvard included working on the schema, conceptual, and design development teams consistently. While, I was not a core part of the CD team, I developed the bench forms and customized end-walls of the over-pass, through 90% DD. I assisted, on and off as needed, on the CD sets. Elements of my contribution can be seen at the right. I left the firm before the end of CA, so the as-builts for the project likely vary from the design and details I helped to execute.

#### **CD: BENCH VARIATIONS**



#### **CD: WALL ELEMENTS AND PLACEMENT**





**ROLE** designer, drafting team (Concept, DD, and some CD sets)

#### EXPOSURE

• Boston Society Arch., various awards

#### INTERNAL TEAM

- project manager- Scott Bishop
- designers- Jill Allen, Margarget Graham, Fiona Lurhman, Eric Prince +

#### TOOLS/DATA

- rhino/cad
- mixed: city/army corp site data





2 WEST WALL @ RAIL+BENCH (1531) wr-ter BERRY







## DOCUMENT SETS CONSTRUCTION DWGS

#### ERIE PLAZA MILWAUKEE, WI

My contribution to the Erie Plaza project included drawing corrections and revisions. The complete revision of paving and path surfacing, due to budget concerns, necessitated nearly complete revision of all plans (layout, materials, planting, etc.). Smaller issues included ADA rail access, minor planting additions, and construction details for benches and electrical equiptment.

#### **OTHER SETS**

In addition, I have documentation experience from developer-driven site planning, design/ build, and preservation projects (misc. offices, campus facilties, lofts, and museums).

#### DATE 2009, Stoss project

**ROLE** designer, drafting team (CD set, phase 2)

#### EXPOSURE

Mayor's Design Award (+)

#### INTERNAL TEAM

- project manager- Scott Bishop
- designers- Adrian Fehrmann

#### TOOLS/DATA

- rhino/cad
- mixed: city/army corp site data

#### **CD: DETAILS**







## MEDIA & CODE posters to parsing

These graphic samples present a mix of my media explorations and experimentation in information design and communication. Along with, 3-D modeling and traditional formal articulation, medium-specific approaches to data and 4-D processes are evident in my on-going forays into interaction and animationed story-telling.



# MANIFESTOS + MODELS GRAPHICS 69

## **ANIMATIONS** proposals 73

## **INTERACTIONS** DATA+WEB 77

## MODELS & MANIFESTOS GRAPHICS

Each of the following infographics or models was set forth as a manifesto, visualizing the problematics addressed by particular design solutions and/or course contents. Full project proposals are available on request.

#### **SLOPE SERIES**

These study models examine the alternate slopestep-occupation opportunities between two plazas. ADA constraints triggered the initial tests, while mediating between green restraining slopes, direct passing paths, and directed ampitheatre seating zones. Together—path and slope, hard and soft come together to channel water to planted zones and foster informal gathering.

#### **DETROIT WORKS**

The Detroit Works plan re-conceptualizes the abandoned parcels of Detroit for interim activity and novel economic streams. Aside intensive gis analysis of abandoned, vacant, empty and foreclosed properties, this flow chart imagines de-construction scenarios and opportunities, addressing community groups, the informal demolition industry, and potential non-profit partners.







## MODELS & MANIFESTOS GRAPHICS

#### MAT(S)ERIAL STUDIES

Working as analogs, this radii-system study—a mesh overlay for terrain models, maps, and irregular surfaces—approximates remediation well spacing, anticipating phasing and obstacle integration. More than just representation, the array of materials used bike chain, rhino mock-ups, milling, and plastic pins—enables spatial speculation; the unforseen, synthetic behaviors suggest new site/ social operations and analogs. Post was completed to advertise the mat(s)erial studio course.

#### **ISLANDS IN TIME**

Responding to the Design Inquiry prompt 'Fast-Forward,' this project explores electric temporalities. These initial diagrams situate the relative costs and electric infrastructure across Maine's inhabited islands (left). They then diagram out the history of Vinalhaven's power production and the local variables of wind-power for generation, sale and alternate, public off-peak appropriations (right).







## ANIMATIONS proposal: from below

A typical sample of my animation teaching and production, *From Below* brings together post-production sound and video editing with the animation of diagrams, models, and renderings. Additional video work can be seen at vimeo.com/siteations.

This proposal, 'From Below,' was done in collaboration with Emily Schlickman. It was short-listed and exhibited at the Pruitt Igoe Now competition. The project aimed to activate the former Pruitt-Igoe site as one node in a larger network—tapping, exposing and diverting existing CSO wastewater flows as a catalyst to re-engage the surrounding urban fabric.

The proposed system inundates the site with constructed cleansing basins to produces a number of regional economic outputs: rich biosolids for community composters, urea crystals for "growing" biobricks and bio-fuels. Local ecologies and elevated plazas are woven throughout. When fully constructed, the site becomes a mosaic of experiences - from overflow amphitheaters to floodplain forests to exposed karst collection basins.

DATE 2012, shortlisted, exhibited

**ROLE** animation, designer (with Emily Schlickman)

#### EXPOSURE

 2012, Pruitt Igoe Now competition and exhibition, St. Louis, MO, July 2012 and online at http://www.pruittigoenow. org/competition-finalists

#### TOOLS/DATA

- gis, ai, ae, rhino, psd
- mixed: city vacancies, epa water quality/cso reports, city water authority data, fema maps







## ANIMATIONS models + 'flat' graphics

In addition to animating typical design drawings in AfterEffects, I'm also versed in the wider tools of interactive animation and 3D cinematic modeling. The sampling, to the right, are condensed excerpts from projects and exercise in the last five years.

#### MICRO-VIEWS

In this transition, rhino/3d max model animations come together with illustrator and flash interactions to provide a 'down-the-rabbit-hole' white-out sequence. The movement from 2d diagram to 3d, analytic object and visual instrument was conceived to play on the generative aspect of viewing and the powers of parallax to alter subject and object.

#### ALT-ICONS

A simple table of svg circles, js transitions, and html creates a looping animation of half-tone Marilyn, focused on a fraction of the familiar Warhol crop. The transition highlights the relationship between sparse, media means and saturated, over-loaded (over-determined) cultural significance.

#### FLAT-FRAMING

This holiday card was done to test the parallax and interaction tools in adobe Edge Animate, as well as its integration with Illustrator. A playful series of scenic layers migrate as viewers scroll through the page, to transition from scenes of snowy countrysides to more familiar urban imagery.







## INTERACTIONS CONNECTED DEVICES: ARDUINO + PHP + PROCESSING

While I tend not to focus on live, physical feedback in my digital work, Memonic Making gives a sense of my experince with physical computing, sensor callibration, and the development of digital databases aside live processing. See www.mnemonic-making.com for demo.

Part of a collaboration with Saki Hayashi, the core of the project was an architectural toy, combining the tactile materials and spatial imagination of traditional modelling with the electronic interface and database functions of physical computing and php. Designed for sim-enthusiasts as well as community outreach and engagement, the toy enabled a community of users to build, save, and share others' spatial designs on-line, across time, and in miniaturised real space.

The prototype combines php, html, css, arduino, and processing. Circuit completion and resistors identify each piece - with unique IDs, piece orientation, and LED feedback to capture, save, and provide each spatial positions on the grid. Projected, wireless version will enable players to assemble larger, layered, and irregular configuration for web and community feedback.

#### **DATE** 2013, 2014

**ROLE** designer, electrical, web dev.

#### EXPOSURE

- 2013, ITP Winter Show
- 2014, NYIT, WebVisions Conference
- 2014, Brooklyn Navy Yard, Designing the Future

#### TOOLS/DATA

• php/arduino/processing/html/css











## INTERACTIONS **API + PROCESSING WORKSHOP**

In addition to scripting and programming work, for design and research, I've built a number of program samples for teaching purposes.

One of several exercises from a processing workshop for MLA students, this program and its tutorial was designed to incorporate NYC open api data, use typical table-reading functions, and combine statistical math with geocoded display. To the immediate right, pages from the code tutorials show how line by line instruction/coding builds to create more complex graphics.

Through live examples and collaborative exercises students were shown how to interactively layer several different types of visualization for rhetorical argument, nesting different display functions (between timeline, quantitative geographies, and data-roses). Similar examples - pulled from the monthly waste figures of the Dept. of Sanitation, the sanitary district shapefiles, and indep. transfer station tonnages - were introduced to help student understand how to work across different data types for more complex analysis.

**SEMESTER** 2013+ annual workshops

**SCHOOL** CCNY, Spitzer School of Arch

**ROLE** curriculum development, instructor

#### STRUCTURE

- Collaborative Coding of NYC open data interactions (approx. studio use)
- Debugging and Reverse Engineering of case-studies/samples
- Introduction to visual code (Grasshopper, MaxMSP, etc.)

#### **CORE TOOLS**

- web/processing/geojson/xls & gis dbf
- secondary use of ai/ae for edits/ documentary demos

#### WK 2-INTERDICTS FOR NUMBER OF OCCURANCES 61 e function .getTally( ) compares t dotes in the StringList and return nsed list of dates and the nur f calls per date. To store these links date/Ref calls we will use the et dateCount e the results look in the monito ow the code. (Println it used to pr e that readout.)

#### SKETCH: EXAMPLE 3C CONDENSED COUNTS

To compare the StringList internally, we'll use the getTally( ) function. See above for details of deployment and output as an IntDict.

In addition to the basic transfer of the condensed count of incidents/date to the IntDict e are also using the function .sortKeys( ) in order to make sure those counts are in order. Sor Keys shuffles the list to ascend from earliest/lowest date to highest/latest date recorded in the cx table. Here, the sorted IntDict should start from Jan 1st, 2009 (with one complaint) and ascend toward December 31st, 2009.

PROCESSING WORKSHOP

#### WK 2-ZIPCODE STATS- PERCENTAGES & RADII 87



#### SKETCH: BOILER 1D VARIABLES FOR ARCS

Here, in order to build a data-rose that displays the percentage contri bution of each building typology to that zipcodes's #4 and #6 oil use, we'll derive two sets of values.

First, we set up the array pie [i] to hold the count of properties per type as divided by the total count per zipcode. This series of percentages will be used to get the angle of each typology pie slice (percentage x 360 degrees). Second, we'll want to get the total amount of energy used in each typology as well as used overall, here as 'sumBtu'. These numbers will be used to dictated the length of the arc, i.e. the varing radii of each pie slice in our data-rose.

**PROCESSING WORKSHOP** 

















## TEACHING SAMPLES **ABSTRACTS + STUDENT WORK**

These samples represent a mix of my graduate teaching over the past year. Additional workshops, summer intensives, and forthcoming materials are available by requestion. Collaborative courses are noted by ^.

\*Select Courses and Student Work shown, for full list of teaching experience and potential courses, see CV and coverletter.

Exercises & Prompts available on request.

Syllabi can be downloaded at: http://www.siteations.com/files/syllabi/







#### 87 TRADIGITAL DRAWING CONY MEDIA



#### MLA STUDIO II CCNY STUDIO 89

#### THESIS STUDIO ACCNY STUDIO 91

DESIGN RESEARCH CONY THEORY 93

## EDGE OPS LANDSCAPE THEORY, PENN

This advanced seminar explored the definition of the dispersed, logistical city of Landscape Urbanism, situating contemporary discourses aside the distributed plans and precedents of a) progressive regionalism and b) post-war regional planning. In weekly discussion, students were asked to distinguish and contextualize texts' assumptions about efficiency, externality, materiality, development, and the socio-economic ends of extended urbanism.

Theoretical models of the social and governmentality (Foucault, Latour) were interwoven with discipline-specific works (from MacKaye and Mumford to Keller and Lyster). In addition, analytic frameworks from political ecology, industrial ecology, and the social history of technology were interspersed throughout to give students additional research avenues.

Students engaged with materials in three ways: Semi-weekly blog posting and commenting encouraged not only succinct articulation of readings agenda, but also lateral speculation. Each week, a student led discussion of the core texts in coordination with my lecture. And, finally, each student took on global metabolic relays & 'regions' through a specific material of their choosing, looking for points of logistical, social leverage for global markets, regional arrays, and glocal instances.

#### SEMESTER 2014, Spring

#### SCHOOL Penn, School of Design

#### STRUCTURE

- Case Study Lectures
- Discussion Seminar
- Design Crits

#### CORE TOOLS/TEXTS

- Landscape Urbanist Canon
- RPAA, Graphic Survey, Conservation Canon

#### FINAL (EXCERPT)

COFFEE/CONFLICT, COLUMBIA

#### Student: Adela Parks





FINAL (EXCERPTS) Post-peak industrial phasing, Alaska



ALASKAN OIL MIGRATION

## MEDIA 3 LANDSCAPE CORE, PENN

Media III, at Penn, continues the curricular emphasis on visual communication and design. The course used working labs to intensively explore digital media and its inflection of conceptual, organizational, and formal expression. Working through weekly cases, the term dove into the collection and control of information (from the scale of GIS to sited metrics) and focused on modeling, parsing, and simulating landscape systems/media as topological, recursive, and spatio-temporal patterns.

The major programs taught included GIS (basic), Rhino (basic), Grasshopper (intermediate), and AfterEffects (basic). Emphasis was not on creating new tools, but rather assembling basic code and plug-ins to draw out significant thresholds and distinguish areal effects. With this responsive foundation, students then developed and tested rough design forms that respond conditionally, logically, and intelligently to complex, dynamic systems.

The final project for the term was a three minute animation, combining initial analysis of a site in Pittsburgh - using GIS and grasshopper - with self-directed research and the initial testing of appropriate forms/sites for landscape intervention.

#### SEMESTER 2014. Fall

SCHOOL Penn, School of Design

**CO-TAUGHT** Keith Van Der Syth

#### STRUCTURE

- Lab Instruction + Problem Sets
- Animation Crits

#### CORE TOOLS/TEXTS

- GIS/Rhino/Grasshopper/RhinoTerrain
- Illustrator/Photoshop/After-Effects

## FINAL PROJECT, ANALYSIS ANIMATION (EXCERPTS) LANDSLIDE RISKS & LAND REINFORCEMENT (VAR. BY STUDENT)

Student: Ya You





#### **IMPORTING + EXTRACTING ATTRIBUTES**

GIS DEF + NATIVE SPATIAL ATTRIBUTE INTEGRATION

various sample definitions & exercises shown from larger lesson/problem set frames

## **LAYERED, SYNTHETIC BEHAVIORS + DESIGN FEEDBACK** Plug-ins + logical strategies for system modeling









## TRADIGITAL DRAWING LANDSCAPE CORE, CCNY

Tradition and Digital Representation (aka tradigital drawing) was a spatial graphics course for entering Masters students in Landscape Architecture with no prior design experience. As a lab-based, technical course, it emphasized digital skill acquisition and the development of a critical, inquisitive approach to spatial observation and visual communication. A series of graphic assignments - from hand and digital sketching to surface and site manipulation in CAD, Rhino, and laser cuttng - were designed to build digital skills and the capacity to create/ coordinate spatial designs and drawings. By the end of the course, students had iteratively developed a site intervention and collated their maneuvers in a designed board and booklet.

Schematically speaking the course introduced:

- the conventions associated with geographic, urban, and landscape drawings (maps, plans, sections, diagrams, perspectives, axons)
- the graphic structures necessary for visual communication (line, color, massing hierarchies, grids, negative space, font use/ formatting, etc.)
- the appropriate workflows for creating drawings - both drafting and rendering between common digital software (GIS, CAD/ Rhino, Adobe Illustrator, Photoshop, InDesign, and various interfaces)
- the sketching and informal analysis tools to begin estimating spaces, and creatively capturing sites/ material systems/intensities

#### SEMESTER 2014/15, Fall

**SCHOOL** CCNY, Spitzer Grad Core

#### STRUCTURE

- Lab Sessions
- Field Surveying

#### **CORE TOOLS**

- Illustrator, InDesign, Photoshop
- CAD, Rhino (some GIS, laser instruction)

#### IMAGED ECOLOGIES (TOP), TRACED TERRITORIES (BOTTOM)

RESEARCH + ADOBE INTEGRATION

Collage and rendering to capture research ideas, as projection to accompany analytic instruments, fantastic introduction to constructed ecologies and econstructing imagery Manipulation of scanned sketches, found images (photoshop) for object/area focus, capturing ideas of season, duration, and/or juxtaposition of historic states

Students: Jacqui LeBoutillier (top, Elk & Cotton Grass), Sarah Toth (bottom, Annotated Site Ecologies in Al)







#### MEASURED DESIGN DRAFTING, DIAGRAMS, & RENDERED DRAWINGS

SCALING & ARTICULATING SPACE, PROGRAM

Transition from unmeasured, note & affect-driven illustration to measured drawing - plans, sections, & views from model photographs Use of underlay imagery, knowledge of perspective construction as drafting, info. coordination practice

Students: Kenia Pittman (top left, Edge Overlook Materials, CAD/GIS), Margaret Mulligan (top right, 'Balds' Stargazing Grounds, CAD/AI/PSD)

Robyne Heymans (bottom left, River Terrace Access, CAD/PSD), Maya Raby (bottom middle, Perched Platform- laser model, CAD), Kate Jirasiritham (bottom right - sod meadow diagram/model, CAD/AI)











## MLA STUDIO II LANDSCAPE CORE, CCNY

MLA Studio II is the second required studio for Masters landscape students at City College. It is the first neighborhood scale studio and, for most students, the first term integrating urban systems research, urban site articulation, design across several scales, and the use of digital media within the design process. The studio focuses on reading and responding to context through strategic interventions, with an emphasis on the process and staging of urban programs and places.

This year's studio has focused on Red Hook, Brooklyn's under-utilized surface sites. Dove-tailing with adj. coursework in urban ecology, students are developing in-fill interventions as a ground for quantitatively, spatially, and temporally testing the performance of remedial relays, eco-system service elements, and green infrastructure. As a second semester studio, this performative engagement with landscape is entwined with developing fundamental spatial vocabulary and syntax. To that end, each student team is responsible for staging their design (driven by material processes) and elaborating on potential organization effects within the larger Red Hook neighborhood, from phenomenal and programmatic elements to environmental impacts.

As we have just completed midterm, the samples here represent initial assignments. Additional exercises and final boards will be added at the end of term.

#### SEMESTER 2016, Spring

**SCHOOL** CCNY, Spitzer Grad Core

#### STRUCTURE

- Team-based Studio Work
- Group Reviews
- Design Crits

#### **CORE TOOLS**

• GIS, CAD, AI, PSD, InD, Models

#### **PROBLEM 1: SYSTEMS EXTRACTIONS, MANIPULATIONS**

FINDING AND MAKING MEASURE

Developing designs through elemental analysis, annotation, and iterative recombination

Student: Robyne Heymans





#### **PROBLEMS 2-3: RED HOOK RESEARCH: PROBLEM & SYSTEMS ARTICULATION**

IDENTIFYING A FIELD FOR INTERVENTION, RESEARCHING SITUATED RESPONSES Urban site analysis and systems research,

Student Team: Jacqui LeBoutillier & Elizabeth Gilchrist



## THESIS STUDIO LANDSCAPE CORE, CCNY

Thesis Studio is offered for Masters students in their final year. Largely self-directed, students propose a problem and resolve spatial resposes as a primer for independent, professional research and inquiry. Students work from intensive problem research combining drawing, presentation, and writing - and move through several scales of design Combining component research, synthesis, and programming, they ultimately present their design work in a variety of forms, as suggested by their concept. In past years, students have developed interperative frameworks shown in video tours, used models to simulate sedimentation processes, and more traditional design drawing sets.

As in design research, the studio emphasizes the integration of critical and speculative use of familiar design tools and technologies for engaging with historical, social, environmental, and policy problematics/materials.

#### CATCH & RELEASE: DESIGNING DREDGE IN LAKE ONTARIO

CHOREOGRAPHING SHORE-LINE RETREAT & REIMAGINATION Typological strategies for dredge habitat constructions on New York's Northern Shores

Student: Eli Sands





Drift Studies idenstanding of the process of littoral drift was critical in the development of these strategies. Inspired by Dr. Dalrymple's infinite del, the development of a wave model was created to experiment with form and time.





Strategy AI Double Barrier Strategy A-I is a double barrier strategy that uses a raised protective breakwater to allow a secondary planted submerged breakwater to thrive in the coastal zone. The in-between area is used for dredge seeding, habitat development, or industrialized fishing









#### CORE TOOLS/TEXTS

SEMESTER 2014/2015, Spring

**SCHOOL** CCNY. Spitzer Grad Core

**CO-TAUGHT** Catherine Seavitt

STRUCTURE

Discussion Seminar

 Group Reviews Design Crits

Range determined by students

# THESIS STUDIO

#### KATHMANDU COLLECTIONS: RENEWING WATER RESOURCES

STEP-WELL STRATEGIES, FOR SOCIAL & ECOLOGICAL RESILIENCE District strategies and seasonally-dynamic typologies to reconnect fragmented step-well system for adequate, accessible water

Student: Ashlev Drexler



DESIGN CATALOGUE: 5 STRATEGIC DESIGN OPTIONS FOR COMMUNITY OPEN SPACE







WATER HARVESTING + AUGMENTING GROUNDWATER RECHARGE shaping a new urban hydro-ecology Ashley Drexler

## DESIGN RESEARCH LANDSCAPE CORE

Design Research, a seminar focused on research and methodology, is offered for Masters students in their final year as preparation for the Comprehensive Studio and as a primer for independent, professional research and inquiry. Although the course is reading and discussion oriented, it acts as theoretical and conceptual preparation for research by emphasizing the critical and speculative use of familiar design tools and technologies for engaging with historical, social, environmental, and policy problematics/materials. Along with original archival and field research, students drew upon their backgrounds in spatial modeling, graphic communication, typological/temporal scenario creation, and supplemental writing to develop a 'constellation' of responses to an independent research proposition.

With method modules (after week 4), the course guides students through the process of research, testing, and supporting their assertions in a variety of media. While they develope individual trajectories, a mixture of seminar readings and dicussion, professor and group feedback, and in-class exercises helped them situate their work amidst both contemporary landscape praxis and larger cultural contexts. Basic research skills (literature reviews, bibliographic referencing and metadata handling, etc.) and organizational tactics necessary were emphasized in the first module as students defined conceptual problems and elaborated research plans.

#### SEMESTER 2014/15, Fall

SCHOOL CCNY, Spitzer Grad Core

#### STRUCTURE

- Discussion Seminar
- Group Workshopping
- Design Crits

#### CORE TOOLS/TEXTS

- Latour/Foucault/Material Culture
- Booth/Deming/Misc. LA Journals
- archives, articles, gis, etc.

#### PROBLEMS TO PLANS: BOTANICAL CURATION





#### SCENARIOS: TOWARD COLLECTIVE PHYTO-PHASING

ROTATIONAL & SPATIAL VARIABLES Mixed use of policy metrics and applied science research as synthetic ground for speculation Extracting and extrpolating the material processes at work to develop alternate spatio-temporal scenarios

Student: Fern Lan Siew





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"AERIAL" TOPOGRAPHIC MODE

ELEVATED VIEWING

PERSPECTIVE AS PLANAR, EQUIDISTANT PROJECTION DEVICE

Aurijas mulasis ar un alterativas aurijas nei artes ar restati i un restati nei tanas (r) a a restati i un restati i un restati nei tanas (r) a a restati i un restati i un restati nei tanas (r) a a restati i un restati i un restati nei tanas (r) a a restati i un restati i un restati i un restati nei tanas (r) a a restati i un restati un restati i un restati un restati i un restat

XHIBITS & EXERCISES

CIENCE MUSEUMS, AIRPORTS ACT AS PERMANENT HOST SITES

