

WATER AS CATALYST

Int

Interventions

AR

Adaptive Reuse

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T-HOUSE

WATER AS MEDIUM IN INTERVENTIONS AND ADAPTIVE REUSE

by KATHERINE BAMBRICK & BRIAN AMBROZIAK

Located on the tip of Hains Point in Washington, D.C., the theoretical design project entitled *T-HOUSE* is an experience-based construct that juxtaposes two distinct landscapes and speaks to the memory of the 20th century teahouse that once existed there. The proposal encourages a critical dialogue between the natural and artificial processes inherent in the history of the site, from the engineering staged to control flooding to the articulated tea ceremonies that took place there. At each scale, the medium of water — its forces, textures, tastes, thermal properties, associative potential, and trace memory — plays a requisite role. Through critique of such qualities, *T-HOUSE* translates the archeological as well as environmental realities and fictions of place. It expands upon traditional architectural practice by finding root in some of the more primordial conditions of the human psyche, affecting the body through tactile means, responding to time and change in values, and offering an opportunity to transform reality.

Key physical and phenomenological conditions associated with water — *transformation*, *temporality* and the rhythmic structures of *time*, and multi-sensory *tactility* — come together as fundamental “T” forces in the *T-HOUSE* narrative. These themes are integral to the analyses of the landscape, program, and material investigations that provided motive for representation methods and context for the design. Design elements through which the story is told include a productive landscape supporting the intentional acts of harvesting, brewing, and drinking tea, a tight grid of irrigation sprinklers that emit domes of mist, and oxidizing metal skins, akin to the earthenware tea kettle that is ceremonially

bathed in its own contents as an act preserving both material and cultural memory. With the environments of a productive landscape and an abstracted teahouse, this design accentuates the properties and aesthetics of the various forms of water as a framework for a new architectural construct.

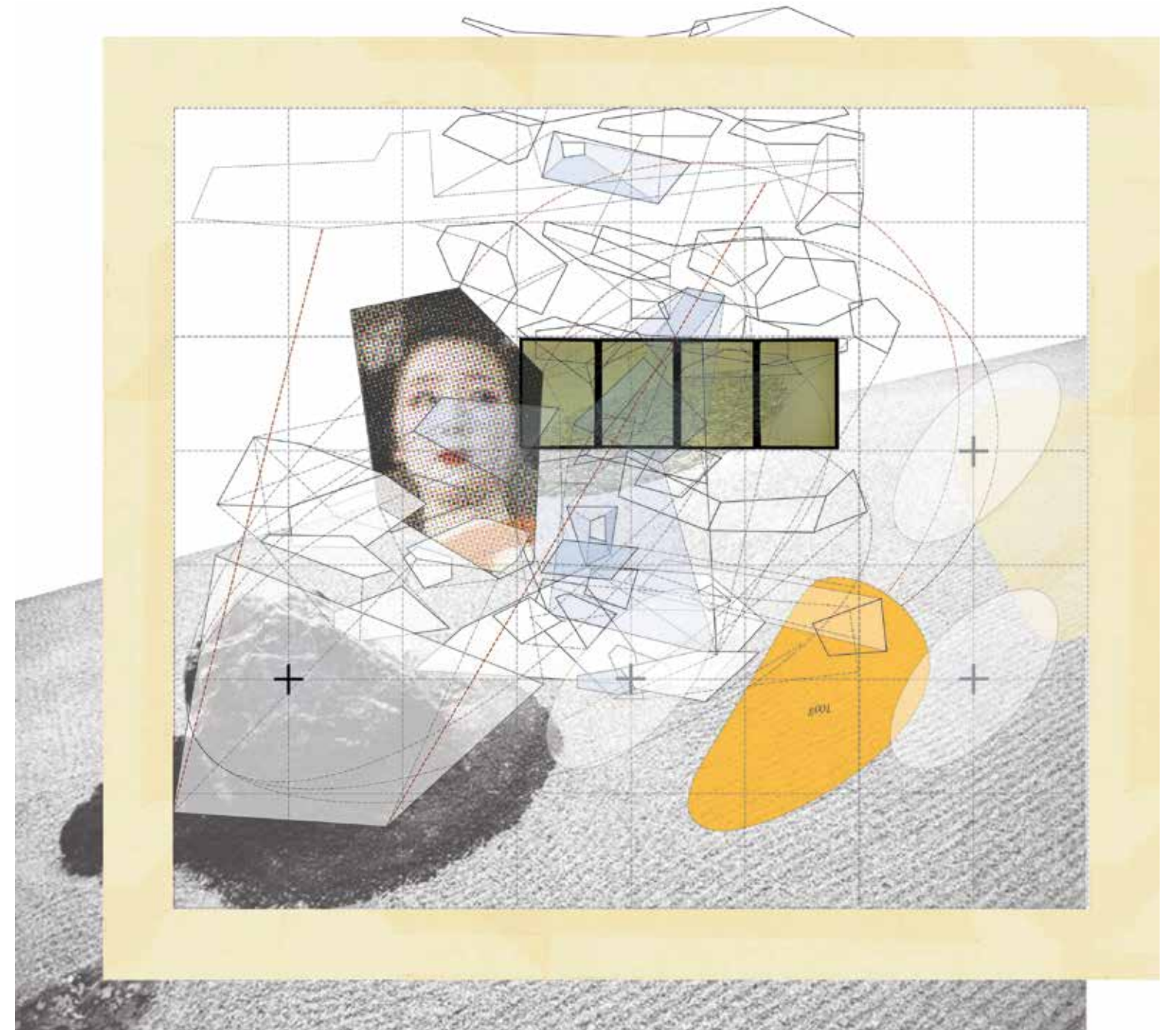
I. Constructed Terrain

Context and artifact both play a part in the unfolding of the Hains Point story and are translated as evolving specters to become experiential counterpoints of the *T-HOUSE* intervention. The site is a fabricated island located at the confluence of the Potomac and Anacostia Rivers. It is composed of the silty spoils that accumulated during the dredging of the Potomac when the Tidal Basin was constructed in the late 19th century. This civil engineering project, designed to control flooding and fetid runoff of Washington’s original marshland environment, was overseen by Major General Peter C. Hains from whom it takes its name.

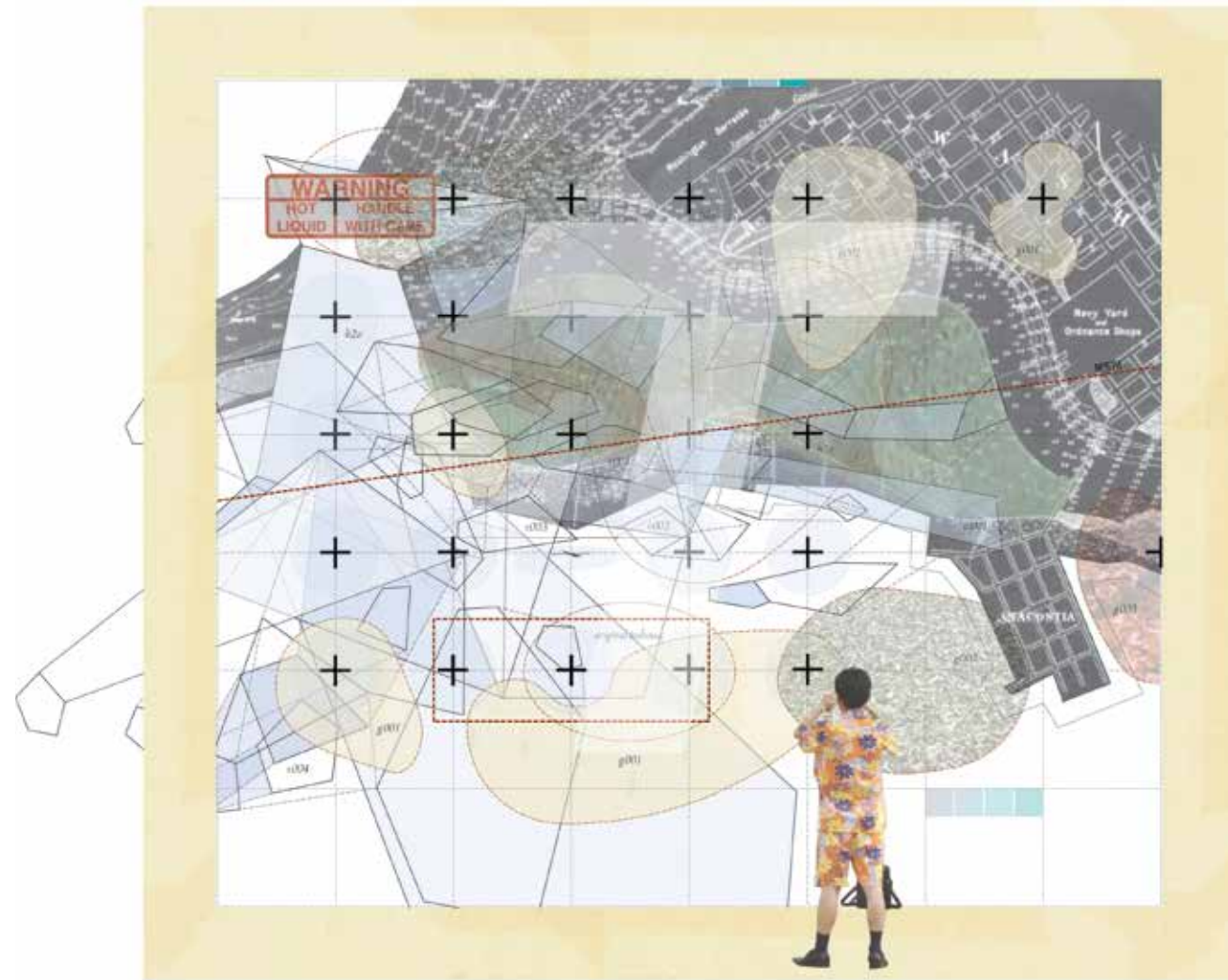
Championed by the McMillan Commission in 1902, Hains Point became a public park a decade later at a time when tearooms were becoming popular in American culture. “There are few hours in life more agreeable than the hour dedicated to the ceremony known as afternoon tea.”² The drink imbibed the nation in the years proceeding Prohibition. This also coincided with the rise of the automobile and recreational travel. In 1920, the Girl Scouts set up a refreshment stand in the park for motorists enjoying the “speedway,” which set the wheels in motion for a more permanent teahouse structure built in 1923.³

It was mid-winter and the water’s surface was covered with the withered leaves of the lotuses. Suddenly I realized that the flowers had not simply dried up, but that they embodied, in their decomposition, the fullness of life that would emerge again in their natural beauty.¹

— HOUNSAI GENSHITSU SEN



T_HOUSE pavilion: unfolding interiority



While the location was ideal on the x-y coordinate map, in close proximity to the governmental and commercial hearts of Washington and Arlington, its vertical stance proved problematic. Unchecked by levies or keys, the extremes of the tides produced periodic flooding. After a generation, the teahouse fell victim to the fragility of the systems from which it originated. Materially, the aquatic abuse rendered it unsanitary; culturally, teahouses were becoming less fashionable.⁴ In 1962, the Hains Point Teahouse closed and the structure was repurposed as a visitor center. After the flood of 1985 the building was permanently shut down and was demolished in 1987.

The story of water is integral to Hains Point and its social prominence through the mid-twentieth century. The landscape was created in response to the forces of a wetland ecology that existed prior to the urbanization of the area. To this day, flooding continues as a watery resurgence of nature's free will. However, rather than

try to contest it, the Water Environment Federation and International Water Association have embraced the site as a water-rich resource by which people can reconnect to the watershed and monitor quality parameters.⁵

Hains Point is, and its teahouse structure was, a fabricated foreign entity. Yet, too, was the tea ceremony itself. As a ritual it is "a construction, a category or tool of analysis" that "has been pressed into service in an attempt to explain the roots of... human behavior in ways that are meaningful."⁶ Tea is believed to have originated in China, date unknown;⁷ the tea ceremony originated in Japan in the fifteenth century as a development of the Zen ritual.⁸ It related consumption to meditation and aesthetics and suggested equality amongst differing economic and militant classes. In the United States, the tea ceremony held no such meaning. The tearoom was a fictitious stage where we found entertainment in the roles we played. Without

the deep cultural roots, teahouses were bound to remain mere fashion and inevitably die as the trend lost favor.

These stories open doors to critical design investigations. Here, interest in adaptive reuse focuses less on the permanent physical elements of Hains Point and more on its temporal and changing situation. Water's ebb and flow suggest the potential to register new horizontal strata above the ground plane, defining alternate zones of occupation. Seasonal changes related to both human visitor and flora resident, one moving transitionally on and off the island, the other a permanent fixture delivering the textural palette for visual and olfactory encounters. We reconsidered tea not through its cultural association but rather its sensory potential responded to by carnal instincts. With these reconsiderations, we deduced that memory of place and artifact did not need to relate to just a history, but rather a contemporaneous evolving story.

II. Abode of the Unsymmetrical

*"The Philosophy of Tea is not mere aestheticism in the ordinary acceptance of the term, for it expresses conjointly with ethics and religion our whole point of view about man and nature."*⁹

— Kakuzo Okakura

Next to water, tea is the most widely consumed beverage in the world.¹⁰ Originally sourced for its medicinal benefits, it has become a powerful economic and political commodity and has played a role in shaping the cultural identity of nations. Contemporary analysts of tea reference its prevalence in literature through the past two centuries. In the highly cited *Book of Tea*, Kakuzo Okakura describes tea as the root from which all culture is crafted. *Prix du Rayonnement* winner Francis-Noël Thomas introduces tea as more a recurrent side-note of life, present in simple gestures of friendship and courtship, revealing memories of the familiar with the taste of the madeleine.¹¹

Tea consumption is practiced in as varied of ways as there are teas. As noted, the Japanese tea ceremony is the measure of cultural ritual, maintaining behaviors respondent to environment, season, time, hygiene, dress, even lighting levels and building materials. Exterior and interior threshold moments, *roji* (garden and path) and *tokonoma* (scroll alcove), supplement the *chashitsu* (tearoom enclosure) as places where occupants prepare themselves physically and mentally for the transformative practice of tea.

Besides serving as the solvent, water plays an especially important role in the tea ceremony as a purifying agent. Prior to consumption, guests wash their hands and insides of their mouths and often drink hot water, sometimes flavored with roasted barley. Utensils and vessels are prescriptively cleaned prior, during, and after

use. These are then inspected by guests who handle them with brocaded clothes, allowing more tactile engagement to influence their visual perception.

Okakura describes the tearoom as the "Abode of the Unsymmetrical," purposely left unfinished for the patron's imagination to complete.¹² In part this term signifies the abstract disposition of the structure and interior design. It also speaks of the participant's need to interpret changes brought about by the spatial and material manipulation of the teahouse. Body posture and movement tempo are regulated through the ceremony. Chimes announce changes in phases. Open and closed doorways encourage air movement while stoked fires generate heat and produce enigmatic light contrasts. Often food and tobacco are served to offset the flavors of the tea and further stimulate the palette. Even interior scenes are modified during transitional stages as the host replaces representational scrolls with simple flower arrangement, signified replacing signifier.

These transitional moments are translated through sensory responses to the tea being consumed, affected by temperature changes, color saturation, aroma, and taste. Yet even without the ceremony, these tactile stimulants still produce a change in perception because they are intrinsic to the body rather than culturally learned.

III. Imperfect Waters

In the opening paragraph of *The Book of Tea*, Okakura states that Teism, the practice of the tea ceremony representing the adoration of the beautiful recognized within the ordinary, is principally "a worship of the Imperfect."¹³ In relation to water, this phrase may be interpreted in two seemingly contrary ways. When considering water in its most pure state, simply hydrogen and oxygen, there is an absence of any informative matter that could taint or provide evidence of context. Yet water is said to have memory, particulates of past experiences that may be described as imperfections. We find that water is not truly one or the other, but a happy juxtaposition of both.

The process of design is inherently a process of enjoyable investigation. During the time of the *T-House* study, much tea was drunk and much observation of leaves and powders and cloudy residues was performed. Most of the time we were adding substance to the liquid with expected results of increased color and opacity. But stepping back, it was the investigations of the "pure" water that most informed us of the nature of the imperfect. In its agitated liquid state, the solute particulates dissipate evenly throughout the liquid medium. Assuming a low level of saturation, this imperfect water appeared clear. However, by exploring the contrasting thermal processes of steaming/boiling or freezing, water's beauty as seen by its compositional imperfections was revealed.

Desalination is a purification process that removes particulates, particularly salts and other minerals, from *imperfect waters*. There are a number of techniques that

may be used, from vapor-compression distillation to reverse osmosis. Following simple measures, we examined some of the most primitive methods that could be performed domestically. We set target thermal extremes as our first parameters, experimenting with reduction via steaming and material isolation via freezing.

Increasing the temperature of the fluid object speeds up the natural process of evaporation where the lighter, less affected molecules of pure water are released into the air as gas. In our studies, the steam rose as sensual overlapping atmospheric veils. If acquisition of the pure substance was our goal, we would have contained the vapor and condensed it. However, it was the residual fluid that inevitably held the greater aesthetic promise related to the imperfect. Trapped air was the first to leave the bath, violently emerging from the floor of the heated vessel. Rings of minerals formed along its vertical surfaces marking the absence of the departed liquid. Prior to boiling off the entire contents, we observed a subtle hint of murkiness as the heaviest solutes gained greater influence. For us, this was the point where the water took on its most imperfect and beautiful character.

Decreasing the temperature slows the water molecules more gradually and creates a more stable end product for observation. We started our second thermal experiment with cold water tainted with dried herbs and tea powders. By placing the vessels immediately in the freezer, we had hoped to capture the evolution of the tea infusion, expecting to see a color gradient emanating from the particulate source. The result was less than satisfying. Any promise of a subtle staining was obscured by the intense white that developed in the icy core. We began again, this time using ordinary water ice cubes and changing our method of observation from unaided visual examination to viewing via photogrammetry.

We used standard store-bought ice sourced from regional waters. The cubes were not completely transparent — their cores were marked by a translucent white. Mounding the ice in an area four-foot square, we took a series of photographs and ran them through a photogrammetry software that generated a digital surface model. With the physical eye, the photographs presented the expected geometries of angular solids and voids. Through the lens of the photogrammetry, however, we discovered new ice topographies. The software's digital eye was blind to the clear outer layers but could accurately decipher the minute detail of the ice's inner disturbances. The aggregate form of trapped veins of air and diluted solutes, pressured to the center as the outer shell of pure ice formed, offered great aesthetic and spatial consequences. So unlike the traditional wireframe that contains its described form, this newly created digital surface defined a territory that had no clear inside or outside. It was as if the dream of

Piranesi's *Pianta di ampio magnifico collegio* had been realized through fluid dynamics.

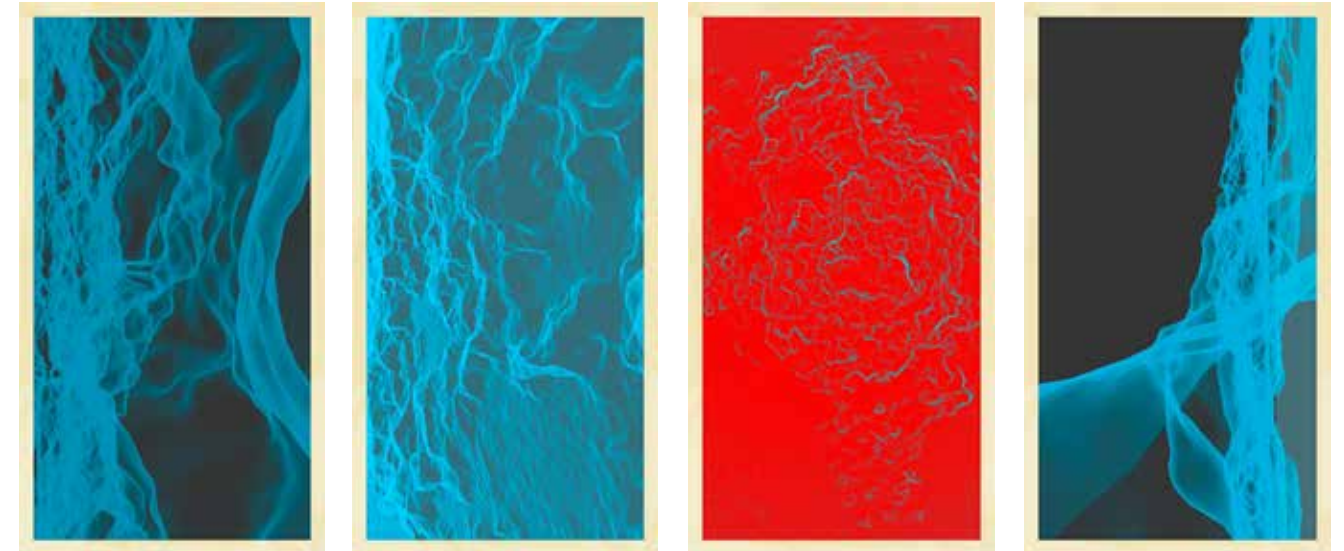
This digital exploration helped us visualize potentials for a new topographic and atmospheric strata. We sought views within the wireframe that exploited characteristics specific to the molecular qualities of ice and exported these as flattened images in a series of plates. These abstracted images reinforced the concept of the *Unsymmetrical* as the visual similes activated our imaginations. We performed similar processes of digital abstraction on liquid tea and steam to capture each state of matter which further informed the design process.

IV. T-HOUSE

In *the Sphere and the Labyrinth*, Tafuri states, "The collegio... constitutes a giant question mark on the meaning of architectural composition: the 'clarity' of the planimetric choice is subtly eroded by the process with which the various parts engage in mutual dialogue; the single space secretly undermines the laws to which it pretends to subject itself."¹⁴ In our experiment, the ice cubes created an artificial stability and required a new dialogue between the physical participants. This conversation acknowledged time and temperature, crack-lines and mineral veins, and most eloquently the reciprocal agreement forged between various blocks to accept either the inverse or converse form resulting from accelerated thermal processes. "Simmel... recognizes this in his *Metaphysics of Death*: 'The secret of form lies in the fact that it is a boundary; it is the thing itself and at the same time the cessation of the thing, the circumscribed territory in which the Being and the No-longer-being of the thing are one and the same.'"¹⁵ It is our position that the physical state of water both blurs and accentuates internal divisions and its reading as simultaneously pure and imperfect adds even greater complexity to Simmel's study of boundary.

These premises of simultaneous boundaries and *the Unsymmetrical* inform the relationship between visitor and environment in the design investigation. While the idea of the *collegio* challenges traditional reading of *poché* in favor of a more atmospheric and changing zones of occupation, Teatism's assertions regarding *the Unsymmetrical* prompt a more interpretive phenomenological intent. We tested these assertions in the conceptual design of the *T-HOUSE* on Hains Point. The name of the work derives not only from the base ritual acts of tea preparation and consumption, integral to the site's history, but also from key physical and metaphysical conditions associated with water, these fundamental "T" forces being *transformation*, *temporality* and the rhythmic structures of *time*, and multi-sensory *tactility*.

Conceptually, the three physical states of water — gas, liquid, and solid — translate the archeological as well as environmental realities/fictions of the place.



They relate in scale and association to the design elements of the proposal, a new productive landscape and a series of *T-HOUSE* environments that together represent a critical jump from abstract analytical exercises to resultant form.

The Productive Landscape describes a network of three ground-related systems: a planted landscape in service to the intentional act of harvesting, brewing, and drinking tea, a tight grid of irrigation sprinklers that emit domes of mist which define the zone of human occupancy, and woven movement routes that span across the gentle contours of the island.

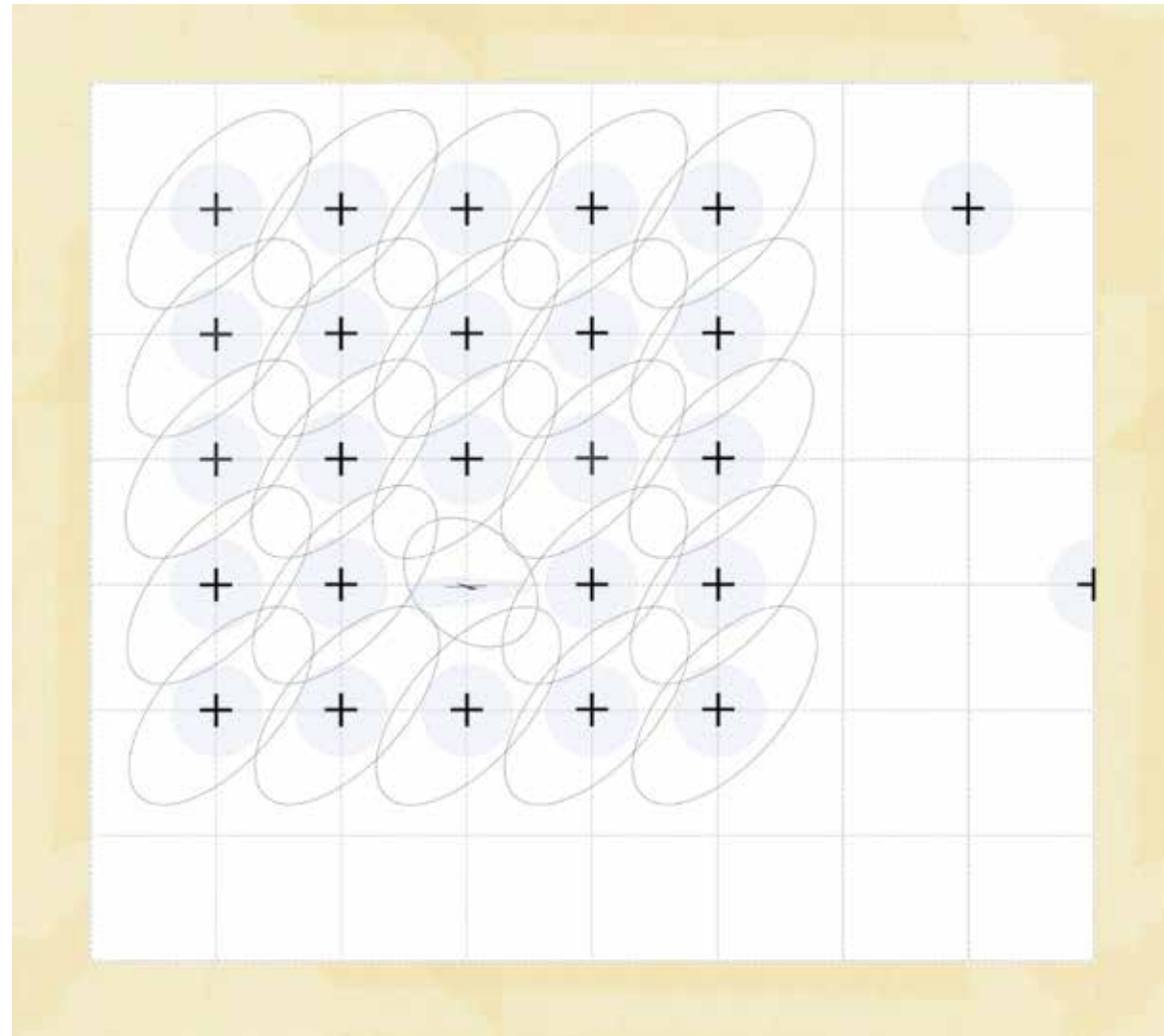
The first lesson from Hains Point is the importance of water's ebb and flow that establish horizontal zones of perception. Here, atmospheres rise above the normative ground plane and suggest the true region of man's sensory occupation. One of the five categories for tea evaluation is aroma¹⁶ determined by the volatile components¹⁷ released into the air. In tea, these are transmitted to our olfactory organs via the steam that rises from the hot liquid. For the *T-HOUSE* landscape, we propose a translation of this medium in the form of mist irrigation. The spray of water droplets emitted by the sprinklers reach approximately ten feet in height, enough to suggest enclosure and an interiority of the exterior gardens. These water-defined rooms establish the Cartesian order through which the herb-planted gardens and meandering footpaths weave.

(temporality) The landscape follows the common diurnal, seasonal, and cosmic rhythms of time. The plant life flourishes and fades. Migrant birds and insects visit shortly. Holidays and weekends produce a greater deluge of tourists. Only the incessant on-off of the sprinklers is constant as a time-keeping element.

(tactility) It is a field of color, a mosaic of herbs and flowers enjoyed for their scents, flavors, and textures. We *touch* this landscape in the traditional sense with our skin and our gut. We *touch* this landscape with all our organic and motor systems as we transduce chemical signals into perception. We *feel* the memory of walking through a hot summer day, looking for shade, experiencing the purifying cloud of mist that regulates our body temperature and periodically fogs our vision. The water droplets refract the dense sunlight, producing an array of color that challenges the perennial blooms. We walk through this altered landscape and recognize it as both familiar and new, a memory and an experience.

The *T-HOUSE* is a spatial apparition occurring in series above the sunken grave of its 20th century predecessor. Resting just over the misting waves, the pavilions' folding metal envelopes allow a tenacious ambiguity between the visitors' occupation of landscape and room. It is here that the visitor enacts a self-guided tea ceremony with the herbs that only minutes before she has picked.

(temporality) The pavilions' skins are agents of time recording atmospheric, floral, and human interaction. Their low-gloss perforated copper registers the mist with fine lines of greens and blacks. Oils from the visitors' hands produce a protective layer and stop time where engagement is most prevalent. Traces of pollen and slow-growth algae produce a subtle yellowish hue on the lower portions of the panels, those most perceptible when one kneels for tea. We see this as patina, not corrosion. It is the focused association and ritualistic aesthetic of the conceptual teahouse.

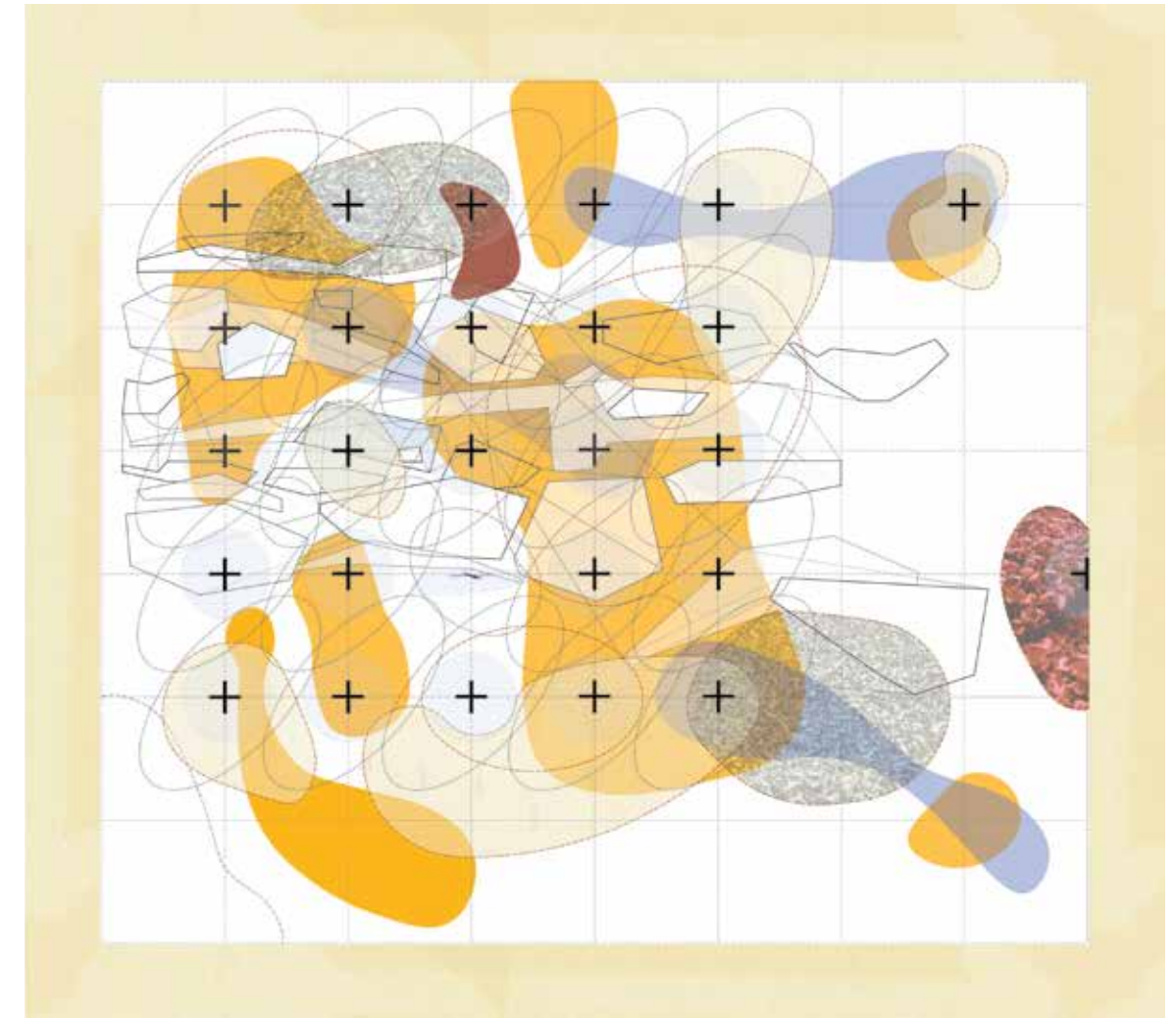


(*tactility*) Sensory agents are diminished within the confines of the *T-HOUSE*. The rooms are blanched, stripped of ornament and color to offer a neutralized context in which taste may be privileged. The floors are smooth and level. Light levels are balanced. Sound is muffled. Senses are stifled. A ceramic vessel, the self-selected herbs, and the steaming water are the sole contenders for the body's attention.

The Productive Landscape/The Tea House

Transition proposes two distinct environments that speak to the legacy of the island as a constructed landform responsible to a larger region of the Potomac delta and the ritual of the teahouse responsive to a society's values. Both these conditions have been tested over time and have known failure, yet the yearning to remember and adaptively reuse both land and situation are part of the cyclical story of the place.

(*transformation*) Set apart, these two realms form separate identities. They constitute liminal spaces with starkly contrasting sensory stimuli. Yet by their juxtaposition they are in dialogue. Our series of two, three, and four dimensional analytical techniques slowly uncovered a new *waterform* capable of superimposing the boundaries between solid and void, physical and psychological, and ultimately laid the foundation for a construct whose permanence evolves from its ever changing temporal nature. The visitor to this new realm is witness to the erosion of liminal states as interiority and exteriority are folded beyond one another to become the single entity. Such experience allows them to consciously enter into the continuum of this ever evolving story and themselves become transformed.



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PROJECT CREDITS, INFORMATION AND BIBLIOGRAPHIES

EDITORIAL

Project Name_ Projecting Change

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BREATHE, LOOK, STAND UP

Project Name 01_ DC ExchangeProject_Site_ McMillan Slow Sand Filtration site_ Location_ Washington DC_ New use 01_ Community center, marketplace, performance_ Project Name 02_ People's Liberation Army No. 1102_ Location_ Shenyang China_ Original architect_ Communist Party China_ Rehabilitation architect_ META-Project_ New use 02_ Exhibition space, mini theatre

Image Credits_ Figure 01,02, 08_ McMillan slow sand filtration site, Washington, DC, Lewis Francis; Figure 03 –07_ Public Folly, Shenyang, China, META-Project; Figure 09_ Courtesy of Lindsay Winstead

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THE TEARS OF THE U.S.S. ARIZONA

Project Name_ A tomb that lives; Location_ Pearl Harbor, Hawaii

Image Credits_ Figure 01_ View of USS ARIZONA taken from Manhattan Bridge on the East River in New York City on its way back from sea trials. December 25, 1916, Library of Congress Prints and Photographs Division Washington, D.C. 20540 USA http://hdl.loc.gov/loc.pnp/pp.print;photographer_EnriqueMuller,Jr./E.Muller;1916;Wikimedia; Figure 02_ A TOMB THAT LIVES Monument proposal, illustration by author; Figure 03_ An aerial view of the USS Arizona Memorial, U.S. Navy photo by Photographer's Mate 3rd Class Jayme Pastoric, Wikimedia

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THE EDGE OF CONDITION

Project Name 01_ Three Mills_ Bromley-by-Bow_ River Lee_ London, England_ Project Name 02_ The White Building_ Lee Navigation Canal_ Hackney Wick_ Stratford, England_ Project Name 03_ The Marine Engine House_ Walthamstow Reservoirs

Image Credits_ All images courtesy of the authors; Figure 01, 02_ Three Mills Island, London_ Figure 03_ White Building_ Hackney Centre Wick_ Stratford_ Figure 04_ The Sinking Future Post Apocalyptic Flood Survival Centre.

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BACK TO THE FUTURE

Image Credits_ Figure 01_ The Big U, Courtesy of Bjarke Ingels Group; Figure 02, 03, 05) by Julia Casol; Figure 04_ Courtesy of H+N+S Landscape Architects; Figure 06_ Dijkdoorbraak bij Bemmel, 1799, Christiaan Josi, naar Jacob Cats (1741 – 1799), 1802, source: Rijksmuseum, Amsterdam

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THE OYSTER BLOCKS PROJECT

Project Name_ The Oyster Blocks Project

Image Credits_ Figure 01 – 07_ courtesy of the author

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THE HAMMAM OF ERBIL CITADEL

Project Name_ Hammam of Erbil; Location_ Erbil, Iraq

Image Credits_ Figure 01 – 04_ courtesy of the authors

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(re)MADE BY WATER

Project Name_ New World Mall, Bangkok, Thailand

Image Credits_ All images courtesy of the author; Figure 01_ Mall; central court, Photograph by Perfect Lazybones; Figure 02_ Floating market in Bangkok, Photograph by Georgie Pauwels; Figure 03_ Mall, escalators, Photograph by Olga Saliy; Figure 04_ Mall, koi, Photograph by Olga Saliy; Figure 05_ Mall, escalators, Photograph by Olga Saliy.

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T-HOUSE

Project Name_ T-HOUSE, theoretical project; Location_ Hains Point, Washington, D.C.

Image Credits_ Figure 01 – 08_ courtesy of the authors

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THE BLUE LINE

Project Name_ blue developments; Location_ Battir, Palestine; Qeparo, Albania

Image Credits_ Figure 01- illustration by author

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ENVIRONMENTAL IDENTITY

Project Name 01_ Caiaques kayaks; Location_ Pinheiros River, São Paulo, Brazil; Artist_ Eduardo Srur; Project Name 02_ Pets; Location_ Tietê River in São Paulo, Brazil; Artist_ Eduardo Srur

Image Credits_ All photos courtesy of Eduardo Srur; Figure 01_ Caiaques, kayaks, Pinheiros River, photo_ Eduardo Nicolau; Figure 02_ Caiaques, kayaks, Pinheiros River, photo_ Alexandre Schneider; Figure 03_ Pets, Tietê River, photo_ Eduardo Srur; Figure 04_ Pets, Tietê River, photo_ Almeida Rocha

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A METROPOLITAN PARK OF WATER

Project Name_ Metropolitan Water Park project, Location_ Saragossa, Spain

Image Credits_ Figure 01_ Bridge Pavilion & Third Millennium Bridge, Río Ebro, Zaragoza, España, Source_Pabellón Puente y Puente del Tercer Milenio, Author_ Juan E De Cristofaro from Zaragoza, España, CC-BY-SA-2.0; Figure 02_ Google Earth aerial view of Zaragoza, Spain; Figure 03_ Plano topográfico de la ciudad de Zaragoza del siglo XVIII, Wikimedia;

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BETWEEN RESILIENCY AND ADAPTATION

Image Credits_ All images courtesy of the author; Figure 01_ by author, background_ by Aleks Dahlberg at www.unsplash.com; Figure 02_ by author; Figure 03, 04_ graphic by author, background_ by Frantzou Fleurine; www.unsplash.com

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WATER AS MEDIUM

Project Name 01_ Water tower in Delft, Architect_ Rocha Tombal; Location_ Delft, NL; Project name 02_ Water tower in Brasschaat, Architect_ Crepain-Binst Architects; Location_ Brasschaat, Belgium; Project name 3_ Water tower Sint-Jans convent, Overijssel; Architect_ Zecc Architects; Location_ Overijssel, NL

Image Credits_ All images courtesy of the authors_ Figure 01_ typological evolution of the water tower, Source: Ingeonné; Figure 02_ Water tower in Delft (NL), photo by Christiaan Richters; Figure 03, 04, 05_ Water tower in Brasschaat (BE), Crepain-Binst Architects, photo_ Crepain Binst; Figure 06, 07_ Water tower Sint-Jans convent, Overijssel (NL), Zecc Architects, photo_ Stijn Poelstra, <http://www.stijnstijl.nl/>;

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- Van Craenenbroeck, W. *Eenheid in verscheidenheid watertorens in België*. Brussels: NAVewa, 1991.

Ahmed Abbas holds a Bachelor Degree in Architecture from the Technical University of Avans and a Master in Interior Architecture from Hasselt University in Belgium. He has six years of experience as an architect in leading his own company. He has been a lecturer at the University of Newroz (Iraq) since 2014, where he teaches Modern Design and coordinates Working / Drawing and Building Construction. Since 2015 he has been working on his Ph.D. entitled "A Proposed Methodology for the Adaptive Reuse of Traditional Buildings in the Buffer Zone of Erbil Citadel".

Brian Ambroziak is an Associate Professor of Architecture at the University of Tennessee, Knoxville. His publications include *Michael Graves: Images of a Grand Tour* (2005) and *Infinite Perspectives: Two Thousand Years of Three Dimensional Mapmaking* (1999) with Princeton Architectural Press. In 2008, Brian Ambroziak founded time[scape]lab with Andrew McLellan and Katherine Ambroziak.

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Michael Leighton Beaman is the founding principal of Beta-field, a design/research office run with Landscape Architect and educator Zaneta Hong. Michael is also a co-founding member of the design nonprofit GA Collaborative. Michael currently teaches at the University of Virginia where he is an Assistant Professor in Architecture and at the Rhode Island School of Design, where he is a critic in the Interior Architecture Dept. In addition to teaching and practice, Michael is a writer for *Architectural Record* focusing on design technologies and techno-centric design practices.

Inge Donn  completed her bachelor's degree in Interior Architecture at Lucca School of Arts, Brussels, and her master's degree on the topic of adaptive reuse at Hasselt University. After internships at Baccarne and Lens'ass architects, she researched the reuse of water towers and created a masterproject for the water tower of Hoeilaart (BE) as co-working space.

Dr Graeme Evans is Professor of Urban Design at Middlesex University, Department of Design and Director of the Art & Design Research Institute. He has been leading a research project in the Lee Valley as part of a 3 year Arts & Humanities Research Council-funded project: Towards Hydrocitizenship, exploring the changing relationships between people, ecosystems and urban water landscapes, and the legacy of waterside architecture and heritage. In June 2015 he curated the Hackney Wick & Fish Island Connecting Communities Festival including an exhibition of site-based design schemes including BA Interior Architecture student work, as part of the London Festival of Architecture. Graeme is also Professor

of Culture & Urban Development at Maastricht University, The Netherlands where he has been working on several industrial heritage re-use schemes.

Alexander Ford earned a B.S. in Architecture from the University of Arizona in 2014, and an M.S. in Historic Preservation from Columbia University in 2016. Ford currently works for Daniel Libeskind in New York. His architectural work has been published internationally.

Francesco Garofalo founded Openfabric in 2011, an office specialized in landscape architecture and urban planning based in the Netherlands. Francesco Garofalo studied Landscape Architecture in Van Hall Larenstein Arnhem, the Netherlands and in Genoa University. Through Openfabric he has led various awarded competitions and commissions, including: a proposal for New Tahrir square in Cairo, Egypt; an AIDS memorial park, New York, USA; renewal of the main boulevard in Genoa — Via XX Settembre, Italy (First prize); an urban square, realized in The Hague, The Netherlands (First prize). Francesco currently teaches at the Amsterdam Academy.

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Catherine R Joseph is an architect based in New York City. She earned a Master of Architecture from Cornell University and a Bachelor of Science in Structural Engineering from Duke University.

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Renzo Lecardane, Ph.D. in Architectural Design (Palermo) and *docteur de l'Ecole Nationale des Ponts et Chauss es* (Paris), is Associate Professor in Architectural Design at Department of Architecture of University of Palermo. From 2000 to 2005 he carried out research and teaching activities in France (EAPMalaquais, EAPLa Villette, EAPVal de Seine; LATTS/ENPC-Paris; GRAI). From 2002 is associate to *Laboratoire Infrastructure, Architecture, Territoire* (ENSAPMalaquais). Since 2009 he is member of the Academic Board for the PhD in Architecture at University of Palermo. In 2013 he founded the research group *L@bCity Architecture* creating connections between architectural design and urban shape.

Karen Lens holds a Master in Architecture and Architecture Sciences from Sint-Lucas and KU Leuven, both in Belgium. She worked for 10 years as an architect specializing in adaptive reuse, energy efficiency and design for all. In 2012, Karen started a Ph.D. on the reinterpretation of underused monastic sites in Limburg (Belgium) and Western Europe at Hasselt University. She is also engaged in several design studios concerning adaptive reuse and collective dwelling at the same university.

Kees Lokman is an Assistant Professor of Landscape Architecture at the University of British Columbia. He holds degrees in planning, urban design and landscape architecture. Current research focusing on the intersection of landscape, infrastructure and ecology has been published in the Journal of Architectural Education, Topos, Landscapes|Paysages and New Geographies. Kees is also founder of Parallax Landscape, a collaborative and interdisciplinary design and research platform. klokman@sala.ubc.ca www.parallaxlandscape.com

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