

WATER AS CATALYST

Int

Interventions

AR

Adaptive Reuse

Vol. 08

Int | **AR**
Interventions | Adaptive Reuse

Editors In Chief:

Markus Berger

Liliane Wong

Graphic Design Editor:

Ernesto Aparicio

Int|AR is an annual publication by the editors in chief: Markus Berger + Liliane Wong, and the Department of Interior Architecture, Rhode Island School of Design.

Members of the Advisory Board:

- Heinrich Hermann, Adjunct Faculty, RISD; Head of the Advisory Board, Co-Founder of Int|AR
- Uta Hassler, Chair of Historic Building Research and Conservation, ETH Zurich.
- Brian Kernaghan, Professor Emeritus of Interior Architecture, RISD
- Niklaus Kohler, Professor Emeritus, Karlsruhe Institute of Technology.
- Dietrich Neumann, Royce Family Professor for the History of Modern Architecture and Urban Studies at Brown University.
- Theodore H M Prudon, Professor of Historic Preservation, Columbia University; President of Docomomo USA.
- August Sarnitz, Professor, Akademie der Bildenden Künste, Wien.
- Friedrich St. Florian, Professor Emeritus of Architecture, RISD.
- Wilfried Wang, O'Neil Ford Centennial Professor in Architecture, University of Texas, Austin; Hoidn Wang Partner, Berlin.

Layout + Design Coordination_Cara Buzzell, Sungkyu Yang

Editorial + Communications Assistant_Toban Shadlyn

Cover Design_Ernesto Aparicio, Cara Buzzell

Cover Photo_Browning Cottage, Matunuck, RI_Aerial Photograph by John Supancic

Inner Cover Photos_Markus Berger, Jeremy Wolin

Support Team_Iris Kuo

Copyediting_Amy Doyle, Clara Halston, Jeremy Wolin

Printed by SYL, Barcelona

Distributed by Birkauer Verlag GmbH, Basel P.O. Box 44, 4009 Basel, Switzerland,

Part of Walter de Gruyter GmbH, Berlin/Boston

Int|AR Journal welcomes responses to articles in this issue and submissions of essays or projects for publication in future issues. All submitted materials are subject to editorial review. Please address feedback, inquiries, and other material to the Editors, Int|AR Journal, Department of Interior Architecture, Rhode Island School of Design, Two College Street, Providence, RI 02903 www.intar-journal.edu, email: INTARjournal@risd.edu



CONTENTS

	04	EDITORIAL
BREATHE, LOOK, STAND UP	08	THE SECOND LIFE OF WATER INFRASTRUCTURE Lindsay Winstead
THE TEARS OF THE U.S.S. ARIZONA	20	A TOMB THAT LIVES Alexander Ford and Nicholas Gervasi
THE EDGE CONDITION	26	RE-USE OF INDUSTRIAL HERITAGE ON URBAN WATERFRONTS Graeme Evans and Naomi House
BACK TO THE FUTURE	34	THE SPATIAL DIMENSION OF WATER MANAGEMENT Kees Lokman
THE OYSTER BLOCKS PROJECT	44	SUBAQUEOUS INTERVENTIONS FOR NON-HUMANS Michael Leighton Beaman
THE HAMMAM OF ERBIL CITADEL	50	A CONFLUENCE OF PAST, PRESENT, AND FUTURE Ahmed Abbas and Karen Lens
(re)MADE BY WATER	56	OBSOLESCENCE, URBAN NOMADISM AND THE NEW WORLD MALL, BANGKOK Gergory Marinic
T-HOUSE	64	WATER AS MEDIUM IN INTERVENTIONS AND ADAPTIVE REUSE Katherine Bambrick and Brian Ambroziak
THE BLUE LINE	72	REUSING TRADITIONAL RURAL WATER MANAGEMENT SYSTEMS Francesco Garofalo
ENVIRONMENTAL IDENTITY	76	THE SÃO PAULO RIVERS CASE Anne Schraiber
A METROPOLITAN PARK OF WATER	82	Renzo Lecardane and Paola La Scala
BETWEEN RESILIENCY AND ADAPTATION	88	Catherine Joseph
WATER AS MEDIUM	96	ADAPTING WATER TOWERS Inge Donn� and Bie Plevoets

THE OYSTER BLOCKS PROJECT

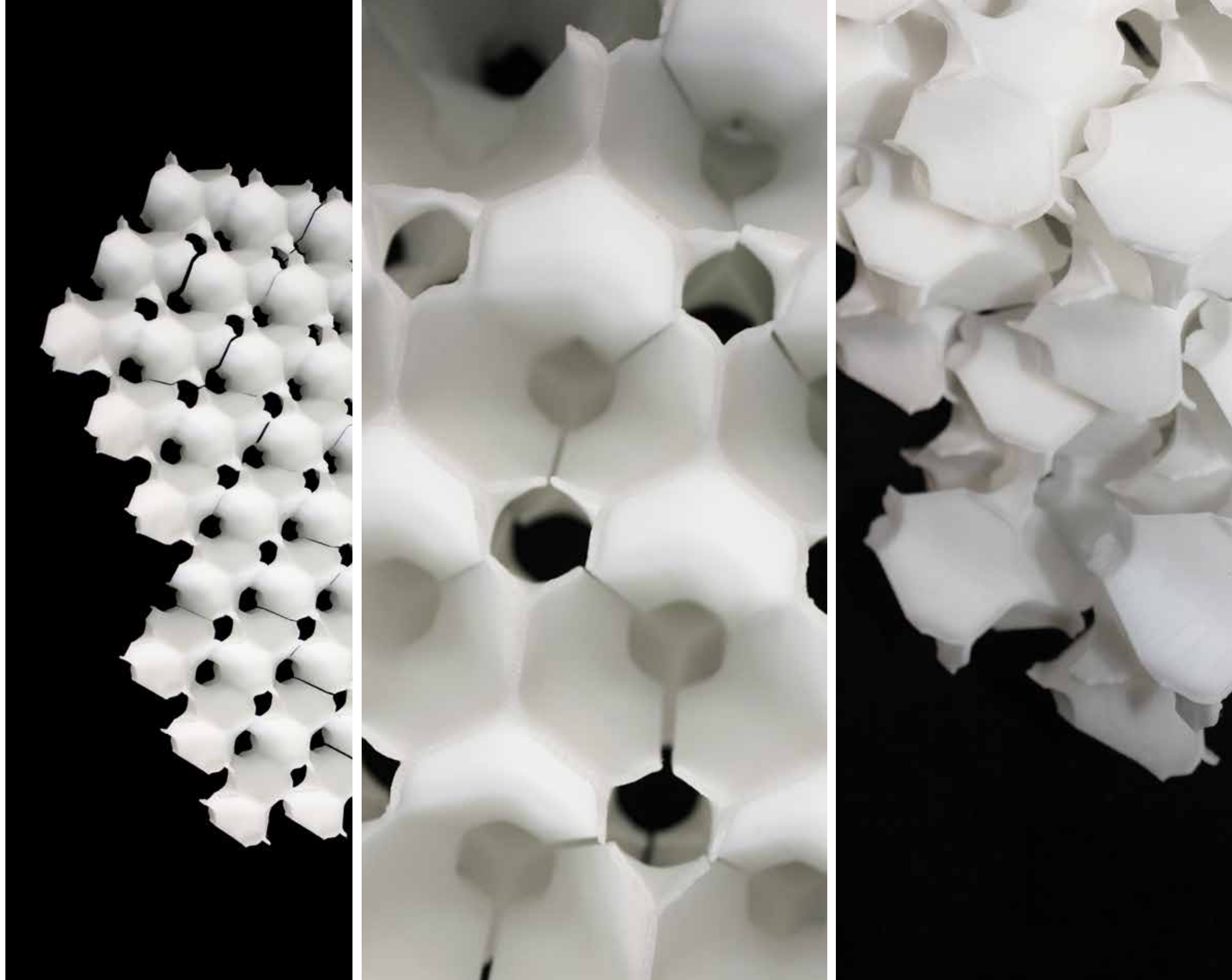
SUBAQUEOUS INTERVENTIONS FOR NON-HUMANS

by MICHAEL LEIGHTON BEAMAN

Part .01

Subaqueous environments, those that are defined through their submersion under water, are inhuman environments, they do not afford human life. And while this alone might disqualify us from playing an active role in the formation and modification of these environments, it has not. Humans have affected these environments both intentionally and unintentionally for thousands of years. Most of our impact comes in the form of "non-design" interventions. This encompasses varying degrees of intentionality, but they lack a conscious design agenda. These interventions are predominantly the byproducts of multiple, dispersed domestic and industrial scale activities, or non-point origins. Agricultural runoff, waste disposal, leakages and other non-point source origins constitute a systemic distributed form of non-design authorship.

Though the manipulation of subaqueous environments may not have the practical or theoretical impact of land-based interventions, they are part of a larger anthropogenic remaking of the world. Reformation of the Earth's surface by collective human activity has accelerated exponentially since the Industrial Revolution. On average, humans displace twice the volume of Mount Fuji each year. This geological-scale adaptation of our environment has brought about the emergence of a new



Oyster Block shown in a single layer configuration, 3D print in ABS plastic

geological era — the Anthropocene. Much of this activity occurs in what has been termed the Earth's event layer, which encompasses multiple environments.

For designers, with little exception, our practice is on dry land. However, from the dredging of the East River in New York, to the creation of artificial islands in the South China Sea, anthropogenic land formations are also designed to operate with and within water. Or, these Earth Surface transformations are simply the unintended products of fluvial processes operating on our interventions. These projects, whether because of their scale, complexity, or the specific ecological and hydrological concerns they embody, fall outside of the scope or interests of the design disciplines. As a result, they occupy a place somewhere between designed and non-designed environments.

Part .02

It is within the tradition of non-design interventions that the earliest artificial subaqueous environments are believed to have emerged, serendipitously through the artifacts of net-fishing practices. Fishing nets are an ensemble of materials and forms. Fibrous rope is tied together in regular intervals forming a flexible scaffold. Thinner cord is tied or woven into the spaces between in precisely spaced patterns tailored to the characteristics of local sealife. The addition of stone, metal, bone, and wooden hooks helped to ensure larger, stronger fish could not break free. Small nets could be thrown or swept through a water body by only a few people. Larger nets required coordination and time. Nets measuring over four-hundred feet in length and twenty feet in height were common in ancient Mediterranean and South American civilizations. But, these larger nets could not be easily moved through water and their yields became difficult to gather by hand. Eventually buoyant materials were attached to one edge, and at the other, heavy stones were tied, spreading the net vertically from the water's surface to the sea or river bed. Nets oriented in this fashion create a selectively porous wall. Fish are brought into the net by their own movements, tides and currents.

As nets grew in size, so too did intervals between harvests. When these larger nets, now full of fish, were pulled ashore or onboard boats, fishers simply cut away their ballast to manage the weight, depositing gagged stones on the seafloor. Over time, changes in the spatial dimensions of the seabed emerged. New topographies were generated, affecting the flow and trajectory of water. Cavities were created, protecting prey from predator. Mass was increased, mitigating shifts in temperature and changes in current. Surfaces accumulated, affording places for plants and animals to attach themselves and grow. What was merely debris generated changes in the composition of the ecosystem below the water's surface. Increases in seabed complexity

correlated to increases in biomass; as a result, breeding increases, food sources increase, and fishing yields become more plentiful.

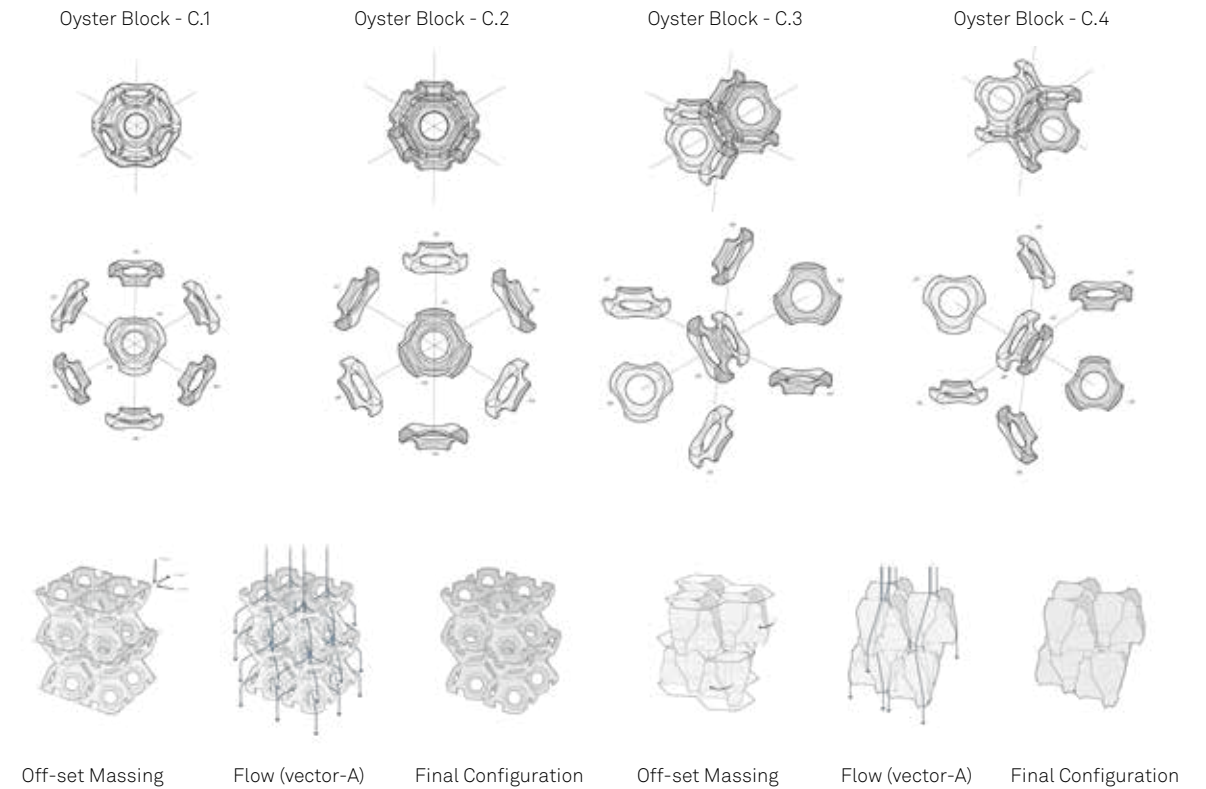
The use of discarded materials accounts for the majority of modified aquatic environments, either as an intentional act through scuttling ships or sinking used tires tied together in massive bundles; or as a byproduct of waste disposal practices — building and infrastructure construction or agriculture and aquaculture. In each case, the resulting reshaping of seabeds can be considered a reformation of the Earth's event layer, and a problem for designers to address. In the case of scuttled ships, their placement, orientation, and modification are considered, when repurposing them into environmental interventions. For tires and other modular waste materials, their pattern of aggregation and their collective formal qualities are considered. While manufactured systems are readily available, they form only a small fraction of these environments. More importantly, the degree to which they are non-design objects is of question.

Part .03

As more emphasis is placed on humanity's impact on the Earth's environments, and what might be called an acknowledgement and exploration of the ecological context of our activity, designers have become more involved in adaptive and interventional projects that are realized in larger, more interconnected ways. Increasingly, those projects are involving subaqueous environments and ecotones. These projects are expanding the notion of intervention and adaptation for designers to encompass water. The Oyster Blocks Project, which began as a collaboration between Betafield and Allied Concrete, was born from this approach to design intervention. Our collaborative goal was to investigate how manufactured elements, which play a role in these environments, might be reconsidered to be more specific in form, material, and construction; and more responsive in how they relate to their intended intervention and unintended effects.

The creation of artificial reefs is one of the earliest examples of a systematic and practiced subaqueous intervention. Modified aquatic environments are created for multiple reasons. One of the most widely used applications is to promote or mitigate the growth of sea life by creating environments calibrated to support specific species. Support can be generated by mitigating some condition already present, or amplifying an existing favorable condition. While these two functions are not mutually exclusive, they do help define the goals for intervention.

Artificial seabeds and reefs that are completely designed are typically done so through unitization and modularization to lower cost and facilitate in their placement and assembly. Whereas reused materials and



objects like ships and tires are only able to be modified, constructed units can be designed for specific performances or effects. They can be calibrated to effect specific environmental conditions such as water flow, and specific inhabitants such as fish, algae, or in the case of the Oyster Block Project, oysters.

We identified oyster farming in the Chesapeake Bay as a practice that had been affected by commercial fishing, industrial waste, transportation infrastructure, and changes in environmental conditions; and proposed this as the context in which to work. The project, though initially just focused on research, presented an opportunity to examine the larger issues of anthropogenic landformation practices as a problem within three of our core areas of interest: materials research, design technology, and environmental impact.

Part .04

The unitized, modular approach was one we were interested in building upon. This approach has been used in Japan as far back as the mid-eighteenth century and throughout the world since the early twentieth century. The adoption of manufactured reef units was spurred in large part by the accessibility of mass production techniques and advances in material science. The digital modeling, simulation and manufacturing advances, which are folded into mass production today, expose a way to expand the correlation between

unique environmental conditions and artificial reef unit design. We began by addressing the issues of form, material, and construction in a more relational way, in which performance criteria could be modulated by morphology, composition, and assembly. Through Morphology, we examined the unit and aggregate form, Composition, the environmental effects of each unit's material makeup, and Assembly, the organizational, structural and product of each unit - with all three considerations impacting the final design. The project spawned five typologies: Oyster Blocks A-E. Each foregrounded one of the three considerations over others, while addressing the central function of creating artificial reefs for oyster farming.

Block form or unit morphology, and aggregate pattern or collective morphology, are closely linked. While all unitized reef modules accumulate, the question for us was how we could create effects present in the aggregate that were not present in the unit. Since the collective, not the individual, creates the performative effect, we began by examining how a collective morphology could guide design. These effects generated a mitigation or exaggeration of local aquatic conditions and influenced the orientation or directionality of unit aggregation. Oyster Block series A for example was concerned with creating a thickened and articulated surface, whereas series B and C examined multi-directional and rotational aggregations. Likewise, orientation

and directionality of effect was also a consideration. Oyster Block series E allowed for deviated, but relatively clear paths for water flow along one vector, while constraining movement in others, creating various degrees of resistance through changes in direction. Directional changes generated occluded or sheltered surfaces that promote biodiversity.

Material composition has both global and local effects. These can include: compressive and tensile strength, mechanical and chemical erosion resistance, density, porosity, texture, and color. These material effects impact both design considerations and performance considerations. For instance, smooth surface textures reduce friction and resist mechanical erosion from moving water. Rougher textures allow for the attachment of mollusk and barnacle stalks. Some materials resist chemical erosion from mineral deposits by packing tighter, while others provide a better substrate for shell growth. The three main components of each unit are cement, aggregate, and additives. Within these three, there are variations in chemical composition and physical characteristics, such as particle size. Both chemical and physical recipes were tested with Allied Concrete, each tuned to the chemical makeup of different areas of the Chesapeake Bay, in order to promote more habitable conditions for local oyster species.

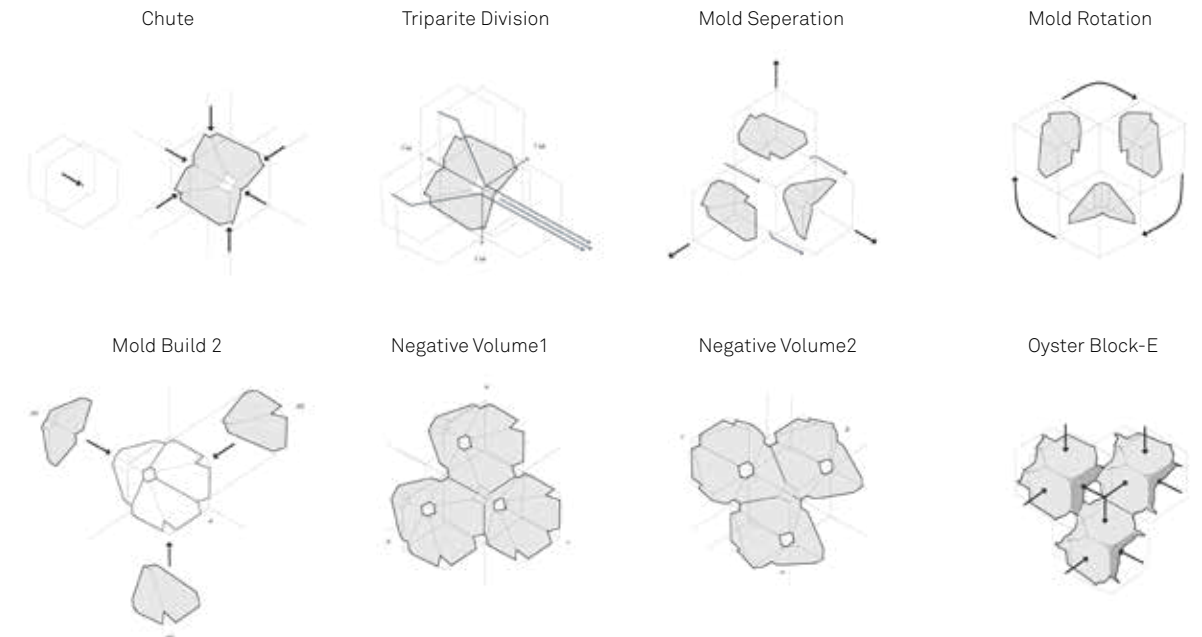
Assemblies were examined in multiple scales and stages of production. The first scale we considered was that of the unit itself. Working exclusively with cast materials meant that each unit had to be described geometrically through multi-part, reusable molds. While the constraints of reusable molds limit certain geometric complexity, it also allowed for variation in the unit itself, by conceiving of the mold as a design problem itself. We began by understanding that like the units, molds

are comprised of parts, which can be rearranged and reassembled to produce different final unit configurations. As was the case with Oyster Blocks C.1, C.2, C.3 and C.4, mold parts could be reconfigured to create more open or enclosed units. Likewise, duplicate mold parts can be used to create three-dimensionally variable units, in the case of Oyster Block series E, which is created by six identical interlocking mold parts. The second scale of assembly is how each unit, once cast, is able to lock in place with other units to form an aggregation pattern. In both the C and E series, units nested through interlocking features, created to ensure alignment during unit placement in a site, so that voids and surfaces were continuous throughout the aggregation to produce predictable effects.

Part .05

These three considerations allowed the project to be developed as a series. The series framework allowed us to take a parametric approach to integrating the three main criteria above. That is to say, that not only could geometric definitions be generated by the relationships, as is the case in parametricism, but that all three characteristic were explored as interconnected contingencies within the design process. The Oyster Block, as a series of design solutions, explored through a conceptually parametric design process, also allowed us to foreground specific characteristics with the knowledge that others would not be ignored, only hierarchically displaced. Variability within a typology or variations between typologies could then be more tightly explored and rigorously tested.

Working primarily in a digital environment meant that aggregation patterns of hundreds of units could be tested using flow simulations. These were typically

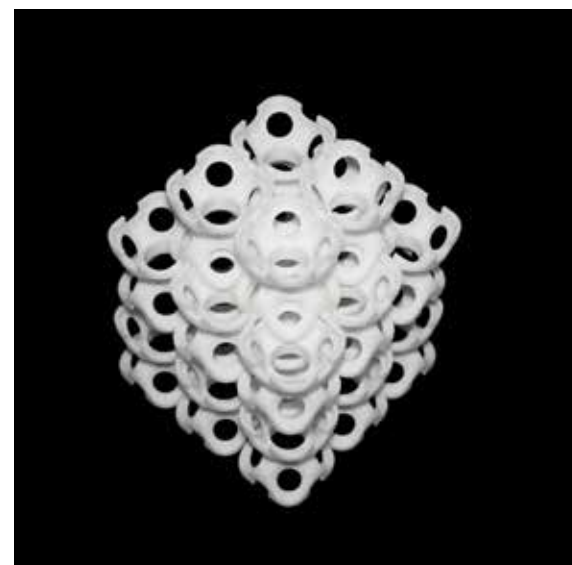


done using discrete particle tests, but could easily be extended to more computationally expensive simulations. The monolithic nature of the Oyster Block units lent themselves to exploration in physical simulations through 3-D printing. This mid-step before prototyping provided us a chance to test aggregation tolerances, water flow impact, and an opportunity for experimentation. This promoted the development of project insights difficult to realize in a digital environment. Alternative packing or stacking geometries could be tested as well as aggregation misalignments and unit stabilities. 3-D printing also provided a way to test molding strategies, using the same methodologies. The research, while not realized as fully manufactured units, is part of a larger research path Beta-field has pursued over the last few years. This path closely examines designed landformations and their impact on the built environment.

Our own involvement with understanding how designers might intervene in the course of anthropogenic landformation are either analytical in nature or carry with them all the considerations of human activity, desire, and sensibility. The Oyster Block project builds on our research into establishing practices, which bridge computational design and simulation methodologies with data-driven form generation, human-nonhuman collaborative production techniques, and materials research. The project has been instrumental in expanding this approach to other more traditional architecture and landscape architecture projects, focusing on the question of designing for non-humans in a way that recognizes our role as designers in reshaping our environment in an explicit and novel way.

ENDNOTES:

- 1 Diana Agrest outlines the term "non-design" as being objects that have purpose and intention, but that are not the product of a design process.
- 2 Diana Agrest, "Design Versus Non-Design," in *Oppositions*, No.6 (Fall 1976), pp 45-67.
- 3 National Oceanic and Atmospheric Association. "Ocean Pollution" <http://www.noaa.gov/resource-collections/ocean-pollution>. Accessed Jan 12, 2017.
- 4 Bruce H. Wilkenson, "Humans as Geologic Agents: A Deep-time Perspective," *Geology*, 33, 3, (2003). p. 161-164.
- 5 Paul Crutzen, "Geology of Mankind," *Nature*, 415, (2002).
- 6 Richard Christian, Frank Steimle and Richard Stone, "Evolution of Marine Artificial Reef Development — A Philosophical Review of Management," *Gulf of Mexico Science*, 16 (1), (1998).



Oyster Block shown in two packing configurations, 3D print in ABS plastic

Water chute geometry and mold reconfiguration

PROJECT CREDITS, INFORMATION AND BIBLIOGRAPHIES

EDITORIAL

Project Name_ Projecting Change

Image Credits: Neethi Abraham, Angelica Carvahales, Udeeta Jain, Mengran Jiang, Vinoti Kabara, Krishna Lingutla, Sneha Mathreja, Hana Mehta, Gloria Ramirez, Eshank Rishi, Eder Romero, Yinghua Tan, Rohit Vantaram, Ananya Vij, Plub Warnitchai, Mengyue Zhou

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

BIBLIOGRAPHY:

- Burian, S., J. Stephan Nix, Robert E. Pitt, S. Rocky Durrans. "Urban Wastewater Management in the United States: Past, Present, and Future." *Journal of Urban Technology* 7, no. 3 (2010): 33 – 62, <https://dx.doi.org/10.1080%2F713684134>.
- Cartwright, M. "Aqueduct — Definition." *Ancient History Encyclopedia*. 2012. <http://www.ancient.eu/aqueduct/> (accessed September 5, 2016).
- EHT Traceries, Inc. "McMillan Slow Sand Filtration Plant." Historic Preservation Report for the Proposed Redevelopment of the McMillan Slow Sand Filtration Plant. 2010.
- Greenberg, S. *Invisible New York: The Hidden Infrastructure of the City*. London: The Johns Hopkins Press Ltd. 1998.
- Harper, D. "Infrastructure." *Online Etymology Dictionary*. <http://dictionary.reference.com/browse/infrastructure> (accessed January 10, 2014).
- Hobsbawm, E. *The Age of Revolution: Europe 1789-1848*. United Kingdom: Weidenfeld & Nicolson Ltd. Vintage Books, 1962.
- Jacobsen, T., and L. Seton. *Sennacherib's Aqueduct at Jerwan*. University of Chicago Press: Oriental Institute Publication. 1935.
- META-Project. "Public Folly — Water Tower Renovation PR Text." Dongcheng District, Beijing: August 5, 2013. September 3, 2016.
- META-Project. "Water Tower Renovation — Industrial Heritage Reuse." December 2012. <http://www.meta-project.org/projectdetail?projectQueryCon.id=47&select=2,1> (accessed September 3, 2016).
- Metcalf, L.; Harrison P. Eddy. "American Sewerage Practice." New York: McGraw-Hill. Vol. I, Design of Sewers, 1914.
- "Public Folly — Water Tower Renovation / META – Project." *ArchDaily*. August 20, 2013. <http://www.archdaily.com/417034/public-folly-water-tower-renovation-meta-project/> (accessed September 3, 2016).
- "Reference Terms — Infrastructure." *ScienceDaily*, 2006. <https://www.sciencedaily.com/terms/infrastructure.htm>.
- Rodda, J. C. and Lucio Ubertini. "The Basis of Civilization — Water Science?" International Association of Hydrological Sciences, 2004.

- Staley, Cady; George S. Pierson. *The Separate System of Sewerage, Its Theory and Construction*. New York: D. Van Nostrand Co. 1891.

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

BIBLIOGRAPHY:

- Henderson, S. "Submerged Cultural Resources Study, USS Arizona Memorial and Pearl Harbor National Historic Landmark". Santa Fe, NM: Submerged Cultural Resources Unit.
- Shapiro, T. "Arizona Memorial Seen as a Dedication to Peace." *Honolulu Star Bulletin*. May, 2002. Southwest Cultural Resources Center. 1989. "Section IV: Biofouling and Corrosion Study."
- Stille, M., and A. Hook. *Yamamoto Isoroku: Leadership, Strategy, Conflict*. Oxford: Osprey. 2012.
- Stillwell, P. *Battleship Arizona: An Illustrated History*. Annapolis, MD. Naval Institute. 1991.
- The National World War Two Museum, New Orleans. "The D-Day Invasions in the Pacific". December 2001. <http://www.nationalww2museum.org>
- U.S.S. Arizona Preservation Project 2004, "Baseline Environmental Data Collection." http://128.146.17.149/previous-programs/Arizona/Legacy_2.html (accessed 10 December, 2016).

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.

BIBLIOGRAPHY:

- Bluestone, Daniel. "Challenges for Heritage Conservation and the role of Research on Values" In *Values and Heritage Conservation*, ed. Erica Avrami, Randall Mason, Marta de la Torre. Los Angeles: The Getty Conservation Institute, 2000.
- Evans, Graeme. "The Lee Valley: an industrial river system and heritage landscape". In *Patrimoine Paesaggi : Costruiti Dall'acqua*, ed. Margherita Vanore, 90 – 101. Milano: Mim Edizioni Srl-Udine, 2016.
- Foucault, Michael. "Of Other Spaces: Utopias and Heterotopias," *Architecture, Mouvement, Continuité*. 5, 1984, 46 – 49.
- Hollis, Ed. *The Secret Lives of Buildings: From the Parthenon to the Vegas Strip in Thirteen Stories*. London: Portobello Books, 2010.
- Knight, Jasper. "Development of Palimpsest Landscapes", 2012, <http://serc.carleton.edu/68942>, (accessed December 16, 2016.)
- Lewis, Jim. *London's Lee Valley: Britain's Best Kept Secret*. Chichester: Phillimore & Co, 1999.
- Machado, Rodolfo. "Toward a Theory of Remodelling — Old Buildings as Palimpsest." *Progressive Architecture*. 11, no. 76, (1976): 48.
- Marshall, R. *Waterfronts in Post-Industrial Cities*. London: Spon, 2001.
- Norberg-Schulz, Christian. *Genius Loci: Towards a Phenomenology of*

Architecture. New York: Rizzoli, 1985.

- Norberg-Schulz, Christian. "The phenomenon of place." In *Theorizing a new agenda for architecture: an anthology of architectural theory 1965 – 1995*. ed. Kate Nesbitt. New York: Princeton Architectural Press, 1996.
- Pallasmaa, Juhani. *The Eyes of the Skin*. Chichester: J.Wiley & Sons, 1996.
- Solà-Morales, I de. "Terrain Vague." In *Anyplace*. ed. Cynthia C. Davidson. 118 – 123. Cambridge: MIT Press, 1995.
- Strong, Brian. "A tidal mill tale." *Journal of the Islington Archaeology & History Society* 4, no. 1 (2014): 16 – 17.
- Symmons Roberts, Michael & Paul Farley. *Edgelands*. London: Vintage, 2012.
- TICCIH (The International Committee for the Conservation of the Industrial Heritage), *Industrial Heritage Re-tooled: The TICCIH guide to Industrial Heritage Conservation*. James Douet (ed.) Lancaster: Carnegie. 2012. 236.
- Weizman, Eyal. *Forensic Architecture: Notes from Fields and Forums*. Kassel: Documenta. Series 062.

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 Bemmell, 1799, Christiaan Josi, naar Jacob Cats (1741 – 1799), 1802, source: Rijksmuseum, Amsterdam

BIBLIOGRAPHY:

- de Vries, J. "The Netherlands and the polder model: Questioning the polder model concept." *BMGN — the Low Countries Historical Review* 129, no. 1 (2014): 99 – 111.
- Dutch Water Authorities. 2015. *Water Governance: The Dutch Water Authority Model*. URL: <http://www.dutchwaterauthorities.com/wp-content/uploads/2015/05/Water-Governance-The-Dutch-Water-Authority-Model1.pdf> (accessed August 30, 2016).
- Gunn, C. "Acequias as Commons: Lessons for a Post-Capitalist World." *Review of Radical Political Economics* 48, no. 1 (2016): 81 – 9.
- Lewis, M. E., and Craig L. Torbenson. "Cultural Antecedents of J. W. Powell's Arid Lands Report." *Journal of Geography* 89, no. 2 (1990): 74 – 80.
- Lokman, Kees. "Dam[ned] landscapes: Envisioning fluid geographies." *Journal of Architectural Education* 70, no. 1 (2016a): 6 – 12.
- Lokman, K. "Exploring a New Paradigm: Water management in Mexico City." *Topos: European Landscape Magazine*, no. 96 (2016b): 44 – 50.
- Lokman, K. "Progressive Pragmatism: The Next Generation of Dutch Landscape Design Practices." *Proceedings of the Cracow Landscape Conference*, (2016c): 19 – 28. http://www.clc.edu.pl/wp-content/uploads/2016/09/VOL_1_CLC2016.pdf
- Merlín-Uribe, Yair, et al. "Environmental and Socio-Economic Sustainability of Chinampas (Raised Beds) in Xochimilco, Mexico City." *International Journal of Agricultural Sustainability* 11, no. 3, (2013): 216.
- Parsons, J. R. "Political implications of prehispanic chinampas agriculture in the Valley of Mexico." In H.R. Harvey (ed.) *Land and politics in the Valley of Mexico. A two thousand year perspective*. Albuquerque: University of New Mexico Press, 1991.
- Powell, J. W. *Report on the lands of the arid region of the United States: With a more detailed account of the lands of Utah with maps*. Washington, DC: Government Printing Office, 1878.

- Raheem, N. "A Common-Pool Resource Experiment in Acequia Communities." *International Journal Of The Commons* 9, no. 1 (2015): 306 – 321.
- Raheem, Nejem. "A common-pool resource experiment in acequia communities." *International Journal of the Commons* 9 (1) (2015): 306 – 21.
- Salewski, C. *Dutch new worlds: Scenarios in physical planning and design in the Netherlands, 1970 – 2000*. Rotterdam: 010 Publishers, 2012.
- Sanders, William T., Robert S. Santley, and Jeffrey R. Parsons. *The Basin of Mexico: The Ecological Processes in the Evolution of a Civilization*. New York: Academic Press, 1979.
- Santistevan, M. "Acequia Culture and the Regional Food System." Coyote Gulch. URL: <https://coyotegulch.blog/2016/10/16/acequia-culture-and-the-regional-food-system-miguel-santistevan/> (accessed November 15, 2016).
- Schmidt, J.J., and D. Shrubsole. "Modern Water Ethics: Implications for Shared Governance." *Environmental Values*, vol. 22, no. 3 (2013): 359 – 379.
- Torres-Lima, P., B. Canabal-Cristiani, and G. Burela-Rueda. "Urban Sustainable Agriculture: The Paradox of the Chinampa System in Mexico City." *Agriculture and Human Values* 11, no. 1 (1994): 37 – 46.
- van Tielhof, M. "Forced Solidarity: Maintenance of Coastal Defences Along the North Sea Coast in the Early Modern Period." *Environment and History* 21, no. 3 (2015): 319 – 350.
- Worster, D. "A River Running West: Reflections on John Wesley Powell." *Journal of Cultural Geography* 26, no. 2 (2009): 113 – 126.
- Zevenbergen, Chris, et al. "Taming Global Flood Disasters. Lessons Learned from Dutch Experience." *Natural Hazards* 65, no. 3 (2013): 1217 – 1225.

THE OYSTER BLOCKS PROJECT

Project Name_ The Oyster Blocks Project

Image Credits_ Figure 01 – 07_ courtesy of the author

BIBLIOGRAPHY:

- Agrest, D. "Design Versus Non-Design," *Oppositions*, no. 6 (1976).
- Christian, R., F. Steimle, and R. Stone. "Evolution of Marine Artificial Reef Development — A philosophical Review of Management". *Gulf of Mexico Science* 16, no. 1 (1998).
- Crutzen, P. "Geology of Mankind." *Nature* 415 (2002).
- National Oceanic and Atmospheric Association. "Ocean Pollution" <http://www.noaa.gov/resource-collections/ocean-pollution>. (accessed Jan 12, 2017).
- Wilkenson, B. "Humans as Geologic Agents: A Deep-time Perspective." *Geology* 33, no. 3 (2003).

THE HAMMAM OF ERBIL CITADEL

Project Name_ Hammam of Erbil; Location_ Erbil, Iraq

Image Credits_ Figure 01 – 04_ courtesy of the authors

BIBLIOGRAPHY:

- Al-Haidari, A. *Urban renewal for Erbil Citadel: tafseer office Erbil* (2014).
- Al-Haidari, A. *Popular bathrooms in Erbil between past and present: Modern Discussion* (2014).
- Al Yaqoobi, D. *Highlights of Erbil Citadel*. Erbil: Government Governorate of Erbil High commission of Erbil Citadel Revitalization (2012).
- Ahmed, A. *Hammam – Herbestemming als brug naar de toekomst van Erbil*: Universiteit Hasselt (2014). not published.
- Derbandi, N. A. *Hammam as a Koerdish heritage*. Subartu: Issued

by Kurdistan archaeologists syndicate. Second year, no. 2 (2008): 140–141.

- MacGinnis, J. *Erbil in the Cuneiform sources*. Erbil: Ministry of Culture and Youth, Kurdistan Regional Government (2013).
- Musatafa, M. J. *Art of Decoration and Ornaments on the Stone in Erbil*: University of Salahaddin-Erbil in partial fulfillment of the requirements for the degree of M.A.in Islamic Archaeology, 2011.
- Plevoets, B. & K. Van Cleempoel. "Adaptive reuse as an emerging discipline: an historic survey," In *Reinventing architecture and interiors: a socio-political view on building adaptation*, ed. G. Cairns, 13–32. London: Libri Publishers, 2013.
- Resul, E. *Erbil, a historical study of Erbil's intellectual and political Role*. Cultural Centre of the Ministry of Culture — the Kurdistan Regional Government publications (2005).
- Yaraly, B. *So do not forget Arbil*: tafseer office of publishing & advertising / Erbil (2001).

(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.

BIBLIOGRAPHY:

- Behnke, A. *Angkor Wat*. Minneapolis: Twenty-First Century Books, 2008.
- Benjamin, W. and M. Jennings. *The Writer of Modern Life: Essays on Charles Baudelaire*. Cambridge, MA: Belknap Press, 2006.
- Bharne, V. *The Emerging Asian City*. London: Routledge, 2013.
- Bharne, V. and K. Krusche. *Rediscovering the Hindu Temple: The Sacred Architecture and Urbanism of India*. Newcastle-upon-Tyne: Cambridge Scholars Publishing, 2012.
- Budziak, A. *Text, Body and Indeterminacy: The Doppelganger Selves in Pater and Wilde*. Newcastle-upon-Tyne: Cambridge Scholars, 2008.
- Burke, P. *The New Cambridge Modern History: Volume 13*. Cambridge: Cambridge University Press, 1979.
- Byrnes, Mark. "Removing Fish from a Surreal Abandoned Shopping Mall," *The Atlantic*, January 16, 2015.
- Foucault, M., and Miskowiec, J. "Of Other Spaces." *Diacritics* 16, no. 1 (1986): 22–27.
- Fredrickson, Terry. "Bangkok's hidden fish pond," *Bangkok Post*, July 1, 2014.
- Goldstein, Sasha. "Abandoned Bangkok shopping mall Becomes incredible koi pond after years of neglect," *New York Daily News*, July 1, 2014.
- Grossman, N. *Chronicle of Thailand: Headline News Since 1946*. Paris: Editions Didier Millet, 2009.
- Hadjiyanni, T. "Rethinking Culture in Interior Design Pedagogy: The Potential Beyond CIDA Standard 2g," *Journal of Interior Design* 38, no. 3 (2013).
- Heberle, L. and S. Opp. ed. *Local Sustainable Urban Development in a Globalized World*. London: Routledge, 2008.
- Hill, C. *South Asia: An Environmental History*. Santa Barbara: ABC-CLIO Publishing, 2008.
- Kongarchapatara, B., and R. Shannon. "Transformations in Thailand's Retailing Landscape: Public Policies, Regulations, and Strategies" in *Retailing in Emerging Markets: A Policy and Strategy Perspective*, ed. Malobi Mukherjee, Richard Cuthbertson, Elizabeth Howard. New York: Routledge.

- Lefebvre, H. *Critique of Everyday Life, Volume II*. Brooklyn: Verso, 2002.
- Leslie, E. "Ruin and Rubble in the Arcades," in *Walter Benjamin and the Arcades Project*, ed. Beatrice Hanssen. London: Bloomsbury, 2006.
- McDonough, T. *Guy Debord and the Situationist International: Texts and Documents*. Cambridge: The MIT Press, 2004.
- Peng, H. *Dandyism and Transcultural Modernity: The Dandy, the Flaneur, and the Translator in 1930s Shanghai, Tokyo, and Paris*. London: Routledge, 2015.
- Pleasance, Chris. "Splashing out at the shops: Hundreds of fish take over abandoned Thai mall after it's Flooded." *Daily Mail*, June 26, 2014.
- Sobocinska, A. "The Expedition's Afterlives: Echoes of Empire in Travel to Asia." In *Expedition into Empire: Exploratory Journeys and the Making of the Modern World*, ed. Martin Thomas. New York: Routledge, 2015.
- Turnbull, D. "Soc. Culture: Singapore." In *The Architecture of Fear*, ed. Nan Ellin. New York: Princeton Architectural Press, 1997.
- Vidler, A. *The Architectural Uncanny: Essays in the Modern Unhomely*. Cambridge: The MIT Press, 1994.
- Wacharoen, Supoj. "Fish pulled from New World pond." *Bangkok Post*, January 13, 2015.
- Wacharoen, Supoj. "A New World fish pond." *Bangkok Post*, June 30, 2014.

T-HOUSE

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

Image Credits_ Figure 01 – 08_ courtesy of the authors

BIBLIOGRAPHY:

- Bell, Catherine. *Ritual: Perspectives and Dimensions*. New York: Oxford University Press, 1997.
- DeFerrari, John. "The Vanished Teahouse at Hains Point." Paper presented at the 40th Annual Conference on DC Historical Structures, Washington, D.C., November 14–17, 2013.
- "EPA, D.C. Area Students Officially Launch World Water Monitoring Day 2008." *US Newswire*, Alexandria, Virginia: September 18, 2008. Ga |A185264601.
- Howes, F.N. "Tea." Review of *Tea* by T. Eden. *Nature* 4649 (1958): 1577.
- Jackson, J.R. "Tea." *Nature*, July 14, 1870: 215–217.
- James, H. *The Portrait of a Lady*. New York: Random House, the Modern Library, 1851.
- Okakura, K. *The Book of Tea*. Rutland, Vermont: Charles E. Tuttle Company, 1956.
- Proust, M. *Swann's Way*. Translated by Lydia Davis. New York: Penguin Books, 2003.
- Sen, H. Afterword to *The Book of Tea*, by Kakuzo Okakura. Translated by the Urasenke Foundation, Foreign Affairs Division. Tokyo: Kodansha International, Ltd., 1989.
- Tafuri, M. *The Sphere and the Labyrinth: Avant-Gardes and Architecture from Piranesi to the 1970s*. Cambridge: The MIT Press, 1992.
- Thomas, F. "Tea." *New England Review* 33, no. 1 (2012): 82–87.
- Wedzicha, B.L. "Tea." *Nutrition & Food Science* 79, iss. 6 (1979): 2–4.

THE BLUE LINE

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

Image Credits_ Figure 01- illustration by author

BIBLIOGRAPHY:

- De Sherbinin, A.; A. Schiller.; A. Pulsipher. "The vulnerability of global cities to climate hazards." *Environ. Urban.* 19 (2007): 26–39.
- Farmer, B. H. "Perspectives on the 'Green Revolution' in South Asia." *Modern Asian Studies* 20, no. 1 (1986): 175–199.
- McDonald, R.I.; P. Green; D. Balk.; B.M. Fekete.; C. Revenga; M. Todd; M. Montgomery. "Urban growth, climate change, and freshwater availability." *Proc. Natl. Acad. Sci. USA* 108 (2011): 6312–6317.
- Schuetze, T.; L. Chelleri. "Integrating Decentralized Rainwater Management in Urban Planning and Design: Flood Resilient and Sustainable Water Management Using the Example of Coastal Cities in The Netherlands and Taiwan." *Water* 5 (2013): 593–616.
- Shiklomnov, I. "World fresh water resources" in *Water in Crisis: a guide to the World's Fresh Water Resources*. edited by Gleick P.H. New York: Oxford University Press.
- UN, "International decade for action 'Water for life' 2005–2015." <http://www.un.org/waterforlifedecade/scarcity.shtml> (accessed November 6th, 2016).
- World DataBank, World Bank. "Rural population (% of total population)." <http://data.worldbank.org/indicator/SP.RUR.TOTL.ZS> (accessed November 6th, 2016).

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

BIBLIOGRAPHY:

- Brocanelli, Pérola Felipette. *O ressurgimento das águas na paisagem paulistana: fator fundamental para a cidade sustentável*. Phd diss., Universidade de Sao Paulo, 2007
- Carvalho, Fabíola Araújo de. *Caminho das águas: A água na cidade de São Paulo*. Sao Paulo, Revista Belas Artes 13 (2013): 1–43, url <http://www.belasartes.br/revistabelasartes/?pagina=player&slug=caminho-das-aguas-a-agua-na-cidade-de-sao-paulo> (accessed February 25, 2017)

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;

BIBLIOGRAPHY:

- Ebropolis, *Plan Estratégico de Zaragoza y su entorno*, Zaragoza 2006.
- Ezquiaga, J.M., "El lugar: Zaragoza y la Expo", *Arquitectura viva* 117, *Pabellón de Espana Expo Zaragoza 2008*, (2007).
- La Expo de Zaragoza acumula unas pérdidas de 502 millones de euros, *El Periódico de Aragón*, April 04, 2010.

- Lecardane, R., G. Cimadomo. "Las grandes exposiciones en Europa 1992–2002. Efectos duraderos sobre la ciudad y apropiación por parte de la ciudadanía", in *Proceedings of International Seminar on World Events and Urban Change, Grupo de Investigación HUM-700*, Siviglia, 2012.
- Lecardane, R., "Expo, ville, architecture. Lisbonne et l'héritage de l'Expo'98, in *Cahiers thématiques — L'architecture et l'événement*, 8 (2009), 127–135.
- Martínez Ramírez, I.M., "Las estaciones del ferrocarril Zaragoza-Caminreal, vistas por sus autores, los arquitectos Luis Gutiérrez Soto y Secundino Zuazo Ugalde." *Artigrama* 14 (1999): 99–107.

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

BIBLIOGRAPHY:

- Buchanan, L., H. Fairfield, A. Parlapiano, S. Peçanha, T. Wallace, D. Watkins and K. Yourish.
- Erickson, C. "Crumple Zones in Automobiles," *Sourced through the American Institute of Physics*. (accessed July 28. 2015).
- Guattari, F. *The Three Ecologies*. 1989, Trans. Ian Pindar and Paul Sutton. New Brunswick, NJ: Athlone P, 2000.
- "Mapping the Destruction of Typhoon Haiyan", *The New York Times*. November 11, 2013. <http://www.nytimes.com/interactive/2013/11/11/world/asia/typhoon-haiyan-map.html>
- NOAA. "Storm Surge Overview", *National Hurricane Center | National Oceanic and Atmospheric Administration*. <http://www.nhc.noaa.gov/surge/>. August 27, 2015.
- Reed, C., and N. Lister. "Parallel Genealogie." In *Projective ecologies*. New York, 2014.
- Schwartz, J. "How to Save a Sinking Coast? Katrina Created a Laboratory", *The New York Times | Science*. August 7, 2015. http://www.nytimes.com/2015/08/08/science/louisiana-10-years-after-hurricane-katrina.html?_r=0
- Wu, J., and W. Tong. "Ecological resilience as a foundation for urban design and sustainability", In *Resilience in Ecology and Urban Design* 3 (2013): 211–229.

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/>;

BIBLIOGRAPHY:

- Cercleux, A.-L., Mercliu F.-C., Peptenatu D. "Conversion of water towers — An instrument for conserving heritage assets." *Urbanism architectura constructi* 5, no. 2 (2014): 3–19.
- Norberg- Schulz, C. *Genius loci: Towards a phenomenology of architecture*. New York: Rizzoli, 1980.
- 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.

Katherine Bambrick Ambroziak is an Associate Professor of Architecture at the University of Tennessee, Knoxville. Her publications include *DeadSpace Arlington*, *Material Scribe: Memoirs of the Collective Individual*, *Surrogate Stones*, *Odd Fellows: Constructing the Positive Place|Self*, and *Codification of Ritual in Design*. Since 2009, she has served as the primary designer and coordinator of the Odd Fellows Cemetery Reclamation Project, a conservation and rehabilitation initiative that aims to educate and support the minority communities of East Knoxville through the design and implementation of a responsive memorial landscape.

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.

Nicholas Gervasi earned a B.ARCH and M.ARCH from Tulane University in 2012, and an M.S. in Historic Preservation from Columbia University in 2016. Gervasi currently works for AYON Studio Architecture and Preservation in New York.

Naomi House is a Designer, Educator and Writer with an approach to the Interior that is framed through forensic investigation. A Senior Lecturer in Interior Architecture at Middlesex University she is also a Tutor in Critical and Historical Studies at the Royal College of Art. Naomi is a founding member and Superintendent of C.I.D — the *Council of Inordinate Design*.

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.

Paola La Scala PLS, architect, she is *Doctor Europaeus in Museography* (Palermo). In 2013 attended, as a guest PhD student, the School of Museum Studies at University of Leicester (UK). Since 2013 she has been taking an active part in L@bCity Architecture, a research group headed by Prof. Renzo Lecardane at Department of Architecture in Palermo, concerning architecture and city planning, focusing on culture as important strategy for urban regeneration. Currently she is working on the use of digital technologies to enhance architectural heritage.

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

Gregory Marinic an associate professor and head of the environmental and interior design program in the Syracuse University School of Design. His research and practice are focused on the intersection of architecture, interiors, obsolescence, geography, and adaptive reuse. A widely published design scholar and researcher, Marinic has served as an editor/associate editor of several international peer-reviewed publications, and as co-founder of the *International Journal of Interior Architecture & Design*. His most recent publications include *Journal of Architectural Education*, *Journal of Interior Design*, *AD Journal*, *Design Issues*, *International Journal of Architectural Research*, *IntAR Journal of Interventions and Adaptive Reuse*, and various publications of the Association of Collegiate Schools of Architecture.

Bie Plevoets studied Interior Architecture at the PHL University College in Hasselt (BE) and Conservation of Monuments and Sites at the Raymond Lemaire International Centre for Conservation in Leuven (BE). In 2014, she obtained a PhD in architecture at Hasselt University; her thesis was entitled 'retail-reuse: an interior view on adaptive reuse of buildings'. Her current research focuses on the theory of adaptive reuse, and preservation of spirit of place. She teaches courses on adaptive reuse at Hasselt University in the specialized master programme in Interiors 'Adaptive Reuse — exploring spatial potentials and the poetics of the existing'.

Anne Schraiber is a practicing architect based in S o Paulo, Brazil. She holds a bachelor degree in Architecture and Urban Planning from Universidade Mackenzie (2006) and a Master in Business Administration from Funda o Armando  lvares Pentead (2010). She continued her education at a postgraduate course in Ephemeral Architecture at Escuela T cnica Superior de Arquitectura de Madrid (2015). Anne was a participant at the 10th S o Paulo Architecture Biennale (2013) and won a best interior design project award at CASACOR TRIO (2011). Her academic interest focus on the research of the ephemeral design in the contemporary culture.

Lindsay Winstead is an architectural designer working in San Francisco, California for Rapt Studio. She began her career at Davis Brody Bond in New York City, after which she received

a Masters of Design in Adaptive Reuse, from the Rhode Island School of Design. Some of her built work includes the US Embassy Compound in Jakarta, Indonesia, Vivint Solar's headquarters in Lehi, Utah, and Lydian Dental in Tempe, Arizona.

EDITORS

Ernesto Aparicio is a Senior Critic in the Department of Graphic Design at RISD. Aparicio earned his BA at the Escuela de Bellas Artes, La Plata, Buenos Aires and completed his Post Graduate Studies at the Ecole des Art Decoratifs, Paris. Prior to moving to the US, he served as Art Director for Editions du Seuil in Paris, while maintaining his own graphic design practice, Aparicio Design Inc. Best known for his work in the world of publishing, Aparicio has worked on corporate identities, publications, and way-finding for corporations and institutions in France, Japan, and the US. Recently, Aparicio was named Creative Director for the New York firm DFA.

Markus Berger is Associate Professor and Graduate Program Director in the Department of Interior Architecture at RISD. Berger holds a Diplomingenieur f r Architektur from the Technische Universit t Wien, Austria and is a registered architect (SBA) in the Netherlands. Prior to coming to the US, Berger practiced and taught in the Netherlands, Austria, India, and Pakistan, and currently heads his own art and design studio in Providence. His work, research, writing, and teaching focus on art and design interventions in the built environment, including issues of historic preservation, sensory experience and alteration. He is a co-founder and co-editor of the Int|AR Journal.

Liliane Wong is Professor and Head of the Department of Interior Architecture at RISD. Wong received her Masters of Architecture from Harvard University, Graduate School of Design and a Bachelor of Art in Mathematics from Vassar College. She is a registered Architect in Massachusetts and has practiced in the Boston area, including in her firm, MWA. She is the author of *Adaptive Reuse: Extending the Lives of Buildings*, co-author of *Libraries: A Design Manual* and contributing author of *Designing Interior Architecture and Flexible Composite Materials in Architecture, Construction and Interiors*. A long time volunteer at soup kitchens, she emphasizes the importance of public engagement in architecture and design in her teaching. Wong is a co-founder and co-editor of the Int|AR Journal.