SOAK: Mumbai in an Estuary

Anuradha Mathur and Dilip da Cunha. 2009. New Delhi: Rupa, 216 pages, including front/back piece, note from the Director of NGMA, foreword by Arjun Appadurai and Carol Breckenridge, preface, epilogue, glossary, image lexicon, and notes. Color and black and white illustrations and photographs. $195, hardcover.
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SOAK: Mumbai in an Estuary by Anuradha Mathur and Dilip da Cunha is a beguiling book that advances the leadership of landscape architecture in redefining our cities. Moving between serious scholarship about the cartographic history of India, to creating an alternative mapping of Mumbai using sections and photographs, and concluding with proposing twelve design 'initiations' (8) that reintroduce the ability of the landscape to soak up the monsoon rains, the book expands our understanding of place-making. The tension of applying scholarship to the design process is a reoccurring theme in their previous works, *Mississippi Floods* (2001) and *Deccan Traverses: The Making of Bangalore's Terrain* (2006), and their practice as landscape architects and educators. With *Soak,* Mathur and da Cunha's inquiry into iterative drawing has fully matured and engages in a larger cultural dialog (though perhaps a smaller terrain) then their previous works.

The publication emerged from an exhibition at the National Gallery of Modern Art in New Delhi developed in response to the 2005 monsoon floods in Mumbai caused by almost a meter of precipitation falling in just one day. The book's thesis is that artificial delineation of land from water is impossible to maintain in the territory of the monsoon and

requires a new approach to place-making that enables permeable boundaries between land and sea.

> "An estuary demands gradients not walls, fluid occupations not defined by land use, negotiated moments not hard edges. In short it demands the accommodation of the sea not the war against it . . ." (4)
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> "*Soak* is an appreciation of an aqueous terrain. It encourages designs that hold monsoon waters rather than channel them out to sea; that work with gradient of an estuary; that accommodate uncertainty through resilience, not overcome it with prediction." (9)

Historically, rainwater from the monsoon was captured on and in all available surfaces for use during the dry season. In contrast, the engineered 20th century system of storm drains and sea walls attempts to move precipitation out to sea as quickly as possible and prevent the tides from washing over former mudflats. After the engineered system failed to handle the deluge of 2005, Mathur and da Cunha were invited to propose alternative landscape solutions that became the exhibition and the book.

Mathur and da Cunha provide detailed scholarship into how the process of mapping Mumbai and the sub-continent's coast over three centuries of European colonialism set the stage for flooding by arbitrarily demarcating an edge between the land and the estuary. This arbitrary "fair weather" (70) delineation was a Western construct driven by the desire to catalog, divide, and sell territory to feed the British (and Dutch or Portuguese) Empire's mercantile ambitions. While the book focuses on the defining Mumbai through the craft of mapping this cartographic scholarship process can be applied to many, if not most, modern coastal places and landscapes from New York to London, St. Petersburg to Buenos Aires. Traditional cartography (either oceanographic charts or land surveys) exists exclusively in planimetric views, where there is a need to distinguish between different conditions no matter how diffuse the edge; Mathur and da Cunha's opus strives to bring the section back into the cartographic realm.

Flooding in Mumbai is a modern issue and resulted from the development of the myriad pans, tanks, and mudflats that used to accommodate the deluge. With the emergence of the modern city, the natural hydrology and culture of infiltration was forgotten. Mathur and da Cuhna sleuth out the forgotten waterways, tidal mud flats, and shorelines of Mumbai—an archeology that many other cities have undertaken that seems inspired by their former colleague at the University of Pennsylvania, Ann Winston Spirn and her restoration of Mill Creek. The spirit of Ian McHarg is also present beyond the literal layering of Mathur and da Cuhna's graphics and in their obsessive analysis and data collection. *Soak* transcends all these legible influences to synthesize cartographic poetry.

Exhibitions have been used as a planning tool since the days of Sir Patrick Geddes (invoked in the preface on page x) and Mathur and da Cunha succeed in transcending the banalities of contemporary planning boards and posters through their iterative drawing and sophisticated site exploration. As an exhibition catalog, *Soak* attempts to mimic the gallery experience through its design. This leads to a non-linear reading experience caused by the randomly situated text excerpts that interrupt the flow of the narrative. Another issue with encapsulating the entire exhibit within the book is that drawings tend to either be reproduced too small to fully appreciate their complexity or enlarged too far to understand the bigger composition (there is no happy answer to this dilemma other then providing a digital book or website that allows zooming in on the boards). As a stand alone analogue for the exhibition, the book does capture most of the graphic information presented (better then the exhibit's website, http://www.soak.in/) and provides the in-depth supplemental scholarship. Most exhibition catalogs don't have such aspirations to recreate the gallery and are instead content to be just scholarly guides to the works on the walls. I do not know if *Soak* succeeded in guiding visitors around the gallery, but from visiting the *Deccan Traverses* exhibit, the complexity of Mathur and da Cunha's work is best suited towards the longer immersion and repeat experience enabled by a book or website.

As Mathur and da Cunha's iterative mapmaking process has matured, they have shifted from hand drawings and silk screening (as seen in *Mississippi Floods)* exclusively into the digital realm. While computer graphics allow for more precision and refinement of the composition, and integration of text and photographs, there is a loss of poetic spontaneity and imprint of the physical process of making that made their earlier works so refreshingly original. The intellectual rigor provided by digital printmaking does elevate each of the drawings

beyond the one-off artwork of their earlier work and into the realm of design.

Perhaps the only significant shortcoming of the entire *Soak* exhibition is the myopic focus on the past as a lens to describe the modern conditions. With climate change poised to unleash rising sea levels that will inundate much of Mumbai, the future implications of sea level rise and increased precipitation remain unexplored. What would a map of future estuary conditions provoke? Ed Mazria's Architecture 2030 (with NASA) created maps for many coastal cities in North America, but these maps are limited when it comes to describing the future coastlines and interplay of land/water. With Mathur and da Cunha's sectional techniques and iterative process, there is an experiential richness and temporality that simple orthographic projections and remote imaging cannot convey that are very well suited to exploring future potentialities.

GIS and GPS have radically changed the societal use and relationship with maps beyond what Anuradha Mathur and Dilip da Cunha document in *Soak*. Digital maps and satellite imagery have become ubiquitous in many societies. Perhaps this is most evident in the loss of orienteering abilities, dead reckoning, and the rise of the sport of geo-caching. It is time for a new cartographic urbanism to emerge from the seeds that *Soak* plants.

Soak significantly contributes to the genre of contemporary cartographic scholarship and deservedly belongs on the bookshelf next to works by Denis Cosgrove and Denis Wood. It also belongs with other seminal texts of landscape architecture as it transcends being a mere exhibition catalog and provides a refined answer to how analysis becomes design. The world would be a richer (and better understood) place if more cities faced the rigorous exploration and reimaging that Mumbai was so fortunate to get with *Soak: Mumbai in an Estuary.*

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