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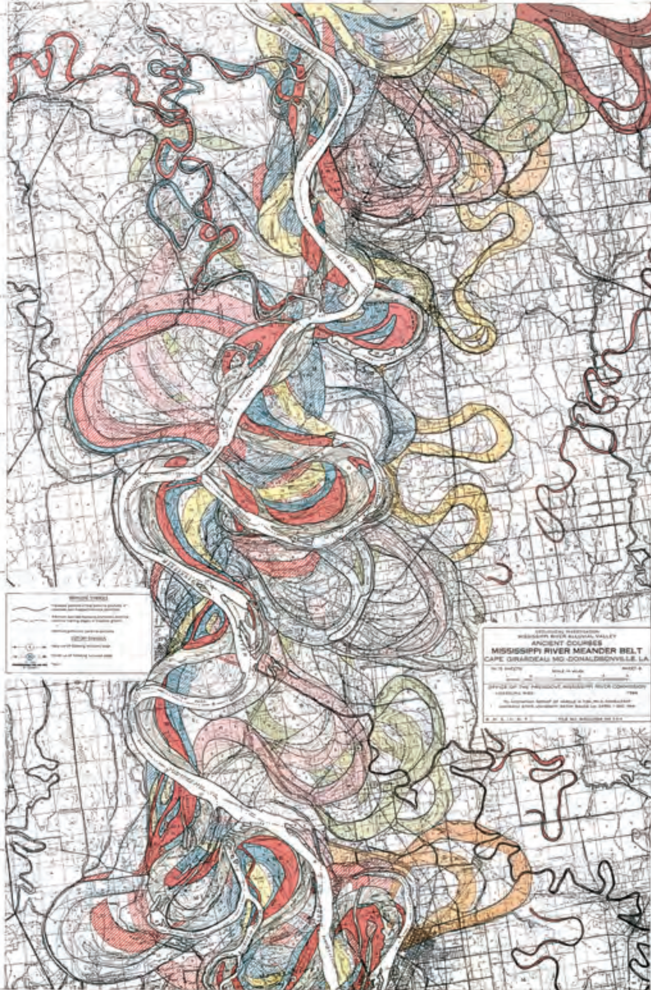
Mississippi Floods: Designing a Shifting Landscape



"Mississippi Floods" investigates how representations of the Mississippi River—maps, surveys, photographs, engineering reports—have been used to construct a meaning for the landscape, and, ultimately, to frame design and management policies. Jurors praised the project for its beauty and its ability to convey the complexity of the life of the river and to suggest that both landscapes and the way we construct them in our minds are constantly evolving.

Anuradha Mathur and Dilip da Cunha, landscape architects and instructors at the University of Pennsylvania, began studying the Lower Mississippi after the floods of 1993, contrasting its physical elusiveness to human efforts to capture it as a river and as a cultural idea. They assembled a range of material and experiences—reviewing maps, publications and working documents held by public agencies; travelling the landscape by canoe, towboat, car and airplane; visiting flood control structures and river-related enterprises such as catfish farms; even interviewing blues musicians and lawyers whose art and practice are rooted in the river—to understand how representations have been used as ideological instruments. Their work was presented in an exhibition and a book, *Mississippi Floods: Designing a Shifting Landscape*, published by Yale University Press.

It is when the Mississippi floods, Mathur and da Cunha argue, that these constructions are most provocative. They describe two opposing ways of representing floods: as a natural disaster that ought to be controlled by engineering interventions, or a cultural disaster that necessitates the withdrawl of human settlement. They suggest that rather than searching for solutions to flooding, we might question the frameworks that shape our thinking about floods in the first place. What is at stake, they say, "is not just money, life, economy or ecosystem, but the openness of imagination necessary to inhabiting an enigmatic landscape."

—*Todd W. Bressi*

River Logic

Understanding how environments inhabit people, rather than the other way around, remains a difficult subject for designers and design researchers. The difficulty lies not in empirically describing subjective experience, but in recognizing how one's experience contributes, consciously or not, to what one knows.

Rivers in particular enter deeply into our minds and lives, making our depictions of them impossible to fully rationalize. Artists sometimes compare their imaginations to a river's shifting velocity and volume, its periods of wildness and calm. Toni Morrison has described the Mississippi River as a model of the creative mind, especially its periods of idleness and intensity. She uses the river's unpredictable force as a metaphor for explaining how subjectivity serves in mysterious and circuitous ways in intellectual problems, particularly those we claim to be "functionally objective":

Because, no matter how "functional" the account of these writers, or how much it was a product of intention, the act of imagination is bound up with memory. You know they straightened out the Mississippi River in places, to make room for houses and livable acreage. Occasionally the river floods these places. "Floods" is the word they use, but in fact [the river] is not flooding; it is remembering. Remembering where it used to be. All water has a perfect memory and is forever trying to get to where it was. Writers are like that: remembering where we were, what valley we ran through, what the banks were like, the light that was there and the route back to our original place. It's emotional memory—what the nerves and the skin remember as well as how it appeared. And a rush of imagination is our "flooding." [1]

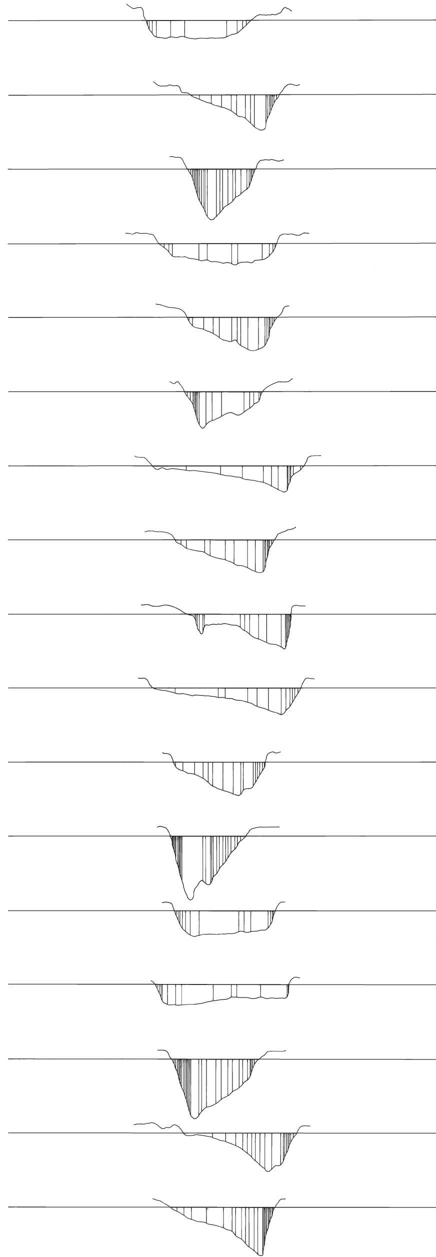
The record of human inhabitation of the Missisisippi basin, and the river's inhabitation of human enterprise, is compellingly probed in *Mississippi Floods: Designing a Shifting Landscape*—a book based on a reconnaissance and exhibition by landscape architecture professors Anuradha Mathur and Dilip da Cunha. *Mississippi Floods* presents a historical and cultural context that reveals how the Mississippi inhabits the people whose livelihoods, and lives, are bound up with the river. By blending archival research, field explorations, interviews and mappings with studio printmaking, they look and think beyond the "levees and locks [and] gates to the representations employed in their design—the maps hydrographs, photographs" which project their ideologies through a visual rhetoric and descriptive text.

Opposite left: Map of the ancient courses of the Mississippi River meanders. From Harold N. Fisk, *Geological Investigation of the Alluvial Valley of the Lower Mississippi River*, 1944.

Opposite right: *Raising Hollers*.

Above: *Delta Crossings*.

Illustrations courtesy Anaradha Mathur and Dilip da Cunha.



Mississippi Floods traces the confrontation between governmental logic and "river logic"[2] into what might be called the natural history of river design. Before there was any engineering of the muddy Mississippi, the U-shaped bends in the river were so long around that Mark Twain once wrote, "if you were to get ashore at one extremity of the horseshoe and walk across the neck, half or three-quarters of a mile, you could sit down and rest a couple of hours while your steamer was coming around the long elbow at a speed of ten miles an hour to take you on board again."[3] In order to improve the transport system for big boats and the people and goods they carry, concrete paving was used to deepen the channel, contain the banks, and cut off the U-shaped bends —halving the distance from St. Louis to the Gulf of Mexico.

As early as 1850 a structural approach to river management was accepted as a means of furthering economic development by enhancing river traffic, mitigating floods and farming in the fertile flood plains, and Congress passed the first of many river and overflow land acts to help pay for construction. This legislation enabled the federal government to deed millions of acres of river marsh and swampland to the states along the river, which in turn sold the acreage to pay for river management. The new owners would drain the wetlands in order to farm—thereby eliminating the only naturally occurring form of flood control (like sponges, swamps and marshes have the capacity to absorb floodwaters, retain the overflow and gradually release it as the flow subsides) and spurring demands for greater protection from ever-larger levees. This was the dilemma one hundred and fifty years ago, and many billions of dollars later it characterizes the dilemmas we face today.

Mark Twain began writing *Life on the Mississippi* in 1879, the same year that Congress consolidated these various efforts into the Lower Mississippi River Basin Commission and granted the Army Corps of Engineers full authority over flood control strategy and construction. Twain commented:

Ten thousand River Commissions, with the mines of the world at their back cannot tame that lawless stream, cannot curb it or confine it, cannot say to it, 'Go here,' or 'Go there,' and make it obey; but a discreet man will not put these things into spoken words; for the West Point engineers have not their superiors anywhere; they know all that can be known of their abstruse science; and so since they conceive that they can fetter and handcuff that river and boss him, it is but wisdom for the unscientific man to keep still, lie low, and wait till they do it. [4]

In their research, Mathur and da Cunha reject the oppositional logic behind calls for more river control and counter-demands that settlement be withdrawn from the flood plains. Instead, they turn their attention, and the public's eye, toward the Lower Mississippi's boundless working landscape. They propose that the river's extraordinary hydrology, the magnificent feats of infrastructure that attempt to contain it, and the daily negotiations—surveying, draining, building, cultivating, dredging, towing, crossing—that the river demands can offer grounds for fertile "new imaginings," in much the way that Morrison

suggests. They elongate the process of understanding the river, encouraging the reader to draw different maps in their minds and on the landscape.

Mathur and da Cunha seek to open an "imagination that tends to be underplayed by professionals" with visually stunning environmental design research that is more like a seedpod than a manifesto. Their work enables Twain's "unscientific man," as well as the designers and engineers, the pilots and farmers who still manipulate the Mississippi, to reflect on the Mississippi as a working landscape and encourages them to draw different maps in their minds and on the terrain. The project resonates with Donlyn Lyndon's editorial introducing the publication of the year 2000 EDRA/*Places* awards winners: "The most pressing challenge for designers is to learn to see and think with appropriate complexity." [5]

Mississippi Floods succeeds because it brings us closer to the river. Like new waterfront development or public art projects that enable citizens to engage their rivers anew, this book is an inviting visual and physical product (some images are gorgeous, all are interesting)—beautiful enough to detain even those who are not aesthetically oriented, to keep them hovering, looking and learning anew.

Yet *Mississippi Floods* is not only about the visual environment. Mathur and da Cunha have generated research about design decisions that depicts a river far more complex than a single landscape design project. They have woven a picture of the ecology, culture, environment and history that usually is evoked only in great literature. This project, and this EDRA/*Places* award, acknowledge that we must draw on the cultures of both art and science if we are to reconcile landscape ecology and human communities.

—*Jamie Horwitz*

Notes

1. Toni Morrison, "The Site of Memory," in Russell Ferguson, et. al., *Out There: Marginalization and Contemporary Culture* (Cambridge, Mass.: MIT Press, 1990), 305.
2. John McPhee explains and explores this logic in the essay "Atchafalya" in his collection, *The Control of Nature* (New York: Farrar, Straus and Giroux, 1989).
3. Mark Twain, quoted in Anuradha Mathur and Dilip da Cunha, *Mississippi Floods* (New Haven: Yale University Press, 2001), 33.
4. Twain, 1951, 156; Andrew Bookes, *Channelized Rivers: Perspectives for Environmental Management* (New York: Wiley, 1988), 18. As cited in Mathur/da Cunha. [what page?]
5. Donlyn Lyndon, Caring about Places, *Places* 14.1

Jury Comments

Hanrahan: The drawings are beautiful, they are derivative of James Corner's *Measuring the American Landscape*.
Jacobs: My problem with this is, what do you do with it?
Hood: They don't say, "You should do this," or "You should do that." It's more about looking at the life of the river, looking at the river of from the point of view of landscape, and re-mapping it.
Hanrahan: We live in a moment at which things like flooding rivers have been looked at as natural problems for solving, and we've internalized the ways we deal with those problems. It is very positive and powerful to look at landscapes and local disasters—to look at nature, at the processes, at the issues and interpretations that resulted in the form of the river.
Sommer: I like the way they look at maps. They have a theory about maps as projective documents, ideological documents. But I would like to have seen this coupled with viewer research, to understand what people are learning from the exhibition.
Griffin: The diagrams of the river sections are fascinating. There is a problem with looking at a river as a flat surface: we don't know what's happening underneath, yet the potential for using that information is really powerful.
Hood: Knowing the scientists who are working on these kinds of issues, I wonder if this project makes the research findings less pointed for them? Is it communicating that information to them directly?
Sommer: There is a marriage of art and science that looks, for example, to the beauty of astronomy and the world of the microscope, scientists are very interested in that, so are policy-makers.
Hood: I would like to think so, but as designers doing this kind of work, I wonder if we do ourselves a disservice when we couch the work so as art.
Hanrahan: Of course the pitfall is also looking at very complex diagrams of work, ordinances and natural phenomena and saying, "It looks cool, but I don't understand it."

Opposite: Cross sections of the river, drawn from data taken from soundings, reveal a hidden profile.