Soldiering Sustainability

Expectations of ecological decline in cities are well rehearsed, and nearly always framed against a backdrop of unprecedented growth, unprecedented climatic conditions, and unprecedented movements of those displaced by ever more precarious environmental and geopolitical circumstances. The Anthropocene looms large and ominous, and its biophysical and social realities embolden anxious responses.

This book set out to understand a collective social response to the urban present, and the urban future. It traced how ideas of ecology and nature were integrated into a specific architectural modality. The geographic and historical setting within which this modality was embedded—contemporary Mumbai—is undoubtedly unique, but the central questions at hand resurface across urban contexts in the peculiar, uncertain era called the Anthropocene. How, I asked, would agents craft a social mission to transform the built form of Mumbai, and how would ideas of ecology galvanize it? What kind of sociality would adherents to that mission forge and inhabit? Once established as an environmental affinity group, could environmental architects actually make the kind of change they were now collectively equipped to envision?

I addressed these questions in a historical moment when Mumbai is riddled with seemingly intractable environmental and social problems, yet also buoyed by robust economic growth, narratives of global ascendance, and the bold confidence captured in slogans like, "Consider it Developed." This tension framed the research in this book, and cast into the foreground the ways it is lived in everyday social and professional life. As my interlocutors at RSIEA described their aspirations to understand and practice good design, they demonstrated the force of a collective moral ecology, one that conditioned striking—often seemingly impossible—spaces

of imagined possibility. These emerged repeatedly, in spite of an endless array of bureaucratic, political, and economic obstacles to operationalizing good design. As I have shown, the confidence that RSIEA students and graduates espoused cannot be fully captured, or simply dismissed, as bourgeois delusion or rehashed technological optimism. Although both privileged positionality and a context of ever-evolving technologies were certainly facets of the RSIEA experience, architects' repeatedly reflexive posture toward both, and their commitment to specifically rendered logics of equity, justice, and more-than-human nature challenge us to think beyond more conventional political ecological analyses. The force of their shared moral ecology played an undeniable role in fostering RSIEA architects' collective refusal to imagine the future of Mumbai within the political economic and material conditions that characterize its present.

At the same time, such confident aspirational politics are not new to environmental activism or to urban design; neither are they unique to the broader tradition of social uplift through environmental politics present in the many forms of postcolonial environmental action across India.[1] A host of examples might be found in arenas of indigenous knowledge or tribal land rights, for instance, or through historical figures like Anil Agarwal and his Center for Science and the Environment; these often made an explicit point of amplifying the positive developments and hopeful ideas that would energize aspirations for ecological transformation.[2] Many such figures populate the history of Indian environmentalism, urban planning and design, and social justice work.[3] The rhetorical promise of the Jawaharlal Nehru National Urban Renewal Mission to improve city life and infrastructure, along with its program of Basic Services to the Urban Poor, provide other examples; so, too does the Atal Mission for Urban Renewal. Although riddled with political complexity and often vigorously critiqued, such initiatives provided professionals of a previous era with concrete policy rubrics that sketched the form of the possible, and, perhaps, energized their adherents in ways analogous to the case in this book.

Yet the aspirational politics formed and reinforced through RSIEA's moral ecology of good design would be misread if we were to regard them as galvanized exclusively in nationalist or regional political registers, or exclusively anchored to local and regional scales. For RSIEA architects, nested global, national, and regional circumstances set the stage for an *inevitable* rise of the environmental architect, however dormant or constrained she may be in the immediate present. Global developments as varied as the rise of green building certification systems worldwide, the proliferation of comparative mechanisms that ranked world cities according to environmental conditions and achievements, and impactful sociopolitical movements that ranged from Occupy Wall Street to Occupy Central, stood as evidence of global transformations that gestured increasingly outward, and thus political economic spheres that, however locally conditioned and embedded, had political ecological logics that ensured and reinforced their legitimacy at every

scale. The so-called inconvenient truth of global climate change itself, perhaps, stood as the ultimate condition that separated the RSIEA mission of the past from its moral ecology of good design in the present.

Throughout the book, I traced how a distinctive sociality—framed as an environmental affinity—was produced. It combined RSIEA's version of green expertise with a post-training commitment to ecology in practice, and drew from a wide set of references that, through RSIEA training, came not only to be shared, but also to connect a grounded sense of good design to a much larger regional and global environmental sensibility. Good design, in the sense of its collective sociality, came to demonstrate how the specific work of urban ecology—that knowledge/practice hybrid bridging ecosystem ecology, social process, and material form—proceeds in social life.[4] The work of urban ecology enfolded both an integrated subject *and* the integrated subjectivity of the social agents who espoused it.

The RSIEA case also underscores the peculiar temporality of contemporary urban sustainability as it is lived in social life: actual good design was always deferred, and yet ever more urgent. I argued that this temporality was central to environmental architects' aspirational politics; the temporality of its own fluorescence depended fundamentally on dramatic, if not catastrophic, ecological and political shifts. RSIEA-trained environmental architects viewed theirs as a vocation in waiting precisely *because* certain environmental and political changes would inevitably ensure the need for their skills. The only uncertainty was whether the primary catalyst would be the environment or human politics; whether the path was opened by nature, human society, or both, future practitioners of good design stood at the ready.

Yet to stand at the ready with bold confidence while also embedded in the everyday structural realities of Mumbai's urban development involved constant, undeniable compromise. And thus emerges the second unresolved tension in the book: despite its socially vital life as aspiration, in practice, good design was inevitably dormant. Even standing at-the-ready, its enactment seemed always almost fully dependent on external political economic and ecological activation. We might therefore dismiss good design's adherents as politically benign at best, antipolitical at worst.

Yet I suggest that we risk a great deal if we are to dismiss the complex social life of good design as simply ineffective or benign. In part, this argument returns to the peculiar temporality of urban sustainability itself, but it also underscores the very specific ways that conceptualizations of "consciousness," and explicit formulations—however problematic—of a rhetorically secular and inclusive notion of Indian identity point to something more complex. The environmental affinity forged at RSIEA and lived as a vocation in waiting illuminates a steadily growing social arena in which a shared moral ecology repeatedly reinforced an ecopolitical mission. In the process, it reproduced and sustained the essential resolve that ensured that the wait was not in vain. The vocation in waiting, I contend, was a

space that nurtured an urban environmental politics that, though dormant in the present, may at any moment find a force to ignite it.

The Mumbai context, of course, carried with it significant place-specific political stakes, even as the explicit contours of the contemporary political economy of urban development in Mumbai remained unnamed and un-discussed in the context of RSIEA training. Grossly uneven relations of power and access to resources are a clear facet of the city's everyday life, and to ignore those circumstances is to assume a complicit position within them. While it would be inaccurate to interpret these silences as evidence that RSIEA students and faculty did not genuinely care about putting good design into practice, they do invite us to think carefully about how and when environmental architects configured the temporal calculus of socioenvironmental transformation and socioenvironmental justice. Good design carried with it clear moral imperatives, but it also enabled a logic of deferral that allowed architects to make repeated social and environmental compromises in the present without violating the eventual mission.

The shifting scales of reference so central to this calculus—sometimes focused on the neighborhood, at other times, the city, and at yet others, entire watersheds, ecosystems, or non-human species populations—allowed a constant slippage between articulating various costs, and rescaling logics of benefits, that could be derived or would accrue. Open, green, or vegetated city spaces, more efficient energy use, or cleaner air and water might be valued as "public" goods with intrinsic capacities to remedy urban unsustainability, for instance, even as gross inequalities might persist between social groups when it came to which groups might enjoy direct access to those spaces and their benefits. Such formulations of eco-social costs and benefits was most visible in the case of the Doongerwadi Forest, evaluated as it was for its broader array of non-human natural attributes and processes, but open only to an highly exclusive human public for any direct use or experience.

Scalar logics of good design introduced yet another clear tension, one particularly visible during study tours. Many of its *sources* for ecological ideas, values, and strategies mapped to population-sparse, space-rich contexts; nearly all were sited in contexts *other* than Mumbai.[5] The question of precisely how, for example, a decentralized water management system observed in Auroville might be applied to a design brief in Mumbai was left unresolved, leaving such questions of how to scale up, urbanize, and otherwise modify various lessons to fit the Mumbai context unsatisfied. Although students and faculty were fully aware of these discrepancies, few discussions took up the direct question of their Mumbai-relevant analogue. The contents of the toolbox, in this sense, often stood remote from their intended sites of application and relevance.

But perhaps most critically, good design's expansive, multiscalar calculus of environmental justice included the benefits that would accrue to non-human nature, with the effect of recasting logics of equity and the social good as logics of

equity and the socio*natural* good. This further legitimized, as in the Doongerwadi case, exclusive, controlled access to the forest in a city otherwise starved for open spaces. Again, this reinforced environmental architecture as almost automatically noble: even in its deferred state, good design "counted" as a mode of doing good.

We began, and we end, then, with a city whose future material form is still largely unbuilt, and still in-the-making. It takes shape in real time, however rapidly and however divergent its path from the influence of the good design that RSIEA architects espoused. Demands for open spaces, projections and creative renderings of a future city mosaic of built forms and urban natures, and stark socioeconomic inequalities all punctuate the triumphant ascent of this city at the economic heart of "India Rising." The more general consolidation of political power on India's nationalist right has brought renewed international attention to India's social and political economic future, as well as to its environmental one. Where and how the temporality, aspirational politics, and moral ecology of RSIEA environmental architecture will fit in the Mumbai of the future is a chapter that continues to write itself in real time. The ultimate resilience of good design as ecology in practice remains to be traced and observed, but if its proponents are correct, it may be the environment itself that remakes Mumbai's political stage, perhaps sooner rather than later.

Green experts, their publics, their spectacles, and their hybrid knowledge forms, all provide guidance for reading the city of the present and anticipating the city of the future. But they also caution us to disaggregate them, noting the difference between green knowledge forms and their in-practice social lives, and the temporalities through which they galvanize moral and political force. While green knowledge forms may foreground the integrated subject, their lives as ecology in practice demand more careful attention to the power relations, aspirational politics, and enduring social structures that organize the moments and contexts within which they may be operationalized. However dormant or deferred, RSIEA's modality of good design gave the urban future a social life that could be both lived in the present and practiced, as anticipated, in the future.

In its dual arenas of training and practice, RSIEA environmental architecture challenges us to move beyond conventional political ecology analytics in ways that can more fully engage more-than-human agency, more-than-human exclusions in our analytical calculus of equity, and the aspirational politics that characterize the socialities of human agency-in-waiting. It challenges us to reconsider the presumptive authority and agentive power of the green expert—the so-called "soldier of sustainability" who understands, as students were assured, what others do not. In its guise as good design, RSIEA's environmental architecture reminds us that ecology in human, agentive practice depended in large measure on the ways that practice was made meaningful; it challenges us to forge an analytical place for the political purchase of agency deferred. A vocation in waiting, I have argued here, constitutes an arena of politics worthy of attention—one suspended in the social

structures of the present but unquestionably confident in the inevitability of structural transformation through the agentive capacity, quite possibly, of non-human nature itself.

I deliberately left the starkest reminders of the power of existing urban development in Mumbai to the end of this book. My aim was to underline that in the case of good design, if we were to measure effectiveness by real-time implementation, there may be no book to write, no ecology in practice to explore. If it can't be *practiced,* after all, how can it have social or environmental value? Indeed, good design as practice was heavily constrained and usually curtailed; it was nearly always foreclosed within political economic structures and bureaucratic orders that showed only passing indications of any transformation at all. If we were to start and end the analysis with the work of the present, we might rightly look to arenas of finance, politics, real estate, and governance for the real—and only— story of environmental architecture (and its absence) in Mumbai.

Yet the sociality of building green was real, powerful, and perhaps even profoundly political, despite the material absence of much that "counts" as green building. To confine our understanding of RSIEA environmental architecture only to its evidence in the material built cityscape is to miss its social, political, and ecological point. Good design's feasibility depended on far more complex metrics, expectations, and temporalities, to say nothing of a more expansive understanding of aspirational politics *as* politics. As Arjun Appadurai has argued, forms of hope and anticipation like those which organized good design are always in tension with aspirations configured by "the dreamwork of industrial modernity, and its magical, spiritual, and utopian horizon, in which all that is solid melts into money."[6] Indeed, the city unbuilt is also the speculative city, but the possible future within which to imagine fabulous profits and solidified asymmetries of power and wealth may also collide with, and give way to, a very different, and yet perhaps equally plausible possible future marked by transformed environmental conditions, transformed politics, and an urban form ripe for the good design practices of RSIEA's environmental architects.[7]

Our challenge is to consider together, and to understand in tandem, both the speculative dreamwork of capitalism and the dreamwork of good design.[8] The latter articulates a regime of value more expansive than capitalist calculations can capture, yet positions itself in the present within the deceptive arena of bourgeois, professional practice. It seeks simultaneously to do well, and, eventually, expects to be positioned to do good. It espouses a moral disposition that works to embody practices of ethical engagement, and it expects of its labor a materiality that only multiplies its positive ecological *and* social effects.[9]

Recent scholarship on new materialisms has suggested that a truly ecological study of the dreamwork of capitalism would give close attention to the sometimes profound and unforeseen ways that materials may be regarded by their users as things with the potential to bind human beings and the non-human, biophysical

world in new ways. After all, it was the promise of good design itself—embodied in form and declarative of social aspiration—that bound together the moral disposition that made ecology in practice thinkable in the Mumbai of the present.[10] This is not a trivial fact; it suggests social actors with clear belief in the birth of alternative political economic spaces to be born inside the very latticework that industrial capitalism continually reweaves. In the present case, the catalyst for that alternative political economic space may be non-human nature itself, however evasive it remains of our usual analytical toolbox.

If a broader political economic critique of global environmental urbanization—indeed, planetary urbanization—traces cityscapes of ever intensified vulnerability and suffering, it also quite notably returns ethnographic facts that trace spaces of astonishing aspirational hope. Once opened and activated, they remind us not only of capitalist dreams of future value, but also of the more-than-capitalist—indeed, more-than-human dreams of a different, possible city. They challenge us to take seriously the deployment of shared environmental affinities as a conscious mode of social inclusion—even in historical moments when the very symbolics on which they draw are otherwise heavily marked by their violent promise to exclude.

Even as IndiaBulls fragmented into scandal, Mumbai's new development plan suffered repeated delay and controversy, and enthusiasm for reimagining Mumbai notably waned, RSIEA's environmental architects remained. Their numbers grew, and their affinities strengthened. They may even, in fact, be stronger than ever in their own generational logic of imminent and totalizing change. The fundamental source of their inspiration was neither the fate of the development plan nor the satisfaction of putting their newly gleaned green expertise into immediate practice. It lived on, instead, within a sociality of environmental affinity that emboldened collective confidence in inevitable change—a confidence more robust and meaningful today than it was at this writing.