

# Traverse Before Transect

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By *Anuradha Mathur*

IAN MCHARG INTRODUCED ME to the ecological transect. It situated me uniquely in the land to which I had recently arrived as a student from India, 12,000 kilometers (7,500 miles) away. I was not just in Philadelphia; I was on a line drawn from the Appalachian Mountains across the Piedmont Plateau down to the Coastal Plain and the Atlantic Ocean. Having learned about Patrick Geddes's Valley Section from his work in India in the 1910s, the transect resonated with me. In Geddes's words, it was "that general slope from mountain to sea which we find everywhere in the world."<sup>1</sup>

The transect, however, not only situated me; it also gave the students of my class, who hailed from five different continents, a common ground. It cultivated an eye for seeing landscape that we could carry wherever we went. For many of us that meant back home.

Each week we set out to a point on the transect—the coal mines near Scranton, the boulder field in the Poconos area, the forests of the Wissahickon, the meadows near Valley Forge, the falls at Manayunk, the bogs and waterways of the Pine Barrens, and the dunes along the Jersey Shore. We dug soil pits, identified vegetation, searched for clues to what lay above and below the Earth's surface, and in our field notes pieced together the sectional history of the land. In studio, we worked in groups, familiarizing ourselves with particular sites on the transect. Each site was an area of 65 square kilometers (25 square miles), represented by a topographical map on which we called out diverse soils, vegetation, land uses, slopes, and geology.

We highlighted the lines of streams, floodplains, wetlands, and aquifers, constructing clear distinctions between features that belonged to land and those that belonged to water. Although the base maps were the same each year, using a scale of 1 centimeter to 60 meters (1 inch to 500 feet), we took particular pride in choosing our palette of colors, which extended into subtle gradients of green, blue, and brown, perhaps in an attempt to dissolve boundaries constituted by the map that did not correspond with our experience on the ground. It was inevitable, however, that the transect on the ground would recede into distant memory as the map took over as the primary site of analysis and design. After all, it allowed the layering of information from multiple disciplines onto the same geographic surface. The map is what we, as students of design and planning, were tasked to respond to. This was our experience in the 501 studio at Penn in 1989, the foundational landscape studio initiated by Ian McHarg and Narendra Juneja in one of its last years.

A decade later it was my turn to teach the foundational landscape studio.<sup>2</sup> I took students not to the transect of my student days but to a place from which they could construct their own transect. They carried measuring tapes, string, improvised spirit levels, pencils, newsprint, index cards, and charcoal. They did not carry maps to orient themselves, only the blank pages of their sketch books as they began to negotiate an unfamiliar terrain. I urged them to walk not so much to find their way, but to *make* their way. Some made their way from creek to ridge, others

from forest to industrial remnants, yet others from wetlands to infrastructural corridors. Like route surveyors at the head of armies charged with mapping unknown terrains, they triangulated between points, connecting these points with lines of sight and measurement. They learned to be attentive to their selection of points. Some were fixed; others were ephemeral. They also learned to appreciate the lines that connected them, paying particular attention to the line between land and water. This line was fraught with controversy. It was known to shift daily and seasonally; but in a land of settlers, it was also shifted at will. They learned to appreciate wetness everywhere—in the ground, air, plants, rocks, creatures—rather than accept the presence of water as it was indicated on maps. The terrain was not exhausted in a single walk. It was walked differently each time. Once they triangulated, students sketched, sectioned, and photographed with an eye and ear tuned to meter and movement, material and horizon, continuity and rupture. Distinctions and boundaries that they had been cultured to see dissolved, and they began to articulate new relationships and limits.

Students were learning what it took to make a map. They were also learning what it took to construct a transect. It took traversing, traversing being the act of journeying across a terrain with the objective of recording findings as much as imposing a new imagination on place. In this sense, they were already designing while constructing a transect. Design was in the eyes with which they were seeing, the legs with which they were striding, the choices that they were making, the instruments with which they were measuring. They were learning what Geddes and McHarg knew all too well, that landscape and design emerge simultaneously in the act of traversing to construct a transect.

The work on the walls and on student desks drew a smile and characteristic sharp inhale from McHarg every time he walked into my 501 studio, expressing an appreciation for the graphite sections and triangulations being drafted, photographic montages being made, and plaster castings being worked. It was an

appreciation that could only come from someone who knew what the transect owed to the traverse.

Today I take students in more advanced studios to places of conflict, poverty, and unfolding tragedy such as Mumbai, Bangalore, the Western Ghats of India, the deserts of Rajasthan, Jerusalem, and Tijuana. These are places on slopes from mountain to sea of their own, slopes that Geddes and McHarg believed to be “everywhere in the world.” But I am acutely conscious, as they would be, that these “transects” are products of traverses by “designers” before us—surveyors, explorers, colonizers, conquerors. Their extraordinary transgressions articulated the landscapes that have become the ordinary in these places, including what is taken for granted as natural and cultural, land and water, urban and rural. In short, they created today’s ground of conflict. Surely the least we can do in the spirit of McHarg and Geddes is to traverse these places again, to venture a new imagination aimed not necessarily at solving problems, but at keeping the transect alive as an agent of change. □

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## NOTES

- 1 Patrick Geddes, “The Valley Plan of Civilization,” *Survey* 54 (1925): 288–290.
- 2 I taught the 501 studio, the foundational design studio in the Landscape Architecture Department at the University of Pennsylvania, from 1994 to 2014, with a few breaks here and there. During this time, I had the opportunity to coteach with Katherine Gleason, Mei Wu, Dennis Playdon, and from 2003 with my partner Dilip da Cunha. I owe much to these colleagues, particularly to Dennis and Dilip, who brought structure, profound insights, and a high level of skill to 501 and taught me what it really meant to traverse.