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Viewpoint

The Transgressive Urban Forest: An Ecological Aesthetic for the Anthropocene

Lucie A. Laurian Ernest Sternberg Nadia Voigt da Mata

ABSTRACT

City dwellers experience urban nature as controlled, romanticized, healthy, and disconnected from the global ecological crisis. The landscape aesthetics of ecological urbanism convey the message that cities can be integrated into natural ecosystems. We challenge this notion and propose alternative aesthetic principles of ecological provocation: a transgressive urban forestry model in which trees disrupt street-scapes to express the ecological struggles of the Anthropocene and humans experience the wildness, power, and fragility of nature. This new urban landscape aesthetic, inspired by architectural innovations, centers on concepts of unkempt wildness, liberated insurgent trees, furcated forest shards, and exposed decomposition.

Keywords: aesthetics, cities, forestry, nature, trees

In the age of the Anthropocene and mass species extinction, urban nature appears healthy and reassuring. It is trimmed, hedged, and controlled in soothing stasis. Regimented along streets, trees are staked, watered, and pruned; turfgrass is irrigated, fertilized, and mowed; and decayed limbs, fallen leaves, and animal carcasses are cleared away (Robbins & Birkenholtz, 2003).

Planners understand the ecosystem services that urban trees provide. Yet, apart from overgrown lots and other ruderal intrusions (Crawley, 2004), city dwellers experience a tamed nature seemingly sheltered from the global ecological crisis. Nature is presented and experienced as a haven, a place for repose, a green contrast with the artificiality of buildings and pavements. Recent ideas of ecological urbanism and eco-cities have further built hopes for integrating human settlements into bioregions. We posit that these practices perpetuate a deceptive self-indulgence about the compatibility of city and nature.

Could urban nature, and in particular urban trees, become vanguards in urban aesthetic disruption, expressing alternative messages to challenge city dwellers' relationships with nature and wake them up to global ecological struggles while still providing ecosystem services? Beyond the neo-romantic ecological picturesque of ecological urbanism and landscape designs, we propose a new landscape aesthetic for the urban pseudo-forest that confronts people with nature's power and fragility.

Our proposal is not meant as an aesthetic dogma. Traditions of the formal garden, the Olmsted pastoral

park and greenway, the City Beautiful tree-lined avenue, preserved wildlands, and ecologically inspired designs all contribute to urban greening. But in the current environmental crisis, planners should also experiment with transgressive tree-planting tactics. Working with urban foresters and landscape architects, as staff or as consultants, in-house or through design competitions, planners should urge and pursue landscape provocation. The aim should be to trigger memorable experiences, raise public awareness, spur discussion, and alter city dwellers' understandings of urban nature (Meyer, 2008).

Urban Landscape Planning: Substantial Achievements, High Hopes

City leaders have long valued nature in cities, as hundreds of years of investments in street tree planting and park designs show (Dümpelmann, 2019; Jonnes, 2017; Laurian, 2019). But the explicitly conceptualized Western planning effort to reconnect country and city is only about a century and a half old. A consistent tradition goes back to Patrick Geddes, followed by Jaqueline Tyrwhitt (2015), Ian McHarg (1969), Frederick Steiner (2002, 2011, 2018; Steiner et al., 2019), Anne Whiston Spirn (1984, 1988), Louise A. Mozingo (1997), and others. In response to increasingly salient ecological goals, planners have built a body of approaches for adapting land uses to local ecological contexts.

Urban environmental planning has evolved to include stormwater runoff infiltration, ecological restoration that regenerates habitats, and tree canopy

programs to reduce heat island effects. Greenways, rain gardens, swales, and green roofs enrich the urban experience, even allowing some animals and plants to flourish (e.g., Austin, 2014; Sinnett et al., 2015).

As a result, urban nature is more sustainably managed than it used to be. When Dutch elm disease marred American streetscapes, city foresters planted millions of fast-growing ash trees. Today, as emerald ash borers destroy stands of ash, foresters plant more biodiverse tree selections. In arid regions, xeriscapes are replacing irrigated lawns. Environmental practitioners can also turn to the findings of the National Science Foundation's Long-Term Ecological Research Program, which provides data and best practices for the management of urban landscapes (Pickett et al., 2014).

Planners have also been inspired by classic environmental thinkers, such as Aldo Leopold (1949, p. 225), whose "conservation aesthetic" called for saving places where people could commune in isolation with nature, learn about ecological processes, and acquire sensibilities for the stewardship of nature. Applying those ideals to cities, Spirn asked planners to foster ecological functioning in cities and proposed a landscape aesthetic that would encompass natural process and urban places and elicit appreciation of culture and nature as interacting processes (Spirn, 1984, 1988). In a similar vein, Howett asked aesthetics to become "coextensive with the ecosphere" (1987, p. 7) and called for a landscape architecture that makes systems of soils, hydrology, wildlife, and vegetation interact with the "human community that will come into play on a given site and will be affected by its design" (Howett, 1987, p. 7). In practice, the most ecologically designed parks, raingardens, and swales may support some ecological functions (e.g., rainwater retention, pollinator habitat), may look wild (e.g., with nonmanicured native plantings), and may even provide therapeutic spaces. Yet they cannot reintegrate nature and cities on a meaningful scale. For instance, in the case of air pollution, urban trees remove less than 1% of air pollutants in major U.S. cities (Nowak et al., 2006).

The False Promise of Landscape Urbanism

In this century, "ecological urbanism," "green urbanism," and the "eco-cities movement" hope to take environmental planning beyond localized ecological improvements. They set out a vision for cities integrated with nature in harmonious relationships (e.g., Beatley, 2012; Hodson & Simon, 2010; Mostafavi & Doherty, 2010; Register, 1987; Ruano, 1998). In the eco-city, nature, the built environment, and society get along, interacting sustainably. Political conflicts, economic dynamics,

cultural and historical change, and technological change would be benignly fitted with nature in an all-encompassing system.

It is a quixotic vision. Healthy ecosystems depend on the integrity of regional biotic interrelationships, yet cities are epitomes of the artificial. They are mostly asphalt, concrete, steel, brick, and glass, and remaining pervious areas typically grow turfgrass. Buildings, roads, and infrastructure stand on vast impermeable foundations that have decimated indigenous landscapes. If the world's cities are to absorb billions more inhabitants and still leave room to protect the global environment—perhaps leaving half the earth to nature (Wilson, 2016)—then they must become more, not less, artificial. That megacity still must leave room for urban nature, but it is necessarily channeled, constrained, and manipulated to fit. It is thus essentially "unnatural": a cultural artifact.

Beneficial though they are, green interventions cannot come close to repairing the environmental destruction that modern human settlement brings. They cannot unmake the city as an anthropogenic construction. Worse, the alleged eco-city gives the illusion that a city's scattered natural features could make up for its inherent artificiality to exert benign impacts on the planet.

The Urban Pseudo-Forest

Trees are the city's most visible biotic elements, its charismatic megaflores. In American cities, tree planting and management falls under the field of "urban forestry," even though city trees do not constitute an actual forest ecosystem. The "urban forest" is a test case for the feasibility of ecological urbanism as ambitiously proclaimed.

Consider the North American temperate forest, an ecological generalist present in 13 states (Anderson et al., 2013). Although trees dominate the human experience of forests, the greater biodiversity is underneath: from grasses and herbaceous plants on the forest floor, up through the understory of shrubs, saplings, stumps, fallen logs, and decaying leaves. Further down, forest soils host burrowing mammals and insects, earthworms and arthropods, and microscopic nematodes, protozoa, fungi, and bacteria.

However, trees of the putative urban forest encounter turf-dominated parks, private yards, rights-of-way, and sidewalk planters. Trees are pruned, thinned out, and deprived of their natural understory and decaying organic matter. Shoots and saplings are mowed down, preventing natural procreation. Diseased and dead trees are removed and replaced by others purchased from nurseries. The American urban landscape is thus programmed into the familiar, safe-feeling, savannah-type environment consisting of turfgrass punctuated by

isolated large trees and by paths that meander just enough to give the impression that this is indeed nature. This Olmstedian environment is in keeping with romantic conceptions of the pastoral and the bucolic.

The complex forest habitat fares badly in small urban patches. Urban wildlife is reduced to generalists, such as robins, squirrels, raccoons, and dandelions, that do well amid urban disturbance. The few urban groves allowed to grow free are confined to ridges, ravines, stream banks, and ruderal patches. These narrow places may allow native, invasive, and escaped ornamental species to undergo decay, succession, and regrowth but lack habitat richness. Only large and connected patches, far larger than makes sense in a city, can ensure habitat integrity. In the words of Perlman and Milder (2005, p. 126), "Ecological integrity ... is often unattainable in landscapes with significant numbers of humans or amounts of human land uses." Briefly put, the metropolis is largely incompatible with the forest habitat, except where large areas are held as wilderness preserves; those cease to be urban.

We are not, of course, against trees in cities. They infiltrate and transpire stormwater, mitigate urban heat island effects, provide shade and wind breaks, enrich soils and sequester carbon, improve air quality, and provide insect and bird habitat. Trees also act as symbols of life, growth, and endurance and as canopy ceilings that turn open spaces into intimate, shaded, and human-scale environments. Aligned on sidewalks, spaced unnaturally apart in fields of mowed turf, or isolated in planters, trees still ameliorate cities.

However, when planted in the name of the eco-city ideals, trees become tools in an aesthetic misrepresentation, a kind of dishonesty. They become sociocultural artifacts that disguise human mastery over nature. Inasmuch as aesthetics relates to the awakening of senses and perceptions, the current presentation of the urban forest in American cities is *anesthetic*: it deadens city dwellers to their destructive relationship with nature. Thus, we challenge the landscaping and streetscaping aesthetic choices that give the misleading impressions that nature and cities live in harmony and that nature is doing all right.

What would be an honest or ecologically authentic way for trees to engage city dwellers? Can urban forests reveal the dangers of the Anthropocene? Could trees become symbolic vanguards of urban provocation and bearers of a global ecological consciousness? If so, what would this new urban forest look like?

Beyond Ecological Aesthetics

The 1990s saw the emergence of modern environmental aesthetics (e.g., Bourassa, 1990; Mazingo, 1997; Nasar, 1992; Parsons, 1995). Diffey (1993) argued that public

officials implicitly accept "the popular theory of beauty as personal preference" and defer to "the *widespread philosophical* belief that beauty is merely a matter of personal liking" (pp. 52–53, italics in original). Just one effect is Parsons's (1995) observation that "preferred natural environments are characterized by relatively open grassy areas, punctuated by occasional groupings of trees and shrubs ..." (p. 232). If popular preferences for the managed outdoors are unquestioned, there can be no critique of the dominant aesthetic, as there can be in music, painting, or literature.

Aesthetically unreflective planners, reluctant to act as "taste police," resist disconcerting landscape concepts. They may (begrudgingly) tolerate the unusual and the shocking in the city's public art but not in its landscapes. Urban forestry practices thus by and large remain implicit, bureaucratically path-dependent, and bound up in romantic bucolic notions.

Reconceptualizing urban forestry as a form of public art opens new aesthetic possibilities. It could express visions and create experiences that exert power over beholders in ways that the untrained eye may fail to identify. As Michael Hough (1984, pp. 6–7) observed, the long-established convention is the "pedigree" landscape, consisting of flowerbeds, fountains, and gardens whose forms rest on "formal design doctrine," dependent on intensive energy inputs and horticultural technology. In contrast, Olmsted and Vaux constructed romantic–pastoral parks-as-savannahs, which were ideal for strolling, contemplation, and solace from the industrial city.

In the wake of ecological awareness, landscape design now favors mixed native plants, wetlands, and irregularly shaped paths that follow variegated landforms. They suggest biodiversity and healthy habitats that are peacefully accommodated in the city. This landscape genre, which we call *ecological picturesque*, conveys the idea (or illusion) that the city is compatible with functioning ecosystems. Given the rarity of critique of urban ecological aesthetics, the choices and intrinsic values embodied in this now-dominant style remain implicit and unexamined. It is particularly difficult to recognize the ecological picturesque as a stylistic choice because it cloaks itself as a panacea, as if it could really integrate the most gargantuan of human artifices, the city itself, into natural systems.

In emerging dissatisfaction with the eco-urban sustainability narrative, Weller (2016) worried that McHarg's and others' "allegory of stewardship ... seems way too pastoral" for a world of massive human interventions and that the idea of sustainability is too static. He proposed the cultivation of landscape processes that are adaptable and resilient.

Also in dissatisfaction, Elizabeth Meyer (2008) asserted that landscape architecture's now dominant

sustainability discourse has neglected beauty. For backing, she went to Olmsted, who cared not just about the park's cleansing function (analogous to ecosystem functions) but also about the beauty created and the "recuperative, transformative power of aesthetic experiences of nature" (p. 6). One way to restore the landscape's recuperative role is through unexpected artifacts she calls "hypernature." In a New York City (NY) park, it is a massive wall that is "clearly out of place in terms of the city, but of its place in terms of the region." It is "challenging and re-centering, momentarily shifting one's attentions and affiliations towards the unseen. . . ." Her work reveals a kind of wavering between the landscapes that console beholders with natural beauty (seen as worthy alongside sustainability) and dramatic interventions that are not necessarily pleasurable but that challenge and transform.

If those ideas are to translate into city dwellers' everyday experiences, urban planning and forestry practices should shift away from anesthetizing streetscape landscaping that convey the message of a healthy, sustainable, controlled, and reassuring nature and instead propose landscapes that intentionally disconcert, awaken, and provoke.

Trees as Environmental Provokers

We propose an urban forestry model that reveals the tensions and conflicts between urban life and ecosystems. Since trees are already ripped out (or grown outside) of their native forest habitat, they can be released from their roles as reassurers of city-nature harmony and turned into vanguards for urban provocation.

In *ruderal resurgence*, weeds make up the scouting parties, growing naturally out of brownfields, wastelands, and other derelict lands. They may be mobilized by guerrilla gardeners' "seed bombing" and by education in the appreciation of weeds. After the grass come mixed shrubs and then the trees. This ruderal tactic already has commentary and precedent (Del Tredici, 2010, 2020; Gobster, 2011; Jorgensen & Keenan, 2012; Lister, 2016). Examples include the Landschaftspark Duisburg-Nord in the Ruhr region of Germany and Freshkills Park in Staten Island (NY). In some projects, fields are cleared for the resurgence, but in others the busted concrete, fallen walls, rusted spikes, collapsed amusement rides, and decaying machinery remain and keep the trees company. These "mongrel" growths (Lister, 2016, para. 6) challenge the pedigree flowerbeds that once displayed a tame nature.

The urban forest could also present itself on city streets, in city dwellers' everyday experiences, as *unkempt wildness*, thick and overgrown with flourishing density, open but resistant to human intrusion. Humans would remain on the perimeter of dense patches, or

cross through them, aware of entering nondomesticated spaces, such as those with cracked pavement or trees protruding in walkways. Whether the process of getting there is rewilding, the intensely cultivated Miyawaki method (Miyawaki, 1998; Owens & Wolch, 2019), or some combination, it is the effect that counts. Doing so need not buy into the idea of primordial wilderness, a modern myth that disregards the native presence, natural wildfires, and other disruptions (Cronon, 1996). The overgrown wildness is rather an aesthetic effect, expressing nature's non-human strangeness.

Trees could also escape their regular placements when arranged into *forest shards*, aimed toward the middle of the street, with pathways and lines of sights that challenge city dwellers' daily assumptions of straight and curvilinear lines. As in the architectural motifs of Renzo Piano and Daniel Libeskind, the shards pierce traditional expectations of form and cut through expected symmetries. At the Dresden Museum of Military History in Germany, Libeskind inserted a long wedge of concrete, steel, and glass through a classical building, creating new dramatic tensions, spaces, and viewpoints (Frearson, 2011). The forest shard reveals a new insurgency as trees force a reckoning with nature.

Insurgent trees escape lawns and rights-of-way to march into civic spaces. They invade roadways (annoying and calming traffic), trample onto sidewalks (pedestrians must circumnavigate around them), penetrate parking lots (displacing parking bays), and obscure lines of sight. In some places, the street, plaza, and superblock are gashed with strips of soil, succumbing to arboreal invasion. In others, trees crack the concrete and buckle the asphalt. Vines ascend walls and gain footholds on green roofs. The newly forested vistas sway with winds and thicken and thin out with the seasons. In these ways, urban forestry presents a liberated nature that reclaims some of its territory, and must be reckoned with, but also struggles to survive in urban canyons (see renderings in Figures 1–4).

This *liberated forest* is inspired by Littman's 2019 installation incarcerating 300 trees inside an Austrian soccer stadium as a "memorial" to the environment in the Anthropocene era" and a dystopian vision of "a world where trees would only exist like species of animals in a zoo" (Block, 2019, p. 1). If current tree management practices are read as incarcerations (street trees lined up like prisoners and held in planters), then the liberated trees would reveal the fact of their recent imprisonment.

The shard forest is also *furcated* many times over, split by roads, buildings, and fences. In architect Gordon Matta-Clark's famous house cut asunder (from roof downwards), the act of artistic aggression revealed the vulnerability of the building's tenuous hold on its spaces. Likewise, in the furcated forest, the cut, slice, or bifurcation is the aesthetic point. Today, environmental



Figure 1. Visualizing the transgressive urban forest at SUNY Buffalo North Campus: main entrance. (Rendering by Nadia Voigt da Mata.)



Figure 2. Visualizing the transgressive urban forest at SUNY Buffalo North Campus: parking lot. (Rendering by Nadia Voigt da Mata.)

harm (from roads, fences, pathways, building foundations) is typically hidden by remedial landscapes. In contrast, the furcated forest showcases the damage. Decapitated trees, trunks cut down the middle, disturbed water flows, deracinated roots, and distorted roadside growth remain to display the environmental harm of the artificial alignment.

Not least, *exposed decomposition* de-emphasizes the noble trees in favor of the grubby detritivores that recycle the forest litter. Soil decomposition processes are recycling performances that deserve far more

recognition. The marquee players are the beetles, flies, maggots, slime, fungi, molds, slugs, snails, earthworms, and bacteria that rarely get star billing in landscape designs. Showing visibly decomposing soil would not only provide plants with necessary nutrients but also celebrate the complex underlayer almost always censored from view. Parks that feature decomposing forest matter are already found in Sweden, Belgium, and the Netherlands (Verstrate & Karsten, 2015).

What we propose is not a continuation of land art. Transgressive foresters would not turn trees into



Figure 3. Visualizing the transgressive urban forest in Downtown Tulsa: a street corner. (Rendering by Nadia Voigt da Mata.)



Figure 4. Visualizing the transgressive urban forest in Downtown Tulsa: South Boston Avenue. (Rendering by Nadia Voigt da Mata.)

outdoor gallery pieces. Rather, their trees will be in-your-face provokers, confronting urbanites with the specter of environmental fragility and threat.

Conclusion: Toward Transgressive Urban Forestry

For cities wishing to become ecologically less damaging, sustainable practices are paramount. Urban woodlands, parks, and trees are essential for the ecosystem

services they provide and the many ways in which they enhance human wellbeing. Even though the city cannot be made truly ecological, in the sense of a self-perpetuating web of biotic interrelationships, those efforts remain essential.

Yet there is much leeway for changing the *ways in which* nature is displayed in the city and the messages those aesthetic choices convey. Conventional urban forestry practices give an impression of safe, bucolic, and domesticated nature. The more recent aesthetic is the ecological picturesque. Ecological urbanism presents

itself as a utopian reintegration of city, nature, economy, and society, overstating the extent to which essentially artificial urban landscape can restore ecological functions.

It is urgent to challenge those assumptions and to pursue an aesthetics that more truthfully depicts nature's struggle in the face of overwhelming assault. The designers so inspired will have to face practical questions. Urban forests only make sense in appropriate biomes; planners will have to find the transgressive interventions that fit their ecoregions. Wayward trees and shrubs that trespass onto streets will purposefully disconcert but need not be less safe than bump-outs and chicanes. The spaces they form can be made as inclusively accessible as conventional greenways. Problems of maintenance, litter, and deterioration should be no different than for greenways. Like the challenging buildings that lean, jut out, and disconcert, yet comply with established regulations, the insurgent woodland can—with attentive planning—be made safe and equitably accessible.

Cities need spaces in which nature is not relegated to providing passive beauty and a cozily reassuring sense of sustainability but rather becomes a transgressor of everyday expectations, awakening city dwellers to the environmental crisis through startling encounters. The new spaces should include furcated forest shards of liberated and insurgent trees trampling through streets and sprouting from soils in which decomposition is publicly exposed. If planners accept the manifesto, the trees will grow into provokers of the urban future.

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