Urban Gardens: Catalysts for Restorative Commons Infrastructure

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Nature continues to define the restorative landscape. While our early commons, a central shared field for grazing or crops, has changed over the centuries, our urban infrastructure is a new necessity that has paralleled the growth of cities and that carries with it remnant functions of these commons. In New York City today, the commons may be a pastoral memory of a field, **Central Park**, a paved opening between buildings, Rockefeller Plaza, or a street lined with retail shops and vendors. Our infrastructure is not often thought of in terms of living tissue, but it is nothing less than the vascular system of our cities.

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The Restorative Commons seeks to apply the restorative qualities of nature to the urban landscape to enhance human and ecological health and well-being. This possibility owes much to the community gardeners who rebuilt the landscapes of our abandoned inner cities in the 1970s and a group of environmental artists who, at about the same time, began creating strong large-scale built works that reminded us of our relationship to the Earth and to nature. While early green infrastructure elements existed in the cellular network of green squares James Oglethorpe designed for Savannah, Georgia, Frederick Law Olmstead's emerald necklace in Boston, and in many other urban parks, these landscapes were not shaped by the culture of cities or to support ecological systems in a concerted way. It was not until we saw large-scale urban gardening through **community gardens** that urban nature began to support neighborhood values, gathering and food production, as well as places for human restoration and healing. The environmental and ecological artists of the 1970s also began exploring large-scale environmental art works that served to highlight natural systems and

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Curbside gardens expanded and nurtured by local residents in Brooklyn (2006).
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in some cases worked to restore ecological systems. Savannah's squares and Olmstead's parks were designed primarily for viewing. Nature is to be seen, fixed in approximation of a pastoral ideal, and occupied in equally prescribed measure. The gardeners and the artists changed this paradigm and the elements of a more decentralized, interactive, restorative infrastructure began to appear in our cities.

Earth Art and Community Gardens

In New York City we saw Alan Sonofist's "Time Landscape" completed in 1975 in the West Village and Agnes Degnes "Wheatfield" planted in 1982 in what would become Battery Park City. Both of these large scale environmental works of art introduced another kind of nature into New York City. "Time Landscape" sought to make visible the nature that existed before the settlers arrived and "Wheatfield" created a field of wheat on a pile of rubble on the edge of Lower Manhattan. These projects were instrumental in not only moving art out of the studio and extending the palette to living materials, landscapes, and nature, but also they focused attention on urban ecological issues by integrating the rhythms, seasons, and lifecycles of nature into their designs. As such, these artists refocused us on natural process as a possibility in design. About the same time, a group of East Village gardeners began 'seed-bombing' abandoned lots and organizing the first community gardens. Over the next three decades, as our inner cities were revalued and rebuilt, gardens began to spill over into sidewalk gardens and tree pits.

Tree allee, Brooklyn Botanic Garden (2001).
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Streetscape

We also began to place a higher value on this "public" nature with neighborhood groups installing tree guards and competing for "Greenest Block" honors, a community outreach program developed by **Brooklyn Botanic Garden's GreenBridge**. Trees began to be valued for an array of ecological services, as well as their aesthetic value. These newer valuations included contributions to clean air, ability to support bird populations, and lowering of summertime street temperatures.

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We are now beginning to see more attention paid to plantings that can help clean and manage urban stormwater flows. In Portland a "Green Streets" program uses curbside planting areas to both retain and clean rainwater that falls on streets and sidewalks.

Rain gardens filter street runoff in Portland, Oregon.
PHOTOS USED WITH PERMISSION BY CITY OF PORTLAND

When these strategies are combined with **building strategies** that may include green roofs, **bio-swales**, rain gardens, and rainwater storage tanks in a comprehensive urban stormwater management plan, we begin to see the potential to significantly alter the urban landscape and restore a productive hydrologic system to everyone's benefit.

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Waterways

Sometimes knowledge of an area's natural history will unearth former built-over springs and stream courses. The daylighting of the Woonasquatucket and Moshassuck Rivers, in downtown Providence, RI, included uncovering and restoring two-thirds of a mile of the once covered rivers. In Yonkers, New York State is spending $34 million to daylight part of the Saw Mill River. As we revitalize these water courses, and street and building water flows into the public eye, there are an increasing number of opportunities to not only tell a story of sustainable water management, but also, to begin creatively shaping this infrastructure in resonance with the natural systems and neighborhood cultures they traverse.

Walls

Public spaces within cities are defined as much by the walls that border them as they are by what is within them. Green walls can help us shape our Restorative Commons from both an ecological and human health perspective. Historically most green walls have depended upon climbing plants that were either able to cling directly to a wall surface or were aided by a trellis. This limited the palette to climbing plants and the height to the reach of the plant. Recent developments in green roof technology have extended our ability to support healthy plantings on walls and we are beginning to see experimentation in this area; perhaps most notably by the richly diverse planted wall gardens of Patrick Blanc.

Ivy on abandoned building, Newburgh, New York (2001).
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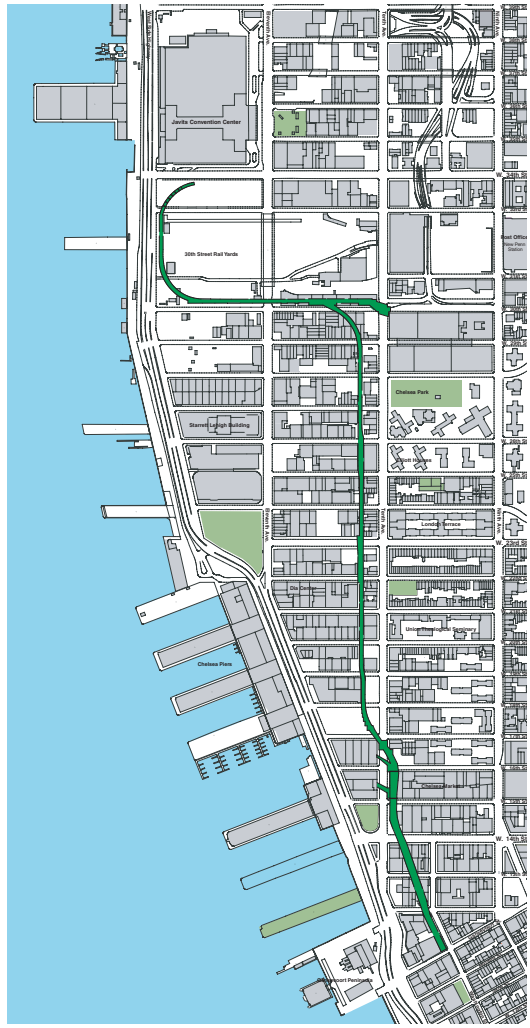
Greenbelts, Corridors, Greenways

While street trees and our pastoral urban parks have long been valued, it has generally been difficult to integrate an understanding of plant communities and an appreciation for biodiversity into urban planting plans. Three-quarters of the street trees in New York City represent less than 12 species; urban dwellers in both Europe and North America consistently prefer manicured pastoral urban landscapes, and appreciate more diverse alternatives only when they include obvious design elements that indicate human intent. As cities grow and we continue to reduce our biological reserves outside of cities, our urban infrastructures will increasingly be called upon to support plant and animal diversity. In the past some cities created ecological reserves with both leisure and educational components like the Heem parks in Amstelveen, the Netherlands. Today some municipalities are beginning to legislate biodiversity in public plantings and Basel, Switzerland requires that new buildings must not only include green roofs, but must also document diverse rooftop plantings and the ability of plant communities to support specific populations of insects and birds.

Another strategy available to public-space planners is green infrastructure mapping and the coordinated placement of green spaces along corridors to facilitate the movement of bird and animal species. Patch ecology teaches us that the smaller an area of green space and the more disconnected it is from other green spaces, the less it will be able to support plant and animal life. This initial disadvantage can be mitigated by creating green corridors and



Plan of existing High Line (2002).
MAP USED WITH PERMISSION OF FRIENDS OF THE HIGH LINE

networks, allowing a mosaic of small green spaces to function more like a continuous edge community. These green infrastructure networks become even more resilient when they are connected to larger natural water or land areas with plant and animal reserves.

As we begin to align open space design and planning with corridor development that includes green infrastructure and pedestrian access, we can begin to understand how the built environment can be shaped to support ribbons of Restorative Commons throughout the city.

Seattle's Open Space Plan for the center city, dubbed the "Blue Ring", is a good example of a U.S. initiative designed to guide development that considers many of these factors and works to put into place a series of linked Restorative Commons. It is successful in large part because it reconsiders the street as open space and prioritizes pedestrians, access to light and air, and an integrated design approach. Designs are to utilize rainwater, consider natural features, be guided by community and neighborhood groups and include public art and healthy green space. In extending these design guidelines to the street and creating an extended ring, Seattle multiplies the potential of these commons greatly.

In New York City, a group of visionaries have created a plan for another green corridor and open space network atop an abandoned elevated railroad. The High Line spans 22 blocks and, when renovations are complete, will create a new raised linear series of gardens and open spaces for a mile and a half through

City of Seattle 100-year open space strategy seeks to build connections and create new center city "Blue Ring."
MAPS USED WITH PERMISSION BY CITY OF SEATTLE

Manhattan. Along the Bronx River to the north, another type of greenway is forming. This one seeks to improve the Bronx River and use the river as a link between a series of new and existing parklands. Plans include improved access to the river, natural area restoration, and conversion of former industrial sites to parkland along the river.

Restorative Commons

The infrastructure of the Restorative Commons is built upon an understanding of natural systems and shaped to celebrate who we are. It is a part of the living world and, like a garden, it requires caretaking, yet it is about more than making sure the plants have sun and water.

We need to find a way to make vibrant and beautiful places in resonance with a nature we once knew: places that engender human health and well-being in both tangible and intangible ways. **Biophilia** helps us understand our inherent and essential preferences for natural environments, life, and life's processes. These lessons can help shape our commons into places that restore us, that refocus us on the life-support systems that sustain us and that involve, reassure, and fascinate us. These are the environments we need to thrive.

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