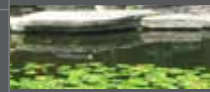


# Ecological Restoration in Urban Parks: Achieving Historical Fidelity

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Broadly understood, ecological restoration repairs damage caused by human activity in natural areas. This concept has only recently been applied to urban parks. I conducted research on four areas of Lincoln Park in Chicago that were restored in a broader effort in cooperation with the USDA Forest Service, the Chicago Park District, and local stakeholder groups to rehabilitate the park in the 1990s, collecting data during a post-occupancy evaluation for the Forest Service and the City Design Center of the University of Illinois at Chicago<sup>1</sup>. As a scholar interested in how people experience their environments, I wanted to explore how residents experience nature in an urban setting, but during my work I found the concept of ecological restoration strained, not only because urban parks are built environments but also because of the history of Lincoln Park and the restored areas. Here I focus on one of the four areas and discuss its implications for ecological restoration which, when applied in urban settings, has the potential to bring inhabitants of urban areas closer to nature in a way that, according to the philosopher Andrew Light, fosters “stronger and better relationships of stewardship or care between human communities and the nature around them” (Light, 2002, p. 154). For Light, ecological restoration “is as much about restoring the human relationship with nature as it is about restoring natural processes themselves” (p. 155).

Lincoln Park occupies 1,208 acres along a nearly six-mile stretch of the Lake Michigan shoreline of Chicago’s north side. Built almost entirely on landfill that has over time covered

shallow water, shifting sands and marshy swampland, the park offers athletic facilities, field houses, a golf course and driving range, harbors with boating facilities, public beaches, landscaped gardens, a zoo, a plant conservatory and botanical garden, museums, significant sculptures and monuments, and architectural treasures, including the Alfred Caldwell Lily Pool, the focal subject of this essay, which is on the National Registry of Historic Places.

While developing the theoretical basis for my research, I discovered that, although “ecological restoration” entered the lexicon in the 1980s as the practical component of restoration ecology, there was no canonical definition of the term. After reviewing the history of attempts to define it by the Society for Ecological Restoration, I formulated a definition based largely on the work of Eric Higgs, who argued that the two essential principles that must be observed when restoring an ecosystem are ecological integrity and historical fidelity (Higgs, 2003, p. 130). A slightly abbreviated version of my definition runs as follows: *Ecological restoration creates a historically representative natural ecosystem within a defined space that achieves indigenous ecological integrity and repairs elements that have been damaged by human activity.*

Here I focus on the idea of a historically representative restoration, one that achieves historical fidelity. The work involved in restoring the Lily Pool, however, seems to stretch the concept of ecological restoration insofar as, rather than restoring it to a state that existed prior to European settlement (the Chicago area was “discovered” in

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the late seventeenth century and was settled in the late eighteenth century), the work restored an area that was mostly under water until the mid-nineteenth century. The Lily Pool was built in 1889, designed as a heated outdoor pond filled with exotic plants. Chicago’s cold climate was a constant challenge, though, and in the 1930s Alfred Caldwell—a protégé of Jens Jensen and Frank Lloyd Wright—redesigned it as a regionally sensitive Prairie School landscape, installing native Midwestern prairie and woodland plants and stratified limestone rock formations that represented the headwaters of a Midwestern prairie stream. Thus, the ecosystem that the Forest Service sought to restore had indeed functioned as a “natural” area for decades, but its plantings and material installations were not indigenous to that location; they were designed to simulate a native prairie landscape.

The Lily Pool deteriorated over time and the Lincoln Park Zoo began using it in the 1950s to breed birds for its avian exhibits. Rehabilitation work in the 1960s further disturbed its capacity to represent a prairie headwaters landscape, but when the zoo relinquished it in 1997 historic preservationists, birders, and local civic groups stepped in. The final design sought to restore both natural habitat and Caldwell’s unique design features. The waterfall and step-stone pathway that highlighted Caldwell’s original plans were restored, as were architecturally distinctive pavilions (Figure 1) and a limestone council ring (Figure 2). The area once again provided a secluded garden for public use<sup>2</sup>.



Figure 1: Viewing pavilion at the Lily Pool  
Source: Lincoln Park Conservatory

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The question inevitably arose, however, whether restoring this area to a former state in which it was even then a simulacrum of indigenous nature was truly an ecological restoration that achieved historical fidelity. The Forest Service itself used the term “ecological restoration” in reference to the work, and it was undertaken to restore both its most significant historic design features and the native plantings that Caldwell had installed, plantings that would have been indigenous to the headwaters of a prairie stream created by natural processes. The focus on Caldwell’s design reflects the collaborative approach the Forest Service adopted for these restoration projects, as historic preservationists participated actively in the restoration design process. Classifying this work as ecological restoration therefore applies the concept to projects in which the historical conditions to be restored are defined by local stakeholders, but in so doing it also expresses a commitment to involving humans in decision-making processes that shape the built environment, which

From its inception, some have doubted the viability of ecological restoration in any setting; to them, the work at the Lily Pool might have created a nice park but it would not be a natural area whose original value has been restored. Undertaking ecological restoration in urban settings not only provides local stakeholders with opportunities to define for themselves what counts as history, but also to define what counts as the “original” value of an area.

Among the more formidable critics of ecological restoration are Robert Elliott and Eric Katz. Elliot (1982) famously compared ecological restoration to art forgery, but Light replied that it was more like restoring than counterfeiting a painting (Light, 2000). Katz (1992, 2000, 2012) took the torch of skepticism, arguing that no matter where it is applied ecological restoration creates an artifact rather than something natural. Katz believes that ecological restoration is dangerous because it expresses the human desire to dominate nature and might encourage humans to exploit nature with the reassurance that they can always repair the damage. According to Katz, “the underlying lesson” of ecological restoration “is that human science and technology can control natural forces and processes. The underlying message is the glory of human domination of nature” (Katz, 2012, p. 75).

Given the history of the Lily Pool, Katz would certainly deny that the work done there has created an intrinsically valuable natural area. He would wonder why the concept of ecological restoration would apply at all, since on his definition the area is an artifact that restores an artifact. And that means that in its original state following Caldwell’s redesign it lacked the intrinsic value of a naturally occurring prairie headwaters. Even if Katz conceded that the recent restoration of the area has achieved a high degree of historical fidelity to Caldwell’s design, he would deny that this design ever achieved historical fidelity in its own right, since a stylized representation of such an arrangement could never replicate the value of its natural inspiration. This however implies, as Katz would have it, that the original value of a natural area—historical or otherwise—is intrinsic to nature and has nothing to do with human purposes. The

interest of historical preservationists in restoring Caldwell’s design at the Lily Pool notwithstanding, Katz would argue that natural history exists independently of human history.

Where then does this leave our question about seeing the Lily Pool as an ecological restoration? If we consider Katz’s claim that ecological restorations of wilderness only encourage further exploitation of nature, then ironically perhaps the work of restoring the Lily Pool will prove to have the opposite effect. By extending the concept of ecological restoration to the Lily Pool, we signify that restoring such an area in an urban park may in fact foster precisely the sort of concern with the environment that



Figure 2: Council ring at the Lily Pool  
Source: Lincoln Park Conservatory

the environmental movement needs. Indeed, Katz fails to do justice to the arguments of Andrew Light and William Jordan, both of whom argue that ecological restoration has the potential to engage people with nature in ways that should encourage them to support environmental preservation of wild areas.

Jordan (2000) stresses the potential of ecological restoration for creating reciprocity between humans and nature, which can help the environmental movement build a community of supporters. Acknowledging that most ecological restorations “are carried out on a small scale . . . [representing] wilderness only in miniature, a

Again, though, undertaking ecological restoration in urban settings not only provides local stakeholders with opportunities to define for themselves what counts as history, but also to define what counts as the “original” value of an area.

in this case happens to be built of natural materials. Still, should we stretch the meaning of ecological restoration in this way?

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Landscape designers who extend the concept of ecological restoration to new applications can reconnect city dwellers with nature and foster new relationships between users and the built environment.

symbolic or ceremonial wilderness” (p. 30), “restoration can become . . . a way of creating community . . . [and] expanding the repertory of experiences and techniques available to environmentalists” (p. 32). Thus, far from being antithetical to Katz’s objective of leaving wild areas to the natural processes that shape them over the eons, ecological restoration, even of urban parks, can create among those who enjoy those areas a commitment to supporting wilderness preservation or restoration efforts on a larger scale.

For its part, the Lily Pool provides park users with an opportunity to experience a setting that evokes the sights, sounds, and smells of a natural headwaters ecosystem, and it does so through faithfulness to a historical design that represented such an ecosystem when it was built. True, the result is twice removed from a naturally occurring ecosystem, but if designers and scholars restrict the principles of ecological restoration to wilderness or rural areas, millions of city dwellers might be prevented from experiencing nature. Landscape designers who extend the concept of ecological restoration to new applications can reconnect city dwellers with nature and foster new relationships between users and the built environment. Thanks to the restoration work of the Forest Service and local stakeholders, those who enjoy the Lily Pool today know something about what it’s like to experience nature in a Midwestern prairie headwaters area.

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<sup>2</sup> See Maloney (2001) for a detailed description of the work and a view of the area’s main body of water. The pavilion shown in Figure 1 is visible in the background.

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