

Introduction

For thousands of years, humans have cultivated gardens for the purposes of preserving and studying plant specimens. The origins of the modern botanical garden as an organizational entity lie, however, in the medicinal gardens attached to European monasteries. During the Renaissance, the study of plants and their medicinal properties gradually shifted from monasteries to universities, and important gardens were established in the sixteenth and seventeenth centuries in university towns such as Pisa, Padua, Leiden, Paris, and Oxford. The age of European exploration and colonial expansion generated an explosion of botanical inquiry on the part of professional scientists and laypeople alike. European botanical gardens, like the many new gardens founded in the United States in the nineteenth century, had as their chief organizational goals (1) the support of scientific research on plant biology; (2) the education of the public about the world's plant life; and (3) the preservation of plant diversity.

Given these goals, botanical gardens appear to have been aligned with the key concerns of the environmental movement of the twentieth century. In recent decades, however, concerns about widespread environmental destruction and over-consumption of the world's natural resources have given rise to calls for "sustainability" in all domains of human activity. While one might reasonably expect commercial enterprises such as auto manufacturers or coal mining companies to suffer from inertia in the face of pressures for sustainability, even the "greenest" of all formal organizations—botanical gardens—have been surprisingly slow to respond in their practices and communications to this new pressure. Only a handful of the many hundreds of U.S. botanical gardens have begun reframing themselves as "sustainable" enterprises—that is, as enterprises committed to the lowest possible consumption of natural resources and to the lowest possible production of pollutants. Because botanical gardens serve a crucial role in educating citizens about the natural environment, this failure to model sustainable practices in building and land use is at best a missed opportunity and at worst a contradiction of most gardens' chief mission. The proposed research seeks (1) to document the changes that are taking place in the identity, mission, and operations of U.S. botanical gardens and (2) to explain how and why certain gardens, but not others, are going green.

Sustainability and U.S. Botanical Gardens

Calls for humans to consider the sustainability of their individual and organizational practices have been increasing in force and impact for several decades. The last two to three years in particular have seen an explosion in public awareness of the devastating environmental results of human activity. This heightened attention to sustainability offers challenges and opportunities alike for botanical gardens. Although the extent to which specific gardens have thus far addressed these challenges and opportunities varies tremendously across the country, the issues raised for botanical gardens by the movement for sustainability include:

- (1) how to incorporate sustainability education into the content of their exhibits;
- (2) whether to devote gardens to native rather than non-native species; and
- (3) whether to renovate extant facilities in conformity with LEED standards.

Many gardens have already responded to the first of these issues by explicitly addressing the impact of human activity on the world's ecosystems in their exhibits. Very few gardens, however, confine themselves to cultivating and displaying native species, because this practice would conflict with the central goal of educating the public on unfamiliar ecosystems. As for updating resource-costly buildings, some of which date back to the nineteenth-century origins of the U.S. botanical gardens movement itself, only one garden, the Phipps Conservatory in Pittsburgh, appears to have completed construction of a LEED-certified building to date.¹ Nevertheless, as the Phipps director has pointed out, there is an obvious tension between the negative environmental impact of most facilities and the environmental and educational mission of botanical gardens: "We are passionate about protecting our global environment and believe that before we can speak with any credibility, we must start by making our own operations and lifestyles more sustainable."²

In addition to these three intersections between botanical gardens and sustainability issues, a further significant issue emerged into the national spotlight on November 1 with the release of a preliminary report on best practices in sustainable land use by the Sustainable Sites

¹ A handful of gardens across the country are currently constructing buildings for which they hope to acquire LEED certification, while others have begun capital campaigns aimed at securing the funds necessary to launch LEED projects in the future.

² Richard Piacenti, <http://www.phipps.conservatory.org/exptropical1.htm>

Initiative.³ This initiative was launched in 2005 in response to a widely-perceived failure of LEED standards to address land use issues adequately. Of the three organizations spearheading this effort, two are botanical gardens.⁴ Botanical gardens also figure among the locations designated by the Sustainable Sites Initiative as appropriate for the application of sustainable site practices. In addition to “[o]pen spaces such as local, state and national parks, conservation easements and buffer zones and transportation rights of way,” the Sustainable Sites Initiative singles out “landscapes with buildings including industrial and office parks, military complexes, airports, botanical gardens, streetscapes and plazas, residential and commercial landscapes and public and private campuses.”⁵

Proposed Research

Botanical gardens clearly face a new array of public and internal pressures for organizational change. However, organizational research has shown that leaders frequently find themselves constrained by the inherited identities of the organizations they lead.⁶ An organization’s identity is generated and maintained, in turn, by the expectations of organizational members and outsiders regarding mission, functioning, and outcomes. While an organization’s identity may be crucial to the mobilization of the resources—whether human, economic, cultural, political, or material—that it requires for survival, organization theorists have argued that a relatively fixed identity may also thwart leaders’ efforts to bring about crucial organizational change. The identity of U.S. botanical gardens as an organizational class is the product of the values and priorities of the nineteenth century, during which the gardens movement first spread in this country, as well of subsequent shifts in those values and priorities. Individual gardens partake of this generalized identity but also generate more specific identities of their own through their contact with local stakeholders. The origins of the U.S. botanical gardens movement in a very different scientific and political era from the one these organizations are facing today poses

³ Sustainable Sites Initiative, “Standards and Guidelines: Preliminary Report,” November 1, 2007.

⁴ The three organizations are the American Society of Landscape Architects, the Lady Bird Johnson Wildflower Center, and the United States Botanic Garden.

⁵ <http://www.sustainablesites.org/scope.html>

⁶ E.g., Michael T. Hannan, James N. Baron, Greta Hsu, and Özgecan Koçak, “Organizational Identities and the Hazard of Change,” *Industrial and Corporate Change* 15(5): 755-784; Michael T. Hannan, László Pólos, and Glenn R. Carroll, *Logics of Organizational Identity: Audiences, Codes, and Ecologies* (Princeton: Princeton University Press, 2007); Victoria Johnson, *Backstage at the Revolution: How the Royal Paris Opera Survived the End of the Old Regime* (Chicago: University of Chicago Press, 2008).

special challenges for leaders, board members, and employees alike. The research proposed here is aimed at explaining the conditions under which particular gardens successfully implement changes that align them more closely with the principles of sustainability advocates. Among the questions to be explored through archival, secondary, and interview research are the following:

1. How do the stakeholders of each botanical garden—the leaders, board members, scientific staff and other employees, visitors, community members, and so on—conceive of the garden’s mission and its relation to the principle of sustainability?
2. In gardens where sustainability initiatives are apparent, what is the source of these initiatives? Do they emerge from within or beyond the organizational boundaries? If from within, at what organizational level do they originate?
3. How and why have certain gardens successfully implemented costly renovations of buildings? Which stakeholders were mobilized? Who managed the identity-reframing effort? What opposition, if any, was overcome, and how?
4. For gardens that have not responded to sustainability pressures, is inaction a product of an implicit and unchallenged commitment to an older identity or, alternatively, is it the result of failure to surmount explicit internal and/or external conflicts over identity?

The concrete products of this research project will be scholarly articles targeted at sociological and organization-theoretical journals as well as a university press book. The research stands to contribute to scholarly work on organizational theory as well as to research on sustainability. Organizational identity is a theoretical construct that received a great deal of attention in the 1980s, but it was subsequently marginalized after serious critiques of early identity work. Recently, organization scholars working in a variety of theoretical frameworks have turned their attention to developing a more robust concept of organizational identity, one that addresses the contributions made to identity by all stakeholders rather than prioritizing the impact of people within the organization. The proposed research, which builds on and extends my own past work on organizational identity, is intended to deepen our understanding of how such collectively-produced identities constrain efforts at organizational change. In addition to making a contribution to scholarship on formal organizations, it is my aim to use the tools of

organization theory to contribute to research on sustainability. While a great deal of effort has been directed at specifying the scientific and technical requirements for sustainable buildings and sites, we know far less about the social and organizational processes through which sustainability standards are successfully introduced and implemented. I hope that my study will help clarify and thereby ultimately facilitate such processes.

In order to carry out this research, I would like to request a grant of \$10,000 from the Erb Institute. Annually, I am granted \$3000 by the Organizational Studies Program to cover all my research expenses. This money is exhausted each year by the costs of memberships in the Academy of Management and the American Sociological Association, by travel and accommodations related to the annual meetings of these organizations, and by the cost of books purchased for teaching and research purposes. I have recently applied for \$3800 from the Organizational Studies Program's new Barger Leadership Institute to cover travel and associated costs to about six botanical gardens; I expect to be notified in the next month about the decision on this request. The sum requested from the Erb Institute would serve primarily to cover travel and associated costs to between seventeen and twenty gardens (depending on gardens' proximity to one another), thus bringing the total of gardens in my study to about twenty-five.