

Project Definition

Planted Narratives in the Now and Future Botanic Garden

Caleb Melchior LAR 700 Fall 2013

Background:

In a world where it's more likely that we're more familiar with the weather icons on our computer screens than the actual weather events outside our doors, citizens of the first urban century need new paradigms for understanding their relationship to the world around them. In such a world, it may seem odd to look to botanic gardens. But, as living collections and centers of knowledge about plants, botanic gardens have the potential to become vital instruments in building relationships between human and ecological systems.

Existing botanic gardens often mediate between two functions as living collections of plants (valuable to the scientific community) and pleasurable experiences (valuable to the general public). According to James Corner's recent article for *Topos*, botanic gardens are "elaborate organizational fictions" (Corner 2013). He says that "such structures and frameworks are not simply geometrical and formal but are more significantly information based, organizing material according to one scheme of classification or another, like taxonomy, geography or narrative."

If the botanic garden is, as Corner sets forth, an "elaborate organizational fiction", its form will necessarily reflect the relationship of humans to the natural world. Given that our understanding of the human/world relationship has changed drastically in the past century and will continue to change as we move into the future, it is ironic that the plantings in even recently-designed botanic gardens continues to duplicate past forms. Even Corner's own work at Hengchun Tropical Botanical Gardens in Taiwan, with a topographic organization dictating the design, relies on planting styles typical of botanic gardens from the mid-20th century and earlier. (Corner 2013)



Figure 1: Historically, monastery and university gardens, like the Alchemist's Garden at Perugia, were often organized according to different scientific ordering systems.



Figure 2: The display gardens are Missouri Botanical Garden display remarkable horticultural skill, however they are a purely aesthetic enterprise with little contribution to ecological systems or scientific study.

Driving Forces:

To make botanic gardens relevant in the 21st century and beyond, we have to move beyond what urban foresters Gustavsson et al. describe as “a culture of headlines and a feeling of a sense of knowledge” to “an honest belonging to knowledge” (Gustavsson et al. 2005, 389). Rather than relying on passive reproduction of past forms, as is evident in even newly-designed parts of contemporary botanic gardens, it is essential that we find new ways to structure and communicate knowledge through experience.

It is ironic that recent innovations in planting design have occurred outside the realm of botanic gardens. Instead, new ways of planting have come from individual practitioners, mostly garden designers and landscape architects, experimenting with new methods for physically designing gardens, mostly on residential properties or urban squares. If botanical gardens are to remain relevant within the urban landscape, their form must transform to reflect their new roles in the urban milieu.

To find new precedents for creating environmental experiences that construct the relationship between humans and the natural world in accordance with 21st-century dialogue, this study will look to contemporary planting design, especially as exemplified in the work of the Nigel Dunnett and James Hitchmough in the United Kingdom, Oehme van Sweden and Roy Diblick in the United States, Giles Clement in France, and Piet Oudolf in the Netherlands.

In contrast to older understandings which treated planting as either a work of “pure beautification”, a pure scientific organization, or an attempt to completely replicate a wild environment, contemporary planting designers have created hybrid methods of planting design. By understanding the narratives conveyed through these hybrid methods, then reconciling the narratives with those of the botanic garden in the 21st century, new methods for creating planting designs in botanic gardens can emerge.

Dilemma/Proposition:

When we neglect the narrative conveyed through the physical experience of botanic gardens, we minimize the garden’s potential agency as pleasurable experiences instilling deep knowledge about the relationship between humans and the rest of the world..

Going beyond realizations of existing botanic garden narratives, how can applying contemporary planting design methods to botanic gardens enable designers to create multi-sensual aesthetic experiences while building deep knowledge of socio-ecological relationships?

Theoretical Underpinnings:

Given that this studio is concentrating on designing for landscape affordances - “a specific combination of the properties of its substances and its surfaces taken with reference to an animal” (Gibson 1977, 67), the project will consider botanic garden landscapes and planting design with the primary intention that the designed environment affords potential to build deep understanding of socio-ecological relationships through sensual intensity. In addition, landscape affordance theory can augment phenomenological understandings to consider how the proposed botanic garden experience can stimulate individual psychological involvement.

Site Determination:

Two potential sites are currently under consideration. Both are both of significance for their visibility, biological sensitivity, and potential for further development. In addition, both reflect the researcher's personal interest in flora and ecological systems of the southeast United States. In particular, the southeast is a particularly neglected region for active biodiversity preservation.

In Apalachicola, Florida, the Chapman Botanical Garden was intended to memorialize a well-regarded Florida botanist, Dr Alvin Wentworth Chapman (Cox 2010). Today, however, the site (of approximately 10 acres) is barely a fitting tribute. The site lacks interest and has little to draw visitors. While western Florida is home to many National Forests and other sensitive natural habitats, many of these are not accessible to humans. By exploring methods to create an immersive learning environment that affords a pleasurable multi-sensual aesthetic experience while building deep knowledge of socio-ecological relationships at the Chapman Botanic Garden, this project can transform the human understanding of natural systems in an area that has deep ecological and social needs. Given the tourism prevalent in Apalachicola and the surrounding area, the garden offers the potential to be a strong asset for the community if developed into a viable tourist attraction. When realized, this project could be a strong educational tool for both residents of the Apalachicola region and tourists who come to enjoy the beauty of the west Florida coast.



Figure 3: The existing landscape at Chapman Botanic Garden is desperately underdeveloped, with little provision for human or ecological systems.

Figure 4: Apalachicola is located in Franklin County, in west Florida.

The other potential area for consideration is Asheville, North Carolina. Given its location in the eastern Appalachians, Asheville is bisected by the Blue Ridge Parkway, a national historic corridor. The Appalachians are well known for their biotic diversity and popularity with tourists. Given the need to preserve the natural systems of this area and the predictions of rambunctious growth for North Carolina cities, this is another area that shows great potential as a strategic site for a botanic garden. A specific site within the greater Asheville metropolitan area will be determined, following further research. The existing Botanical Garden at Asheville is one possibility.



Figure 5: The Botanical Garden at Asheville, adjacent to the UNC Asheville campus, are currently underperforming as an engaging experience.

Figure 6: Asheville is located in Buncombe County, North Carolina.

Precedents:

With a founding in ecology and aesthetic perception theory, Dunnett and Hitchmough have established a concept of “Enhanced Nature”, which blends human aesthetic desires with ecological system functioning (Dunnett & Hitchmough 2004). According to their recent article in *Topos*, Dunnett and Hitchmough exemplified this approach in their design for the London Olympic Park plantings (Hitchmough & Dunnett 2013). Given the requirements of the Biodiversity Action Plan, Hitchmough and Dunnett resisted the notion of simply creating a “pre-development” restoration project (Hitchmough & Dunnett 2013). Instead, they “argued successfully that it was essential that this ecological requirement was combined with a realization that [they] had to create a festival landscape that would be inspiring, uplifting, and highly memorable.” (Hitchmough and Dunnett 2013, 74) Their methods involved working with planting designer Sarah Price to create highly-considered mixes with a combination of “native” and non-native plants (see Figure 6).



Figure 7: The collaboration between Hitchmough, Dunnett, and Price to create fantastic celebratory planting designs that fulfilled both ecological concerns and provoked human delight resulted in a reawakening of the potential for landscape to bring sensory surprise and delight. This image shows visitors enjoying a garden bed focusing on South African plants.

In a more permanent situation, Piet Oudolf’s planting design for the Lurie Garden in Millenium Park is one of the most widely publicized examples of Oudolf’s signature “mingled” planting style. Its design consisted of a scheme for managing plant communities to create certain effects that balance ecological resilience and human aesthetic desires (Oudolf 2011).



Figure 8: Piet Oudolf’s serene drift plantings at the Lurie Garden in Chicago’s Millennium Park stimulated American gardeners to rethink how they use plant material. While many of the species are indigenous to the American Great Plains, others originate in similar ecoregions across the globe.

When Roy Diblik was asked to create a planting scheme for the Sullivan Arch Garden, in sight of Oudolf's Lurie Garden, he decided to create a similarly naturalistic effect. However, he chose to utilize a modular grid system of plant communities that are repeated throughout the space. In addition, Diblik's plant palette was determined using colors drawn 'Earthly Paradise', a Pierre Bonnard painting in the adjacent wing of the Art Institute of Chicago. (Oudolf & Kingsbury 2013)



Figure 9: Roy Diblik's plantings for the Sullivan Arch Garden explore the potential for modular grids of planting to be used as an ordering system for intermingled planting styles. The colors of the plant cultivars in the garden are drawn from a painting in the adjacent gallery.

By examining these precedents in contemporary planting design, exploring their theoretical underpinnings, then applying the strategies of 21st century planting design to a contemporary botanic garden, this project will explore how to realize new narratives in a botanic garden plantings.

Relevance to Contemporary Landscape Architecture:

Landscape architects are well equipped to mediate between the scientific concerns of botanists/taxonomists and the experiential concerns of artists/visitors. By aligning strategies from planting design and narrative theory, designers will be equipped to create botanic gardens that are transformative, affective, and authentic.

Methods:

In the 21st century, it will be vitally important for there to be a development of richer relationships between humans and natural systems. While the underlying assumption that botanic gardens are concerned only with aesthetics or curation has kept them from achieving their full potential as centers of knowledge within the urban environment, the implementation of new landscape experiences that realize more sophisticated narratives through planting design offers the potential for botanic gardens to build socio-ecological relationships.

The research process will begin with literature review focusing on several sub-questions to answer parts of the primary research question.

- How has the concept of socio-ecological relationships shifted in contemporary ecological and design theory?
- How are underlying narratives of existing botanic gardens revealed through the physical experience of the place?
- How have contemporary planting designers attempted to reflect narratives of the human-nature relationship in designed environments?
- What can the experience of future botanical landscapes afford to those who experience them that virtual realities cannot?
- How can planting design be used to make underlying landscape narratives more legible for contemporary and future audiences accustomed to technologically-manipulated experiences?

In combination with the literature review, the researcher will create a framework for understanding how to transform the experience of botanic gardens as an agent for relationship-building in the 21st-century urban milieu. Many existing botanic gardens are designed primarily for visual understanding. Rather than competing with the flash of the virtual visual world, gardens must become multisensual experiences which fully engage visitors' senses to afford them new understandings of the narratives on which the botanic garden is founded (Potteiger and Purinton 1998).

Following the development and examination of the framework, initial testing through design will occur at The Meadow on the KSU campus. This recent addition to the landscape on campus demonstrates how a prairie-style planting can provide pleasurable experiences while demonstrating new understandings of the relationship between humans and nature.

As testing through evaluation of precedents and involvement with an active design project on campus reveals new understandings, the framework will be revisited and refined. The framework will then be applied to Chapman Botanic Garden through a site design, with special attention paid to planting design. These works will be represented through diagrams, graphics, and written text compiled in a full project report. In addition, research for the project could become the basis for a print (or digital) book that sets forth the potential for botanical gardens in the 21st century.

The primary intent for this project is that those who read the written work and view the images will have their imaginations stirred. One of the essential aspects of the project is to convey the potential for botanic gardens to become memorable sensual experiences. In addition to a strong basis in the application of theory, the product will focus on evocative imagery that conveys the potential of new planting designs to stir emotions and engage the senses. Based on the strategies outlined in this project, designers will be enabled to create botanic gardens as transformative experiences that awaken the senses and build deep knowledge of natural systems.

Limitations:

Because of a limited time frame for developing and applying a framework, this project will focus on creating a framework for understanding how to create planting designs for 21st-century botanic gardens and envisioning possibilities for the type of sensual experience those designs could create.

Figures:

Figure 1: Melchior, Caleb. 2013. Alchemist's Garden at Perugia, Italy. Digital Photograph.

Figure 2: Melchior, Caleb. 2009. Spring Bloom at Missouri Botanic Garden, Bulb Gardens. Digital Photograph.

Figure 3: Melchior, Caleb. 2013. Back Garden at Chapman Botanical Garden, Apalachicola, Florida. Digital Photograph

Figure 4: "File:Franklin County Florida Incorporated and Unincorporated Areas Apalachicola Highlighted.svg." 2013. Wikipedia, the Free Encyclopedia. Accessed September 14. http://en.wikipedia.org/wiki/File:Franklin_County_Florida_Incorporated_and_Unincorporated_areas_Apalachicola_Highlighted.svg.

Figure 5: Daderot. 2009. Botanical Gardens at Asheville, Asheville, North Carolina, USA. General View. Own work. http://commons.wikimedia.org/wiki/File:Botanical_Gardens_at_Ashville_-_path.JPG.

Figure 6: "File:Map of North Carolina Highlighting Buncombe County.svg." 2013. Wikipedia, the Free Encyclopedia. Accessed September 4. http://en.wikipedia.org/wiki/File:Map_of_North_Carolina_highlighting_Buncombe_County.svg.

Figure 7: Hitchmough, James. 2013. People Are Magnetically Drawn to the Incredibly Vibrant Colours in the SA Garden. Photograph. Accessed September 13. <http://hitchmough-2012-olympic-park.group.shef.ac.uk/images/drakensberg3.jpg>.

Figure 8: Melchior, Caleb. 2012. New Wave Planting at Lurie Garden, Millennium Park, Chicago. Digital Photograph.

Figure 9: Melchior, Caleb. 2012. Plantings near Art Institute of Chicago. Digital Photograph.

Sources:

Corner, James. 2008. "The Hengchun Tropical Botanical Gardens, Taiwan." *Topos: European Landscape Magazine*.

Cox, Dale. 2010. "Chapman Botanical Garden - -Apalachicola, Florida." *Explore Southern History.com*. <http://www.exploresouthernhistory.com/chapmangarden.html>.

Gibson, James. 1977. "The Theory of Affordances." In *Perceiving, Acting, and Knowing: Toward an Ecological Psychology*, 67–82. Hillsdale, N.J. : New York: Lawrence Erlbaum Associates ; distributed by the Halsted Press Division, Wiley.

Gustavsson, Roland, Martin Hermy, C.C. Konijnendijk, and Anne Steidle-Schwahn. 2005. "Management of Urban Woodland and Parks - Searching for Creative and Sustainable Concepts." In *Urban Forests and Trees: a Reference Book*, edited by C. C. Konijnendijk. Berlin: Springer.

Hitchmough, James, and Nigel Dunnett. 2013. "Design and Planting Strategy in the Olympic Park, London." *Topos: European Landscape Magazine*.

———. 2004. *The Dynamic Landscape: Design, Ecology and Management of Naturalistic Urban Planting*. 2004. London ; New York: Spon Press.

Oudolf, Piet. 2011. *Piet Oudolf: Landscapes in Landscapes*. London: Thames & Hudson.

Oudolf, Piet and Noel Kingsbury. 2013. *Planting: a New Perspective*. 1st ed. Portland, Or: Timber Press.

Potteiger, Matthew and Purinton, Jamie. 1998. *Landscape Narratives: Design Practices for Telling Stories*. New York: J. Wiley.