

# Changing: the School Landscape

exploring mutable landscapes and  
design strategies at the public school

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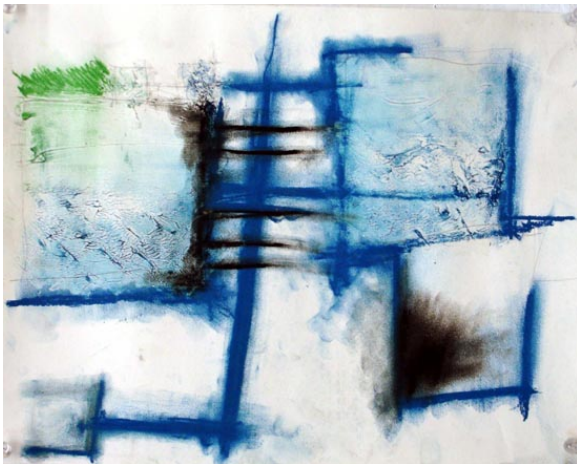


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Capstone Proposal  
January 13, 2005  
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## Abstract

While many public schools fail to include their landscapes as part of the learning environment, alternative approaches to school landscapes are shifting that condition. One opportunity available for schools is to access the potentials of a changing landscape. Changes that occur at the hands of student and natural agents can create interesting possibilities for learning and develop fundamental ways of thinking of the local and regional environment. This capstone project explores the potentials of designing a *mutable landscape* for school yards. Developed as a hypothetical design project, the capstone will examine modes for designing mutable environments based on methods suggested through contemporary design discourse. A key component for the research will be to describe these design approaches through alternative graphic strategies.

*I would like to thank my advisor, Elen Deming, and my capstone committee member, Matthew Potteiger, for their assistance with this proposal. I look forward to working with them next semester on what will hopefully be an exciting and interesting capstone project. I would also like to thank Ed Sichta and Toby Horton for their contributions. Finally, I extend a thank you to the Fall 2004 LSA 326 students and instructors for compiling a wealth of project data.*

## Introduction

The landscape of the public school is suffering at the hands of an inconspicuous ailment: missed opportunity. Many public schools in the United States relegate their landscapes to the service of strict utilitarian and functional roles resulting in large areas devoted to parking lots, recreational zones and, often, vast fields of lawn. While these stark expanses serve useful programmatic roles, they negatively impact the school on many levels. Most significantly, these school landscapes fail to harness the opportunities of creating interesting and engaging outdoor learning environments. Despite trends that point to a seemingly apathetic treatment of landscapes, there is evidence of numerous groups determined to shift this handling of school landscapes. “There is a quiet revolution occurring in this country as educators in this country and abroad are realizing the role the environment around the school can play in education” (Takahashi 1999, p. 4). Between non-profit organizations, school design competitions and school districts themselves, new and innovative approaches to school landscapes are emerging. They are changing the educational nature of landscapes and opening a wealth of possibilities for learning.

Of the myriad of opportunities for school landscapes, the creation of *mutable landscapes* offers distinct potentials. For the purposes of this capstone, the term *mutable landscapes* refers to places designed to intentionally change, transform and evolve at the hands of either human or natural agents. They can develop into unique sites where students can engage, interact with and literally change their environment while learning and thinking about the broader systems that affect a place. At the site scale, natural processes can be employed to transform the entire school landscape into a functioning, evolving *mutable landscape*. Through this course of action, students can gain a deeper understanding of their environment beyond classroom-based activities.

The notion of *mutable landscapes* derives from a combination of current educational aims for school landscapes and conceptual ideas from contemporary design practitioners. The educational side of this equation promotes school landscapes designs that encourage engagement with the environment and includes modes through which students understand a richer meaning of place. In an effort to create these types of stimulating outdoor learning areas, some pedagogical approaches suggest landscape designs that grant students the freedom to manipulate and change a site. On other side of this equation, some contemporary designers are now embracing the transformative capacities of ecological and hydrological processes and are harnessing their potentials for landscape design. As opposed to designing fixed, static sites, these practitioners develop strategies for evolving, changing places. By synthesizing these ideas, schools can extrapolate some of their existing approaches for their landscapes into a conceptual strategy for the entire site.

## Purpose

This capstone project aims to explore the potentials of a *mutable landscape* for a public school site. Using design methods suggested in contemporary design discourse, the research for the capstone will investigate *mutable landscapes* through a hypothetical design project at Corcoran High School, Syracuse, NY. The primary goal for design will be the development not of a singular designed plan; but rather the creation of an organizing framework, a site strategy and a conceptual site design through which a *mutable landscape* could take form. Research goals will be divided into the following three phases:

### *Understanding*

- To examine and understand *mutable landscape* precedents – case studies
- To collect, gather and interpret site data and information – site analysis, site visits
- To review the findings from an earlier design studio (LSA 326)

### *Investigating*

- To develop a process for a *mutable landscape* design – concept development, framework design, strategy construction and conceptual site design
- To explore alternative modes of representation in design – site analogs, strategy diagrams

### *Reflecting*

- To document thoughts and ideas during design process – written/graphic journals
- To reflect on methods employed in research investigations – critique, process mapping

## Project Site

For the purposes of design investigation, the research will focus on the Corcoran High School site in Syracuse, NY. Located between the Strathmore neighborhood, Elmwood Park, and the Town of Onondaga, the site includes the high school, parking areas, recreational fields, two stream corridors and dramatic changes in elevation. Corcoran High School contains over 1,400 students and sits within a quarter mile from the Roberts Elementary and Middle School.



## Literature Review

### *Background*

Creating landscapes that foster creative and interesting learning environments stems from harsh reactions to the current state of school grounds. Throughout the literature, educators, theorists, practitioners and landscape designers express concerns over the lack of attention paid to the landscape or the dull, void character that it can often evoke. One concern expressed among educators is the neglectful attitude towards the school landscape. Due to building-centric approaches to school designs, buildings tend to establish themselves as the centers of education and learning. As a result, landscapes are demoted in the educational hierarchy and viewed as places to take a break from learning (Takahashi 1999). Another grievance typically cited among those in education is the physical condition of school grounds. Educators and designers tend to deplore the poor visual qualities of school yards, noting specifically their bland, uniform image. Typical school landscapes are poorly designed sites consisting of flat, treeless planes of grass and paving (Stine 1997, Takahashi 1999). These types of landscapes not only degrade the visual quality of the site and leave little opportunity for interesting learning activities but also “strike a heavy ecological blow to the character and quality of the ecology, hydrology and terrain that previously existed” (Takahashi 1999, p. 9). Abstractly, such landscapes can also be characterized as “empty signs, dead and deeply aestheticized experiences that hold neither portent nor promise for the future” of the school. (Corner 1999, p. 156). While the disregard of outdoor environments appears as a wide spread problem among schools, progressive school districts and organizations are determined to improve this situation.

Coalitions and organizations from the US and abroad are slowly working towards redefining the role of the school landscape. Driven to create engaging, stimulating outdoor learning environments, these groups promote new directions for primary schools, high school and college campuses. The State Education and Environmental Roundtable (SEER), a cooperative endeavor of 16 state departments of education, and the New American Schools, based in Washington DC, are two coalitions working towards improving the condition of schools. The SEER focuses on interdisciplinary and collaborative models of learning that support student-centered, hands-on approaches to interaction in the environment. Similarly, New American Schools, implements outdoor learning strategies based on the principles and values of the nationally recognized Outward Bound program. Their learning model “integrates the landscape as both a stage for self-discovery and as a text with its own lessons” (Johnson 2000, sect 2.2.1). International groups are also making strides in this field including the British organization, Learning Through Landscapes (LTL), and the Canadian organization, Green Brick Road (GBR). LTL campaigns to make school grounds better places and advocates for school grounds to be incorporated in to the educational mission ([www.ltl.org](http://www.ltl.org)). GBR “specializes in resources and information for students and teachers of global environmental education” ([www.gbr.org](http://www.gbr.org)). Although the attention of individual groups and organizations leans in particular directions, many of their goals align towards finding ways to harness the potential of school landscapes in order to create better learning environments.

School landscapes offer a myriad of opportunities for education and learning in the outdoor setting. They can hold tremendous potential to integrate curricula, incorporate layers of meaning and foster engaging interactions with the community (Johnson 2000). Perhaps the most clearly defined opportunities for landscapes are the links between the formal academic curriculum and the outdoors. Bill Lucas, the LTL Trust Director, explains how “curriculum development and the

development of school grounds must go hand in hand” (Lucas in Young 1990, p. 1). Whereas some curriculum topics logically relate to the outdoor environment (ie: ecology, plants, biology, etc.), the school landscape can also host subjects such as math, history and the arts (Takahashi 1999).

Beyond simply connecting the outdoors with curriculum, school landscapes can be designed to contain or exhibit the rich layers of meaning inherent within them. School yards can be transformed into places for: connecting learning environments with the dynamics of cultural systems; expressing abstract concepts through physical form; and exploring the cultural significance of public space (Herrington 2002). Methods such as these can create provocative landscape solutions that “cause us to pause and question our particular world view” (Nekaba in Stine 1997, p. 138). Interaction with the landscape and surrounding communities also fosters creative outdoor learning experiences through an educational approach that uses the “environment as an integrating context (EIC)” (Johnson 2000). EIC relates to an interdisciplinary, collaborative, student-centered, and hands-on approach to the landscape where students can construct their own learning experiences guided by teachers and administrators (Lieberman and Hoody 1998, Johnson 2000).

### *Mutable Landscapes*

From the array of possibilities available for school landscapes, one that offers a great deal of potential involves landscapes with a capacity and propensity for change. Although virtually all sites change in varying degrees, landscapes that adapt, evolve and transform through intentionally prescribed changes present some very interesting opportunities for learning, understanding and thinking about a place. Landscapes changed through student interaction can become “special places” where the next iterations and generations of students can forge connections to their earth, their place and to each other (Stine 1997). At an elemental scale, agricultural and gardening programs depict one type of this changing landscape condition. The students at the MLK School in Berkeley,

for example, grow their own organic food in the yard adjacent to their school. This program, deemed the Edible Schoolyard project, teaches students about sustainability and organic food production (Johnson 2000) through a changing, functioning agricultural field. For PS 19 in New York City, Ken Smith Landscape Architects designed the school grounds with a verdant, interactive urban garden. The hands-on approach to the garden provides teachers with an outdoor teaching tool (Steen 2004) that changes based on student involvement. But, the opportunities of a changing school landscape extend beyond student-initialized interventions; instead, the concept of a *mutable landscape* can serve as the guiding principle for the entire school site by working with the potentials of *both* human and natural change. School landscapes that “embrace the complexity and mutability of the site’s biological systems” (Herrington 2002, p. 8) can perform an educational role in addition to meeting an ecological need. By harnessing the ecological, hydrological and other natural processes, school yards can transform into *mutable landscapes* that educate and inform outside the realm of coursework. The creation of “changing outdoor environments is an opportunity to rediscover values, cultural heritage, and vast regional differences” (Stine 1997, p. 98). The conception of *mutable landscapes* can thus become a richer, dynamic extrapolation of conventional approaches to learning landscapes.

The conceptual model for *mutable landscapes* derives from the confluence of similar design concepts emerging in current architectural and landscape architectural discourse. At the crux of these concepts lies an impression of landscapes as open, mutable places where ecological or even social processes have the potential to generate new, self-propagating conditions. As explained through different sources, the performance of a changing landscape depends on three crucial elements: an organizing framework within which changes can occur; an overall strategy to envision potential changes; and a site design that promotes yet controls change.

Anita Berrizbeitia, in her article “Scales of Undecidability” (2001), pursues this notion by abstracting ideas from the scientific discipline of systems theory. In creating evolving, changing landscapes, she posits that landscape architecture must provide a “framework for theorizing the organization of complex environments that are both open and closed to stimuli from the outside” (p. 123). Through such a procedure, landscapes can be devised with an evolving flexibility of program for the “precisely open rather than the vaguely loose” (p. 124). “This approach,” as she later concludes, “could spur the creation of a new and vast participatory, public realm, one in which many juxtapositions would unfold” (p. 124).

In a similar vein, James Corner advocates for landscape design in the form of strategies. In a recent article entitled, “Not Unlike Life Itself” (2004), he explains how a successful strategy is a “highly organized plan (spatial, programmatic or logistical) that is at the same time flexible and structurally capable of significant adaptation in response to changing circumstances” (p. 32). He continues by describing how the concept of resilient design strategies describes “not only pathways and processes but also specific forms of organization, specific agreements, configurations and relational structures” (p. 32). The Freshkills competition submission from James Corner’s firm, Field Operations, espoused this view with a proposed design strategy “guided more by time and process, than space and form” (FO 2001, p. 2). But, as Corner discusses later, these approaches to landscape do not preclude the need for a formal design response; they must be coupled with form, geometry and material design for these elements produce the “substrate through which strategy plays itself out” (2004, p. 32).

Another conceptual influence for *mutable landscapes* stems from a procedure called ‘design intelligence’ currently being employed in architecture. In a series of interviews conducted for

*Architecture + Urbanism*, Michael Speaks explored the various forms in which young architecture firms are utilizing this new yet slightly ambiguous design phenomenon. In one discussion with Rients Dijkstra, of Maxwan Architects, Speaks interprets ‘design intelligence’ as a “tactic for engendering flexibility through a structure of enforced inflexibility” (2003, p. 32). Or, as Speaks described even more succinctly in a speech at Syracuse University, “‘design intelligence’ is a type of inflexibility that makes flexibility happen” (2004). This approach alludes to the framework model proposed by Berrizbeitia and is suggestive of the strategy concepts developed by Corner. However, the idea of ‘design intelligence’ does not end there. In another interview with Oliver Lang, of LWPAC, the mention of ‘design intelligence’ refers to the technique of ‘scenario thinking.’ LWPAC uses ‘scenario thinking’ to brainstorm mutable urban design strategies through a process that avoids predicting a final outcome (Speaks 2003b). As opposed to other urban planning approaches, this method results in the creation of what Speaks refers to as, a “living plan” (2004).

### *Precedents and Models*

Given that the suggestion of a site-scale *mutable landscape* for schools is relatively unique, precedents from school site rarely appear in the literature. Therefore, this capstone will examine precedents from other typologies, conditions and locations in an effort to comprehend the techniques and methods employed for these types of landscapes. For the purposes of this proposal, the case study analysis phase of the capstone has already been initiated using the following using two projects: Drawn from Clay in Haarlemmermeer, Amsterdam and the Crosby Arboretum in Picayune, Mississippi. Stemming from Dutch design approach of “nature development,” Drawn from Clay is a project characterized more by dynamic processes than dynamic structures (Ruijter 2002). Out of a procedure of manipulating water systems, this project transforms fallow agricultural fields into five new and different environmental sectors designed for recreation and ecological awareness. This

slowly evolving landscape provides one interesting precedent model for school sites. The Crosby Arboretum, another precedent model, approaches *mutable landscapes* through a different lens. Using the metaphors of healing and revealing, this landscape is designed to “retell the region’s ecology by reestablishing the structural combinations of plants in relation to process” (Potteiger and Purinton 1998, p. 52). In order to recapture the native ecological conditions of the site, different zones of the arboretum are selectively managed with routine interventions such as controlled burns (Potteiger and Purinton 1998). These changes in the landscape serve an ecological function in addition to a didactic role and suggest potential opportunities for school landscapes.

### *Design/ Research*

Since *mutable landscapes* is still a conceptual strategy, the design methodology for this capstone will take an analogously abstract approach. ‘Research as design,’ or more specifically, research as a hypothetical design affords this project the opportunity to fully explore and visualize the potentials of *mutable landscapes* in a school setting. Although this methodology results in a looser, unquantifiable kind of knowledge than normally gained through conventional research, it does not suggest that such efforts are futile (Dorrian 2003). Hypothetical design projects offer “contemplative realities that dilate and provoke the living world they parallel” (Chi 2001). Whereas conventional design practice can have strict pragmatic limitations, a hypothetical design frees itself from contextual constraints of a real program, client, brief and other pragmatic concerns (Dee 2004). In her article “The Imaginary Texture of the Real” (2004, p. 23), Catherine Dee concisely states the advantages of pursuing a hypothetical design project as a research methodology:

By working experimentally on paper landscapes in ways similar to artist practices, the researcher/designer may focus more acutely on their research questions and themes and on the development of design processes to explore and answer these questions. In work which is published but not built, the researcher/designer can raise and examine difficult questions and issues which may lead not only to new perceptions but also to new design ideas and approaches.

Hypothetical design, therefore, becomes the conduit for translating conceptual design models used in research (ie: *mutable landscapes*) into tools for elevating levels of discourse and advancing design possibilities.

### *Representation*

Representing and envisioning *mutable landscapes* is a central focus for the design component of this capstone. Since visualization techniques introduce strong determinants for design, results rely heavily on graphic methods. “The way landscape architects make images influences both what and how places are conceived and made” (Dee 2004, p. 22). In ‘design as research,’ the poetic and interpretive processes involved with the making and creating of images can, in themselves, become modified and evolved for research purposes (Dee 2004). For example, complex strategies for evolving sites, similar to those suggested by *mutable landscapes*, require thoughtful and investigative graphic techniques that outline the performative dimensions of a project’s unfolding (Corner 1999). Investigating and discovering analogical and diagrammatic images serve not to “produce form but rather they emit formative and organizational influence” (Corner 1999, p. 165).

## Methods

The research for this capstone project will be divided into three phases corresponding to the categories listed above. These areas include: Understanding, Investigating, and Reflecting.

### *Understanding*

This first phase of the capstone project is geared towards gathering and interpreting data, information and relevant source materials. The products from this phase will set the foundation for the subsequent design investigations. Included in this phase are the following three tasks: Case Studies, Site Analysis and Site Visits.

*Case Studies:* The *mutable landscape*, by its design, fosters engaging and interactive learning environments for students. Many new school site designs that embrace the educational aim of landscapes already provide areas where students can manipulate and change their outdoor space. Using activities such as gardening and farming, some school landscapes are already taking the initial steps towards creating *mutable landscapes*. But in the school setting, examples of site-scale *mutable landscapes* interventions are few and far between, making the search for precedents a challenging task. Therefore, I will examine precedents for mutability from other typologies, conditions and locations in an effort to comprehend the techniques and methods employed for these types of landscapes. Each case study will be filtered through an analysis that will attempt to answer the following questions about each project:

*How does this project perform as a mutable landscape? What are the elements that change and what are the mechanisms or agents of these changes? What are the objectives for these changes? How can*

*this information serve the goal of creating mutable landscapes on school sites? What are the organizing frameworks that control manage or structure the mutability of a site?*

*Site Analysis:* The *Site Analysis* phase will examine various elements of the landscape that are relevant to the overall design concept. Although I will conduct portions of site analysis through my own research, I will also be reviewing and using the findings from the SUNY ESF LSA 326 Design Studio. Over the course of the Fall 2004 semester, students involved in this studio conducted an exhaustive inventory and analysis of the project site. This design studio also ran a series of participatory workshops in an effort to collect information directly from the students, teachers and neighbors affiliated with the site. Their findings will serve as a valuable resource for my capstone project.

*Site Visits:* Since personal observations and interpretations of the Corcoran High School site will play a role in the design process, I will conduct routine site visits over the course of the capstone. I will document my reflections of each site visit in the project journals (see below) and maintain a photographic record of each trip.

### *Investigating*

As a hypothetical design project, this capstone will investigate methods for designing *mutable landscapes* using the concepts mentioned previously. This *Investigating* phase will be divided into four stages: Concept Development, Framework Design, Strategy Construction and Site Design.

*Concept Development:* In order to proceed with design, I will begin by developing an overall concept for the site. Drawn from the findings of the site analysis, personal inspirations, and

the educational mission of the school, the concept will direct all future design decisions towards a unifying idea. As an example, the idea of ‘revealing’ or ‘revealing processes’ could act as a possible concepts for design. In this case, the mutable landscape strategies suggested for the site would have to subscribe some form of revelatory action. Eco-revelatory designs, for instance, that shape the land can be a way of restoring or revealing the visible geological constructs, climate patterns, and eco systems (Betsky 2001). This type of approach, or concept, could lend to the learning objectives of the school landscape.

*Framework Design:* The *mutable landscape* requires an organizational framework in which changes can take place. These frameworks, as suggested through design discourse, can be either programmatic or performative objectives. For this project, the learning objectives for the school landscape can serve as one component of the framework while the aims of the either hydrologic or ecological functions dictate another. During this stage of the investigation process, I intend to explore the framework design through a series of site analog drawings. The analogs will help to inform my decisions about the site and, hopefully, trigger new, directions for design. This past semester I took a course with Ed Sichta, a Syracuse University professor, where I began creating an initial series of site analog drawings. This phase of design will allow me to continue these investigations and further develop my graphic interpretations of the site.

*Strategy Construction:* Once the framework and design concept for the site have been defined, I will begin the design of a landscape strategy. As opposed to standard site design approaches, strategies do not consider a specific end for a site; rather they represent highly organized plans that are responsive, adaptive and intentionally structured to support change.

Strategies work with – and not counter to – the mutable processes involved on the site in an attempt to “maximize the effects of their potentiality” (Corner 2004, p. 34). Since some of the particular components of these mutable processes may be unfamiliar to me, a section for ‘process research’ will be included at this point of the Investigating phase. As with the framework design, I will also use graphic analog explorations to both inform and produce the strategy design. These drawings will attempt to “outline the performative dimensions of a project’s unfolding” (Corner 1999, p. 165) through the creation of diagrams, schemas and plans.

*Site Design.* The success of *mutable landscape* strategies relies not only in their ability to change but on the structures and forms that regulate it. Thus, site design becomes the final step in the *Investigating* phase, pulling together the strategy model for landscape and the organizing framework. In order to create an effective site design that capitalizes on the opportunities for a changing landscape, I will explore the site design through a method of ‘scenario thinking’. This process involves the development of multiple site scenarios used to envision the effects of potential changes over time. The graphic representations of these conditions will take the form of models and drawings.

### *Reflecting*

An on-going component of the research will include a process of reflection. Given the open-endedness of the *Investigating* method, the journal reflection pieces will help to track the progress and direction of design. Three methods of reflection will be introduced for this project: Journals (written and graphic), Critique and Process Mapping.

*Written Journal:* Documentation in this journal will have two primary purposes. The first will be to compile information, criticisms and suggestions gathered throughout the process from outside sources. Materials such as pertinent literature, exemplar case studies, etc. in addition to capstone committee comments, independent review ideas, etc. will be noted in this journal. This accumulation of data will be documented chronologically and systematically cataloged for future reference since the written journal is intended to serve as the project record. The second purpose of this journal will be to record personal observations, feelings, motivations and influences over the course of the capstone design phase. Since the design approach relies on unconventional methods, it will be important to detail personal positions on approaches and attempts. These personal reflections will provide a basis from which to pursue different or opposing directions.

*Graphic Journal:* Although the written journal may contain sketches, diagrams and other drawings types, the graphic journal is intended to serve as its visual compliment. The graphic journal will provide a place to document outside comments and suggestions in addition to site observations. The graphic journal will also provide a means for documenting personal reflections, attitudes and feelings. Random and spontaneous drawings will be collected in this journal, creating a visual diary of sorts. In addition to paralleling the two purposes described for the written journal, the graphic journal will allow space for experimentation of drawing mediums. While line drawing and sketching will be the primary tools for visualization, other techniques may be explored (or attempted) including charcoals, pastels, collages and photographs (inserted or pasted into the journal).

*Critique:* For the final portions of the *Reflecting* phase, the end of the capstone design process will include a two-tiered critique. The first part of the critique will take place at the final capstone presentations (April 20-21) in the form of a group design review. This presentation will allow for a panel of independent reviewers to critically assess the design project and comment on the strategies, ideas and approaches pursued throughout the project. The information gathered at the final review will then set the foundation for the second part of the critique: a final personal evaluation/reflection.

*Process Mapping:* The *Reflecting* phase of the capstone will end with an exercise in process mapping. This last step will provide an opportunity to graphically interpret the direction of the design process over the course of the semester. Using a mapping or diagramming technique, this final portion of the project will help to define and articulate the process of creating a *mutable landscape*.



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