It's all in the Game: Designing the Contained, not the Container

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It is something to be able to paint a particular picture, or to carve a statue, and so to make a few objects beautiful; but it is far more glorious to carve and paint the very atmosphere and medium through which we look, which morally we can do. To affect the quality of the day, that is the highest of arts.
- Thoreau, *Walden*

Among many solemn responsibilities, designers of spatial environments for humans (landscape architects, architects, interior designers, urban planners, transportation planners, etc.) must approach their work with something akin to Thoreau's thought as a guiding principle. In these disciplines every mark put on paper and every line drawn on the computer screen represents a proposed alteration of a physical environment. Will that alteration be positive or negative? For the users of that environment, the alteration will certainly affect the experience of their passage through space and through time, and hence the quality of their day.

Teaching students of environmental design the importance of designing for experiential quality has been an engaging challenge.   It is often initially difficult for students to grasp the value and function of negative space and the relationships, tensions, and psychological implications of mass and void in two-dimensional design, even without the added task of adding the third dimension and then the fourth and fifth; spatial and temporal user *participation within* the design.

When teaching the beginning design studio course to landscape architecture students at the University of Georgia, in classes ranging from 16-23 students each, I traditionally started with basic elements and principles of design, essentially giving them 'materials' (elements) and a 'toolbox' (principles) to apply to problem solving. As a working definition of design I used Bevlin's, in which design is: a plan for order, form ("…combination of shapes, sizes, and masses that compose a work and cause that work to exist in the space around it,") (Bevlin, 1989, 20) fulfillment of purpose, and expression of materials. This definition, while a good one, sets up the habit of designing by the assembly of attractive, harmonious forms and materials with the intent of creating balanced compositions. And while landscape designers must use this process, or at least include these steps of assembly within a broader design process to form human environments, their real subject is *the space between* the tangible forms and the *transitions* from space to space (the negative space and the character of experience within it.)

Transitions are a key component in my curriculum because the designer of human environments has a unique task. Whereas a painter can deal with negative space within a two dimensional format, the picture plane, and a sculptor designs his or her work as either mass only, or the visual interplay between mass and void (as in the work of Henry Moore, 1898-1986), the landscape designer must also design for temporal experience, the passage of time within a space and the passage through space and time from place to place. To put it in the context of Bevlin's definition of design, the plan for order becomes the sequencing of physical/temporal experience, and the experience itself is the purpose. So the interrelationships between form, space, and materials must be planned to design for the intended quality of experience.

This approach requires that the designer develop objectives for the quality of experience within a space, and only then begin to choose the elements, materials, proportions, transitions, etc. to support the desired objectives. This rightly places the design focus on the (negative) space, the between, the contained, rather than the container.

As educators, how do we provide meaningful ways for beginning design students to focus on the character of space and its intended experience when it is easier to simply form places from attractive assemblages of forms and objects? How do we teach this primacy of *experience* over the arrangement of *things*, getting students to see the spaces between tangible forms as their real subject? How can students gain a deeper understanding of how the character and arrangement of things affects experience? These essential objectives, in my experience, seem abstract and counterintuitive to students at first, or become quickly pushed aside when design assembly begins, so I have tried varied project sequences in my desire to illuminate them.

I had developed and used a project in past iterations of the beginning design course that, in its final stages, was successful. I assigned the task of designing space for manipulated, choreographed experiences suggested by emotionally evocative terms like 'liberating,' 'surreal,' 'exhilarating,' or 'depressing.' Each student had to design separate spaces for three distinctly different experiences. These experiences had to be entirely reliant on the spatial character of the design without use of color, texture, or objective materials such as trees, furniture, water, stones, bricks, etc. It forced them to form experiences with manipulation of planes of enclosure, pure form, elevation change, sequencing, adjacency, and permeability. They were encouraged to consider light quality and were allowed to make use of openings, transparency, and reflectivity. After students designed the individual spaces they had to organize the relationships between them and develop sequencing, transitions, and interstices from one to the next in an effort to further exaggerate each intended experience.

When beginning with this level of abstraction, students had difficulty grasping the objective at first, and only after several revisions did they come to understand that they were assembling forms to focus on the 'contained' rather than the 'container.' Also, most students initially had difficulty grasping that definitions of interior/exterior or landscape/building were not relevant. Another common problem was the tendency of most students to design with a backwards approach in which they decided to form spaces with things like trees, benches, fountains, and the like and then simply replaced these objects with non-objective forms to satisfy the project requirements. (This is a problem landscape architecture students continue to have in later design classes, such as Planting Design. They often skip several steps and design by choosing favorite plant species rather than by establishing experiential objectives. An example of a more effective design process would be to decide that a space needs a tall vertical element with semi-transparent overhead enclosure, and then choose a tree as the best thing to accomplish this design objective, then decide on optimal form, size, texture, and color, and only then select an appropriate species.)

Last year I tried something new to see if students could grasp the essence of their purpose earlier in the process. In attempting to make the concept of designing spatial character and experience more easily apprehended from the start, I proposed game play and design as a model for designed spatial experience. The preliminary stages of the assignment allowed students to discover, through observation and through physical and mental participation that as designers they will actually manipulate, choreograph, and stage human experience, holding "the quality of the day" in their hands.   In the latter stages of the project students were able to apply their findings to a work of design and, in small groups, they conceived, designed, and built their own three dimensional board games.

I chose to use the board game as our end goal because of its shared characteristics with physical space that we move through.   Both game playing and spatial experience are governed by participant objectives and present opportunities for confrontation and avoidance. Both have analogous physical characteristics and offer a series of punishments and rewards.   In short, the experiences of both a game or of a place are affected by design, by choice, and by chance.

My inspiration for this decision came from two sources. While in graduate school I designed a board game to satisfy the requirements for a presentation demonstrating post-modernism and the layers of history and variations in experience present in an urban setting. I used the game model as a way of introducing the interplay of design and chance to show how each user of a space has a different experience based on environment, happenstance, and their personal responses and choices.   I was also inspired by a remarkably effective project developed by a colleague, Ronald Sawhill, who builds and supports the students' knowledge base in landscape ecology and security applications by having them analyze the game of English Checkers and conduct field shape studies, then apply their findings to the design of a paintball course. This process gives them an acute awareness of the implications of the character, size, and placement of nodes, corridors, barriers, and boundaries on movement and game success (Sawhill, 1997 and 2006).

To jump-start the process of designing a board game and to reinforce the objectives of a previous assignment about inspiration, students designed three separate study models of spaces influenced by their previous project, an in-depth study by each student of a different well-known painter and painting.

For preliminary research, students visited an urban area to make and record observations about what shaped and affected their physical and temporal journey. They were charged with both driving and walking through their hometown and writing an assessment of their observations about what shaped and affected their passage through space and time. The students were prepared, in part, by readings and lectures focused on schemata for spatial organization (Ching, 1996, 177-225), and on the importance and opportunities of approach and entrance (Ching, 1996, 227-275), and I sent them off with the following series of questions to facilitate their discoveries:

How does form articulate space?
What are the mass-void relationships and the planes of enclosure?
What layers of history are present?
Are there juxtapositions of architectural styles?
What are the differing uses (e.g., retail, office, restaurants, sidewalks, seating, bus stops) in evidence?
Where do people gather comfortably, where do they avoid, and where are they forced to keep moving?
What choreographs movement?
What do you stop for?
How do spaces feel (inviting, intimidating, derelict, fanciful…)?
What are the punishments and rewards of the experience?
What is governed by choice and what is governed by chance?
What are the physical processes (e.g., walking, stepping onto a bus, opening an umbrella, opening a door and encountering loud music, ducking under tree limbs, sitting on benches…) experienced?
How do the approaches to each separate space affect the experience?
How does the number of people or their activities affect the experience?
What are the speeds of passage?
How are the spaces organized and what, if anything, unifies them?
(Cannady, Nov. 2006, Part 3)

The following are examples of the kind of observations recorded by the students. The first is physically descriptive, focusing on spatial organization, and the second describes a more visceral and emotional reaction to the experience.

> There are only 2 main roadways or "hallways" which run through Gordon (GA), one being a railroad. Other roads tend to form a grid pattern around these. The densest area would be in the central city at the only caution light, and the town becomes less dense the further away from the town you travel. (Beck, 11/26/06, 2)

> … one can smell the many different restaurants preparing food for their customers. Harry Bissett's (Athens, GA) is one of my favorite olfactory experiences. The aromas remind me of Baton Rouge, Louisiana, where I was born and raised. Later in the evening when walking past the noisy bars, you can also notice they, too, have a particular aroma. I don't think it is pleasant because of all the cigarette smokers that huddle at the entrance. The smoke makes me want to avoid walking closest to the doorways. Also, the sheer number of people at each establishment makes me choose a quieter, less crowded place to go. I would rather sit in a clean environment where I can hear what the person sitting next to me has to say without having to raise my voice. After the establishments close, bags of trash, piles of cardboard, and lines of trashcans line the sidewalks. (Fletcher, 11/27/06, 2-3)

Next, students continued their research by playing at least two different board games with friends or family (e.g., Parcheesi or chess) or team sports (e.g., football or softball.) Playing a video game that simulated action within a spatial context was allowed, but was a less preferred option, because even if a player had opponents the interface was with a screen and not directly with another person in real space. For each game, students recorded their observations and assessments about how the play of it was analogous to moving through space and time, considering the following factors:

> What choreographs movement through the game?
> What are the corridors, stopping nodes, barriers, safe areas, boundaries, and shortcuts?
> What are the punishments and rewards?
> What does one try to avoid and what does one try to achieve?
> What is governed by choice and what is governed by chance?
> What are the physical processes of the game?
> How does the number of players affect the experience?
> How are the spaces of the game organized (e.g., grid, centralized, radial, clustered, or linear) and what are their adjacency, approach, and transitional relationships?
> (Cannady, Nov. 2006, Part 3)

Findings differed with each different game and student. In playing the board game of Monopoly, one student found that punishments and opportunities for rewards were influenced mostly by speed of movement, but that this speed was governed entirely by chance:

> The game of Monopoly is driven by the strategy of property acquisition but the opportunities for that acquisition are solely driven by the movement of the famous pieces around…the board. Much of this is governed purely by chance because of the dice but what a player makes of the opportunities that come about is the crux of the game. Rewards and punishments are doled out on the basis of the movement and has (sic) a huge impact on the game. Everything…rides on the players' movement around the board. (Pickens, 11/27/06, 1)

Compare this to the following discussion of how speed is dictated, movement is affected, and punishments and rewards are experienced in an urban setting:

> Walking and driving through town are two different experiences. While driving, the streets and stop lights govern the path and rhythm of travel. However, a pedestrian experiences more obstacles and physical interaction with the city. From stepping up and down from curbs, to avoiding other walkers, to maneuvering around outdoor café tables, the pedestrian becomes more involved with the spaces around him. Outdoor seating for restaurants and shaded benches provide a congregating place for friends. These areas are open yet cozy, providing patrons a sense of leisurely relaxation. Some areas where

patrons congregate are not quit as relaxing, yet most (are) often still inviting, when the outdoor areas are full of loud, lively attendees. While many of the gathering places are areas people flock to, areas that the homeless congregate (in) are avoided. (Roper, 11/27/06, *Walk*, p. 2)

These observations by the students show that through their personal physical experiences in an urban space and their participation in game playing, they found that both require physical and mental engagement, are governed by both prescribed rules and individual goals (objectives), and present opportunities for confrontation (attraction) and avoidance (aversion.)   Students also found that the physical characteristics that stage and affect movement shared by both urban landscapes and games are corridors, nodes, barriers, safe areas, risk areas, boundaries, and sometimes shortcuts. Compare the following experiences, the first a description of the video game Halo and the second, a journey through the landscape of a student's childhood.

In one particular area I played in there was rolling grassy hills, valleys, cliffs, and even several hidden caves. The hills served as barriers, the valleys as corridors, the cliffs as boundaries and the caves as shortcuts; each way providing a completely different experience. In addition, bases at either end of the arena serve as safe areas. (Van der Noord, 11/06, 2)

As I turn, the first change I notice is that the path is now much wider; there is room for several strollers and (me). …there are swings for people to rest on and there is a water fountain. I continue to walk down this slightly downward sloping, wide path. There is a small brick wall to my right to prevent erosion … My path is suddenly screened. There are three large yellow cement poles in the middle of it to prevent cars from driving into the path. Soon after the obstruction, I walk across a gravel parking lot that leads to the … baseball fields. I finish across the parking lot … and I walk in between two cement poles to my favorite sign in the entire park. It has a dog on it and then it says "It's Your Dooty." The sign also offers plastic bags. It always makes me smile. I continue to walk and then am suddenly forced to turn and run down a hill. It is such a steep hill that one cannot help but run. … As I finish my short run, I turn to see a small child on rollerblades holding onto the railing for dear life. His mom is not far behind and she suggests he go down on his bottom. (Price, 11/27/06, 1-2)

Personal observation and participation enabled students to discover that their own passage through space and time and also their success or failure in game playing was governed by factors of design, choice, and chance. This personal experience in spatial and modeled spatial context reinforced the goal of the project, which was to drive home that the actual design subject for landscape architects is space and the character of experience. One student, by playing an outdoor game rather than a board game in which he had to actually 'design' the playing field, made some especially revealing discoveries that could be applied to future staging of human experience.

I had to establish certain boundaries, barriers, and of course a safe area…to ensure an enjoyable game (of hide and seek) with my cousins…As I was running around hiding I began to notice the many different spaces surrounding my house…Since I was out in the yard most of the places I was hiding (in) were very organic. I soon realized that the time of year really effects (sic) the game. Since plants are the main structures used while hiding, the winter months make the game more difficult…if I played hide and seek during the summer…the spaces I saw now would be drastically different…While playing hide and seek…I was able to really notice the spaces that make up my home and everyday life…, for the first time actually noticing the variety and range of movements around my home. (McCullough, 11/06, 4-5)

The preliminary research described above was done individually. For the remaining steps of the project, students were put in teams of three or four. Because each person had previously designed three spaces with specific emotional and aesthetic content inspired by a different work of art, teams now had an assemblage of nine to twelve spaces to consider as base material for the design of a board game. To proceed with the organization and editing process, they listed and diagramed commonalities and disparities between the varied models, deciding, as a group, what graphic, contextual, or historical elements from the original painters/paintings they studied could be utilized to unify the spatial models as a set. The decisions they had to make involved an aesthetic and experiential unification of disparate themes and experiences, which could be largely influenced by overall spatial organization, adjacency relationships, and the nature of transitions.

Making these decisions allowed students to form solid objectives for the design of their game board. The following questions (from Cannady, Nov. 2006, Part 4) were considered: what is the game's 'look,' what are the rules, what governs or choreographs movement, and how do you win? Then, in the final design and construction phases of the game board students were forced to confront these essential issues: the name of the game; how to best organize the spaces for functionality and purpose; connections, transitions, and passages through all nine to twelve spaces; how to exaggerate the experiences; how the original art relates to the game; and the character of the users (game pieces.)

To assist them in the development of their objectives and the design of the game boards fulfilling these objectives, students were reminded to consider the same kinds of things they had observed and experienced previously in the research phase of the project. In the end, each team had organized, revised, and connected the original separate spatial models based on the experiential objectives that the team developed for its game such that the product was one unified work of design and not simply an organized collection. They adhered to the additional practical requirements of building the game board at a standard scale, writing concise rules of play, designing the game pieces, and meticulously constructing the board for repeated play without damage. Following are very brief descriptions of the games that do not attempt to fully impart the breadth of experiential possibilities in actual game play.

The Race to Mount Olympus
C. Hawkins, N. Pickens, and J. Pock combined models inspired by Edward Mitchell Bannister's painting, *Palmer River*, Hokusai's *The Great Wave*, and Alfred Sisley's *Under the Bridge at Hampton Court*. In the game, teams of players battle creatures from classical mythology through landscape experiences in an archipelago-like organization of spaces varied primarily through color and elevation change. The goal is for all team members to make it to the central feature, Mount Olympus.

Turn or Burn: a Game of Morality
J. Robertson, D. Daniel, C. Beaulieu, and Z. Day designed a game for mature players in which progression is determined by moral choices (chance, really, as "choice" is determined by dice roll.) The winner is the first player to get to Heaven, and the losers remain in Purgatory or Hell. Aesthetics were influenced by Utagawa Hiroshige's *Village in Snow, Kanbara Evening*, Edvard Munch's *The Scream*, Edward Hopper's *Nighthawks*, and Francis Bacon's 1973 *Triptych*, and the game board is arranged as ascending/descending spaces along a linear path.

Pandoral Pursuit
S. Price, B. Beck, A. White, and K. van der Noord designed the most conventional board game with spaces arranged on a grid (similar to the board game Clue, but three-dimensional.) Surprise actions determined by chance are required by players to move from space to space. The game is visually stimulating and is influenced in theme by R.B. Kitaj's painting, *Germania (The Tunnel)*, Louis Icart's *Speed*, Maxfield Parrish's *Daybreak*, and David Hockney's, *A Bigger Splash*.

Immortality Quest
Designed by M. McCullough, D. Gaskins, and B. Fletcher, this game takes players through a series of enigmatic spaces, each with a unique set of punishments or rewards, nestled in a 'valley' between 'mountains.' The winner is rewarded with immortality symbolized by a crystal that lights up. Theme and aesthetics were inspired by Michelangelo Caravaggio's *St. Matthew and the Angel*, J.M.W. Turner's *Grand Canal at Venice*, and Vasily Kandinsky's, *Improvisation 9* .

The King's Rat Race
A gardenesque appearance and beautiful detailing characterize this game simulating a race between players through a rising landscape of greenery, water, and architectural elements fraught with hazards and dead-ends. It was designed by C. Thornton, L. Roper, and J. Means and was inspired by Cecile Martin's *Lost Button*, Pieter Bruegel the Elder's *The Harvesters*, and Romare Bearden's *Out Chorus*.

Students were able to collaboratively determine experiential and aesthetic objectives enabling them to design visually and mentally stimulating board games. To truly appreciate the success of their products, one must have the experience of playing the games, thus participating in the model of spatial experiences determined by design, choice, and chance. In the confines of this paper it is impossible to fully describe actual

game play or the breadth of possible experiences given the elements of choice and chance.

The preliminary research, the design, and the playing of these games provided the students with an exaggerated and engaging model for making the process of designing for human experience comprehensible. In my observation, the greatest impact of the project on the students was that it provided a context for the development of not only a mental, but also a visceral and intuitive awareness that as designers, they are manipulators of experiences in space, but that opportunity for personal choice and the element of chance are ever present to make each participant's experience unique. My hope is that they see that their role as designers includes careful staging based on solid objectives to influence and/or limit the choices available and the types of chance that may occur, thereby purposefully affecting "the quality of the day" for the user.

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