ARCHITECTURE THAT AFFORDS PLAY

by

PAUL ERIC FALLON

Submitted to the Department of Architecture
on May 8, 1981 in partial fulfillment of the
requirements for the Degree of Master of Architecture

ABSTRACT

Play is a form of behavior common to all people. A person's
propensity to play depends not only on his physiological and
emotional state, but also on his surroundings. This thesis
investigates environmental qualities conducive to play, and
poses some ideas about how designers can provide opportuni-
ties for both active and fantasy play in places that we use
on a regular basis.

The thesis addresses the issue of 'what is play?' by estab-
lishing a working definition of play in terms of an individ-
ual player and his surroundings. This definition then serves
as the basis for evaluating how a number of quite different
environments afford play for their users. These observations
provide the framework for developing some design parameters
which an architect might use in designing places that afford
play. The parameters are then applied to a short design
exploration of how the main corridor at MIT might be
redesigned to better afford play.

Thesis Supervisor: John Randolph Myer

Title: Professor of Architecture
Thesis is about coming to terms with your mortality.

Paul Pressman
Many thanks

... to anyone who's ever spun around a lamp post or slid down a railing ... to Congo Catie who introduced me to rational thinking ... to Jack Myer for saving me from it by revealing the intuitive ... to the Capell's for having such a wonderful willow tree ... to Rosemary Grimshaw for advocating violence ... to SOM for designing 'the tomb of the unknown tool' ... to Ben Snyder for recounting his Las Vegas adventures ... to the Lampy's for sharing their Castle with a Techy ... to Marty Myer, Mimi St. Clair, and Mayer Spivack for their enthusiasm ... to Ellie Siegel and Bill Warren for teaching me a new word ... to my fellow inmates of the thesis room for holding up well in captivity ... to all my friends who think I've died and gone to hell in the last four months ... to Lisa Dobberteen for putting up with all my play and all this work ...
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>3</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>5</td>
</tr>
<tr>
<td>TABLE OF CONTENTS</td>
<td>6</td>
</tr>
<tr>
<td>ONE - INTRODUCTION</td>
<td>8</td>
</tr>
<tr>
<td>TWO - A DEFINITION OF PLAY</td>
<td>14</td>
</tr>
<tr>
<td>Theories of Play</td>
<td>17</td>
</tr>
<tr>
<td>Play Domains</td>
<td>30</td>
</tr>
<tr>
<td>Characteristics of Play</td>
<td>34</td>
</tr>
<tr>
<td>The Definition</td>
<td>42</td>
</tr>
<tr>
<td>THREE - OBSERVATIONS</td>
<td>43</td>
</tr>
<tr>
<td>Willow Tree</td>
<td>46</td>
</tr>
<tr>
<td>The Forest of Winnie-the-Pooh</td>
<td>48</td>
</tr>
<tr>
<td>Boston Children's Museum</td>
<td>54</td>
</tr>
<tr>
<td>Brooklyn Children's Museum</td>
<td>60</td>
</tr>
<tr>
<td>Jack's</td>
<td>68</td>
</tr>
<tr>
<td>Nameless Coffee House</td>
<td>71</td>
</tr>
<tr>
<td>The Harvard Lampoon Society</td>
<td>74</td>
</tr>
<tr>
<td>Las Vegas</td>
<td>82</td>
</tr>
<tr>
<td>Great Adventure</td>
<td>88</td>
</tr>
<tr>
<td>Hyatt Regency Hotel, Atlanta</td>
<td>96</td>
</tr>
<tr>
<td>Brattle Theater Alley</td>
<td>101</td>
</tr>
<tr>
<td>Government Center Subway Kiosk</td>
<td>104</td>
</tr>
<tr>
<td>Suffolk County Courthouse</td>
<td>108</td>
</tr>
</tbody>
</table>
FOUR - DESIGN PARAMETERS FOR ARCHITECTURE

THAT AFFORDS PLAY . . . . . . . . . 114
What Makes a Good Place to Play . . . . . 116
Scale Manipulation . . . . . . . . . 119
The Sense of Theater . . . . . . . . . 125
Reinterpreting the Familiar . . . . . . . 130
The Essential Dose of Delight . . . . . . 132

FIVE - DESIGN EXPLORATION . . . . . . . . 135
MIT Corridors . . . . . . . . . 136
Play at MIT . . . . . . . . . 141
Generating the Design Concept . . . . . . 146
Theme A: Mini-Classicism . . . . . . . 148
Theme B: The Lighter Side of Technology . . . . 152
Theme C: Main Street . . . . . . . . . 158
Commentary . . . . . . . . . 164
Main Street Revisited . . . . . . . . . 166
City Center . . . . . . . . . 172

THE END OF THE BEGINNING OF . . . . . . . . 183
NOTES AND SOURCES . . . . . . . . . 184
BIBLIOGRAPHY . . . . . . . . . 190
a young man spent all his free hours at the harbor. He was fascinated by the wide expanse of the sea, the height of the masts, and the grace of the sails. He delighted in watching ships sail far out to sea. In his pleasant world of reverie he noticed that the masts were visible long after the hull had disappeared. This puzzled him, and led him to seek the new world which lay beyond the horizon.

So the story goes that Christopher Columbus discovered that the world was round during contemplative play amidst the bustle of the harbor. His ability to play allowed him to look at the world in a new light and understand the opportunities of its roundness. Throughout history, the ability to play has helped man* to survive.

Throughout this thesis, the generic use of the words 'man' and 'he' do not imply gender.
and flourish, adapt and create. It is an essential component of human culture which can be found in the roots of law, music, liturgy, military tactics, and debate.

Play is also a critical component for the healthy development of each individual. Like eating, sleeping, working, grieving, or rejoicing, play is an essential life process; a type of behavior common to all people that nurtures the mind and challenges our physical capabilities. In our society, play is largely associated with childhood, yet Erik Erikson has shown that maintaining a sense of playfulness is also a critical component of interesting and fulfilling adult lives.

Our ability to fulfill essential life processes is a function of our emotional and physiological state as well as the surrounding environment. We live in a world whose physical form increasingly segregates us into separate places to sleep, eat, learn, work, play, be born, pray, and die. Modernist concepts of planning and design apportion each section of a city or part of a building into specialized components which meet particular functions. These concepts are guided by the belief that man can reach his maximum potential in any aspect of his life in an environment which is specifically designed for and dedicated to that purpose.
Although the immediate environment can indeed affect our behavioral responses, the processes of our lives cannot be treated as mutually exclusive functions. Our emotional and physiological framework can operate on many levels, simultaneously or in sequence. An environment which only promotes one kind of response may not help fulfill other essential processes. Since we are capable of reading several layers of meaning into our world, it is possible to create places which can encourage a variety of life processes at once. Just as Christopher Columbus enjoyed contemplation in the bustling harbor, we can find learning in the workplace as well as the school, reverence in the park as well as the church, and play on the sidewalk as well as in the ball field.

Let us recognize that a striving for self-realization, for poetry and play, is basic to man once his needs for food, clothing, and shelter have been met.

Ivan D. Illich

This does not mean that every place should, or even could, enhance every life process. In the design of a particular place, the programmatic requirements and commonalities among its users should determine what mix of life processes is most desirable.

Man only plays when he is human in the full sense of the word, and he is only completely human when he is playing.

Friedrich von Schiller
This thesis explores the relationship between play and the physical world in order to understand how it can become a more integral part of the built environment. It does not investigate the play which architects and others pursue during the creative process of design. Rather, it seeks to discern some of the qualities in our surroundings which can facilitate people's ability to play and explore how architectural elements and relationships can afford play.

Although play is an important component of everyone's life, the thesis concentrates on adult play. As people grow older, they tend to devalue the significance of play, relegating it to specific times such as weekends or vacations. Also, adults usually play in structured settings, dedicated to playing, unlike children who usually make little distinction between play and other activities. However, since almost all literature on play deals with children and their behavior, children's play will frequently be cited in discussing the salient characteristics of play.
The methodology of the thesis is one of personal observation and inquiry based on an understanding of the nature of play. Chapter Two briefly analyses various theories of play, the domains of play places, and the characteristics of play behavior. This information provides insights for developing a definition of play which can be used in evaluating how the environment can foster play. In Chapter Three, this definition is applied to a variety of places which in some way facilitate play. Observations are made of places specifically for children, adult play environments, and places which primarily serve functions other than play. From the definition of play and specific observations, Chapter Four outlines some design parameters which can be used in creating environments that afford play. In Chapter Five, these design parameters are applied in a design exploration of how the public corridors of MIT might better afford play.

There's less to this than meets the eye.

Tallulah Bankhead
def’nish’en
we use
UV
pla
too
No behavioral concept has proved more ill-defined, elusive, or controversial than play. The term enjoys the status of being conceived and perceived as a very subjective, idiosyncratic form of expression. The reasons for this are not totally clear, although the fact that each person has an intuitive idea of what play is may contribute to the difficulty. Another problem of definition is that play is a concept that does not solely belong to the province of one area of science or social science. As a result, many people in various fields have undertaken to classify human play, but no one classification is all-encompassing. Even this study does not seek a complete definition of play, rather one which relates features of the built environment to characteristic forms of play behavior.

Erik Erikson

The term 'play' has long been a linguistic wastepaper basket for behavior which looks voluntary, but seems to have no obvious biological or social use.

Susanna Millar

...maybe such phenomena as playfulness or youthfulness or aliveness are defined by the very fact that they cannot be defined.
Traditionally, studies of play took a philosophical and phenomenological approach which imbued play with mystical or religious qualities not amenable to rigorous examination. Although these approaches provide insight into the meaning of play, they don't address the questions of 'What is play behavior?' or 'What are its determinants?' On the other hand, scientific analyses of play sometimes lose sight of the unique characteristics of this form of behavior. The disciplines of biology, philosophy, psychoanalysis, behavioral psychology, education, and ecological psychology provide a range of views concerning play. A brief discussion of how each of these areas describes play will provide insights that can lead to a definition of play. Additional insights can be obtained by looking at the domains within which various forms of play occur, and some salient characteristics of play behavior. By synthesizing this information in terms of the objectives of this study, a definition of play can be formulated which can serve as a tool for evaluating how the built environment can foster play.

The world of play is not one that can be seen; it has to be experienced.

Mayer Spivak

16
Biological explanations of play search for physiological reasons why play occurs. Such explanations are based on the assumption that play must serve something which is not play. Species with highly developed logical thought processes or social structures tend to play more elaborately than those whose similar faculties are less developed. This leads to the hypothesis that play has biological value as a means of changing or adapting to an environment. Play serves both as a mechanism for discharging excess energy and also as a way to relax and regenerate exhausted power. There is an explanation of play which describes it as a form of cultural evolution by which the customs of our ancestors are handed down. This accounts for the imitative nature and role playing aspects of play which provide training for the serious work of life. Philosophy takes a much different approach towards play, seeking both its essence and its formal structure. Play is a paradox in which one intensely pursues a goal which is soon forgotten and inconsequential. Therefore, through play one realizes the supreme
importance and utter insignificance of his existence. It is not related to either wisdom or folly, truth or falsehood, good or evil; it has no moral functions. In play, people can achieve a degree of concentration and spontaneity which exceeds their normal behavior. They can view the world from unique and different vantage points. The new perspectives which are found in play can often become the roots of artistic expression.

Play is the expression of exhuberent energy, and the origin of all art.

Friedrich von Schiller  

The formal characteristics of play are described as a free activity which is quite consciously outside 'ordinary' life. It is not serious, yet it can absorb the player intensely. It has no material interest; no profit can be gained by it. Play proceeds within prescribed boundaries of both time and space according to fixed rules. It promotes the formation of social groupings which tend to surround themselves in secrecy, stressing the difference between themselves and the common world through disguise and other means.

The psychoanalytic view of play uses such ideas as instinct of mastery, wish fulfillment, assimilation of overpowering experiences, leave of absence from reality and the superego, and fantasy. Play is a reenactment of a situation in which the player works something out or provides discharge for
instinctual drives. It is a fantasy with the purpose of mastering inner and outer conflicts as well as mastering the environment. Play provides the opportunity to transcend ordinary ego levels of functioning to experience the world of wonder, peace, love, anguish, and joy at an intuitive level. In play, our desire for a perfect world under our control is satisfied. We recreate the world to our liking and fulfill our wishes in role playing and daydreams. When children build airports or skyscrapers they are gaining control over things that ordinarily dwarf them. Similarly, a vacationer who carefully selects which resort to visit is dictating the conditions of his surroundings. Thus, play is the external manifestation of internal drives to control our lives.

We see that children repeat in their play everything that has made an impression on them in actual life... all their play is influenced by the dominant wish of their time: viz. to be grown-up and to be able to do what grown-up people do.

_Sigmund Freud_ 9

However, in this effort to control his life, the player never totally loses his sense of reality. In psychoanalytic terms, thought processes can be described in two different ways. Primary thought is the unconscious thought of dreams and free association found in the id. Secondary thought is the conscious, logical thought of the ego. Normally, one type of thought dominates our mind at any one time, but during play they are closely aligned. The primary thought processes allow us to suspend reality
during play while the secondary processes retain the quality of make-believe. A jungle gym may become a mountain where climbers hang precariously close to death, yet regardless how intense the play, the reality that it is only play remains clear.

Within the dream the dreamer is usually unaware that he is dreaming, and within 'play' he must often be reminded that 'this is play'.

Gregory Bateson

In behavioral psychology, play is seen as a means of discovering the uses and limits of the human body. The solution of a problem is not the object of play, rather play is a process of trial and error which allows each person to learn how to cope with the actual world. This process is referred to as Funktionsslust, or the pleasure which is derived from the exercise of a newly developed function or skill. By developing and practicing skills through play, children assimilate the experiences of the world around them and come to understand their relationship with other parts of the environment.

The same type of pleasure is a part of puzzle and problem solving play in adults. Cognitive psychologist Jerome Bruner believes that the most fundamental form of intellectual pleasure is derived from reducing surprise and complexity to predictability and simplicity. The pleasure comes from the act of finding the pattern or solution, and not in the solution itself.
Many people find solving the Sunday New York Times crossword puzzle a challenge they vigorously pursue all afternoon. Similarly, the complex rhythms of an intricately patterned surface invite us to seek its underlying order.

The reasons why people play are related to the extrinsic and intrinsic models of man's motivation. Extrinsic motivation provides a material reward for reaching a certain goal. It is the type of motivation upon which industrialized society and economy is based. Play, however, is intrinsically motivated, where the drive to become involved in an activity is internally generated and the reward comes from the process of performance.

During play, people have an "internal locus of control" in which they feel in control of their actions and resulting outcomes. Thus when play is described as Funktionslust, an activity pursued for its own sake, it is actually being pursued for the intrinsic reward and associated feeling of control.

In order for a child to understand something he must construct it himself, he must reinvent it.

Jean Piaget 13
Play is the child's work. The world is his laboratory, and he is the scientist. Play is the research by which he explores himself and his relationship to the world.

M. Paul Friedberg

Educators have recognized the value of play since the time of Plato. It affords a release from the stress and strain of work, providing opportunities for activities which are self-motivated and test physical and mental capabilities. Creativity is closely associated with play; the mathematician's play with numbers and the sculptor's play of forms are each creative expressions of educational value.

Play means altering the goal to suit the means at hand, whereas problem solving means altering the means to meet the requirements of a fixed goal.

Jerome Bruner

The use of play in an educational context stimulates new ways of structuring thought. Most logical, rational, problem solving approaches to a situation involve vertical thinking, wherein the solution is derived after building a sequence of irrefutable steps. The solution arrived at will not be wrong, but it may not be the best one possible. Play does not require logical, rational thought processes. Instead, it welcomes different ways of establishing relationships between objects or ideas and thrives on sequences of events which are unusual, if not impossible. Play frequently utilizes lateral thinking, which is based on generating ideas rather than proving answers.
require a step-by-step approach, it allows jumps in logic and can even begin at the point of a desired solution. Lateral thinking is a creative adjunct to the vertical, logical approach to thought which can be developed through play.

Psychoanalytic and developmental theories of play usually examine play behavior independently of where it takes place. Ecological psychology, however, is concerned with the role of the environment in fostering play. Ecological psychologists investigate the properties of the environment which can enable certain kinds of behavior, such as play, to occur. Play settings possessing similar attributes will elicit similar play responses from different people, indicating that there is a direct correlation between local environmental factors, a person's propensity to play, and the type of play likely to happen. Studies by Gump and Sutton-Smith illustrate how the same children had very different responses to play opportunities, depending on the setting. 17

Understanding the environmental variables involved in play would be very helpful to building designers, but at this time there are few studies which add much relevance beyond the laboratory setting.

"Contrariwise," continued Tweedledee, 'If it was so, it might be; and if it were so, it would be; but as it isn't, it ain't. That's logic."  

Lewis Carroll
It is also important to remember that the environmental factors which influence play are only one variable in a form of behavior that also depends on the physiological and mental state of an individual. There are, however, two important theories in ecological psychology that link play and the environment in ways which are useful for this study. These are the theory of affordances and the theory of optimal arousal.

The term 'affordance' was derived by ecological psychologist James J. Gibson from the verb 'to afford'. An affordance is what the environment offers, what it provides or furnishes for the people or animals who live there. For example, a surface which is basically horizontal, flat, rigid, sufficiently extended, and at knee-height, can be used to sit on. The properties described can be measured in standard units of physics, but whether a person can actually sit on it depends on his relationship with the object. A horizontal surface eight inches off the ground affords sitting for a small child, while it affords stepping for an adult. Gibson maintains that the composition and layout of surfaces constitute what they afford. If this is so, then to perceive objects is to perceive what they afford. This implies that 'values' and 'meanings' of things in the environment can be directly perceived. Affordances are therefore objective and subjective at the same time. They are real and physical, yet laden with value and meaning.
One way to analyse the environment in terms of fostering play, therefore, is to seek out elements which afford play as well as satisfying their primary or functional purpose. A delivery chute not only affords easy transfer of packages, but may provide a child with a new way of egress. Similarly, a window with a deep sill affords light, view, and a place to rest things for anyone. Yet, if someone knew such a window as a child, it could also afford associations with his youth. Such associations could evoke any number of responses, but a designer might seek out which physical elements or spatial configurations have pleasant or playful associations for the users of a particular place. The functional purpose of both the delivery chute and the deep
window are available to all, but special affordances are available to people of different sizes or who attach different meanings to the elements.

For the healthy, a monotonous environment eventually produces discomfort, irritation, and attempts to vary it. When at ease, animals and humans choose relatively new rather than familiar sights and sounds.

Susanna Millar

The theory of optimal arousal adds additional insight to play by formulating the premise that man's responses to his environment are not always rooted in some biological need; he seeks stimulation for the sake of stimulation. Thus, play becomes a valid activity in and of itself. The optimal arousal theory postulates that each individual functions most satisfactorily with a given amount of stimulus. The amount of stimulus varies for each individual, but there are different norms for various cultures and physical settings. People gravitate towards their optimal level of stimulus by editing stimuli in over-stimulated environments or magnifying it in under-stimulated ones. The subway commuter blocks out tremendous noise, smell, visual, and tactile stimuli through daydreaming or reading. In general, urban environments produce increasing amounts of stimulus, especially visual and auditory ones. The sounds of the woods which provide meaningful stimulus to forest animals have less impact on people who are accustomed to the constant hum of traffic.

Different environments provide various types and levels of stimulus.
Although the long-term consequences of constant exposure to a high-stimulus environment is unknown, there are indications that when people have the opportunity to select their surroundings, they generally seek out higher stimulus environments. Many people flock to shopping malls, discos, theme parks, and concerts as opposed to pursuing more sedate activities such as reading or strolling in their free time.

The implications of this for architecture are clear. A look at LeCorbusier's houses at Pessac before and after the modifications by inhabitants indicate that people sought a higher level of stimulation than the International Style provided. Although ecological psychologists believe
that play behavior is motivated by the need to elevate stimulus in under-stimulated environments, this should not be construed as a call for banality in order to foster play. While some people may respond to low-stimulus by playing, violence and boredom are other potential responses. For example, most prisons and many public high schools are places where the physical environment offers very little stimulus to its inhabitants. Yet these places would hardly be considered playful.

What then are the types of stimulation that can move man to play? Psychologists most frequently include simple intensity, meaningfulness, variation, novelty, complexity, surprise, and incongruity. These also happen to be most of the same qualities that elevate architecture to an art.

Each of the theories of play discussed present relevant and worthwhile points, yet none of them provide a complete definition of what play is. The fact that play is free yet controlled, clowning yet contemplative, gregarious yet solitary isn't revealed by such analyses. The essence of play is that no matter how serious or intense it may be, it has a joyful mood and a

To be glad with the gaiety of laughter, to throw off the stiff and wearing attitude of seriousness and to abandon oneself to mirth and jollity is, in truth, to begin to play.

James Sully

James Sully
consciousness of only pretending. That essence should not be lost in definition. Some of these theories, especially those of ecological psychology, provide insights as to how play might be defined from the viewpoint of a designer interested in fostering it in the built environment. Other clues will come from looking at the physical domains in which various play activities take place and analysing specific characteristics of play behavior.

There was a child went forth every day, and the first object he looked upon and received with wonder, pity, love, or dread, that object he became. Part of him for the day, or a certain part of day, or for many years, or stretching cycles of years.

Walt Whitman
The realm of activities which are usually called play fall into two broad domains. The first is conscious play, frequently associated with organized recreation, physical exercise, and sports. The second is unconscious play, often associated with fantasy. Since all play takes place within some sort of boundaries in time and space, it is possible to look at the physical requirements of various play activities. The conditions conducive to these activities will provide insights for developing a definition of play for the designer.

Conscious play is the result of an intentional decision by a person to play. Many forms of physical exercise as well as cultural, social, and spiritual development are conscious forms of play. Most, but not all of these activities take place in prescribed play spaces. Organized contests such as sporting events usually have well-defined arenas. Games of chance or strategy take place around game boards or gaming tables.
Rituals and feasts are all cultural manifestations of play whose validity frequently rests on a very particular setting, such as the Mardi Gras. The arts are also forms of play which often depend on special facilities. Although murals, sculptures, and significant architecture grace many public areas, theaters, museums, and concert halls are the traditional locales where art flourishes, not to mention studios and garrets.

The Funktionslust and physical aspects of much play do not occur in a prescribed context. Although playgrounds are supposedly the setting for the running, climbing, energetic, manipulative play normally associated with children, they cannot adequately meet that purpose.

Playgrounds are crutches - the city should be one big playground.

Herman Hertzberger

In order for children and other people to play with the world in a physical way, they must be part of that world, and not in some fenced off area with a rope swing. Well-designed playgrounds can provide interactive experiences for children, but the environment as a whole should offer opportunities for exploratory, manipulative play.

Unconscious play behavior is the province of fantasy, daydreams, and reverie. Once considered an evil tendency of the mind, fantasy is now considered an important process where the individual's desire rules. Fantasy is a
way of explaining or postulating some phenomenon, based on our own knowledge or desire. Science tells us that the earth's rotation causes the sun to rise and set each day. If such a fact is unknown or ignored, we might say that the sun 'went to bed' or 'dove into the lake to cool off'. To poets and children, a sunset is not a scientific reality so much as an event which allows them to postulate an explanation which is an extension of their own experience.

Although unconscious play does not require a specific location, it can be prompted by the surroundings. Fantasy and daydreams are the fertilizer for creative, innovative growth where man relives his past and builds whole new futures out of nothing. As such, they need nourishment. When the environment offers one or two clues which recall our past or some well known entity, our mind is prone to make new combinations of these discrete elements, thereby creating a reality from a few bits. For example, the Chrysler Building has a strong vertical differentiation and chunky setbacks which conjure in our minds a rocky landscape or great staircase. We can imagine scaling, leaping, and occupying its surfaces and interstices. The myriad rhythms, forms, and distinctive elements of the Chrysler Building can elicit more fantasies than the faceless mass of the World Trade Center.
Yet maximizing stimulus is not the only mechanism that affords unconscious play. Fantasy can also thrive in a contemplative, meditative environment. However, such places are often charged with personal meaning; our homes, our rooms, the memorabilia and places of our past are fertile areas for fantasy and daydreams. The essence of the world we create in these daydreams is associated with the meanings we find in our surroundings. For example, Gaston Bachelard writes of the daydreams of the garret which are clear and rational, with a roof providing shelter and relating the sky view to the earth below, while daydreams of the cellar are dark, earthly, and in harmony with the irrational.  

Environments for contemplation are often very personal and highly specific, but can also achieve a level of resolution or perfection understood by all. For example, the sculptures of Constantine Brancusi or the chapel at MIT by Eero Saarinen have a clarity and universality that invite contemplation. We do not respond to these as high or low-stimulus environments. Rather...

...every corner in a house, every angle in a room, every inch of secluded space in which we like to hide, or withdraw into ourselves, is a symbol of solitude for the imagination...

Gaston Bachelard 26

they provide a kind of pure stimulus which simultaneously puts the mind at ease and invites it to transcend the actual surroundings.
Several characteristics of play behavior were noted in most theories of play and are common to almost any play domain. They are not all conditions for play, but any number of them may occur simultaneously. By briefly looking at some major characteristics, it will be possible to obtain further insights for a definition of play.

Play is voluntary. It occurs only when the player desires and to the extent he wishes. It can be totally absorbing, demanding intense concentration for an extended period of time, or it can be casual and suspended momentarily. Play cannot be a task imposed by external pressures. Once an individual is required to do something, it is no longer play.

Play is delineated by a set of rules known to all the players that describe a complete, consistent way of acting. In conventional games, the rules are quite explicit, but in make-believe or fantasy play they can change on a regular basis. When a child is playing with a doll, he will not make it fly unless he has predetermined that flight is possible. He may later change that rule and continue play, as long as all the players consent. The rules of play don't need to follow the ordinary laws of life; normal procedures can be upset and the social hierarchy inverted.

Work consists of whatever a body is obliged to do...
play consists of whatever a body is not obliged to do.

Mark Twain
Yet at any point, the players can distinguish between the structure of their make-believe world and the rules of physics and social convention that govern everyday life.

As previously mentioned, play occurs within fixed boundaries of time and space. However, the physical boundaries that demarcate a play place need not correspond to the psychical boundaries of fantasy and daydreams. Physical boundaries are an integral part of sporting events and theater, but also apply to other forms of play. A play-ground is marked off, either physically or mentally, in which the rules of play reign over reality. It delineates a temporary world dedicated to the performance of an act apart.

To play is to yield oneself to a kind of magic... to give lie to the inconvenient world of fact... to enter a world where different laws apply, to be relieved of all the weights that bear it down, to be free, kingly, unfettered, and divine.

Hugo Rahner

A play-ground
Play also loves to be surrounded by an air of secrecy. Although there is nothing inherently secret or mysterious about play, a shroud of secrecy often envelops it, making it easier to occur. This aura of secrecy reinforces the idea that play is independent of everyday life.

The voluntary nature of play, its rules, boundaries, and aura of secrecy all serve to put the player in a position of control. He decides whether to play, where, and how to play, and makes his play more valuable by keeping it a secret. Another way of gaining control through play is by dominating the immediate environment. Domination can be obtained by physically achieving a superior position in relation to one's surroundings. The king-of-the-hill and the mountain climber both seek to gain self-esteem by conquering something which is much bigger than themselves.

However, domination can also be obtained by miniaturizing the world around us. In a world whose physical elements are smaller than usual we can feel larger and more powerful than in our normal relationship with the environment. Complete miniature landscapes, such as doll houses or toy trains are magical because we can simultaneously explore the world in our mind's eye while remaining at its edge. We can be totally absorbed in the parts while

"...everything is small because he is so high. And since he is so high he is great, the height of his station is proof of his own greatness."

Gaston Bachelard 28
always understanding and overseeing the whole. We are both a child with free reign in the landscape and a parental figure who insures that no harm is done. Many children's toys are replicas of familiar environments made small, so the child can both explore the world freely and control its course.

Physical manipulation of the environment is an important characteristic of play. Play is not exploration in the sense of discovering uncharted territories, but rather proceeds by manipulating a known object in new and interesting ways. Children who form mountains out of sand discover their ability to make discrete elements from a continuous surface, thereby illustrating the relationship between the entire beach and its constituent parts.

Other common objects, such as blocks or boxes, can be combined in many ways, each of which provides a different meaning and way of experiencing the world.

The process of play, not its product, is an important element in its satisfaction. The functional pleasure, or Funktionallust, is a critical component of the intrinsic goals of role playing, splashing water, solving puzzles, and similar activities. During the process of play, the player becomes more aware of the nature of his actions. He enjoys a certain amount of choice, a lack of constraint from conventional ways of handling objects, and a freedom of movement.
Freedom of movement is an essential characteristic of physical play. The pursuit of vertigo or attempt to momentarily destroy the stability of perception inflicts a kind of voluptuous panic on an otherwise lucid mind. Some cultures have ritual play that illustrate this, such as whirling dervishes. But roller coasters, sliding, spinning, and hanging upside down are all related play movements. As soon as a child has learned to preserve his equilibrium in ordinary walking, he complicates the problem by trying to walk on curbs and balustrades. Out of these serious efforts for motor control come later play such as hop scotch, jump rope, and dancing.

People also seek out an image of themselves with relation to the world through play. Consider the simple game of stepping on every crack in the sidewalk. A person can play his body against the sidewalk grid and complicate his rhythms on the chance cracks integrated into the surface. Similarly, when a child climbs into a box he not only learns about the box, but also about himself, his own size. Play is constantly involved with measuring oneself against the environment, of coming to know the body in relation to the dimensional characteristics of the world. As a result, miniaturization is pleasant not only for the domination it
affords, but also for the scale juxtaposition it allows.

Physical measurement is not the only way of seeing oneself in relation to the world of play. Our perceptual reactions are influenced by the image of the body, and we seek to see every object as endowed with life, with bits of ourselves in it. Children's drawings of houses are full of faces. After they go to a fire station, climb on the engines, and wear the chief's hat, they see themselves in every fire truck and recall their experience whenever the fire whistle blows.

The search for body image in play leads to the characteristics of play largely associated with fantasy — suspension of reality and symbolic play. Suspension of reality is the loss of one's real self by temporarily accepting an illusory or imaginative self. Within the context of make-believe, suspending reality affords the opportunity to test our abilities, to respond to other people and the environment in unpredictable, personal ways.

I am what I imagine I will be.

Erik Erikson

In play, the phrase 'what if' signals the beginning of symbolic play. In symbolic play, a person imagines himself in a gratifying situation where all his needs are met or where an unpleasant reality is altered. When reality has been suspended, a splinter becomes a doll's milk bottle,
Haven't dreams always liked to perch on high?

Andre Theuriet

sticks become men, and clouds become faces. Life is bestowed upon inanimate objects through the imagination in a new reality that seeks creative expression. Role playing is a form of play in which people can work out frustrations and control a sphere of activity. Yet it also affords a means of self-expression and an opportunity to formulate their goals. Illusion is the act of accepting mental presentations as actual. It may flourish in a new reality or serve as a means of reconstructing the past. Building castles in the air is a form of illusion where one immerses himself in most fortunate surroundings. Such an image is a double illusion that both acknowledges the reality of the castle and manifests an implicit trust that the future will verify present hopes.

A final characteristic of play is its humorous quality. In adults, humor may result from the sudden perception of an unsuspected relationship between two otherwise unrelated or incongruous ideas or objects. Thus, humor depends on one's ability to know the real meaning of each object.
The phrase 'Alfred E. Neuman for President' sounds like a valid campaign slogan unless one knows who Alfred E. Neuman is. When someone incorporates this incongruity into their own personage to gain attention or comic affect, it becomes clowning or buffoonery. In architecture humor can result by juxtaposing the form, meaning, or function of elements. The roadside stand that is a shed turned into a giant hot dog is a kind of buffoon. However, since humor is always related to an individual's values and his ability to extract the meaning of an incongruity, some people might see the hot dog stand as humorous while others might view it as a sort of blight or a shallow commercial trick.
The various theories of play, the physical domains in which play takes place, and the characteristics of play behavior offer many insights with which to formulate a definition of play. This definition can be used to evaluate how particular places afford the opportunity for people to play.

PLAY IS SUSPENDING THE WORLD AROUND US BY CREATING ANOTHER WORLD WHERE THE PHYSICAL REALITY OF OUR ENVIRONMENT TAKES ON NEW SIGNIFICANCE. WE APPROACH THIS OTHER WORLD WITH DELIGHT AND BECOME A CENTRAL FIGURE IN CHOOSING AND GUIDING ITS COURSE OF EVENTS. IN PLAY, WE REACT TO OUR SURROUNDINGS IN NEW AND DIFFERENT WAYS, WE SEE AND TOUCH OUR WORLD FROM ANOTHER PERSPECTIVE, AND ATTACH NEW MEANINGS TO OUR ENVIRONMENT.
This chapter presents a series of observations where the definition of play is applied to a variety of places to see how they afford play. The thirteen observations which follow were chosen for a number of reasons. Because evaluating the play opportunities of a particular setting is subjective and somewhat personal, only places which the author has visited and played in were considered. Unfortunately this precluded studying such
For most of us the world is not just to be visited, tasted, sensed, associated with, in a life of tourism or passive compliance. We need to engage ourselves and our surround in an interaction over time... our surrounds become the arena for our doing.

Jack Myer 1

fantastic and playful architecture as Gaudi's Park Guell, Nash's Pavilion at Brighton, the Pompidou Center, and similar famous buildings. However, this criteria helped to maintain a focus on play in everyday environments and not simply in architectural wunderbar. The observations also sought to investigate a broad range of environments. There is a natural environment, a literary environment, two places specifically for children, a number of conscious play areas for adults, and a few places whose programmatic requirements do not include play, but which provide a variety of play opportunities. The magical lure of the number thirteen itself made it seem an appropriate number of places to study.
The observations are not complete analyses of how each of these places function. Instead they concentrate on what aspects of the environment enhance the user's ability to play. In order to do this it is necessary to describe who the players are and what type of play they enjoy in each setting, whether it be of a passive, observational, intellectual, or totally absorbing nature. Although there is objective information that can help establish the play characteristics of a few environments, most of the observations are based on personal experience and application of the play concepts previously developed.
In a back yard in suburban New Jersey, there stands a willow tree, quite like one that could be found anywhere. This particular tree provides hours of both rambunctious and quiet play for the children in the neighborhood. The golden strands of the willow tree present a smiling face to the world about it, much like a giant haystack. But by slipping through the slender leaves, one can find a completely different world.

The mild scent of the willow is much stronger, the leaves have darker undersides which form a backdrop for the exposed structure of the tree, and the light is softly filtered through the surface of the leaves.

Nature built wonderful play opportunities into this willow tree. It is a reassuring and supportive environment that provides a strong sense of place. It is well defined and organized, yet provides many opportunities for dynamic movement and new tactile and visual experiences which invite us to enter the realm of play. It is an inside place outdoors, where the people can stay well hidden, but still see what's going on outside. This inside world
is organized around the central trunk, a sort of hearth to which every part of the tree relates. By climbing around and through the sturdy branches, one discovers the relationship of all the parts to the trunk and to each other. Lying on the ground in this interior world, one sees the structure of the tree from a new perspective, looking straight up into the exposed skeleton.

While playing in the willow tree, we can associate our body with its trunk, our arms with its branches, and our clothes with its shimmering leaves. We feel good about being there and delight in rambling around this hidden, labyrinth world. When our play nears its end, we can inscribe some symbols on the trunk to leave a trace of ourselves for the next players.
The fantasy tales we know from childhood are not just made up of wonderful characters. They also contain complete environments which are constructed to perfectly match the character's needs. When we read such a fantasy we are transported to another world whose physical definition may be quite different from the one around us. We play along with the characters in this other world, whose aspirations are usually quite similar to our own. In the Wizard of Oz, the yellow brick road leads Dorothy out of trouble and to the shimmering Emerald City where her wishes come true. In Mary Poppins, the rooftops of London become a playground between heaven and earth where the sooty chimney sweeps are free and unfettered. One particularly engaging world is the friendly forest where Winnie-the-Pooh, Christopher Robin and all of his friends engage in high, but harmless, adventures.
Pooh's forest is an exceedingly hospitable place. Each character lives in his own tree or warren, which has generous space around it. The forest has all sorts of familiar trees, brooks, and landmarks which not only make it seem an ideal home for Pooh and his friends, but makes it a wonderful, comfortable place for us to visit. Of course such foreign elements as the Woozles or the Heffalumps provide intrigue, but they are merely imaginary beings which serve to spark adventures. It is really quite a safe, secure world from which to engage in play.

However, within this world which is both a secure place for Pooh and a familiar image to most readers, the size of elements in the environment and how they are used afford play. First of all, the characters come in three basic sizes.
Christopher Robin is a small child like the rest of us, but in the forest he becomes the largest, most respected inhabitant. He lives in the highest part of the forest where he has a commanding view of the surroundings and all the animals he befriends. Pooh, Rabbit, Eeyore, Owl, and Kanga are all about the same size. It does not matter that in the real world bears are much larger than rabbits, let alone little boys. In Pooh's world each of these characters are equal members of the forest community, and therefore have the same size. Piglet and Roo are very small and childlike. But unlike real children they are always included in whatever is going on, and get into their own special adventures because of their diminutive stature.

"It all comes," said Pooh crossly, 'of not having front doors big enough."

A. A. Milne

Each character has a house which is proportioned to his size. This seems quite rational, but also affords adventures which result from the various scales. For example, Pooh gets stuck in Rabbit's hole after he expands from eating too much honey. Although Rabbit does not enjoy having his front door clogged, the pragmatic animal is quick to acknowledge that Pooh's legs make a great towel rack.
Each house is also a reflection of the character who lives there. Eeyore lives in a gloomy place which is "rather boggy and sad" and has no physical definition; The Owl's house is reached by climbing a grand tree-trunk which magnifies the Owl's sense of importance; while the clever Rabbit lives in a complicated warren with several ways in and out.

Things are seldom what they seem in Pooh's forest. Just as the trees contain houses, a bear becomes a rain cloud, a pot becomes a raft, and a broken balloon becomes a wonderful playtoy. These are all familiar objects which, when used in this world of fantasy, take on new uses and meanings. For instance, we always think of an umbrella as an object which shields us from something. But in Pooh's world it also acts as a container in which two or more can float away.
Pooh's forest is a wonderful place to play. As children, we love this world where a child plays the most important role, a Bear of Very Little Brain is the hero, and even the childlike characters are a part of the world's events. It has many familiar elements which remind us of other places we know. Yet the scale of the different elements and how they are used provide play opportunities which no real forest on earth affords.

Owl lived at The Chestnuts, an old-world residence of great charm, which was grander than anybody else's, or so it seemed to Bear, because it had both a knocker and a bell-pull.

A. A. Milne
The Children's Museum in Boston is part of the Museum Wharf building, which also houses the Museum of Transportation. It is a major attraction that draws both adults and children from the entire metropolitan Boston area. It is located across from the Financial District in the center of the city, along the Fort Point Channel. The approach to the building is an important part of a visit there. Most people come over one of the two bridges from the city where they get a long, full view of Museum Wharf. The building is the first of a neighborhood of solid, massive, six-story structures that were originally warehouses and now support a variety of activities.

The museum retains the large, strong image of a building type that is familiar to people of the area and uses a few careful additions to call out its new use. An exposed glass elevator encased in bright orange steel and a 40 foot-high, brightly painted, free standing milk bottle gain strength as fanciful objects against the muted background of the industrial facade. These two objects serve to date the contemporary renovation and call out the building's new function. They bring attention to themselves by being incongruous with their surroundings, thus serving their purpose as a way to alert people of the building's new use and guide them towards the entrance.
The theme of the main facade is carried throughout the building. It is a strong, familiar base of support around which objects are placed that people can interact with. The building does not provide play in an active way. Rather it provides a comforting setting that allows children to feel at ease. The learning that goes on is focused on individual exhibits, while the building provides a generous setting which does not compete for the childrens' attention. The building has heavy wood beams, stairs, and moldings with grey, industrial metal railings. The museum is broken up into a series of rooms, providing an orderly procession through which the exhibits can capture uninterrupted attention. Even the central space is so small that it works primarily as a circulation path and not as a spatial focus. Large windows look back out onto the city, providing reassuring, orienting clues to visitors. The building primarily serves as a supportive receptacle that enhances but does not compete with the activities inside.
The re-use of the old wharf with the new objects deployed throughout it provide opportunities for imaginative, fantasy play for both children and adults. The procession from Boston proper leads to a world which is familiar in form to most people, yet not so familiar in its use. What actually went on in those huge storage sheds and how it affected people's lives gives rise to wonderful dreams of what might have been. The new additions to the building's face seem to make the difference between 'then' and 'now' even clearer, allowing us to relive an imagined past. The walk from Boston to the museum can be a fertile one for fantasy as one leaves the city behind and heads out for this familiar, yet redefined world.

A more direct, physical play is generated by the children's responses to specific exhibits in the building. Although almost all the exhibits are interactive, some seem to afford more play than others. In general, the exhibits which are arranged in a traditional museum display format, such as the "Indians of New England" or the "Cultural Heritage of
"Boston" have a more educational tone than those which recreate a situation that the children can directly participate in, such as the grocery store or "What if You Couldn't?".

Perhaps the most fascinating exhibit in the museum is the turtle pond. It is a transparent aquarium that allows children to crawl underneath it and view the turtle from below. This new perspective on the world enthralls both the children and adults who crowd around the pool to analyse the turtle from all directions. Without touching it they are able to manipulate the turtle by changing their relationship to it. They are in essence in the ground looking up at it and can gain perspective on what 'in the ground' might be like.

An exhibit which gives children the opportunity to physically understand their relationship with others is a simple arrangement of hand and foot prints of various sizes. Children spend some time finding out exactly where they fit, though it is not uncommon to see a child standing in very large footprints, apparently pondering what life might be like with such large, grown-up feet.

The giant's desk top is a blotter with pencils, paperclips, a telephone, and other paraphernalia which is greatly enlarged in scale. Children can climb in and around these objects as they might climb on playground equipment. However, these are more interesting because of their common associations with everyday use. The
telephone is the most frequently-used piece, perhaps because the push buttons are just the right size to be operated with your feet and the base forms a wonderful little slide. Young children never tire of dancing out their telephone number.

The doll houses provide complete worlds in miniature which fascinate both adults and children. These houses are replicas of seventeenth and eighteenth century dwellings which are quite accurate in their detailed portrayal of times past. Museum visitors love to see how life was lived in those times and can feel connected with them when they find domestic articles similar to those we currently use. The doll houses demonstrate how rooms fit together in ways that simply moving through a real house does not reveal, and allow even the smallest child to dominate his surroundings. One little girl ran from house to house looking for tiny baby dolls in each one. She was enthralled by their size, and was convinced that every miniature world must have at least one baby.

One element of the museum itself that provides many opportunities for play is the main stairway and railing from the lobby to the exhibit areas.
The stairway offers many choices of how to ascend; one can move along the diagonal, in a dynamic, twisting body movement across the treads; down the middle, closely sheltered by the column; or along the very outside, hanging onto the rail for support. The rail itself has hand grasps at two levels. This was probably designed to allow people of many sizes to hold on to it, but also affords a wonderful, comfortable way to slide down.

The building which houses the Children's Museum is not inherently playful. It is, rather, like a shopping mall that provides a framework suitable for the learning and play activities that occur within. The familiar materials, even lighting levels, and strong presence of massive, enclosing support provide a secure base which acts as a counterpoint to the play that the exhibits foster. It is a stable reality from which children launch into other worlds, prompted by the objects around them.
The Brooklyn Children's Museum uses a completely different set of architectural devices to create a participatory environment. The building is located on a corner in a park in the Crown Heights section of Brooklyn. The museum, a public school, and the park make up a city block that acts as a void in the densely built urban area. Although the museum has some regional users, it is primarily used by local inner city children.

While the approach to the museum in Boston is a procession, the Brooklyn Children's Museum is suddenly encountered as one emerges from the street walls defined by the large townhouses in every direction. What one finds is a sort of everything and nothing at the same time. The site is a large mound with an assortment of objects with little apparent relationship which make a beguiling puzzle of a skyline. They are so odd, so incongruous with this neighborhood that they demand exploration. No one can pass by the Brooklyn Children's Museum without a second look. There is really not much there, a few large
oil tanks, stadium bleachers, two huge highway signs, and an old subway kiosk serving as the entrance. But the way these common objects are arranged jolts our sensibilities about their proper place and use. They have been transformed to a new location where they serve a new function and help to create the feeling of another world through their bizarre arrangement.

To enter this world one must ascend a series of steps. But how to do it? They can be taken two at a time with 4" risers, in a normal pace, or stretched out in a broad, uneven curve. Reaching the entrance is not difficult, but cannot be done with an unconscious, unnoticed effort as some stairways allow.

The subway kiosk marks the entrance to this other world, and thrusts a visitor down into it in a descending, spiraling People Tube. The

Like most of HHPA's work, there is little that is conventional - but much that is ordinary - about the Brooklyn Children's Museum.
People Tube is a large galvanized steel sewer pipe with a helix of bright neon whirling inside it. The tube is a long ramp that moves diagonally through the square building and lands at a variety of exhibit areas located at each level. Running parallel with the People Tube is a stream which is dammed, directed, and manipulated by both the adults and children along it. There is a great sense of speed in the People Tube which is due to the swirling neon lights and the fact that one moves diagonally in all three directions with relation to the building.

Where the Children's Museum in Boston is accommodating and supportive, the Brooklyn Children's Museum is challenging and disorienting. The building does not simply house the museum's collections, it is part of the collections and displays itself everywhere. The structural, mechanical, electrical, and fire suppression systems are as prominent as any artifacts or exhibits. The upright mechanical ducts blowing air are every bit as fanciful as the totem pole.
sculpture from another time and place standing next to them. The fact that the building is underground is keenly felt in the uneven, artificially lit space. However, at the end of the People Tube the ground outside is cut away and the building is flooded with light. The paradox of a building which is so light at the bottom yet so dark above is one of many throughout the museum.

The Brooklyn Children's Museum affords play for both adults and children in the way it shocks our sensibilities and makes us look at familiar objects in a new light. The building truly feels like another world, one in which up is dark and down is light, the structure is a grid but little else is, an oil tank becomes an auditorium, and an old refrigerator is turned into a store counter. If not for the nuisance of gravity, surely the stream would run up the tube. It is clear that the rules outside don't apply here because nothing is used the way it is 'supposed' to be used.
For children, the museum is full of opportunities for manipulative play. The everyday objects that fill the museum are freely touched and explored. Children are encouraged to find new uses for them in this new world. The space itself can also be matched to their needs. Needless to say, the myriad directions colliding in the museum result in many unusual (unusable?) configurations. These can become the play-grounds for certain games and fantasy. Exhuberent, moving play goes on in the largest area at the end of the People Tube, while many small, leftover places provide opportunity for individual fantasies, such as the tiny doll world which is tucked in under the People Tube.

An important aspect of play for all the museum's visitors is simply moving in new ways, thereby discovering new components of your relationship with the surroundings. Besides the People Tube, it is possible to go from level to level via hydraulic lifts, stairs, ladders, or even by climbing through the gigantic molecule model that crawls through the space. Unlike the Boston Children's Museum where all the circulation gets fairly even use, these movement patterns are clearly subordinate to the People Tube, but provide opportunities to understand the building and its contents in new ways.
Perhaps the most interesting and playful paradox of the museum is that everywhere we find traces of ourselves, but never the way we expect. The materials of the building are all familiar, yet they're not put together in any way we normally see them. A small pond is found indoors, a gigantic sewer pipe is free-standing instead of buried, and a mechanical duct reminds one of a smiling, round face, offering itself as a high shelf where some exotic artifact can perch. After creating an important entry sequence that says 'this is another world, feel free to question', the building plays with us directly by bringing into question how its pieces are arranged.

We believe that the accidental places are easier to shape to activities. People can in some way shape them themselves.  

Malcolm Holtzman
The Brooklyn Children's Museum affords play which is very active and energetic. The museum's program was interested in providing fresh, exciting stimulation for its users and the building certainly fills that need. However, it does so at the expense of having any real calm, controlled spaces where the children can become totally engrossed in one thing or which acts as a reality base for the antics in the building. There is virtually no place appropriate for contemplation or reverie.

The Boston Children's Museum is nowhere as exhilarating as its Brooklyn counterpart. It provides a broader, though less extreme, spectrum of play opportunities. The Brooklyn Children's Museum provides a much more intense, engrossing play experience at the expense of affording much quiet, thoughtful play. The different types of play which the two facilities afford stem from the different programmatic requirements of each museum. The Brooklyn Children's Museum is smaller and desired a highly stimulating building to attract its inner city clientele. The Boston Children's Museum has both more room and a wider social range of users, thus warranting a broader range of play opportunities.
JACK'S bar in Cambridge is representative of many music bars in the area which cater to 20-35 year old affluent adults. The success of the place can only be measured by the huge crowds that congregate there on the weekends. The drawing cards seem to be the music, the drinks, and the fact that you will see other people you know. The crowd itself is a critical component of its success. JACK'S is not so appealing when it is empty. Like many such bars, the physical form of the place seems quite neutral at first glance. But on closer observation it has been adapted to meet some special requirements as an adult play place. First, JACK'S is in a prime location, right on Massachusetts Avenue where it is a highly visible component of a series of entertainment places. JACK'S occupies three bays of a small one-story commercial strip with a large glass front.
Since the location is so public, JACK'S needs some way to create that 'other world' quality of play. However, there is not so much as a change in grade to separate it from the street, so the windows are full of huge plants which block the view and the tables inside are all directed inwards towards the stage and not onto the street. At the critical point of entry, there is almost no transition from outside to inside, but the omnipotent bouncer serves as the vigilant sentry who marks the difference between the public world of the street from the world of the players within.

Inside, JACK'S has a major focus, the stage, and a minor focus, the bar. The players take up the space in between so they can move from one to the other, if there is room. Small, low tables surround the stage, with higher stools, a few columns, and an area of standing room ringing the edges, thereby creating a
slight rise in section which encircles the performers.
The only people who do not face the stage are the minority who directly address the bar.

JACK'S is a totally conscious, singular play environment. When someone decides to go to JACK'S, they are choosing a particular kind of experience. Although there is a variety of places to sit or stand, the music is so dominant that your location within the space hardly matters. The music sets the tone of a very high-stimulus environment which is augmented by the people, who dress flashy and talk loudly. The flat black walls and ceiling only serve as a backdrop for the stimulus. They diminish the sense of space and heighten the feeling of crowding. The homogeneity of the players creates a sense of comradery among them that allows them to thrive in this crowded setting. They enjoy a group identity which is missing in the anonymous crowds of a city street or a subway station.
nameless coffee house

The Nameless Coffee House is a place where local folk musicians play in a church hall near Harvard Square. A series of performers put on twenty to thirty minute sets throughout the evening. The audience is primarily young adults, many of whom are students or people involved in skilled or craft labor. They are quite different from the people who frequent JACK'S, and seek relief from the noisy, bright city streets in the Nameless. Since there is no charge, the audience is composed both of people who want to listen closely to the music and others who drop in for short periods of time.

The Nameless is in an English Gothic, stone addition to an older, clapboard church. The entrance is along a side street and up a few steps, in a covered area beneath a small pointed archway. The door leads into a compact vestibule which gives way to a generous foyer. Usually one or two people sit in the vestibule and greet people as they enter the realm of the coffee house.
Inside, a large room with a high ceiling is the performance area. The stage is at the far end, adjacent to a warm-up space. A large portal runs across the middle of the room, thus framing the performers and visually dividing the room into an area near the stage, where people listen intently, and one further away, where it is possible to speak softly to others while the music is performed. Two doors lead from the foyer into the performance space so that one can choose which area to sit in. In addition, the foyer itself is large enough for several people to gather and tentatively hear the music before going inside. The sequence of spaces from the street to the stage provide a steady transition from the world of the street to that of the coffee house. They also give people the choice.
of many ways of listening to the music. Each person can select a location based upon how closely he wishes to concentrate on the music.

The Nameless Coffee House is a quiet, almost serene environment. The walls have a high, rich mahogany wainscot, the tables have small candles, and the chairs are casual campstools. The surfaces of the wood are highly polished after years of wear and are pleasant to the touch. Unlike JACK'S, which is a high-stimulus environment that challenges the senses, Nameless is warm and comfortable like an easy chair. The music is usually soft and melodic; it complements the contemplative atmosphere and can act as the source for individual daydreams and reverie.
Their motto is 'vanitas' and their mission is to poke fun at whatever strikes their fancy. The Harvard Lampoon Society is an undergraduate organization at Harvard which publishes the Harvard Lampoon magazine and acts as a social focus for its forty members. Their headquarters is a small building on a tiny site near Harvard Square which was completed in 1909. It is known as 'the Castle.' It contains a series of public rooms where the members put out the magazine and some spaces for private use by the society, which no other Harvard undergraduates may see. The building is a sort of confection full of witty elements and anecdotes that cater to the private, intellectual humor of its elite users. It reminds one of many things, but is accurate to no particular style. It is based on its own set of principles which are the physical manifestation of Lampoon's humor in bricks and mortar,
as well as an allusion to a romantic, medieval past when the jester could divert the attentions of the king.

The building itself is located on Mount Auburn Street, along an area which has commercial uses along the sidewalk with Harvard dormitories above. At the intersection of Bow Street and Mount Auburn, the massive six story buildings form a small square. "The jewel of this architectural setting is the frivolous Lampoon Building which appears almost miniature in contrast to its neighbors." 8

The building's exterior not only speaks of its purpose as a center of whimsey, but also of Lampoon's relationship to Harvard University, a frequent object of Lampy's fun. The building is a collection of serious academic forms which become swollen and distorted on the small building. The building sits at a strategic urban location and has an air of importance which matches its pompous surroundings. The lofty gables of neighboring Adams Hall are mimicked on
the roof of the Castle. The hallowed bell tower becomes a jester's face on the main entrance. From the distance one sees a delicate tropical ibis which is precariously resting on a small dome that fits over the jester's face like a freshman beanie. Small, diamond shaped eyes with round windows peer up Mount Auburn Street. The brightly painted door is a mouth with the blue and yellow colors of the Lampoon surrounding a circle of Harvard Crimson. The elaborate lantern above the entrance forms a kind of hooked nose snarling at passersby. This incredible face is set off from the street by a grand set of granite steps which spill out into the square, as if the Lampoon was sticking its tongue out at
Harvard. The building's exterior humor is well matched to the academicians who inhabit Harvard's ivy walls and the students who frequent Harvard Square. Apparently, however, the humor was lost or misconstrued by the City of Cambridge which seized the opportunity to plant a tree right at the tip of the Castle's tongue.

The building also appears Sphinx-like. The two walls extending forward around the stairs are like feet, while the rest of the building rises on its haunches behind the helmeted tower. The roof actually slopes gradually from east to west to enhance this effect. The idea of the Castle being a Sphinx is a long standing tradition among Lampoon editors, who have named parts of the building accordingly. For example, the small window between the two chimneys at the rear is known as the Sphinx's Sphincter.
The anthropomorphic quality of the exterior is part of the building's wit. The dignified forms of Harvard have a different meaning when they compose a face or an animal's body. The small windows, intricate gables, and inlaid ornament of the building's facade make it a rich source of fantasy. Since it is not true to any one stylistic period, we can find traces of many imagined pasts in the exterior. The windows are all placed above eye level to isolate the internal functions of the building and to induce the pedestrian to wonder what goes on in this whimsical little place.

Whatever fantasies about the inside one may have are more than fulfilled once within. Because of the secret nature of some areas, the Lampoon does not allow any sketches or photographs of the Castle's interiors. However, they do give wonderful tours of the entire building if requested, and allow written descriptions as long as they are not directed towards other Harvard students.

The small entrance on Bow Street which leads into the public areas is more frequently used than the main door to the Castle. A steep step directly from the sidewalk catapults a visitor from the red brick world of Harvard into a small vestibule covered with cool, light blue Delft tile. The dimensions of the
room, like everything else in the building, are small and intimate. The rooms are cluttered with an incredible assortment of furnishings and ornament from all over the world, as well as a large collection of Lampoon covers on the walls. The ground floor, which has primarily public spaces used to produce the magazine, has a strong Dutch influence. The floors are unglazed terra cotta set in various patterns and the ceiling is dark, heavy timber. The walls are lined with fantastic Delft tiles which portray scenes of myth and glory. The library, or Womb, is a circular room buried in the building. There is no trace of its form on the outside. Its doors are bookcases which, when closed, create a completely sheltered environment. The spaces formed between the inside and outside walls create shelves of every height and depth as well as deep sills below the small windows. Beyond the Womb is the Sanctum, which is the recreation of a well-to-do Dutch fisherman's living room, full of delicate tile and massive oaken furnishings. This room is farthest from the entry and is quite removed psychically from the world of Cambridge directly outside.

If one goes the other direction from the entrance on Bow Street and through a small locked door, one enters the tower. It is all white with streaks of light coming in from its many small, stained glass openings. It's
The Hall is certainly one of Boston's most original banquet rooms. One wonders if Wheelwright could have imagined the pandemonium of some of the initiation dinners it has housed. Recalling his own undergraduate years, he was sufficiently aware of the possibilities to limit the windows in the main body to dormers which sit high above the tabletops. This prevents flying glasses from injuring passersby, and as in the elevated windows of the first floor, they are an important part of the Castle's defenses. Most of the glasses seem to have ended up in the fireplace.

Martin Kaplan

The Great Hall is the focus of the Lampy's secret life. It is a sixty-foot long medieval dining hall with carved heavy timber trusses spanning between the Castle's gables. At the far end is a massive Elizabethan mantlepiece of oak with richly painted limestone carvings. The room is lit by candles hung in candelabras in the shape of gargoyles and other mythical animals. It is full of bits of antiquity: medieval tapestries, a suit of Japanese armor, a Dutch musical clock, and a huge chair upon which all the former President's names are inscribed. It is a world of secrecy and gallantry where the real and the absurd meet in a timeless collection of memorabilia. It is both a spiritual place and a comical, humorous place where the

a dynamic space that swirls around a central core which is full of niches for special objects. The tower climbs up until reaching the Ibis' nest, a small room which seems much higher than the Castle appears from outside. The nest forms a perch overlooking Mount Auburn Street and a balcony overlooking the Great Hall.
treasures of our civilization are put to the service of folly.

The members of the Lampoon do not mind a written description of their secret areas because, as these literary pranksters well know, it cannot be adequately described in words. It is not simply a world of play where reality is suspended and new rules apply. It is a world where the most serious aspects of our society, such as the nobility of chivalry or the virtue of education, become the butt of an endless joke. In 1910, the editors of Architecture magazine noted that "It seems unlikely that any of these rooms could be properly used anywhere else than in a building of the character of this..." Yet, the ability to find humor in social conventions and institutions should not have to be relegated to the province of secret societies. Wherever there are strong institutional influences in the environment, the potential for humorous parody of them exists.

The Great Hall is sited within 10° of the east-west axis. Twice a year, within two days of the solstices, sunlight comes through one of the eyes, travels the length of the Great Hall, and illuminates the face of the angel in the center of the mantelpiece. This is known as the 'sinus of the soltice.'
Las Vegas is a place of excess; a curious, fascinating phenomenon. The play that goes on there is very different from the quiet mimicking of the Lampoon Building. While Lampy's humor is cerebral and exclusive, Las Vegas holds out the magical lure of omnipotence for thousands of visitors in the form of gambling; a form of play that could be considered anti-intellectual or even primal. Las Vegas teases us all into believing that we might beat the dealer, and it uses a series of architectural and planning devices to reinforce that illusion.

Las Vegas exists in an area where space is measured and conceived differently than in most cities and towns. It is hundreds of miles from anywhere, in the midst of a dramatic, expansive desert. It is a sort of oasis, a clearly identifiable place, yet a kind of illusion where normal sensibilities and social conventions are shattered. People feel freer to act in unusual, spontaneous ways in this world which is so clearly separated from everyday life.
The scale of Las Vegas is derived from the automobile and the vast desert rather than the person. The elements of the wide roadway flanked by immense parking lots, the tremendous signs perpendicular to the driver in order to make the greatest impact, and the huge casinos looming in the distance are similar to most commercial strips, only greatly exaggerated. These elements make little sense to a pedestrian or in a photograph, but create a dynamic sense of flowing light to a person in a moving car. The giant signs are full of glittering, inviting, and familiar images which are larger than life. Since the message of these images is one of offering pleasure to the visitor, the incredible size of these signs makes them intriguing rather than intimidating.

Las Vegas is an architecture of bold communication rather than subtle expression. The signs and buildings take their shape from each other in order to present the biggest possible impact on the motorist, thus gaining his attention.

Robert Venturi
The architectural form of Las Vegas, like its spatial quality, its furnishings, and even its use of chips as currency, is designed to enhance and reinforce an altered reality in this oasis paradise. Each casino and hotel alludes to another time or place. A visitor can be transformed into a centurian at Ceasar's Palace, a ranger at the Frontier, or a playboy at the Riviera. In fact, Las Vegas is actually just a collection of fantastic allusions tied together by the common threads of gambling and the heightened expectations which result from the larger-than-life scale, and that wide expanse of blacktop known as "The Strip". Each building is a stage set where the employees act as the supporting cast to every visitor's starring role. The hotels and casinos are full of sweeping surfaces as opposed to straight walls, mirrors, and level changes which reinforce the importance of the visitor in the environment. For example, a grand staircase may lead nowhere, but people will climb it, pause, and survey their surroundings from a commanding position. Similarly, it is common to enter a dining room on a podium a few feet above the dining floor. This platform is in essence a stage, where each patron makes his appearance before taking a seat.
This is a play. These people are here and they think they're going to have a grand vacation. They want to feel like millionaires. They want to feel that this is just one of the greatest experiences in life. So I put them on stage at all points.

Morris Lapidus

The heightened sensations of the strip and casinos are offset by the domestic scaled motel rooms and their courtyards. These courtyards are typically full of lush greenery, water, and intimately scaled balconies and terraces which provide a necessary counterpoint to the superscaled elements of the strip and the hot, arid desert beyond. Without such human scale references, the excesses of this isolated world could become overpowering and lose their sense of 'only pretending.'
The gambler very quickly, usually as soon as he begins to contemplate making his first wager, transports his self into a play world, a fantasy world in which he stays suspended until he is jarred back into reality by the finish of the last race or the disappearance of his money.

Joseph Levy

Perhaps the stongest way Las Vegas creates a new reality is through the juxtaposition of day and night, thus creating a suspension of time as we usually know it. The brightly lit strip and downtown casinos provide the glare and heat of midday at any time. The streets are just as busy at 3:00 a.m. as 3:00 p.m., and the activities people pursue are the same at either time.

Yet a few feet away, the gambling rooms are always dark. They are large, low spaces without windows. Each gambling room is articulated into a series of subspaces around a gaming table where people can have a feeling of privacy, protection, concentration, and control while they pursue that exhilarating, unpredictable activity. This intricate maze never connects to outside light or space. The dark, absorbant wall and ceiling surfaces are obscured by artificial lighting which tends to make the interior space limitless. The glowing jukeboxes and gambling machines become the objects of this interior world where space and time have no boundaries.
Las Vegas is a world where excess is the norm. The architectural devices used to help create this world may in themselves be excessive if applied to a place which is less isolated or less intense. Yet the physical environment of Las Vegas - the spontaneity, the heightened expectations, the exaggerated scale, and the theatrical quality - seems to reinforce the sense of trying to escape reality that permeates the place and the activities that draw people there. These qualities which afford play in Las Vegas may be applied in modified ways to less excessive environments.

The world's largest resort hotel will soon have a new look to match its reputation for fun and fast action. Continuous varied animated light patterns conveying sensations such as speed, surprise, and even humor will flash across a new front nearly a quarter mile long.

Stardust Motel Brochure
Great Adventure is a theme amusement park located midway between New York City and Philadelphia in a rural area of New Jersey. It is a conscious play area that caters to families who usually spend an entire day on the park grounds. Great Adventure is representative of a series of such parks which have been patterned after Disneyland. In 1979, 75 million people visited the 24 largest parks in the United States, which indicates that they are a very popular way for many Americans to spend their free time. The architectural elements and spatial arrangement of these parks are carefully designed to enhance their play-ground quality. It is interesting, therefore, to investigate Great Adventure in terms of the definition of play developed here.
Historically, amusement parks were bright, noisy, dense environments where people could release tensions and experience the joys of vertigo on a series of rides that confronted the player with the illusion of danger. They also provided bustling 'Main Street' action on the midway as well as places for quieter, more intimate play in the tunnels of love. The common theme of these places was movement, whether it be the slow quadrille of the carousel or the violent rush of the roller coaster. In keeping with this motif of movement, parks such as Coney Island developed elaborate forms of "music-hall Baroque" architecture that complemented the rides with whirling ornament that spoke of an unspecified, exotic land of another time.

Theme parks are less intense environments oriented towards middle-class families, but the lessons of Coney Island's architecture have been translated in the move from the city to the suburbs.

(Coney Island's) gilded symbols are enough to transport us to a land where anything is pleasantly possible, but, because they are all old friends, we do not feel like strangers there.

Great Adventure offers similar thrills of disequilibrium in a setting that is clean, pastoral, and peaceful. The fantasies portrayed are not abstracted swirling movement, but places that we know, made perfect. The tunnel of love has given way to the log flume ride which is more hearty and offers no opportunity for illicit interludes. The midway
Disney World is nearer to what people really want than anything architects have ever given them... It is a symbolic American utopia.

Robert Venturi

is transformed into America 'as it should be' on Main Street, a broad boulevard lined with neat little buildings, flowers, and congenial people. Here visitors can relax and enjoy a public environment which is probably richer than the one near their homes. Other fantasies branch off from this street: an Oktoberfest of Old Germany, the Wild West with the world's largest Teepee, a foray into the tropics, or the confections of the Yum-Yum palace, a sixty-foot high ice cream extravaganza. Each of these worlds is carefully arranged in spacious, clean settings, with the soft pines of New Jersey providing a constant, if sometimes incongruous, backdrop.

There are a number of devices used throughout Great Adventure which enhance its qualities as a play-ground. The most frequently used device is scale juxtaposition. Disneyland pioneered the use of miniaturization by building whole areas of the park at 5/8 actual scale. The scale change is intended to create a kiddie-land for adults as well as making spaces more accessible to children. Of course, in the process some of the opportunities for play through miniaturization, as previously discussed, can be realized. Great Adventure utilizes both miniaturization and enlargement to the point that not one building is what would be
considered normal scale. On Main Street the buildings are small scale, but in the Wild West they are gigantic. The area is truly 'larger-than-life' with its mamouth Teepee, Conastoga Wagon, and restaurant whose generous roof is made out of plastic logs two to three feet in diameter. But the forms of this area are the familiar ones of western movies, and the rides take us up and over these towering forms, so their size is not threatening at all.

Another device is the use of multiple pathways through the park. Two major boulevards are organized as formal promenades which connect important attractions and intersect at the fountain on Main Street. These streets are lined with banners and shops which heighten the expectation of the traditional attractions, such as the ferris wheel and the merry-go-round, which they frame. In addition, an intricate series of rambling garden paths weave among the other attractions. There are no dead ends, so each attraction can be reached by at least two paths. Trees and other objects are arranged in a casual disorder along the way so that thrill rides and attractions suddenly appear.
around bends. The two networks serve complimentary functions: the boulevards are orienting places, where one can be an integral part of the passing parade while the garden paths allow for meandering, aimless strolling within the park.

The building materials used at Great Adventure are all chosen to reinforce the image of a particular area. The central plazas and areas which recall times past are made of painted clapboard with brick or stone. They are substantial and familiar. Industrialized materials are only used in 'futuristic' areas, where steel and tensile structures are used to diminish the perception of support.

Of course, Great Adventure has a full assortment of rides, shops, and eateries throughout. The thrill rides are quite breathtaking, and are usually accompanied by much bravado among the riders. They turn people upside down, get them wet, and spin them furiously. They have an illusion of great danger which is taken to its extreme in the Adventure Theatre, where people stand still and a 180° movie screen presents images of flight or speed that can cause dizziness.
The theme rides are more integrated into the particular setting of each fantasy world. Such rides as the Wild West Runaway Mine Train are generally not as violent as thrill rides. They are more popular with adults who apparently enjoy the explicit escapism and gentler contortions.
Children's rides are small-scaled versions of real world situations where they can feel in control. The planes, boats, and cars which the children operate are full of wheels and buttons that they constantly twirl and push, as if to determine the vehicle's course. Children tend to shy away from overly specific or inanimate objects such as the 'picture spots' in favor of moving attractions and places where there are other children. Some rides might be virtually empty while children line up at other similar attractions; apparently the crowd alone makes them more interesting.

Great Adventure, like most theme parks, is a place where people go to be entertained. Most of the experiences are passive, with the player seated in some type of moving vehicle in a carefully defined fantasy world. The abstract swirling forms of Coney Island have given way to complete replicas of places which are real or imagined by someone else. So the ability to create another world is lost; the player merely selects from the range of discrete fantasies available.
A journey to Great Adventure or any similar park is a programmed experience, as people synchronize their playing with a schedule of shows and events. The result is an environment that is powerful in its initial image, but on return visits one realizes that the same things occur again and again. The player is not really choosing or guiding the course of events in any significant way. Instead he is a passenger on a ride which travels a pre-determined course. There is little of the spontaneity, surprise, or even real danger that can be found in old-fashioned amusement parks.

Great Adventure does not challenge people to think about or react to their environment in any new ways. Instead it provides comfortable, prescribed fantasies which pass by but require limited interaction or sustained interest.
The Hyatt Regency Hotel in Atlanta is the first of a series of hotels recently built which use large, indoor public atriums both as ordering devices and as a way of creating architectural excitement. These hotels serve both as a place for overnight visitors and as an entertainment center for the metropolitan populations where they are located. They are generally very successful, which makes them interesting places to study in terms of affording play. And all of them, in some part, derive their architectural conception from the original hotel designed by John Portman.

From the street, the Hyatt in Atlanta is an undistinguished, three story mass which contains ancillary functions and serves as a podium for the hotel tower. One enters into a low, plain vestibule, through a set of doors, then goes fifteen feet further under a low ceiling. Suddenly the space leaps up to its full 22 story height. In later hotels, architects have tried to develop a transition between the entry and the atrium, but in fact the immediate juxtaposition of the two spaces is exhilarating. It helps to set the atrium apart as a place of its own, a vertical world in the midst of horizontal floors.
The interior atrium is the heart of the Hyatt. All the hotel rooms and functional areas are related by this incredible space. It is 120 feet square in plan and surrounded by 22 floors of balconies. For many visitors, the three million cubic foot space is the largest interior space they have ever seen. But it's not merely the size which attracts visitors; the atrium is full of lights, sounds, and movement. The core of most tall buildings is full of service functions, but here is has been exploded and its elements depicting movement, the vertical elevators and the horizontal balconies, have been exposed.

The elevators are the focal point of the atrium. The egg-shaped glass cabs are lit by rows of tiny bulbs that provide an ordered but unexpected pattern of movement from the main floor. Riding inside the elevator is like sitting in a theater which has a continuously moving vantage point of the stage beyond. The elevators have become an integral, dynamic part of experiencing the atrium and they allow the riders to gain new perspective on this giant space.

People can't walk into a Portman building and remain oblivious to their surroundings. They look up, startled by the large and unusual spaces; they explore; they try out different experiences that the building offers.

Jonathan Barnett
From the main floor, the elevators are the stage attraction and their riders become actors. The lobby functions are carefully, though informally, arranged around this stage to provide optimal views of the elevators' movement. The lobby also contains cafes, cocktail lounges, fountains, and sculptures. Actually it has all the elements of a town square brought inside. Thus the atrium has both the sense of an interior room and of a civic space. This duality gives the space an exhilarating kind of tension.

The balconies which ring the atrium provide a serene backdrop to the activity of the elevators and the main floor. The balconies function as corridors, but also provide views of the atrium. Along the balconies, small, trellis-covered areas protrude into the space. The trellis' are only seven feet above the balcony. They provide a sense of shelter from which to view the atrium. The grandeur of the big space is magnified by the intimate, smaller space.
The volume of the atrium, the moving elevators, and rings of balconies create a space that demands some immediate reaction by those who enter it. Whether one feels comfortable in it or not, it is quite an incredible space. However, it is interesting that after exploding the inside of the building the space which remains and the elevators, rather than the people in it, become the focal points. For many it is a wonderful place; they love to sip coffee in a cafe in the middle of it all, ride up and down in the splashy elevators, and peer out from the balconies. It can be exhilarating for people on vacation or out on the town who are 'up to' the energy of the atrium. However, there are also tired business people and couples who might rather not be seen climbing up
to a hotel room together who also use the hotel. These people may not be so comfortable in the large, exposed area. The lively contrast between the atrium and ancillary spaces is part of the Hyatt's magic, but the price of that juxtaposition is that no place exists for people who may not wish to play the public, theatrical game which the elevators and the atrium are engaged in.

You can incorporate kinetics in a building and strike a responsive human reaction.

John Portman

The Hyatt Hotel bridges the gap between the so-called "popular" architects, such as Morris Lapidus, who design worlds like Las Vegas and Great Adventure, and the cognescenti of the architectural world. The atrium is a theatrical place which heightens the visitor's expectations and creates a place where one is seen and can be seen. However, this is not accomplished by relying on exotic forms and ornament to produce the effect. The great space, bold geometric forms, and movement which is integrated into the building create an interest and excitement in experiencing the building; a sense of play. The play is not added onto the building's functional parts, but comes from organizing the building elements to exploit opportunities where play can occur.
In Harvard Square, the alley between the Brattle Theater and the Cambridge Center for Adult Education acts as a pedestrian passage between Brattle Street and Mifflin Place as well as the entrance to the Cafe Algiers. The alley varies in width from 4' to 16', which is much smaller than either of the streets it connects. At one end one must enter under a sign that frames the path, and at the other the path takes an abrupt change in direction and width. These two conditions set the path aside as a special, clearly defined place.
The alley is delightful to walk through. The sides of the neighboring buildings are quite tall in the narrow space, yet their clapboard sides give them a sense of scale inkeeping with the pathway. The Cafe is located beneath the theater, with a tiny set of steps leading down to it. Small benches and little 16" round tables are scattered throughout the alley, some of which are clearly associated with the Cafe, but others can be used by the general public. The alley is perceived as a place in itself, and its dual functions of passage and outdoor cafe coexist happily, each giving validity to the other.

The alley is rich in scalar and material juxtapositions, which make it a stimulating place to be. The high walls are offset by the tiny benches and tables, the small greenhouse window, the delicate trellis, and the finely detailed windows of the Cambridge Center. The person becomes the scalar element between these small detail elements and the vertical planes. The path's surface is concrete with brick paving along the borders and some dirt patches where small plants grow. The brick also forms the base of the alley walls, with wood above. There are a range of materials to touch while sitting or walking - the vines of the trellis, the smooth wood tables, the coarse brick foundation walls, the cool earth in the planters, and the protruding sills of the windows.
The Brattle Theater Alley is rich in fantasy play opportunities. When we leave the bustle of Harvard Square for the intimacy of the alley, our minds also seem to shift their focus. We become keenly aware of our movements in this narrow alley as our feet encounter different surfaces, are deflected by a change in the path, and rise over a small dirt mound; an urban rocky path that reminds us of other places, other paths. We feel central to the alley's organization when we realize that the theater gables tower above us while the greenhouse window signifies activity below. The scale of the street furniture and the warm materials give us a new perspective on our surroundings and invite our interaction. In the alley, the simple act of walking becomes dynamic due to the adjacencies of many levels of activities, materials, and scales in the confined space.
Boston's Government Center is organized around a huge plaza which is flanked by long, six to ten story buildings on three sides. The fourth side is claimed by the massive City Hall which directly addresses the large open space. Two thin, 35 story towers mark opposite corners of the plaza and denote the limits of Government Center. The scale of the entire complex is certainly monumental and sometimes appears vast and inhibiting.
Along the most heavily trafficked portion of the plaza there is a rather unassuming, but delightfully scaled little building - the subway kiosk leading to Government Center Station. The formal qualities of the kiosk are in keeping with the austerity of the rest of Government Center. It is a refined geometrical shape with a finely detailed brick skin which grows out of the surrounding plaza. Yet the kiosk is full of play because of its incongruous relationship with the rest of Government Center and the fact that it provides opportunities for active play for both children and adults.

The subway kiosk is humorous in its dead pan seriousness. It tries to wear the same somber face as its giant neighbors and pay due homage to City Hall. But in fact, it
is a bump in the landscape which brings attention to itself because of its central location, its important public function, and the fact that it grows out of the vast plaza. Every other building defines the limits of the plaza, but the kiosk is a central event of the plaza. The kiosk was clearly designed to blend into the surrounding bricks, which adds to its incongruous nature. It is actually a useful little building, and the fact that the plaza masonry wraps around it gives it a sense of shelter in the large space. The way the masonry envelops the building conjures up images of entering a cave as one enters the subway, and clearly marks the kiosk as a special place in the vast field of bricks.

The playfulness of the kiosk is also physically reinforced by its scale, which is more intimate and accessible than its monumental neighbors. The base of the building spreads out into a series of levels which one can sit on. It is actually difficult to know where the plaza ends and the building begins. Above this base is an extended platform that allows one to see over people's heads and realize the long vista from the kiosk to the Old North Church which is framed by City Hall and the Kennedy Building. The actual walls of the kiosk are sloped 60°. During the spring and summer, many business people loosen their modest clothing and spread out on the station walls to capture the sun's rays during lunch hour.
The Government Center Subway Kiosk is an interesting and playful building in its own right mainly because of its context. Its quiet sobriety is humorous because it is mimicking the surrounding buildings. This deadly seriousness is then destroyed by the fact that it is full of opportunities for people to use the building's surface as an active play place.

These sloped walls also afford easy climbing onto the kiosk roof, where children often go to have a commanding view of the entire plaza. Huge copper gutters set into the walls provide opportunities for children to slide or roll things down them.
The Suffolk County Courthouse is an example of how the richly articulated facades and processional spaces of nineteenth century public architecture can afford rich fantasy play. The Courthouse was designed to be the commanding focus of Pemberton Square in downtown Boston. However, when Government Center was built in the 1960's, the City Hall claimed more prominence than the Courthouse, and Pemberton Square shrunk to a half-moon shaped plaza completely enclosed by large buildings that primarily address other directions. The result is that this elaborate Empire Style building is left in the backwaters of the urban fabric and its original monumental intentions seem humorous and surprising in its new context. This incongruous situation affords a playful sense of discovery when happening upon this gem.
At either end are the wonderful little balconies which protrude to bring the building to a close. These aren't the grand, formal balconies where generals survey their troops; rather they are romantic spots where a gentleman might serenade his lady or two lovers might escape to during a ball.

As one enters the archway at One Center Plaza and ascends the steps, the entrance to the Courthouse slowly emerges. First the small pediment appears, then the ornate clock, and finally, at the top of the stairs, the large, inviting entrance arch reveals itself. The building spreads across the small plaza. It cannot be perceived in one glance, but as a collection of events which form the wall of the square.
Moving towards the entry, the wall is richly articulated by five vertical bays and six rows of windows. Each row is different, from the small ones which peak out from under the heavy foundation to the graceful arches of the main floor, to the tiny dormers popping out of the mansard roof. Each window is identifiable and elicits images of what activities might go on behind it. The different forms and corresponding placement of these windows afford recollections of places we have known which had similar qualities. The wall is also full of superadjacencies, such as can be found in Mannerist or Baroque facades, where the flat wall is articulated as a series of pilasters of differing scales. These imply a spatial depth and further add to the rich palette of the wall plane.

The same type of imageability exists in the central entrance. The grand arch invites us in under a formal balcony with large columns. The clock marks a central point in the facade vertically as well as signalling the transition from wall to roof. However, above the entrance, the wall continues upwards, separating from the mansard roof on either side. It is crowned by a pediment which clearly marks the entrance in the roof line.
However, the wall plane of the main facade is not simply a place where a variety of openings occur. It also reads as an entity of its own which never loses its sense of being a large shell or hulk despite the punctures in it. Like the entire building, it is anthropomorphically centered around its two flanks, top, and bottom. The quality of this wall is not some minimal separation, such as a curtain wall, but is a generous skin that has ample strength to accommodate the fantasies where we inhabit it.

The transition sequence from outside to inside has extraordinary processional qualities. Starting from the light of day, one enters the dark, enclosed archway. This protected space leads to a perfectly square foyer bounded by four arched walls and a small domed ceiling. A large staircase in the middle of the foyer leads up to the main level. The dynamic movement of the stair creates a counterpoint to the static volume it rests in. At the top of the stair, one crosses a large hallway running parallel to the facade, which reemphasizes the importance of that direction, before entering the Courthouse's central space.
The central space is the place to see people and to be seen inside the building. The large area is bordered by balconies and open archways that connect the upper floors of the building with the main level. A grand stairway leads up to the building's second entry on Ashburton Place. A series of arches along two sides support the second floor balconies and are in turn supported by mythological statuary which add a sense of inhabitation to the space even when few people are about. The main floor is illuminated by a row of lights from these balconies, while the upper walls are dark. This allows the beautiful gold leaf ceiling to appear as a glittering night sky from the floor below.

The Suffolk County Courthouse was not designed specifically to be a play-place. Yet, it affords a variety of types of play. Its location in the city sets it apart as a special place, its animated facade allows us to fantasize by envisioning inhabitation in each of its richly articulated elements, and the entry sequence allows us to experience a wide range of spatial conditions en route to the main space, where we become the central figures of the building.
The observations illustrate environments that in some way afford play. Some of them are conscious play places that cater to certain populations and offer a particular kind of experience. Others are places used by a wide variety of people and seem to evoke a broader response to play. From these observations and an understanding of the basic characteristics of play behavior, it is possible to discern what environmental qualities make a good place to play. How these qualities can be enhanced architecturally are discussed in terms of three design parameters, each of which describes several related architectural devices that can provide play opportunities.

The parameters were developed by seeking out the common elements that afford play in each of the observations. Although a full spectrum of design principles are used in creating play places, the parameters stress those design elements which are most unique to worlds of play. Their purpose is to aid designers interested in fostering play in places we use everyday. These parameters do not constitute a design methodology. Rather, they can be used in conjunction with any other design approach to enhance the special qualities or the user's response to a particular place. The parameters described here are in no way complete; with additional time and study, other parameters and architectural devices that afford play could emerge.
What are the essential qualities of an environment that affords play? Play is a voluntary activity where we suspend reality within some boundary and according to some rules. Therefore a place of play should help us establish those boundaries and give us a sense of control, so that we feel free to create another world. Each of the play places observed in some way sets itself apart from its surroundings. It provides a clearly defined play-ground where different rules or behavioral norms apply.

At the same time play is an activity where we explore and manipulate something, thus gaining new insights into how it works or about our relationship with it. A play place should entice us to see and touch things from another perspective. In some way the environment should provide risks and provoke our curiosity; it should offer elements that puzzle or amuse us.

Everything is sweetened by risk.

Alexander Smith
When considering how to afford play in everyday settings, the balance between control and provocation is most important. A place which is warm and serene may be cozy but lack any impetus to play. However, a jarring element such as a face that jumps out at people, although wonderful in a funhouse, could become irritating or even depressing when incorporated into a place that people use often. When people go to a funhouse they are in a certain frame of mind which the designer can capitalize on. But in a place that people use on a regular basis, the designer's wish to provide play opportunities must accommodate the prevailing state of mind of its users.

A place that affords play should somehow set itself off from its immediate context in order to aid the player in creating another world. It must also maintain some kind of balance between establishing a sense of security where the player can temporarily suspend reality and provide risky or provocative inducements to play. What the proper balance should be for any particular place is a function of the type of play that might occur there, the group characteristics of the players, and the context in which the play setting exists.

Indeed everything comes alive when contradictions accumulate.

Gaston Bachelard

1
Many of the play places observed utilize a number of common design principles to create the sense of another world or to provide control or provocation for the players. When such qualities as light and dark, hard and soft, cold and hot, or wet and dry are contrasted, they establish extremes in the environment which can be used to differentiate the play-ground from the real world or can induce active or fantasy play. In addition the places observed exploit opportunities for people to be conscious of their immediate environment. They are rich in tactile opportunities, full of pattern, offer many ways to circulate and explore space, and often use vertical or diagonal movement to generate excitement or interest.

These are common design principles which can hardly be considered unique devices for creating places that afford play. However, in the environments observed, when these principles are greatly exaggerated they often take on a playful character. For example, a respect for context is not necessarily playful, yet the Lampoon's humor is largely due to the exaggeration and mimicking of its surroundings. Similarly, a careful use of light and dark may not be inherently playful, but in Las Vegas the eternal nighttime in the casinos exaggerates and reinforces the continuous sense of day in the brightly lit outdoors.
Scale is the relative measure of a physical object. The size of an object can be determined absolutely, but its scale must be considered with regards to something else. The Conastoga Wagon at Great Adventure is super-scale, because it is much larger than other wagons we know. A church which is the same size as that wagon would appear to have normal scale, while a city the same size would be considered miniature scale. This is because we know that a wagon is smaller than a church, which is in turn smaller than a city. Our perceptual experiences give us a wealth of information about the relative size of things. When we confront something which does not correspond to our expectation of its relative size, the opportunity for play may exist and we usually take notice of this exception.

Manipulating scale is a useful architectural tool that can serve to relate various parts of a building to each other, to some unified whole, or to some common dimension such as the human body. This can result in a building with a clear message and ordered hierarchy such as the Suffolk County Courthouse, or a building full of obvious distortions such as the Brooklyn Children's Museum. More interestingly, it can produce both order and distortion in the same building, as the Lampoon cleverly illustrates.
In places of play, there are three specific architectural devices which utilize scale manipulation to enhance their play quality. Superadjacencies can be incorporated into a building to provoke interest and fantasy by the close proximity of various elements. Incongruities in a context differentiate one place from its surroundings and offer opportunities for humorous parody. Miniaturization or expansion of familiar elements can make us feel large with respect to our surroundings. These forms of scale manipulation afford play by setting a place apart from its immediate context, creating amusing contradictions, or changing our relative size and importance in the environment in order to provide a sense of control or domination.

Superadjacencies are the juxtaposition of different elements or scales in close proximity. They can relate contrasting objects and allow multiple levels of meaning by presenting familiar elements in a new way or from an unexpected point of view. On the facade of the Suffolk County Courthouse, the wall plane is made up of pieces of pilaster, lintel, arch, window, and solid planes in a way that each is recognizable yet adds up to a totality which feels massive. Mannerist buildings such as Borromini's Palazzo di Propaganda Fide in Rome, are full of superadjacencies which allow us to envision inhabiting
any number of places. Buildings with superadjacencies are full of familiar fragments which can stimulate the recreation of the world in fantasy.

An incongruity may be the result of gross exaggeration or diminishing of scale in a strong context. An incongruous element both sets itself apart as a special place and provokes our interest by making us aware of the various scales operating and our relationship with them. When the incongruous element has the same formal characteristics as its neighbors, it is potentially humorous as well. The Government Center Subway Kiosk and the Harvard Lampoon are both humorous, incongruous buildings which draw on their
surroundings for their playfulness. In Great Adventure scalar incongruities are not as successful because there is so much scale manipulation occurring that no normal scale exists which one can refer to.

In public places, incongruities often take the form of domestic-scaled elements within the public framework. The Brattle Theater Alley is clearly a public way, but its intimate scale sets it apart from its context and exaggerates the difference between itself and its neighbors to create a wonderful world for the pedestrian. Similarly, the Quincy Markets in Boston use a series of large scale dimensions which constantly orient its patrons towards the sea. However in the South Market there is a narrow, four foot wide covered passageway which moves laterally through the building. It is a delightful, incongruous element that provides a welcome diversion in the overall order.

Perhaps the clearest form of scale manipulation in places of play is miniaturization of the environment. When the world around us is shrunk, we gain control over it and feel more powerful from our towering perspective. However, a diminutive place also heightens our sense of another world, where the neatness and security within is contrasted with the wildness and confusion without by a narrow margin. Surely the small scale of the Brattle Theater Alley contributes to its sense of oasis in the bustling world of Harvard Square just as doll
None of us ever entirely outgrows the love of the doll's house or, usually in a vicarious form, the love of squatting under the table.

John Summerson

houses provide an oasis for children where they can dictate what goes on. In adult play, the fascination with the miniature is extended into the small tents which we camp in, the aediculae which mark pulpits and thrones, four poster beds, and the booths in restaurants which offer enclosure and intimacy while dining. Inside the aedicula or the booth, the small scale of the space intensifies our experience of it and increases the perception of our actual size.

The flip side of increasing our sense of self through miniaturization is by using enlarged forms which we can associate with and thereby make us feel bigger. This is more difficult than miniaturization because a large form can be overwhelming and frightening if it is not familiar and inviting. In Las Vegas and Great Adventure the huge signs and attractions are playful partly because they make us feel large with their familiar symbols and enticing messages. Similarly, the gigantic pilasters and statues in the Piazza di Campidoglio in Rome initially
make the space seem smaller than it really is. As we come upon the space we feel quite large because we associate with its familiar elements. Another aspect of Piazza di Campidoglio's delight is that once we reach the Piazza we become a central figure in the space and can look back out over the city from whence we came. This quality of delight is related to another design parameter of play, creating the sense of theater.
In the theater, actors take on new identities and create a new world which revolves around them and in which the audience vicariously participates. Within the theater, the play becomes real during the performance, but when the play is completed, both the actors and the audience reassume their normal roles in the outside world. The theater is a form of conscious play which contains the essence of most play characteristics. It is interesting, therefore, that the physical qualities of a theatrical setting are an important component of places that afford play.

In play, people become central figures in their world; they shape and guide the course of events as actors do in a play. An environment which affords play, therefore, should reinforce the person's central role in his surroundings. Most of the places observed somehow focused inwards, onto the players themselves. This focus increased their central position in the play world, helped to delineate its bounds.

All the world's a stage
And all the men and women merely players.

William Shakespeare
As You Like It II, vii, 139
and increased their perceptual body image. Geoffrey Scott has distinguished between the actual, mechanical measurement of a building, its apparent or visual measurement, and its bodily measurement which is determined by how big a space makes one feel. When the player takes a central position in the world, he feels much bigger than when he is in a supporting role. When we are very close to a nearby wall, we perceive our body as having shrunk, while if we are oriented to an opening in a great space or a vista, we perceive our body as having expanded. For example, the Las Vegas strip is an environment composed of elements with large mechanical measurement. But, because they are
laid out along the axial path of the motorist, the motorist can also feel quite big in his central position. However, the Sears Tower is a large building whose bulk relegates people to the small canyons around its base. The pedestrians feel quite subservient to the corporate symbol which claims the main stage.

Another theatrical component of play which is quite common among adult play environments is the desire to see others and to be seen. Once someone has achieved his central position in the play world, he may enjoy surveying others from this vantage point and want them to notice him. The children's cries of 'look at me' as they scale the molecule labyrinth in the Brooklyn Children's Museum illustrate how we may amplify our play by sharing our pleasures and successes with others. In similar ways, the raised entrance to the Las Vegas dining room, the brightly lit elevators of the Hyatt, and the President's chair in the Great Hall of the Lampoon Building all say 'Look at me, I'm important in this world.'
There are two architectural devices which are repeatedly used to create the theatrical sense of seeing and being seen in play places. The first is the use of viewing platforms where people can survey their surroundings and be on stage at the same time. The romantic balconies on the Suffolk County Courthouse, the overlook from the Ibis' nest in the Lampoon Building, the elevators in the Hyatt, and the flat, accessible roof of the Government Center Subway Kiosk are all different types of viewing platforms.

Another device is to create a place where people can be on parade. A very theatrical parade can take on the sense of a procession, such as the ritual of pronouncing the guests' arrival at fancy balls. It is easy to envision such a parade of beautiful women and their escorts descending the Sweetheart Staircase at the Rosecliff mansion while the guests below act as spectators who watch their entrance. However, parading becomes less formal and more dynamic when the roles of the spectators and
paraders constantly change, as in the promenade steps of many folk dances. In the lobby of the Berlin Philharmonic Concert Hall, the grand staircase has been sliced up to become many smaller stairs. Along each stair, one gets a different perspective on the space and can both observe and participate in the passing parade. At Great Adventure benches are arranged so that when people along the main boulevard rest, they become the spectators. Then they can rejoin the parade whenever they wish. Thus, one can either enjoy the passing movement or contribute to it; be either the actor or the audience at any moment.
Our cognitive sense of the world is based upon a set of experiences, a knowledge that certain actions will result in certain outcomes, which form a series of expectations about what the environment affords. In play, we manipulate familiar objects and ideas and in the process discover new insights about them and about our relationship with them. We can attach new significance to these objects by using them in new and different ways. A play environment should be rich in familiar objects which take on new meaning and augment our expectations of their use. An environment of strange, foreign objects would probably not provide the requisite security that allows one to play. After all, play is not an exploration of uncharted territories, but an inquiry into the known from a different point of view.

Familiar objects can take on new meaning through miniaturization or enlargement as previously described. However, they can also be reinterpreted by serving new functions or taking on new positions in the world. Perhaps this is best
exemplified in the Brooklyn Children's Museum where the common artifacts of our world are used in new ways. A subway kiosk does not take us into a subway, but into a museum. The People Tube transforms a sewer tunnel into a main thoroughfare, thus confusing our common expectation of a major corridor with the image of a service entry. The museum's frenzied atmosphere is largely due to the fact that very few of its elements fulfill our normal expectations of them. Although it seems to sacrifice one's sense of control in exchange for maximizing the provocative aspects of the familiar, the way it reinterprets common objects is quite wonderful.

Another architectural device for reinterpreting the familiar is allowing people to see things from a new perspective. For example, the willow tree looks quite different when one is on the ground looking up into it. When Winnie-the-Pooh sees Christopher Robin's umbrella upside down he discovers that it can be used as a boat. Similarly, the turtle pond in the Boston Children's Museum allows one to watch the turtle swim from underneath; a view which is not normally possible. When we can move over, around, and through things in new ways they can provoke our interest and change the way we normally perceive them.
This discussion of some design parameters for architecture that affords play presents a wide array of options which a designer might incorporate into his approach for designing a particular place. However, how he uses them, and to what result, is quite like how a chef might use ingredients while practising his art. When a chef is confronted with a problem he uses a recipe to guide his solution. But the recipe's success is dependent not only upon using the right ingredients, but also in how and when they are used. The success of the meal is further dependent on the diners. The meal should be eaten at the proper temperature and in a sequence most pleasing to
the palate. But if the diners dally over drinks or are distraught, the chef's success will never be realized.

This brief analogy points up the fact that studying play behavior, observing where it may be occurring, and analysing the salient parameters which afford play may provide a wonderful recipe for creating places of play. But, like many a souffle, the results can flop if the ingredients are not carefully proportioned or do not satisfy the palates of the players. The design parameters and their related architectural devices which evolved out of the observations are three ingredients of places that afford play. Further investigation into what makes a good place to play could probably lead to other parameters and would define additional devices that can afford play. However, there is no doubt that by laboriously applying these and other parameters to a place, and architect could design quite a frightening environment. Although this discussion describes important aspects of making places for play, no set of design parameters alone could ever describe how to replicate that delight, that sense of 'only pretending' which is the essence of play. An environment which can afford play is little more than a darkened stage set until the players come out and respond to it with vitality and delight.
When a designer approaches a problem with the desire to instill a sense of play, he might start by considering such design parameters as these. However, he must also realize that our ability to play is related not only to our surroundings, but also to our emotional and physiological state. Therefore he must understand the mind-set of the people who will use the place. Then he should realize that these and other parameters of play are limited by their analyses.

In many ways, such an illusive, fragile entity as play can be easily destroyed by our zealous attempts to understand it. It is helpful to describe these parameters as ways of affording play, but any heavy-handed application of them could prove fatal to the goal of fostering play. If a designer approaches his problem in a playful way and tries to discern what type of play responses are most likely and appropriate for a certain set of conditions, he will be able to sprinkle in that essential dose of delight which eludes such analyses as this, but can make a place wonderful.
This chapter presents a brief design exploration that investigates how the parameters which evolved from an understanding of play behavior and the observations might be used by a designer. The purpose of the exploration is not to solve a particular architectural problem but to gain some understanding of how the concepts expressed in these parameters might be realized in physical form.

The design problem selected is the redesign of MIT's main corridor. This is an appropriate exploration for a number of reasons. The familiarity with the space and its users facilitates envisioning how play can occur in the corridor. The corridor also lends itself well to a study of possible design options and not necessarily to finding a single solution. It is possible to project design ideas onto certain portions of the corridor that would influence the rest of the corridor's character without actually designing its entire length.
This framework derives in large measure from the basic pattern of MIT's historic building system, with its roots in the 1916 Main Campus - linear, interconnected, disciplined, a sequence of highly practical work spaces, yet composed to reflect MIT's great intellectual idealism and social purpose.1

The Massachusetts Institute of Technology is one of the foremost centers of scientific inquiry and technological innovation in the world. The Institute trains people to pursue rational, logical thought to satisfactory ends. Although its main campus buildings are cloaked in neo-classic garb, the underlying physical organization of MIT reflects a large concern for a logical, straightforward organization of functional spaces. The original buildings are organized around a Great Court. They have uniform facades and are connected by an elaborate system of corridors. On either side of the corridors are large, high spaces that can serve virtually any function. Thus, the great strengths of MIT's organization are that the physical layout has the potential for tremendous flexibility over time and that one never needs to go outdoors in the unpredictable New England weather. The corridors are the common threads which hold the organization together. While the functions behind them can change frequently, the
dimensions and use of the corridors remains constant. As a result the corridors have a life of their own, their own sense of passage or place, quite independent of what is on either side of them.

BATHROOMS

A few guidelines for finding a bathroom quickly:

1. On the main corridor, lavatories are stacked vertically, men's above women's and vice versa. They normally occur at the junction of two buildings, for instance 3-101, which is a women's room.

2. In the other main buildings, a similar situation applies, with bathrooms occurring at the ends of buildings or just before (or after) a corner. Example: 1-101 is a men's room.

3. Check the corridors for water fountains. Where there is a fountain, a bathroom can't be far away.

_HowToGAMIT?_

There are aspects of MIT's organization where the rational ordering procedures which govern it are taken to their absurd and irrational extreme. For instance, the original buildings with their uniform facades and connected corridors are in fact one huge building. Nevertheless different sections are referred to by different numbers and the numbering system is generated by the symmetry of the plan rather than how people actually move through the building. The main entrance is Building 7 which leads directly into Building 3 before coming to Building 10. This clear, abstract rationality is utter nonsense to most people.
Although occasionally intriguing and delightful, M.I.T. deserves its label as a five story subway, a resurrected mausoleum, and multi-story basement. While stately and beautiful on its formal exterior, the interior feels old and ugly.

Robert S. Schwartz

The clarity of the corridor organization itself reaches the absurd in its sheer size. The original main corridor is over 600 feet long. It has been added on to continually until it is now 1750 feet long and takes about seven minutes to navigate. That is an incredible amount of time devoted to interior passage. As a result, the entire system suffers from being disorienting and confusing. It is so interconnected that a person loses his place in the system and can rarely tell where one building ends and the next begins. Although the corridors provide major opportunities for brief personal interactions, there are few informal spaces along them and almost no transition between the busy path and the functions along its sides. The extreme length of the corridors and their rather drab decor generally make passage an uneventful or even disquieting experience.

As is the case for much of MIT, the corridor system was designed from the inside out, with little thought given to the overall environment that has been created.
What type of play might the corridors of MIT afford? In order to get some idea, one must look at the players who inhabit them. MIT's population comes from all over the world but is rather homogeneous in some respects. It is primarily young adults in undergraduate or graduate studies, professors, researchers, and support staff. By and large they are quick, logical thinkers who love being challenged by a problem. There are more men than women and virtually no children or older people.

MIT play has an intensity and energy about it that often makes it seem quite like MIT work. Computer simulation games, Dungeons and Dragons, and other long, cerebral games are extremely popular. Parties are often less like congenial social
It's a good thing we only have eight terms at the Institute. We only have nine lives, you know.

EVERYTHING AT MIT IS NUMERICAL

Thursday 6

events than opportunities to release the pressures of overdue problem sets through wild drinking and dancing. Many students seem to thrive on being eccentric entities and enjoy a kind of love-hate relationship with MIT's peculiarities both as an institution and as a place. Much of the play consists of rather exclusive jokes about the highly technical coursework. There is an incredible jargon used to describe things which mimics the technical language of the classroom. As a group, MIT students fall somewhere between a private club and a bureaucracy; you need to know lots of buzz words to be a member. All buildings are numbers, all subjects are too, all organizations are anacronyms, and people 'punt', 'gnurd', 'tool', or 'cook with gas' on a regular basis. At some level, MIT students love self-effacing play that illuminates their plight as victims of a grueling scientific education. Their T-shirts proudly proclaim 'IHTFP', they raise money for charity by being UMOC (Ugliest Man on Campus), and each year the student body presents The Big Screw, a left-handed model.

IHTFP - 1. I Hate This #$%*@@ Place
2. It's Hard To Fondle Penguins
3. I Have Taken Freshman Physics

punt - To determine after analytical deliberation not to do something, said something often being academic in nature.

HowToGAMIT 7
to a deserving faculty member. Sometimes it appears that the more students proclaim their hate of MIT, the more fun they have loving it.

One of the most popular forms of play at MIT is called Institute Hacking. HowToGAMIT describes Institute Hacking as "...an attempt by students at MIT to understand the creature that has swallowed them." Institute Hacking consists of exploring the corridors, basements, tunnels, and rooftops of the campus in order to find obscure locations. The favorite hacking spots are to scale the Great Dome where one has a commanding view of the surroundings from the center of campus or to find small, leftover spaces within the huge labyrinth of the Institute. The most bizarre of these leftover spaces are sanctified as 'tombs of the unknown tool.' The original tomb is a tiny space, 22 feet high, located in a subbasement. It is full of graffetti and originally boasted an alter with an old, tattered calculus book. MIT living groups have their own hacking

Now, here, you see, it takes all the running you can do to keep in place. If you want to get somewhere, you must run at least twice as fast as that.

Lewis Carroll

Extra Credit - Define the universe. Give three examples.

Thursday 9
clubs which compete for finding ever more intimate, obscure places in the giant order of MIT or in achieving the dominance derived by scaling its domes.
Within play, we in some way suspend reality and create the sense of another world. In order to enhance this other worldly character, the main corridor should have an identity of its own which is clearly different from other corridors or places throughout MIT. The initial phase of design exploration, therefore, was to do three short sketch problems on a link of the corridor in Building 3 in order to explore possible identities, or themes, that would be appropriate ways to afford play in the corridor.
The programmatic objectives of this portion were quite simple:

1. Due to the high volume of traffic, a ten foot corridor width could not be violated.

2. Wherever the corridor expanded into adjacent office space, that space had to be accounted for in mezzanine levels.

3. The corridor is a primary conveyor of information at MIT. Therefore, there should be many places to display and post notices in a clear fashion.

4. The building and room number system should be made clearer.

5. Some transition zone between the corridor and bordering uses should be established to mediate between the private office uses and heavy corridor traffic.

6. The possibility for stepping out of the corridor stream for informal interactions should exist, although major places would probably occur at stairway nodes.

This exam is intended to be instructive. Consequently it is sometimes the case that part of the problem is to figure out what the problem is.

Directions for 6.034 exam
THEME A: MINI-CLASSICISM

MIT's formal exterior presents a unified, institutional image to both the surrounding community and the people who work or study at MIT. The elegant proportions and neo-classical detailing support an entablature upon which the greatest names of rational, western thought are inscribed. The names represent MIT's desire to connect itself in a rich continuum of scientific inquiry whose roots are much older than MIT's. In a way, these are famous alumni who had the misfortune to exist and excel before MIT was granting degrees.

The formal rigor of MIT's exterior sets up a strong and easily identifiable context, which provides the opportunity
for parody in the mini-classicism of theme A. Here, the gigantic three story pilasters are shrunk to fourteen feet, their spacing is cut in half, and the immense windows in the exterior become smaller windows, doors, or display places. The pilasters themselves become cork boards for posting announcements and bear nameplates which identify uses within. The entablature becomes an illuminated information strip which locates various offices and advertises upcoming events. It can be changed in order to pay homage to whatever namesake seems most appropriate to the student body at any time. The rhythm of the pilasters in the mini-classicist corridor marks off a person’s progression, while the office space which spans above marks the abstract location of this place, building 3, in the numerical hierarchy of MIT.

The mini-classicist corridor depends most heavily on its context and scale manipulation for its playfulness. It affords an intellectual play both suitable and appropriate for the inhabitants of MIT.
diagonal is reinforced in elevation by articulating the movement of the adjacent stairways in the corridor and by the exposed, twisted mechanical ducts. The ducts also serve to mark the entries to offices and act as information kiosks. A light walkway is hung along one side of the corridor that provides an alternative way of getting to spaces above the corridor and, further on, to the second floor. This walkway provides a diagonal relationship between parallel movement systems and supports the neon lighting which runs down the corridor.
It provides contrast through creating exterior facades indoors and shrinking the formal vocabulary of MIT so that a person feels much larger in relation to the institution. The use of the entablature as an information strip and the pilasters as notice boards is a way of reinterpreting these familiar forms in a use appropriate to the corridor. In some places, the area spanning the corridor could be a public area that connects to the corridor, providing a viewing platform that could enhance the theatrical quality of the passing parade down the corridor.
There is something very peculiar about MIT's function as promoter of technological and scientific advancement and its heavy, neo-classical garb. A place that is dedicated to furthering an understanding of how things work should not hide itself behind plaster walls. It should expose its inner workings and utilize light, efficient materials to support itself. MIT, of all places, should be high-tech.

The Lighter Side of Technology investigates how exposing the building's guts and using high-tech materials might afford play. A diagonal introduced in plan to set up a third direction which mediates between the 600 foot length and the 10 foot width of the corridor. The diagonal orients information so the pedestrian can view it better, creates entry places into the offices, can be used to form spaces off the corridor, and heightens the player's sense of speed as he moves down the corridor. The

"THE LIGHTER SIDE OF TECHNOLOGY"
The Lighter Side of Technology affords play by using light, high-tech surfaces which contrast with the heavy masonry of MIT. The mechanical ducts are used in new ways which allow people to move around and under them. In places, the dimension between the ducts and columns create tiny places to slip through or look into which manipulate the overriding scale of the corridor. The exposed stairways and hanging walkway help create theatrical relationships among the pedestrians in the corridor and those alongside and above it.
MAIN STREET NEIGHBORHOOD ANALYSIS
If MIT is a community of its own, then the main corridor could easily be considered Main Street. This thematic approach begins with an analysis of what Main Street should be like, according to a look at its bordering neighborhoods. The concept of the corridors as streets could expand well beyond the main corridor, with each section of MIT developing a different street character, depending on the uses of that neighborhood. However, for this study the section of interest falls between the City Gate and the Civic Center of Building 10. It is the logical place for a commercial strip complete with an arcaded sidewalk, small offices above, storefronts, and streetlights.

By making two-story facades along most of the corridor, the scale of the street is much smaller than the rest of MIT. The neutral treatment of the facades allows easy change over time while the signs, arcade, streetlights, and concrete walk provide a consistent vocabulary of street forms. The ceiling could be brightly lit for daytime and the streetlights used to cast an evening glow so the corridor's character could change throughout the day.
Main Street provides play opportunities through its juxtaposition of outside-inside. The outdoor elements are reduced in size so that the player is relatively large on the street. The arcade provides an alternative, more intimate way to navigate the corridor as well as a transition into the offices along one side. By treating the whole corridor as a two-story space, balconies can line the street, affording a theatrical relationship between the people in the street parade and those above.
COMMENTARY

Each of the three thematic approaches offer a variety of play opportunities within the corridor, but seem a bit timid in how they might afford play. The mini-classicist corridor seems like a wonderful parody, but probably lacks the strength to maintain that sense of play over the full 600 feet. The Lighter Side of Technology makes use of what already exists in the corridor, but could be infused with much more exotic artifacts such as visual projections, sweeping neon forms, or even holograms to capitalize on the sense of lightness and technical wunderbar. Main Street has the strongest overall concept; the neighborhood idea creates real differences along the corridor that would help orient people. In time the uses along the strip might even become small retail which the heavy pedestrian flow could surely support. However, at this point, the street forms are not particularly intriguing and rather like a shopping mall.
In the next phase of design, the Main Street idea is further developed. A conscious attempt was made to create much more of a fantasy world than the sketch problems generated, to push the limits of the corridor and the street, to use a freer interpretation and juxtaposition of street forms. In the following phase, the need to simply pass through the corridor is not so highly stressed in order to explore more risky or provocative design options. After developing the street to a strength and playfulness of its own, later design development could modify the street to provide a balance of control and to accommodate the corridor's traffic volume.
This design exploration is based on the idea that the regular order of MIT is so strong that it alone provides an adequate level of control. The street forms can therefore be greatly exaggerated or bizarre without destroying the overriding framework. This 'no constraint' approach led to a design that is based on the same ideas as Theme C, but contains a more eclectic assortment of street forms. These become incongruous elements that afford both active and fantasy play in the corridor. A manhole that connects to the basement occurs right in the midst of shop display cases, drinking fountains become fire hydrants, the columns become telephone poles with informative 'laundry' banners hanging from the wires, and a huge billboard announces the reason for all this folly. Storefronts and displays violate the corridor width in some places. However, the corridor expands around them in the direction of the Great Court to accommodate the stream of pedestrians and reorient them to the river. Giant neon arrows coming from the second floor signal this corridor shift. The large stair node provides a wider choice of movement than most stairs afford. Normal treads move up around an open well while a narrow set of two-at-a-time steps provide a faster way up or down for the MIT students on the run. Of course, the fire pole is even quicker.
The City Center, located in Lobby 10, is quite different than the commercial strip. It is the most central place at MIT; the geographical center of the campus, the symmetrical center of the original buildings, and the place where MIT formally addresses the Charles River. Currently, the stream of pedestrian traffic cuts off one edge of the space, leaving a narrow strip of underutilized area along the outside wall.

In this portion of the design exploration, the strip is deflected to run alongside Lobby 10 so the City Center can be utilized as one complete volume. The peddlers, snack bar, and restaurant line the main pedestrian way which is now closer to the elevators and existing Gallery. Lobby 10 is transformed into a series of places to relax and eat lunch which overlook a central area suitable for informal theater. Much of the classical detailing of the Lobby remains, while new infusions of heavy masonry and light metal balconies contrast with the existing order.
Getting an education at MIT is like trying to drink from a fire hose.

HowToGAMIT

The City Center affords play through the theatrical arrangement of its viewing platforms and the central stage area which marks the center of MIT. There are many ways to move to and from the various platforms. The ladders, labyrinths, and small stairways all recall the spaces that Institute Hackers love. Within the formal order of Lobby 10, familiar elements can be seen in new ways. One classical column is replaced by a steel I-beam; several columns are removed, leaving a base and capital where a person can stand and support MIT; and a fire hydrant is raised to the position of being a sculptural civic fountain.
LONGITUDINAL SECTION
The design exploration of the corridor and the City Center went as far as the thesis deadline allowed. Some of the ideas explored are fantastically unrealistic, but others are simple modifications to the existing spaces that could provide more play opportunities in MIT's corridors. With more time and further design resolution, it might be possible to get some of the most fanciful ideas to happen in a realistic way.
Hundreds of years have passed since Vitruvius described architecture's essential components in terms of stability, commodity, and delight, but they are still primary ingredients that make up the places we enjoy. As a student of architecture and engineering, I have had an education that is heavy on the stability and commodity but rather light on the delight. If what is built is any indication, most architects seem to have had the same bias in their education. We live in a world of tight budgets, complex programs, and difficult time schedules. But we also live in a world where people still laugh and play and dream. We should celebrate our imperfections and intuitions as well as our rationality and achievements. Our buildings are not machines for various functions but places where we can act and interact and which have meanings that transcend a particular use.

This thesis has no conclusion. It is really a beginning investigation of how we can have environments which are not only stable and commodious, but delightful as well. Some partial answers have evolved out of the question, 'What makes a good place to play?' but many more questions have emerged. However, these questions will have to wait for another time and place because the thesis bell has rung, summer is here, and I must go out and play.
CHAPTER ONE


CHAPTER TWO


7. Millar, p. 15.


12. Ibid., p. 110.


15. Wilson, p. 165.


CHAPTER THREE


3. Ibid., p. 48.


7. Ibid.


10. Ibid., p. 76.


15. Venturi, Scott Brown, and Izenour, p. 35.

17. "Coney Island ... its Architecture is the Stuff that People's Dreams are Made Of," Architectural Forum, August 1947, p. 84.

18. Ibid.


20. Ibid., p. 35.


22. Ibid., p. 76.


CHAPTER FOUR


3. Ibid.


5. Ibid., p. 42.
CHAPTER FIVE


6. Ibid., p. 10.


8. Ibid., p. 185.

9. Ibid., p. 38.

10. Ibid., n.p.

Architecture, March 15, 1910, pp. 50-51.


"Coney Island ... its Architecture is the Stuff that People's Dreams are Made Of." *Architectural Forum*, August 1947, pp. 82-87.


Greenacre, Phyllis, M.D. "Play in Relation to Creative Imagination." (Adapted from Sophia Mirviss Memorial Lecture, San Francisco, CA, March 2, 1959.)


