CITIES & MEMORY
INTROSPECTIVE DESIGN OF AN URBAN AMERICAN WATERFRONT

-The cause & effect relation of feeling and memory in a procession of environments.

INTROSPECTIVE- Pertaining to or given to introspection. The observation and analysis of one's own mental processes and emotional states.

DESIGN- To plan conceive. To form or make plans, schemes, etc. in the mind; conceive; invent. The arrangement and coordination of the parts or details of any object, by means of which the whole achieves a certain effect or impression, or produces a certain result. A visual pattern or composition.

Investigated in the design of an urban waterfront of the Georgetown district in Washington D.C. by Mark D. Vollmar

Completed August 11, 1985 at the College of Architecture and Planning, Ball State University.

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DEDICATED TO MY PARENTS
The site chosen consists of lots 818, 819 and 822 of square 1184 Washington D. C. Located on the southeast corner of 34th and 'M' streets NW. This is at the intersection of Key bridge and the Georgetown district. Georgetown, which was designated a historic district in 1967, grew mostly during the 18th & 19th centuries. Its waterfront (everything south of 'M' street to the Potomac), was originally a seaport and the reason for the town's early growth. The Georgetown Waterfront officially includes everything from M street to the water. Until 1973 zoning prohibited residential use in the area, citizens have fought new commercial development, hoping to obtain building-height reductions in order to maintain a low, residential quality typical of Georgetown, and seen in many places along the waterfront, such as along the C & O Canal.

Therefore I believe there is a need to strengthen the visual and physical access to the waterfront starting at this historic node and working its way toward the monument and memorial edge of the District of Columbia. The site chosen can be viewed or approached from many different viewpoints (i.e., Key bridge, Georgetown business district, and the District of Columbia), and is inundated with overlapping layers of active pedestrian circulation. For this reason of maximum interface with the pedestrian and vehicular traffic, both on a visual and physical basis, this site is prime for a "activity" oriented development. A development containing a series of environments unlike any other, allowing both mental and physical play in the truest meaning.
BEYOND SIX RIVERS AND THREE MOUNTAIN
RIDGES RISES ZORIA, ACITY THAT NO
ONE, HAVING SEEN IT, CAN FORGET. NOT
BECAUSE, LIKE OTHER MEMORABLE
CITIES, IT LEAVES AN UNUSUAL IMAGE
IN YOUR RECOLLECTIONS, ZORIA HAS THE
QUALITY OF PREVAILING IN YOUR MEMORY
POINT BY POINT, IN ITS SUCCESSION OF
STREETS, OF HOUSES ALONG THE STREETS,
AND OF DOORS AND WINDOWS IN THE
HOUSES. THOUGH NOTHING IN THEM POSSES
ES A SPECIAL BEAUTY OR RARITY,
ZORIA'S SECRET LIES IN THE WAY
YOUR EYES FALL OVER PATTERNS
FOLLOWING ONE ANOTHER AS IN A
MUSICAL SCORE, WHERE NOT A NOTE CAN
BE ALTERED OR DISPLACED, THE MAN
WHO KNOWS BY HEART HOW ZORIA IS
MADE, IF HE IS UNABLE TO SLEEP AT
NIGHT, CAN IMAGINE HIMSELF WALKING
ALONG THE STREETS AND HE REMEMBERS
THE ORDER IN WHICH THE COFFEE CUPS
FOLLOW THE BARBER'S SHAVED ANIMALS,
THEN THE FOUNTAIN WITH THE NINE TETS.

THE ALPAMENOS GLASS TOWER, THE HELLEN
VENUS'S KNOCK, THE STONE OF THE HERMIT
AND THE LION, THE TURKISH BATH, THE CAFE
AT THE CORNER, THE ALLEY THAT LEADS
TO THE HARBOR. THIS CITY WHICH CANNOT
BE EXPULSED FROM THE MIND IS LIKE AN
ARMATURE, A HONEYCOMB IN WHOSE CELLS
EACH OF US CAN PLACE THE THINGS HE
WANTS TO REMEMBER: NAMES OF FAMOUS
MEN, VIRTUES, NUMBERS, VEGETABLE AND
MINERAL CLASSIFICATIONS, DATES OF BATTLES,
CONSTELLATIONS, PARTS OF SPEECH.

BETWEEN EACH IDEA AND EACH POINT
OF THE ITINERARY AN AFFINITY OR A
CONTRAST CAN BE ESTABLISHED, SERVING
AS AN IMMEDIATE AID TO MEMORY. SO
THE WORLDS MOST LEARNED MEN ARE THOSE
WHO HAVE MEMORIZED ZORIA. BUT IN
VAIN! I SET OUT TO VISIT THE CITY
FORCED TO REMAIN MUTELESS AND
ALWAYS THE SAME, IN ORDER TO BE
MORE EASILY REMEMBERED. ZORIA HAS
LAPSED INTO DISAPPEARANCE, DISAPPEARED,
THE EARTH HAS FORGOTTEN HER.

- ITALO CALVINO
"Vision is not only useful but it evokes our memories and experiences, those responsive emotions inside us which have the power to disturb the mind when aroused."  --- GORDON CULLEN
If one were to take Italo Calvino's poem "Cities and Memory" and say, Is there a Zora in my recollection? It is very likely that there is such a space or place embedded in your memory bit by bit, event by event, frame after frame; each having individual connotations and associations with the built environment or imagined environment that created its memory. Then what are the physical elements of these environments and why are they remembered? This leads to the basis of this study, a study in which the elements and connotations that make up Italo's Zora are not the focus, but the fact that these relationships in literary form work on the imagination of the "self," leaving one searching for his Zora is the justification for this study.

How does one go about utilizing this esoteric information? In reality it is hard to conceive any application of this concept. But if one were to break up the perceptual principles utilized in this literary journey a new and intuitive design approach could be evolved! Since it appears that memory is the key issue to this approach, it is my intent to investigate the use of one's associations, (possibly my own, even though it would be bias), and recollections as a design tool. I am intuitively assuming that memory is very closely associated with human emotion. In order to further break down this term it is going to be assumed emotion is directly associated to the "feelings" evoked by the physical elements constructed by the experience in question. This leads us to the crux of this thesis, "the cause & effect relationship between our inner felt feelings and the environments that evoke them. Therefore, the following chapter will first define the term "experience" and then set a format of perceptual principles that attempt to explain the connection between experience and emotion."
A key term in this thesis is "experience." What is the nature of experience and of the experiential perspective? Experience is a conventional term for the various "modes" through which a person knows and constructs a reality. These modes range from the more direct and passive senses of smell, taste, and touch, to the active visual perception and the indirect mode of symbiosis. Experience is directed to the external world. Seeing and thinking reach out beyond the self, hence for feeling is more ambiguous. As Paul Ricoeur put it, "Feeling is . . . without doubt intentional: it is a feeling of 'something'--the lovable, the hateful, [for instance]. But it is a very strange intentionality which on the one hand designates qualities felt on things, on persons, on the world, and on the other hand manifests and reveals the way in which the self is inwardly affected."¹

Experience thus implies the ability to learn; it means acting on the given and creating out of the given. "The given cannot be known in itself. What can be known is reality that is a construct of experience, a creation of feeling and thought."²

"Experience is compounded of feeling and thought. Human feeling is not a succession of discrete sensations; rather memory and anticipation are able to wield sensory impacts into a shifting stream of experience so that we may seek of a life of feeling as we do of a life of thought. It is a common tendency to regard feeling and thought as opposed, the one registering subjective states, the other reporting on objective reality. In fact, they lie near the two ends of an experiential continuum, and both are ways of knowing."

"What sensory organs and experiences enable human beings to have their strong feeling for space and for spatial qualities? Answer: kinesthesias, sight, and touch. Movements such as the simple ability to kick one's legs and stretch one's arms are basic to the awareness of space. Space is experienced directly as having room in which to move. Moreover, by shifting from one place to another, a person acquires a sense of direction. Forward, backward, and sideways are experientially differentiated, that is, known consciously in the act of motion. Space assumes a rough coordinate frame centered on the mobile and purposive self."³

Taste, smell, skin sensitivity, and hearing cannot individually (nor perhaps even together) make us aware of a spacious external world inhabited by objects. In combination with the "spatializing" faculties of sight and touch, however, these essentially non-distancing senses greatly enrich our apprehension of the world's spatial and geometrical character. Taste abels some flavors "sharp," others "flat." The meaning of these geometrical terms is enhanced by their metaphorical use in the realm of taste. Odor is capable of suggesting mass and volume. Some odors, like musk or tuberosa, are "heavy," whereas others are "delicate," "thin," or "light."
In order to evoke emotions, intuitions or intellectual thought in architecture one has to search for ideas and concepts first; in other words, one has to find a theme or an ordering principle. To derive a series of characteristics with which to design, a creative, "intuitive" investigation must take place.

If architecture is not capable of describing or representing objects of nature, scenarious or events, it is capable of enhancing, immortalising, and acting as an irreplaceable element in relation to all cognitive human action. In other words, it is able to perform as more than a back drop and shelter for our daily activities, it can perform as a determinant of movement as well as emotion. To express emotions, intuitions, or intellectual thought in architecture one has to be able to appeal to the senses; even the sixth, intuition! (i.e., something one just knows or remembers for some illusive reason, such as repetition, intelect, chance, common sense, etc...). It is this sense which is the collective guide of the other five senses, (i.e., sight, smell, sound, touch, and hearing).
In this thesis much will be said about feeling—a response, conscious or unconscious, that culminates in awareness, altered sentiments, and affected emotional states and dispositions. In an image feelings can be symbolized by the artist. We can all recognize expressions of gaiety, sadness, or awe in images. An artist can stimulate a controlled range of feelings by his use of shapes, colors, and other elements to which particular feelings have been attached. However, most of our harmonized experience on which feeling is based remains unused unless there is a stimulus of interest, a disposition of visual cues and contexts that is out of the ordinary.

"An artist needs both imagination and a knowledge of feelings to create symbols suitable to his medium that will call up the feeling he is trying to express. We need to keep in mind, however, that in an art image we are witness to a created symbol of feeling, and not necessarily the artist's own experience of feeling."

"Feelings that stem from our response to an image do so through a kind of mental short-hand, a processing of previously developed integrations of experience qualified by our attitudes and beliefs. While feelings are often of obscure origin, they are nonetheless a product of the mind. By our analysis of specific feelings and of their connections with images, we become aware of the record and the possible scope of our mental life."

"Remembering is not re-exitation of innumerable, fixed, lifeless and fragmentary traces. It is an imaginative reconstruction, or construction, built out of the relation of our attitude towards a whole active mass of organized past reaction or experience, and to a little outstanding detail which commonly appears in image . . . form. It is thus hardly ever really exact, even in the most rudimentary cases of rote-recapitulation, and it is not at all important that it should be so."

Sir Frederick Bartlett, *Remembering*

Intimate experiences, whether of people or of things, are difficult to make public. Apt words are elusive; pictures and diagrams seldom seem adequate. Music can evoke certain feelings, but it lacks denotative precision. Facts and events are readily told: we have no problem saying that we went to Crater Lake on a Sunday, with the children and two dogs, in a station wagon, and that it was a cold day. We know what to admire: the lake. We can point to it and take a picture so that it stays with us as a permanent and public record of what has happened. But the quality of the place and of our particular encounter are not thus captured: that must include what we see out of the corner of our eye and the sensation of the almost frigid sunlight behind us.

If the intent of this thesis is to ultimately utilize the intuitive sense, (i.e., feeling) as a design tool, a cohesive attempt must be made to develop a notation system as a means of reference.
Philip Thiel states: that all spatial experience combines the plastic, visual experience which may range from the philosophical (such as Italo Calvino's Cities & Memory) to the practicle (such as finding your way about the city). It is a practicle necessity for all of us, from the the dullest to the deepest, to see, or to find, the meanings in our sensed world: to "read" the world so that we may respond to it. In reality, all perceptual experience is concerned with the problem of orientation: the relation of the self to the total environment; the purposes of survival and growth in the broadest as well as the narrowest sense. To exclude the component of meaning from a space—sequence notation would thus render it almost useless for human purposes. 

Meaning is conveyed to us through the agency of signs and symbols: signs indicating the past, present or future existence of a thing, event or condition; and symbols as vehicles for the conception of things.

The factors conditioning an experience of space are several. With regard to the observer, they may be grouped into the two categories of the external and the internal. The former includes the path chosen, and the direction and rate of travel along it; and the field of vision as well as its possible restrictions. The internal conditioners are the observer's age, preoccupations, culture (or value system), and familiarity or previous experience with the space.
Our movement through the environment is also purposive, what we attend to depends on our motivations. Philip Thiel has noted two extremes in the way people attend to the environment. At one end of the scale is the level of attention characteristic of the tourist and, at the other end, a level characteristic of the "habitue".12

Movement can relate to either procession or progression, procession in the sense of a sequence from one space to another and progression in the sense of one element to another (i.e., articulation of elements on the facade of a building).

Physical movement in an abstract form can be viewed as a continual series of connectors, with each connector having its own identity, feeling and form.

"Lynche's imageable classes: the node--points of intensive focus which people may come to, enter or leave--is interpreted three-dimensionally as archetypal house, or symbolic cave; the path--or channel of movement--is interpreted as archetypal road, or symbolic river of life; the edge or boundary--which breaks or contains the continuity of experience forms--the archetypal wall, or the symbolic horizon; the district--domain or area with a recognizable character, organization, or texture--becomes the archetypal plain, symbolic of natural earth; finally, landmarks or points of reference external to the mountains. Thus Lynch's empirically supported distinctions are seen in the archetypal forms which have been manifested throughout the history of architecture and symbolic forms and which rest deep in man's psychic and mythical history."13
"In what ways, then, can architecture be meaningful? What theoretical understanding of meaning should an architect have to set the stage for accurate predictions? I would maintain that there are two essential categories of meaning of which the architect should be aware. The first might be classified as representational meaning, the second as responsive meaning. In representational meaning the architectural environment is known, in that it, and anything to which it refers, is represented in the human organism as a percept, concept, idea, or whatever. We "see" the rectangular object, "recognize" it to be a door, "feel", the coolness of the bronze knob, and so on. The second or responsive meaning, consists of internal responses to the already internal representations. These responses might be affective, evaluative, or prescriptive in nature: "tinglings" in our spine, "feelings" of disgust or contempt, "thoughts" about the value of represented environment, or "ideas" concerning what should be done about it."

Throughout this study it has become evident that a major factor of emotion evoking space is the intensity & type of contrast or juxtaposition that is utilized. Using this as a thumb rule almost any feeling could be obtained from the sensational to the delicate. Simple nuances in texture, style, color & enclosure can be used to create emotion over a period of time or intense incongruencies can be utilized to create instant emotion. For instance, a cobblestone road will evoke a slight sense of adventure due to the difficulty of walking on it, but if one were to realize all of a sudden that the path they had chosen got them totally disoriented without them knowing it a much more intense feeling of adventure would take place. It all boils down to realizations, realizations and emergences and how fast they are made & whether they are directed toward the intuitive sense, (which is the collective guide of all the others), or one of the other five senses, which command an almost instant response in most cases. Intuition is acquired and for that reason is hard to analyze, but it is consistent and for that reason I believe it to be a good source of ordering knowledge. It is also evident that objects acquire significance from there relationship to levels as well as there relationship to one another. In either instance by comparison or contrast both relationships will give off different sets of information to the viewer. One could give a sense of scale by comparison of similar forms while the other one implies enclosure even when there is none, by associating points in space. Framed views and recession planes also play a large role in the manipulation of emotion, one gives a sense of depth, which suggests journey while the other creates relationships that are often but not always inspiring. Obstruction is the most common tool used to evoke intrigue, for it seems one always wants to see what is on the other side of whatever is
blocking their view or vantage point, because they have been teased with just parts of the story. Therefore it appears that one could use principals such as these with the aid of intuition. It is this phenomenon which is worth dissecting and taking full advantage of, for I believe it to be a yet untapped avenue in the design of our built environment. Although I do make decisions with this sense every day, I dont know why and I often cannot repeat my actions when I try, for it is an illusive sense to totally control with consistency.

This brings us to the driving force behind this thesis: to increase the burden of awareness via an acceptable mode of notation, stressing the feeling evoked by any given environment. For the purposes of this study the portrayal of an emotion is going to be attempted by the use of perspective eye level views of a procession of environments; keyed into a plan to show the point of orientation, direction and view area in question. The views will then be simplified to a point of portrayal by gesture in order to emphasise the active spatial relationships. These gesture drawings will then be coupled with a verbal description inspired by the writings of simonds, cullen, bacon and lynch.
Flame: Reactions to position of the body in the environment. Here and there, in it or out of it.
1. Termination of linear thrust implied by intricate hillside, juxtaposed against direct feeling of emptiness due to total exposure (i.e., simple contrasting complex).

2. Realization of overlapping paths & circulation, a feeling of curiosity is evoked due to implied or hidden space behind building in foreground and vegetation in background. This is due to the omission and projection of partial elements within the field of view. "That which is not is"
Angularity intersecting organic fabric, this juxtaposition creates a feeling of intrigue due to the many planes of activity. It also gives a good feeling of motion due to its linear incline & decline.

Gives a feeling of advantage due to possibility of overview from above.
5) Feeling of softness given by dome of vegetation, as if one is entering an organism vs. grand vistas down 'N' street which is linear and crisp. Either you interface with the organism or you use it as an edge.

6) Emerging view via gradual descent; ever changing points in space revolving around island tower (i.e., boat masts), creates a feeling of anticipation of the unfolding of a mystery.
7. Feeling of deflection evoked by the expectation of what is around the corner; this is due to the linear thrust of the bridge into dense vegetation.

8. As one passes or approaches this puncture he is involved in a continual orientation, disorientation and reorientation to a different set of relationships. Due to the juxtaposition of the here (wall) with the there (overpass) a feeling of stimulation and excitement is aroused.
3) Nature contrasted against tower and wall, this space gives a feeling of containment, which in turn connotes safety. (i.e., a buffer from that which you came.)

4) Varied recession planes evoke a feeling of intrigue due to intersecting shafts of overpass acting as a filter between the observer and his destination. (island)
11. Feeling of serenity due to casual overhang of the vegetation. Motion is implied by the mild arc of the canal and by the many reference points in the distance; creating a state of relaxation and content.

12. Point of dispersion/indication, with several recession planes; gives a feeling of adventure due to ruff terrain & possibility of surprise.
11 Projection of stair gives sense of escape from the emptiness of the endless horizon.

25 Strong directionality intersected by perpendicular linear plane creating a secondary recession plane from the implied destination, given sense of impending closure and entrapment.
Revelation/expectation of what is beyond, due to the gateway effect, giving a feeling of satisfaction by being able to anticipate emergence.

(I.e., the space is revealing itself).

Divergence of path gives feeling of uncertainty due to the constriction of choice and pressure as the path narrows on the pedestrian.
Converging recession planes contrast intersecting hills and grade changes, the resulting distant vistas create a sense of journey, from plateau to plateau, giving one a feeling of exploration/risk.

Feeling of anticipation of the unknown but eminent evokes a feeling of excitement and wonder. Great expectations build as you gradually ascend which is enforcement of the advantage/reward attitude.
Contrast of hard edges with pastoral view in distance within a monolithic framework invokes a dramatic feeling of awe.

Complacent, safe, serene, as this view changes with the seasons so will the feelings that it commands.
Interplay of horizontal curvilinear thrust with verticality (trees) and decline of grade invokes a welcome or invitation to proceed in a haphazard manner of mingling with the elements.

Point of divergence as well as departure, a feeling of reward is achieved for reaching a new vantage point.
Emerging view, termination of pathway at the visual intersection of two opposite forms (i.e., mass vs. neg., mass vs. horiz. vs. vert.), creates a transitional feeling from one of constriction to freedom.

Enforces the bizarre and unusual type of feeling one of uncertainty but intrigue, this is achieved omission and incongruous thought from the norm.
Intricacy of the hill juxtaposed against the simplicity of the river creates intrigue in the portals of the overpass and that which weaves through and out of them.
"The process of manipulation has begun to turn the blind facts into a taut emotional situation." – Cullen
SPATIAL ASSAULTS:
- depth
- light to dark
- far to near
- high to low
- open to closed
INTROSPECTIVE ISLAND & BRIDGE

* Meant to promote individual mental contemplation of one's past, present and future, in an ideal sense.

* To do this two different types of enclosure are utilized to direct certain views of Washington D.C. and the surrounding area (i.e., monumental, historic, picturesque, intriguing etc.). The first stresses either the vertical or horizontal plane, the second manipulates various combinations of total enclosure (i.e., groundplane, overhead and surround,) with penetration and level change.

* Island activity is directed toward those who wish to explore and experience a continual orientation, disorientation and reorientation to a new set of relationships, both physical and implied.

PAVILION & COLONADE

* Utilized for perimeter observation of complex and as the main nodal/congregation point for the northeast quadrant of the site. The colonade serves as a directional element to the amphitheater & media tower and as a buffer/implied boundary to the rest of the complex.
MARKET AREA
* Versatile spaces capable of containing a large amount of pedestrian activity throughout the riverfront/overpass intersection. Market activity is assumed to be sporadic and everchanging with respect given to the market vendor/pedestrian balance.

AMPHITHEATER
* Utilized for viewing of movie screen on the island as well as performances within the seating arena, it is also used as a transient space for the marina traffic.

MEDIA TOWERS
* Used as a spatial determinant, both physical (ie., points in space), and implied. There purpose is to aid as a mood adjustor and catalyst in spatial function, with respect given to physical mass, whether implied or acted upon. They are versatile structures for projection of varied light sources & images (ie., sound, high intensity focal beams, lasers, celluloid images, etc.).

CORNER PARK
* Due to the high amount of cafe/deli activity in the Georgetown area there is a need for a secluded area oriented away from the street due to the high amount of vehicular traffic. It is meant to be used moderately as a stage for the "people" (ie., street talent, public oratory, assembly etc.), ultimately to be used in all seasons for different specific events and for that reason of change becoming a memorable space of activity & interface.

MARINA/Docking AREA
* Meant to be used mainly by transient boaters as a docking area and access route to the waterfront/boardwalk and amphitheater.

All structures within the complex are meant to be used on a casual basis at all times to accommodate different rhythms in pedestrian activity (ie.,night, morning and day people), with respect given to special events and celebrations. The total environment is geared toward "experience" and for that reason needs to be allowed maximum interface with the pedestrian, whether he is on his way there or just bumps into it.
Footprinting has been used as a means of analysis in this study of the Georgetown area. The purpose of footprinting is to be able to break down a given space into its critical components. Therefore, elements of a particular space, independent of type, function or use, can be broken down into its physical attributes. In order to emphasise the element desired simplification has been stressed to clearly communicate its relevance to the context from which it was taken. This format becomes useful when examining basic similarities and differences in the built environment. This method has been applied to this design in an attempt to isolate physical relationships that may otherwise be overlooked or not readily identified. Due to the nature of the site this solution will inevitably be heavily based on site and contextual responses and relationships.
The site chosen consists of lots 818, 819 and 822 of square 1184 WASHINGTON D. C. Located on the southeast corner of 34th and 'M' streets NW. This is at the intersection of Key bridge and the Georgetown district.

Georgetown, which was designated a historic district in 1967, grew mostly during the 18th & 19th centuries. It's waterfront (everything south of 'M' street to the Potomic), was originally a seaport and the reason for the town's early growth.

After the war, more affluent people began to move to "the hill" (the bulk of Georgetown, which is now everything north of 'M' street), and began restoring the houses. In the late 40's and 50's, the elevated Whitehurst freeway was erected over 'K' street across the town's entire waterfront, and the Chesapeake & Ohio railroad canal. The Georgetown waterfront in Washington D.C. officially includes everything from M street to the water. Until 1973, zoning prohibited residential use in the area, which was mainly an industrial slum. Over the years, citizens have fought new development, hoping to maintain building height reductions in order to maintain a low, residential quality typical of Georgetown. Therefore I believe there is a need to strengthen the visual and physical access to the waterfront starting at this historic node and working its way toward the monument and memorial edge of the District of Columbia. The site chosen can be viewed or approached from many different viewpoints (i.e., Key bridge, Georgetown business district, and the District of Columbia).
Island gives sense of survival due to the inert connotations of sanctuary and retreat it evokes as well as the stone for its lasting qualities and bluntness. The wall supports a feeling of vigor and movement as its arms reach for space. The towers imply points in space creating tension and feeling of tension between these similar forms as point reaches to point across void creating implied boundaries as well as a sense of scale due to the frame of reference they set up as like elements.

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10' Vinyl
Bank Path
Jet Stream
Boat Dock
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Footprinting has been used as a means of analysis in this study of the Georgetown area. The purpose of footprinting is to be able to break down a given space into its critical components. Therefore, elements of a particular space, independent of type, function or use, can be broken down into its physical attributes. In order to emphasise the element desired simplification has been stressed to clearly communicate its relevance to the context from which it was taken. This format becomes useful when examining basic similarities and differences in the built environment. This method has been applied to this design in an attempt to isolate physical relationships that may otherwise be overlooked or not readily identified. Due to the nature of the site this solution will inevitably be heavily based on site and contextual responses and relationships.
The site chosen consists of lots 818, 819 and 822 of square 1184 WASHINGTON D. C. Located on the southeast corner of 34th and 'M' streets NW. This is at the intersection of Key bridge and the Georgetown district. Georgetown, which was designated a historic district in 1967, grew mostly during the 18th & 19th centuries. It's waterfront (everything south of 'M' street to the Potomac), was originally a seaport and the reason for the town's early growth.

After the war, more affluent people began to move to "the hill" (the bulk of Georgetown, which is now everything north of 'M' street), and began restoring the houses. In the late 40's and 50's, the elevated Whitehurst freeway was erected over 'K' street across the town's entire waterfront, and the Chesapeake & Ohio railroad canal. The Georgetown waterfront in Washington D.C. officially includes everything from M street to the water. Until 1973, zoning prohibited residential use in the area, which was mainly an industrial slum. Over the years, citizens have fought new development, hoping to maintain building height reductions in order to maintain a low, residential quality typical of Georgetown. Therefore I believe there is a need to strengthen the visual and physical access to the waterfront starting at this historic node and working its way toward the monument and memorial edge of the District of Columbia. The site chosen can be viewed or approached from many different viewpoints (i.e., Key bridge, Georgetown business district, and the District of Columbia).
SITE AND LOCATION
**LAYERING**
- Realization of overlapping paths of movement at different rates and means which will affect and be affected.
- Linear thrusts in many directions w/series of relationships created at each intersection.

**HISTORIC TO MASS**
- Edges not to be destroyed

**FOOTPRINTS**

**POINT/COUNTERPOINT**
- Key bridge and overpass skewed with 'M' street and orthogonal grid of Georgetown.
ENTRANCE
- Site accessible in several ways
  - Canal
  - River
  - "H" street & Key bridge
- Entry is often obscure from secondary routes

REPETITIVE TO UNIQUE
- Rhythm of overpass creates unique spaces as it intersects steep grade of hill.

CIRCULATION
- Overlapping levels of street and path
  - Canal
  - Bridge
  - River
  - Key bridge
- Circulation route well articulated

NATURAL LIGHT
- Overpass creates most imposing shadow.

SPACE DEFINITION
- Spaces generally of three kinds.
  - Major spaces tend to be defined by circulation routes
  - Intimate spaces created by interface of waters edge and path
  - Semi-enclosed spaces created by repetition of overpasses structure

MASSING
- Overpasses create heavy sense of implied boundary and directionality.
A monument is... 

A monument is a structure erected to commemorate a significant event or person. It serves as a reminder of past achievements and can be a symbol of national pride. Monuments are often made of durable materials like stone or metal to last for centuries.

...to commemorate five

The purpose of a monument is to honor and remember important events or individuals. It is a way to preserve the memory of those who have made significant contributions to society. Monuments can be found in public spaces, parks, or historical sites.

...the key

Understanding the significance of a monument can help one appreciate its historical and cultural value. It is important to respect the intentions behind its creation and the stories it represents.

...a key

A monument is not just a physical structure; it is a key to understanding the past and the values of the community that created it. Studying monuments can provide insights into the history and culture of a place.

...the key to learning

Interpreting a monument requires knowledge and research. The key to unlocking the stories behind a monument lies in the details found in its design, materials, and location.

Exploration is the key.

To truly appreciate a monument, one must engage in exploration. This involves visiting the site, reading about its history, and understanding the context in which it was created.

...to learning

The key to learning about a monument is...
A movement to change the physical point (called tactics)

A movement to the unexpected or maintaining our deaths

Low intensity of plants to any glance, what breaks you, context

Our perceptions of...

- Aesthetics, harmony, patriotism, continuity, social development, ephemera, and so on...
- Our social life are created by our settings, not buildings, rather than buildings themselves
- Perceptions, feeling, and emotions are not ephemeral
- Our capital is very non-ended concepts for urban design

- How to celebrate and cope with a modern history (i.e., a
- should it be pure to admit no bias
- should it blend in with environment
- should it be realistic
- should it be literal
- should it be surreal
- should it be sensational
- should it be decadent or opulent
- should it's proven change or the time of day or type of building 
  interior change
- should it be subtle, concise - demonstrating a skill and its treatment of complex concepts while being a clean 
  and beautiful form exterior

- education toward our

- future

- our time learning on how such complex (ex. light, force, billions, etc.)

- council structure for celebration and education must be set in a setting of allowing interaction and creating the American way

- Education - that of America

- Thomas y. Alexander

- Democracy of patriotism

- Place for stating emotions

- economic current news

- some support for this, e.g.

- editor, drain if not required

- unimportant way to not let any

- government for moment not make it worthless so it is easy to understand

- Size

- Maximum what exists in

- Internet - levels of interface

- City, town, canal, bridge, 

- frame, highway, elevated,

- physical to virtual - intellectual

- structures & objects

- allow to celebrate form

- with in as well as she.

- levels of interface could form

- organizational charts, lists

- concept: points, edges, context, rules of

- architecture

- liquidity is important - just as it

- cost to perfectly clean it might

- as well be literary interpretation

- topics at stimulus shapes within

2 Architectural record, March 1975.


14 Yi-Tuan. *Space & Place*.

15 WASHINGTON D.C. department of transportation, planning department.
CITIES & MEMORY

The following is a compilation of notes, quotes and poems in the spirit of this thesis.

EXPERIENCE
ENVIRONMENTAL PERCEPTION
ARCHITECTURE AS A LEARNING DEVICE
ARCHITECTURE AS SELF
MEMORY / COGNITION
MEANING OF ENVIRONMENT
DESIGN CRITERIA / PHYSICAL
SITE CRITERIA
RESEARCH ADDENDUM
It is impossible to discuss experiential space without introducing the objects and places that define space. An infant's space expands and becomes better articulated as he recognizes and reaches out to more objects and places. Space is transformed into place as it acquires definition and meaning.

Intimate experiences lie buried in our innermost being so that not only do we lack the words to give them form but often we are not even aware of them. When, for some reason, they flash to the surface of our consciousness they evoke a poignancy that the more deliberative acts—the actively sought experiences—cannot match. Intimate experiences are hard to express. A mere smile or touch may signal our consciousness of an important occasion. Insofar as these gestures can be observed they are public. They are also fleeting, however, and their meaning eludes confident interpretation that they cannot provide the basis for group planning and action. They lack the firmness and objectivity of words and pictures.

Intimate experiences, whether of people or of things, are difficult to make public. Art words are elusive; pictures and diagrams seldom seem adequate. Music can evoke certain feelings, but it lacks denotative precision. Facts and events are readily told; we have no problem saying that we went to Crater Lake on a Sunday, with the children and two dogs, in a station wagon, and that it was a cold day. We know what to admire: the lake. We can point to it and take a picture so that it stays with us as a permanent and public record of what has happened. But the quality of the place and of our particular encounter are not thus captured: that must include what we see out of the corner of our eye and the sensation of the almost frigid sunlight behind us.

Intimate experiences are difficult but not impossible to express. They may be personal and deeply felt, but they are not necessarily solipsistic or eccentric. Hearth, shelter, home or home base are intimate places to human beings everywhere.

Although there is far more to experience than those elements we choose to attend to, the images of place that do get sampled either by literary or artistic means are evoked by the imagination of the perceiver. Due to this tool, experiences that would have otherwise faded beyond recall are shared. "Here is a seeming paradox: thought creates distance and destroys the immediacy of direct experience, yet it is by thoughtful reflection that the elusive moments of the past draw near to us in present reality and gain a measure of permanence."
Space behavior is directed toward satisfying needs, the motivational aspects of behavior must be understood as a fundamental concept in designing for human behavior. Motivation, like so many other complex variables, has many definitions. In essence, it is the process of arousing action, sustaining activity in progress, and regulating the pattern of that activity.

An individual's personality is what makes him psychologically unique and colors the way he looks at the world, the way he thinks about it, and the way he behaves.

The perception of our visual world is a dynamic process involving the consumption of time. The spaces, surfaces, objects, events and their meanings which are associated in such varied combinations to constitute both our natural and man-made landscapes cannot be seen simultaneously, but must be experienced in some temporal sequence. From one space we move to another, and then on to the next: subway car, station platform, escalator shaft, station lobby, square, bus shelter, bus, avenue, street, building lobby, elevator, corridor, ante-room, office. Each space exists in a sequence-context. Architecture may well be "frozen music," like a phonograph record; but man is the pick-up whose movement realizes the experience.

Besides proportion, which (along with size) is a quantitative aspect of spaces and volumes, there is the matter of form-quality. The following quotation from Pevsner will admirably serve as an introduction here:

"Wherever we look, we find configurations that are either to be understood as patterns of order, of closure, of a tendency toward a centre, cohesion and balance, or as patterns of mobility, freedom, change or opening. We recognize them in every visible pattern; we become aware of their existence as patterns of our motivations, feelings, states of mind."

"It is a common occurrence to experience several spaces simultaneously. One example would be that of a primary Space suggested by a furniture grouping, a secondary Volume defined by the walls, floor and ceiling of a lobby, and possibly visually related through a glazed area to a tertiary Space suggested by the presence of garden walls and vegetation. A second example is the experience of driving in a car—(primary Volume) through a street (secondary Space) of a town located in a mountain valley (tertiary Space). These spaces of first, second and third degree are ranged in order of increasing size, and thus bring us to a consideration of this characteristic of space."
Our representations may excite us, please us, bore us, sicken us, or do a myriad of other such things. Our feelings and emotions are thus brought into play. We see a building of unknown use and purpose, but whose formal properties simply delight us. The building has just the right combination of lines, colors, textures. Or in walking through a city, we come around a corner and see a combination of shapes, shades, and shadows which takes our breath away. We are affected by the forms themselves. "On the other hand, we may stand before an exceedingly handsome but apparently heavy carved door and be thrilled by the ease with which it opens. We are affected by the use of the form. Or we may sit in a chair whose form has excited us considerably and be angered by its lack of comfort. Indeed, it is often the discrepancies between representation and actuality which affect us most. The same can be said of purpose and value; we see a magnificent columned building and discover that it is a dime store, and are both disappointed and annoyed."

Such a sequential acquisition accords with our understanding of cognitive development as proceeding from organic activity to symbolic thought, from concrete to abstract, from fused to differentiated, and from immediate change to functional flexibility with stability over time. These correspondences may be simply characterized by the mapping of this ontogenesis of cognitive development onto Lynch's elements.

The key attribute in any definition of "environment" is that "environments surround." It is important to consider that man is both the center of his environment and an integral part of the environment; therefore, an individual affects and is affected by his environment.

"Psychological processes play a functional role in enabling man to adjust to or achieve mastery over his environment. Three processes--perception, cognition, and spatial behavior--are particularly important in understanding man's behavior in the environment. Perception is the process of obtaining or receiving input; cognition is the throughput function involving the processes of thinking, remembering, and feeling, and spatial behavior denotes the output manifested in an organism's actions and responses. Other processes--motivation, affect, and development--modify the way in which we perceive, think about, and behave in the environment."
To a considerable extent a beholder intends out certain sense cues and their schemata in order to concentrate on others. Thus the mind may filter out the particulars of shape to concentrate on the utilitarian connotations of an object. But the important point about shape is, as Whitehead pointed out, that geometric forms can express far more than geometric truths. A curved path, a sphere may be seen as swelling or compact, and a sharp angle may appear to pierce or move. Throughout history artists have, unconsciously or otherwise, produced precisely defined feeling in their works by using just those geometric cues that evoke the desired response. A tenth-century Hindu sculptor, for example, used bold but gentle outlines to project feelings of rigidity, sensuality, and otherworldly into sculptured bodies. In forming round, swelling limbs they ignored the skeletal and muscular structure of the body in an attempt to express the world view that all things are permeated by a current of being—a weightless mind stuff (vakshma). The rounded, flowing, swelling shape supply frames of reference within which appropriate experience may be matched to the image.

It is clear that particular sensory cues, such as proportions of shapes, are meaningful to us because they call up concepts and feelings derived from our own life experiences. The particular experiences to which the cues refer often lie beyond our powers of recollection, but these experiences are built up codes of meaning upon which our daily experience is quite dependent.

An individual's preference for one environment over another introduces the problem of the measurement of preference and meaning for the architect. In his paper, Robert Hershberger, Associate Professor of Architecture at Arizona State University, discusses meaning in architecture and introduces a tool by which affective responses to environmental scenes may be systematically identified and so aid an architect to understand his client's preferences. Both Clare Cooper and Robert Hershberger focus on overall feelings and their manifestations rather than on the actual content, structure, or process of cognition.

These issues of mental content and function become manifest when one attempts to recall or express knowledge of previously experienced environments. The study of symbolic coding, memory, and thinking relative to the environment has been increasing rapidly since Kevin Lynch published The Image of the City in 1960.
A concern for the mental representations of the environment must lead to questions regarding how such images are acquired and how this learning might be influenced through the design of the environment.

A good example of how architecture can educate and manipulate people's awareness and conception of reality is from the domain of the illuminated interior. An early success was Hadrian's Pantheon. Its interior attained a sublime simplicity. The Pantheon consisted essentially of a cylindrical drum topped by a large hemispherical dome; sunlight streaming through the central oculus swept the building's stark hollow space. From Roman times the role of light in defining interior space continued to expand. With the Gothic cathedral light and space combined to produce effects of mystical beauty. The light-flooded interiors of Baroque churches and halls were further efforts to explore the possibilities of a major and enduring concept of space.

"In sketches of architectural development like these, we trace the growth of the human capacity to feel, see, and think. Woolly feelings and ideas are clarified in the presence of objective images. Perhaps people do not fully apprehend the meaning of "calm" unless they have seen the proportion of a Greek temple against the blue sky, or of "robust, vital energy" without Baroque façades, or even of vastness without a huge edifice. But, we may well ask, doesn't nature provoke even more powerful images? What gives a better sense of calm than the sea at rest, or of exuberant energy than the primeval forest or vastness than the endless sweep of the plains?"

"Architectural space reveals and instructs. How does it instruct? In the Middle Ages a great cathedral instructs on several levels. There is the direct appeal to the senses, to feeling and the subconscious mind. The building's centrality and commanding presence are immediately registered. Here is mass—the weight of stone and of authority—and yet the towers soar. These are not self-conscious and retrospective interpretations; they are the response of the body. Inside the cathedral there is the level of explicit teaching. Pictures in the stained-glass windows are texts expounding the lessons of the Bible to illiterate worshippers. There are the countless signs pointing to Christian doctrine, practice, and mystery: holy water, flickering candle light, statues of saints, confessional, pulpit, altar, and cross are exles. To some of
the signs the worshipers respond with a more or less automatic act, such as kneeling. Other signs elicit specific ideas. The cross suggests offering, atonement, and salvation. Finally the cathedral as a whole and in its details is a symbol of paradise. The symbol, to the medieval mind, is more than a code for feelings and ideas that can readily be put into words. The symbol is direct and does not require linguistic mediation. An object becomes a symbol when its own nature is so clear and so profoundly exposed that while being fully itself it gives knowledge of something greater beyond. Imagine a man of the Middle Ages who goes into a cathedral to worship and meditate. He is reverent and has some learning; he knows about God and heaven. Heaven is that which towers over him, has great splendor, and is suffused in divine light. These are, however, only words. In an ordinary setting, when he tries to envisage paradise by the power of his own imagination his success is likely to be modest. But in the cathedral his imagination need not soar unaided. The beauty of space and light that he can perceive enable him to apprehend effortlessly another and far greater glory.
If we start to consider the messages from the unconscious made manifest through dreams, we have even more striking evidence of the house-as-self symbol. Carl Jung in his autobiography describes quite vividly a dream of himself as house, and his explorations within it.

It was in a house I did not know, which had two storeys. It was 'my house.' I found myself in the upper storey, where there was a kind of salon furnished with fine old pieces in rococo style. On the walls hung a number of precious old paintings. I wondered that this should be my house, and thought 'Not bad.' But then it occurred to me that I did not know what the lower floor looked like. Descending the stairs, I reached the ground floor. There everything was much older, and I realized that this part of the house must date from about the fifteenth or sixteenth century. The furnishings were medieval: the floors were of red brick. Everywhere it was rather dark. I went from one room to another thinking, 'Now I really must explore the whole house.' I came upon a heavy door and opened it. Beyond it, I discovered a stone stairway that led down into the cellar. Descending again, I found myself in a beautifully vaulted room which looked exceedingly ancient. Examining the walls, I discovered layers of brick among the ordinary stone blocks, and chips of brick in the mortar. As soon as I saw this I knew that the walls dated from Roman times. My interest by now was intense. I looked more closely at the floor. It was on stone slabs, and I disintegrated. Then I awoke."

Jung's own interpretation of the dream was as follows:

"It was plain to me that the house represented a kind of image of the psyche—that is to say, of my then state of consciousness, with its unconscious additions. Consciousness was represented by the salon. It had inherited atmosphere, in spite of its antiquated style."

Jung describes here the house with many levels even at the symbol-of-self with its many levels of consciousness; the descent downward into lesser known realms of the unconscious is represented by the ground floor, cellar and vault beneath it. The final descent leads to a cave cut into bedrock, a part of the house rooted in the very earth itself. This seems very clearly to be a symbol of the collective unconscious, part of the self-house and yet, too, part of the universal bedrock of humanity.
"When I look at the large green iron gate from my window it takes on the air of a prison gate. An goose feeling, since I know I can leave the place whenever I want to, and since I know that human beings place upon an object, or a person, this responsibility of being the obstacle when the obstacle lies always within one's self.

In spite of this knowledge, I often stand at the window staring at the large closed iron gate, as if hoping to obtain from this contemplation a reflection of my inner obstacles to a full, open life... But the little gate, with its overhanging ivy like disordered hair over a running child's forehead, has a sleepy and sultry air, an air of being always half open.

I chose the house for many reasons.

Because it seemed to have sprouted out of the earth like a tree, so deeply grooved was it within the old garden. It had no cellar and the rooms rested right on the ground. Below the rug, I felt, was the earth. I could take root here, feel at one with house and garden, take nourishment from them like the plants."

Arthur Koestler, The Art of Creation

The mind's ability to perceive the differences and similarities between a given perceptual act and a variety of past experiences permits visual cues to produce a complex branching reaction.

"Man's need to understand the world and his experience in it symbolically as well as realistically may be noted early in the lives of many children. The symbolic imaginative view of the world is just as organic a part of the child's life as the view transmitted by the sense organs. It represents a natural and spontaneous striving which adds to man's biological bond a parallel and equivalent psychic bond, thus enriching life by another dimension-and it is eminently this dimension that makes man what he is. It is the root of all creative activity."
Arthur Koestler discusses the dismantled nature of stored experience and the manner in which sensory input is received. "The sensory input is screened, dismantled, reassembled, analyzed, interpreted, and stored along a variety of channels belonging to different hierarchies with different criteria of relevance. A tune can be stored stripped of timbre, and vice versa. The deperticularization of experience in the process of memory-formation is compensated to some extent by the multiplicity of abstractive hierarchies which participate in the process, and by the retention of 'picture-strips'--vivid fragments of emotive or symbolic significance." It is when we feel an awareness of change that we become most conscious of our experience.

Images offer us unique opportunities to become aware of the ingredients, the complexities, and the changes in our concepts so that we can reflect upon their significance. With the stabilization of specific sense data in an image we can ask questions about the origins and relevancies of concepts and feelings that are associated with the data.

"The image serves two purposes in human culture. First, it articulates our own life of feeling so that we become conscious of its intricate and subtle fabric... Second, it shows that the basic forms of feeling are common to most people. At least within a culture, often far beyond it."

Susanne K. Langer, Mind: An Essay on Human Feeling
In our pursuit of an object by gesture, we always involve more than some one isolated quality or dimension, the large or small size of the thing, the hourglass shape of a woman, the sharpness or indistinctness of an outline. By the very nature of the medium of gesture, the representation is highly abstract. What matters for our purpose is, how common, how satisfying and useful this sort of visual description is, nevertheless. 

Rudolf Arnheim, Visual Thinking

There are two ways of escaping our more or less automatized routines of thinking and behaving. The first, of course, is the plunge into dreaming or dream-like states, when the codes of rational thinking are suspended. The other way is signalled by the spontaneous flash of insight which shows a familiar situation or event in a new light, and elicits a new response to it.

Arthur Koestler, The Act of Creation

In order to be meaningful, sense cues must be embedded in a context that we can recognize from our shared experience. A clue is that we are focusing on, while the context is that influences our interpretation of a cue.

Consider plausible meanings for a color, yet such a particular shade of yellow in certain emotional contexts suggests sunlight, joy, and refreshing lemons; similar shades in different contexts suggest sickness or cowardice.

How do we describe "familiarity," that quality of "at home"ness we feel toward a person or place? What kinds of intimate places can be planned, and what cannot—at least no more than we can plan for deeply human encounters? Are
Memory is intended as a tool for the description, communication, and analysis of the relationship between the environment and thought and as the basis for an operational language for use in design.

The environment suggests distinctions and relations and the observer—without great adaptability and in light of his own purposes—selects, organizes and endows with meaning what he sees. The image so developed now limits and emphasizes what is seen, while the image itself is being tested against the filtered perceptual input in a constant interacting process.

The characteristics of a physical object which result in the formation of a strong image in any observer have been identified through field reconnaissance and interviews of people in Boston, Los Angeles, and Jersey City. Lynch's analysis of the data from this study led him to identify five types of elements which people form into an image of the city. These are "nodes," points or intensive foci which people may come to, enter, and leave; "paths," or channels of movement; "edges," or boundaries which break or contain the continuity of form; "districts," domains or areas which have recognizable identity, character, or form; and "landmarks," or points of reference which are external to the observer and are singled out for purposes of identification, structuring, or orientation.

"We 'read' the meaning of iron bars or open gates, of stone or glass, and understand a man by being in his home because architecture presents itself not only as settings for behavior of a physical object to perceive but also as a manifestation of what we think. Symbolic meaning has always been transmitted through the physical form of architecture."

"It will be apparent that a single particular goal may serve, in more than one category of meaning. The sound of a locomotive whistle, for example, may denote the presence of an edge, indicate the use of a space, recall an association with the space, operate as an element to determine the character of an area, and cause one to reflect on the wider implications of time, space and movement."
The particular interest is the recent work of Herbert A. Simon and his colleagues. In their concept of a model of cognition, inputs from the peripheral sensing and encoding (perceptual) mechanisms compete with internally generated information for temporary storage in a short-lived and very small immediate memory. This small-capacity, short-term memory functions to regulate or buffer the sensory input to a second an larger system called an acquisition memory. This intermediate system provides the discrimination and familiarization functions used to build representations of the information supplied by the immediate memory. The intermediate memory also supports the recognition, discrimination, and conceptualization functions of thought for up to a few hours, and may be viewed as the working memory of current thought. A third-level component, a permanent memory, which is essentially unlimited in size, constitutes the long-term repository for the images produced by the intermediate memory.

This three-level computational model of the mind can closely simulate human cognitive performance. For example, at the level of the intermediate memory, stimulus encodings are serially scanned for differences under the control of an attention-focusing strategy. Other strategies function to assemble cue tokens into images and to reference other images in the net, doing so in a manner just adequate for successful performance. Images, even subnets assembled in this way, in the intermediate memory, are transferred on a low-priority basis to the permanent memory and reprocessed there to consolidate them into a useful and relevant form—a very slow procedure that may take days.

"The simulation of such things as spatial knowledge, metaphorical thinking, imagination, and the permutations of individual models of environmental preference, in addition to creative form generation and problem-solving communication, are potentially productive areas of research."

There are a great many symbolic tools such as mathematical logic, style, and methods of designing which can assist the individual in his management of both conscious and unconscious thought. While verbal language is the most important, the ability to think visually and to make conscious use of environmental imagery to help structure memory has always characterized thought. For example, when books were rare and orators were forced to train their memories, mnemonic techniques based on environmental imagery were developed to assist them. We

have a description of this process from Quintillian:

"In order to form a series of places in memory, a building is to be remembered, as spacious and varied as possible...not omitting statues and other ornaments with which the rooms are decorated. The images by which the speech is to be remembered are then placed in imagination on the places which have been memorized in the building. This is done as soon as the memory of the facts require to be revived, all these places are visited in turn and the various deposits demand of their custodians..."

Thus the training memory in Quintillian's time relied on an image of an environment, subordinate images within it, and some idea of the path.
"The past is hidden somewhere outside the realm, beyond the reach of intellect, in some material object (in the sensation which that material object will give us) which we do not suspect."

Marcel Proust, Swann's Way

"Remembering is not re-execution of innumerable, fixed, lifeless and fragmentary traces. It is an imaginative reconstruction, or construction, built out of the relation of our attitude towards a whole active mass of organized past reaction or experience, and to a little outstanding detail which commonly appears in image...form. It is thus hardly ever really exact, even in the most rudimentary cases of note-recapitulation, and it is not at all important that it should be so."

Sir Frederick Bartlett, Remembering

One value of an image is that its sense data can be arranged to bring about an awareness of experiences from other times and other places. Most of us are familiar with the way a sound, an odor, or some visual "incident" can produce vivid and often pleasant feelings without our conscious knowledge of where or in what circumstances we have experienced it before. Proust felt that the revealed feelings could be used to recover the events that had fostered them. Sixty years later Proust's ideas were corroborated by the experiments of the Canadian neurosurgeon Wilder Penfield, who found that the mind records past events in detail, including feelings associated with these events. This memory record continues intact even after a subject's ability to recall it disappears.

The belief that meanings associated with a particular object can be made to recur in a new environment forms the basis of an approach to the design of images that will be developed in this thesis. A key to this approach is the recognition that an image encompasses a multiplicity of discernible sense cues, each capable of calling forth a multiplicity of stored experiences. The mind processes the sense cues attached to a present image by referring to the qualities of shapes, colors, timbres, odors, textures, and other sense data that are already stored in the mind. Meanings and feelings that are referenced to these data are among the stored experiences that may be called forth by the image.
Content: the fabric of towns

color, texture, scale, style, character, personality and uniqueness.

"With a commonly accepted framework --- one that produces lucidity and not anarchy --- we can manipulate the nuances of scale and style, of texture and color and of character and individuality, juxtaposing them in order to create collective benefits. In fact the environment thus resolves itself into not conformity but the interplay of this and that." — Cullen
Relationships of planes
- How can they be treated (i.e., texture, ornament)
- How can they be punctured (i.e., neg to void)
- How material can be manipulated (i.e., translucence, water, light)
- How variations in form affect movement (i.e., sinuosity vs. angularity)
- Interface of horizontal to vertical
- Interface with points in space (i.e., sculptures in plaza)

Ordering ideas of planes
- Symmetry, Balance
- Point, Counterpoint
- Grid, Geometry
- Hierarchy
- Layering

According to Edmond Bacon in order to understand the significance of paths along which city dwellers move, three concepts must be considered:

* Relation of Mass to Space - The recognition of space as a dominating force.

* Centrality of Experience - Due to the nature and form through which the movement occurs a continuity of experience will be achieved.

* Simultaneous Continuities - Realization of overlapping paths of movement at different rates and means which will affect and be affected.

* Design in Depth - Gives sense of movement as well as scale by comparison of similar forms.

* Ascent and Decent - The use of varying levels for emphasis of movement.

* Convexity and Concavity - The interplay of two forms, the negative and positive massing of spaces (i.e., the space between two curved planes).

* Relationship to Man - Dealing with the human scale and how man interacts with built environment.

DELOS - Linear thrusts in many directions
- Visual connectors via architectural interior looking (i.e., buildings which reach out in space to one another)
- Rhythms in foreground are repeated in background.
What we need is a way of understanding the forces which cut through this intellectual difficulty and get closer to the empirical core.

To do this, we must rely on feelings more than intellect.

For although the system of forces in a situation is very hard to define analytically, it is possible to tell, in a holistic way, whether the forces in a situation are in harmony or not. In places like Chinatown and Sausalito, which are vivid with their own life because they are a little separate from the nearby communities, we feel good. We feel good because we can feel, in our bones, the lack of inhibition, the spontaneous growth, which follows its own course in these communities, because they are uninhibited by pressure from surrounding communities which have a different way of life.

By contrast, hypotheses made from thought, without feeling, lack empirical reality entirely.

We see then, that there is a fundamental inner connection between the balance of a system of forces and our feelings.
When you first see a pattern, you will be able to tell almost at once, by intuition whether it makes you feel good or not; whether you want to live in a world which has that pattern in it, because it helps you to feel more alive.

"We can always ask ourselves just how a situation makes us feel, and we can always ask the same of someone else.

"It is not the same at all as asking someone his opinion.

"It is also not the same as asking for a person's taste.

"And it is also not the same as asking what a person thinks of an idea.

"It simply asks for feelings, and for nothing else.

"And if I take a group of people to a variety of places which have modular wall panels in them, and compare these places with places where walls are built up from brick, and plaster, wood, paper, stone... almost none of them will say that the modular panels make them feel better, so long as I insist that I only want to know how they feel. Again, 95 percent agreement.
The effective use of light has been the traditional hallmark of an aesthetic experience in architecture. Yet there is little understanding of the use of natural light or artificial lighting to enhance the human experience of architecture. Architects need to be concerned with design objectives and concepts of implementation. Different settings require different design goals. Three types of research offer insights to the architect human engineering, psychological correlates and global responses to the environment. In drawing on this research, it must be noted that lighting requirements are not static although architects often design for them as if they are, and (3) questions of control, personalization, and choice are very important.\(^1\)

D. Geoffrey Hayward

For example, the quantity and quality of light available in any setting lends structure to our experience and has a strong effect on human emotions, communication, and behavior. Also, it is significant that the effective use of light has been the traditional hallmark of an aesthetic experience in architecture:

"Imagine the surprise and animation experienced when a sunbeam shining through the stained glass window in a cathedral wander[s] slowly through the twilit of a nave and suddenly hits the altar piece. What a stimulus for the spectators."\(^1\)

It is extremely difficult, then, to anticipate design requirements from a set of experiences which cannot be expressed, which are not usually felt, and for which we cannot state our explicit needs and preferences.

The research on psychological correlates focuses more on human values, associations, and learned relationships to light and color effects. Correlates usually have limited applicability outside the boundaries of particular societies, regions, age groups, or settings for which they are formulated, and they are related to trends in fashion and aesthetics.

Investigations of psychological correlates of different types and degrees of illumination are considerably less numerous than studies of color. These are not, of course, independent. One study noted differential responses, including anxiety, arousal, subjective temperature perception, and degree of comfort, to red, white, and blue light. Others have produced lists of psychological responses to different colors. A list of such responses for red and blue is given in Table 1.

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Table 1
Psychological Responses to Color

<table>
<thead>
<tr>
<th>Color</th>
<th>Psychological Response</th>
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<tbody>
<tr>
<td>Red</td>
<td>exciting, stimulating, defiant, contrary, hostile, hot, passionate, active, fierce, intense, happy, sometimes irritating</td>
</tr>
<tr>
<td>Blue</td>
<td>calm, peaceful, soothing, tender, secure, comfortable, melancholic, contemplative, subdued, sad, dignified, restful</td>
</tr>
</tbody>
</table>
There are many "laws" for designing successful color schemes—for example, "complementsaries are often used together as a balance of opposites." It has even been suggested that complementary colors have not only a visual effect but also have an effect on activity. For example, "red may be suited to produce the emotional background out of which ideas and action will emerge; in green these ideas will be developed and the ideas executed."

The changing color, direction, and quality of daylight can be used to good advantage for introducing variety. However, that is not to say that one merely adds windows, thereby creating novel effects. There needs to be some consideration given to the direction of light that one wants to admit, the surfaces upon which the daylight will be incident, the materials through which it will be transmitted or reflected, the variation in intensity, sparkle, and the existence of shadows.
One sees the hardness and brittleness of glass, and when, with a tinkling sound, it breaks, this sound is conveyed by the visible glass. One sees, one feels, the hardness of a plane blade, the coarseness of shavings. The form of objects is not their geometrical shape. It stands in a certain relation to their specific nature and appeals to all our other senses as well. "Synaesthetic" perception is the rule, and we are unaware of it only because scientific knowledge shifts the center of gravity of experience, so that we have unlearned how to see, hear, and, generally speaking, feel.

Maurice Merleau-Ponty, *Phenomenology of Perception*

When we think of texture we often think of the grain, or weave, of an object's surface and the kind of tactile sensation it produces. Another important aspect of texture is its contribution to our awareness of the substance and structure of an object. When we speak of the "character" of a particular piece of stone, wood, or plastic, we are usually considering substance and structure. In forming our notion of the character of the object we use the data of grain, weave, or other dimensional interest of the surface, for many objects—such as stones and pieces of wood—through their textures give evidence of the nature of the substances that compose them and of the forces that produced them. Considered in this way, texture is a manifestation of the process by which an object is formed and not simply an arbitrary effect or a mere sense impression.
• MAP OF GEORGETOWN DISTRICT
  AND SURROUNDING D.C. AREA

• EXISTING HISTORICAL ELEVATIONS ON SITE

• CONTEXTUAL STUDIES / SKETCHES
ZONING & FLOOR AREA SYNOPSIS

SQUARE 1184 LOTS 818, 819, 822

Lot size: 109.30' x 100.00' 10,930 sq.ft.

Zoning: W-2

Height limit: 60'

F.A.R.: 4.0; Non-Residential - 2.0 Maximum

Coverage: No limit for non-residential 75% for residential

Rear yards: 3" per foot of vertical rise measured from center line of alley, beginning at residential plane. 12' minimum.

Side yards: None required.
If provided, 8' minimum.

Parking:
Retail: 1 per 750 G.F.A.
Residential: 1 per dwelling or 1 per 4 multiple dwellings

Loading:
Retail: 5,000 - 10,000: 1
10,000 - 50,000: 2
Commercial: 20,000 - 50,000: 1

Allowable bulk: 4.0 x 10,930 = 43,720 sq.ft.
Maximum 21,860 sq.ft. non-residential

F.A.R. G.F.A.:
Cellar 0
Basement 1,000
First 2,912
Mezzanine 670
Second 2,409
Third 1,469
TOTAL 8,460
My ultimate goal in architecture is to have the ability to design a total environment, having taken into account all aspects of architecture from philosophical overtones to the hinges on the front door, then after the fact, find out what I can do to make it even better. This goal is idealized but it gives the sentiment I feel towards architecture, that of always learning and being able to improve on any isolated item; thus improving the total outcome of any construct. The bottom line is that architecture is the study of man and materials and both are ever changing, both with an infinite number of variables; thus yielding an almost inconceivably infinite number of interactions between the two. Although as complex as these variables are, I believe that one of thir organizing factors is how man learns and perceives. Even though perception is not totally understood and in its own right could be more complex than architecture itself, it is the one constant that can help modify and direct tyhe many variaqbles we face in the study of environmental design.

Therefore I intend to isolate a series of interactions between man and environment with the intent of arriving at a series of conclusions with which to design. I will take major conceptual areas of architecture and show valid correlations between the built environment and the user, specifically the correlation between sequence and memory. "The reorganization of our visual habits so that we perceive not isolated "things" in "space", but structure, order and the relatedness of events in space-time, is perhaps the most profound kind of revolution possible — a revolution that is long overdue not only in art, but in all our experience." S.I. Hayakawa

In order to achieve a cohesive plan of attack as well as analysis I plan limit my experimentation to the 34th and "M" street site of Georgetown, due to the fact that it will serve as a good cross section of this waterfront area. I intend to focus my research on the site chosen and utilize it for a series of case studies dealing with the many aspects of procession and memory. Possible interactions for these case studies may include such areas as repetitive to unique, canopy vs. no canopy or the relation between a generator and magnet. The culmination of these case studies will terminate in a total environment on the site directly modified by their outcome.

The first step in achieving this goal will be the systematic breakdown of procession and memory into areas that can be compared and researched, then these areas will be investigated through case studies.