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Bayou Mile

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Rice University, 1993
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BAYOU MILE

by

JOHN S. EASTERLING

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE MASTER OF ARCHITECTURE

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ABSTRACT

Bayou Mile

by

John S. Easterling

This architectural design thesis contends that meaning is found not in historical typologies and static conceptions of architectural form but in the specifics of the proposed architecture’s conditions--in its precise regional cultural territory and from the particular landscape of which it is a part [Houston]. Such an approach is typically labeled Critical Regionalist as defined by architectural theorist Kenneth Frampton. *This thesis proposes to extend Frampton’s definition of Critical Regionalism by offering an architecture which is informed by the natural systems and processes, the geomorphology, and the phenomenology of the regional landscape.* The project focuses on the bayou system, the Houston landscape’s most significant and salient natural feature. The ideas derived from the bayous, along with the cultural, historical and formal content of the site are transformed into the architectural proposal from its overall massing; to its spatial configuration; and to the tactility of its smallest detail.
ACKNOWLEDGEMENTS

I wish to thank, first and foremost, my wife Kathy Poole for her unwavering love and support. Kathy's willingness to critique my ideas and design decisions was instrumental in sharpening my focus and maintaining momentum throughout the project. I am also deeply indebted to Eduardo (Lalo) Robles for his direction during the research semester and his constant attention to detail throughout the design semester. The breadth of issues which he suggested that I study informed not only design decisions but piqued my interest in the works of architects, artists and other designers which offered valuable insights into issues outside of the regional architectural ones which I set out to investigate. Lalo always seemed to be able to draw in related issues from sources outside my own culture which suggested more approaches to developing meaningful architecture. Thank you.
TABLE OF CONTENTS

I. INTRODUCTION 1
   A. Intentions
   B. Thesis

II. METHODOLOGY 2
    A. Research Phase
    B. Architecture Proposal

III. PRODUCTS 4
     A. Architecture Proposal
     B. Thesis Text Document

IV. CRITICAL REGIONALISM 4
    A. Synopsis of Theory Proposed by Kenneth Frampton
    B. Articulation of Primary Tenets
       1. Resistance to the "Big Idea"
       2. Dialogue with the Site
       3. Architecture as a Tectonic Fact
       4. Emphasis on the Tactile
       5. Local Vernacular and Universal References
       6. Rootedness in the "Here" and "Now"
    C. Critique
V. PRINCIPLES OF THE BAYOU
   A. Development of "Events"
   B. Transience
   C. Levels
   D. Rising Water
   E. Channelization
   F. Scour/Deposition

VI. INTRODUCTION OF SITE

VII. DESCRIPTION OF THE DESIGN PROJECT

VIII. CONCLUSION

IX. BIBLIOGRAPHY

X. APPENDIX ONE: JURY COMMENTS
INTRODUCTION

The intent of this architectural design thesis is to propose an alternative methodology for the definition of architecture's content and the subsequent development of that content into built form. Too often, architectural structures are developed from static typological classifications defined by the historical study of architecture and are conceived from a rigid repertoire of architectural ideas that preclude outside influence from the culture or the landscape in which the architecture dwells. This hermetic approach necessarily limits the capacity of the architecture to express a relationship to the physical place of which it is a part and the multivalence and complexity of the culture from which a place derives its meaning.

Few architects have successfully expressed any meaningful connection to the place or culture of their architectures' residences. These architects, among them Alvar Aalto, Tadao Ando, Luis Barragan and Carlo Scarpa, have been identified as Critical Regionalists and described by architectural critic Kenneth Frampton in a series of articles. This thesis utilizes Frampton's arguments as its theoretical grounding and departure point. The text portion of this thesis includes an articulation of Frampton's argument as well as an appropriation of his principles in analyses of selected architectural works of Alvar Aalto.

While it embraces the tenets that Frampton has articulated, this thesis contends that Frampton fails to recognize the full fruition of his own argument. He ignores the potential the place of a particular architectural
project by acknowledging only generalized factors such as topography and light. Furthermore, Frampton recognizes only architecture's response to these rather nebulous and nondescript factors rather than the possibilities of architecture's interpretation of them.

*Bayou Mile* proposes an architecture which extends Frampton's definition of Critical Regionalism by proposing an architecture which not only responds to natural site features but is *informed by* them. The thesis defines a more critical and definitive understanding of the natural systems, processes and relationships of the site and region and transforms them into physical, architectural expression.

Located in Houston, Texas, the thesis focuses on the city's bayous, which are its landscape's most significant and salient natural features. This text includes a description of the bayous' most significant characteristics, which have been directly incorporated into the development of the project. The design thesis's intention is to derive its content from the ideas of the bayous and to manifest these concepts in the architecture from its overall massing; to its spatial configuration; to its use of materials; and to the tactility of its smallest details.

**METHODOLOGY**

Exploration of the thesis involved two tasks: completion of research and the manifestation of these findings in an architectural design project.
First, research was completed on the primary issues involved in the project. These topics included the following: investigation of Critical Regionalism as discussed in architectural theory; research on Houston's cultural and historical development in relation to its bayous; and articulation of the issues surrounding bayou processes and characteristics.

Simultaneously, site selection criteria were developed, and an appropriate site was chosen. Additional research was completed on the neighborhoods adjacent to the site through two means. First, visual analysis on the formal structure and socioeconomic conditions was assessed. A meeting occurred with Kevin Shanley, a local landscape architect who has worked extensively with both Harris County Flood Control and local community groups. Mr. Shanley outlined opportunities and restrictions typically encountered in designing along bayous and conveyed the present political climate in Harris County. In addition, a meeting with Linda Smith, president of the White Oak Bayou Association, offered insight into the social composition of the three adjacent neighborhoods and the attitudes that they hold regarding the bayous.

The second major task of the thesis was to synthesize the data gathered and the ideas discovered in the research and transform them into a physical, architectural proposal. This process began with formal, functional and process analyses specifically related to the chosen site. These are presented as figures in the body of the text. Preliminary design and design development over the course of a semester explored various conceptual and formal expressions.
PRODUCTS
The research and design explorations resulted in an architectural proposal in the form of 1) drawings: diagrams, plans, sections, elevations, perspectives and 2) site and building models. These illustrations and exhibits were presented orally on 21 April 1993 to the Faculty of Architecture, their invited critics, and colleagues of the School of Architecture. This text accompanies the project as an articulation of the thesis, a record of the research and methodology, a description of the architectural proposal, and an account of the faculty's and critics' observations.

CRITICAL REGIONALISM
In his articulation of Critical Regionalism, Kenneth Frampton contends that contemporary civilization, in its quest for "advancement" is simultaneously denigrating itself. The homogeneity that has become the outgrowth of the developing, worldwide "en masse" culture threatens not only "traditional cultures" but, more importantly, society's creative potential. Homogeneity in and of itself may not be such a negative attribute were it not for its "dogmatism of a single truth," resulting in a loss of richness in expression, reductionism of meaning and destruction of "real dialogues."1

Yet, Frampton maintains that architecture has the capacity to both embrace "world culture" and its reliance on technological advancement and to maintain regional "autochthonous" culture. Architecture can negotiate this precarious position by assimilating and reinterpreting both sides of the duality into new forms which neither deny the region's heritage nor degenerate into a singular regurgitation of vernacular elements.

In his testament of Critical Regionalism's ability to accomplish this feat, Frampton identifies six principle tenets which are characteristic of works which may be considered Critical Regionalist. Following is a description of each of these principles, including critical examples which are original analyses of this thesis. The primary subject for critical analysis is the work of Alvar Aalto, a Finnish architect who practiced worldwide from 1926 to 1974.

*Resistance to the "Big Idea"*

Critical Regionalism, though participating in the progressive efforts of modernism, resists utopianism and normalization. Thus, the architecture favors the particular and the small rather than the "big idea." Since Critical Regionalism tends towards a marginal practice, its products are less imposing than the grand moves of dogmatic architecture that emphasizes the Master (implying an omniscient, paternalistic notion) in the Master Plan.

\[2\text{Ibid., p. 314.}\]
Alvar Aalto's work displays this tendency in two particularly significant instances. In locating the architecture of Finlandia Hall (1967-75), Aalto resists the temptation to place the building in the most prominent position with relation to the street. *(Figure 1)* Despite ample opportunity to do so and the site's location in central Helsinki, Aalto has chosen to site the building 70 yards away from the street and on an elevation eight feet lower than that of Mannerheim Street. He has nestled the building close to the waters of Lake Toolo to draw from the associated sensibilities of Finland's relationship to its 32,000 lakes. Aalto conveys a dual sense of domestication within the monumentality of such a large and publicly significant building. Rather than dominate the landscape with a normalized edifice to "the public," he has designed the building to appear to rise from the grasses and reeds of the shores of the lake, expressing the naturalist myth which the Finnish public holds dear.

In his design for the Seinajoki Town Hall Complex (1952-60), Aalto shows an orderly assemblage of buildings in which the central axis is clearly identifiable.* *(Figure 2)* Yet, at the pedestrian scale, the sense of his striking a line in this major, axial organization is mitigated in the way that Aalto articulates the spaces that form the sequence along this line.

The plaza at the Church of the Plain slopes away from the main plaza at city hall and focuses on the alter inside the Church. Its grass slopes distinguish it from the hard surface paving of the city hall square. Moving west along the axis, the open, figurative spaces articulate transitions through the sharp, cold and dark walls of the church office wings to the
geometric, rectilinear-shaped main square defined by the city hall, library and concert hall. However, the line is gracefully interrupted by a fountain and built mound which is adorned with ornamental flowers. It is more domestic in its expression than rigidly monumental and clearly does not formally reinforce the axis. Finally, despite its reference to acropoline steps up to civic forums, the symbolic mound which leads to the civic meeting hall has a gentle slope and is grass-covered, thereby maintaining its rural reference to the pronounced topography of Finland's glaciated landscape.
Figure 1: Finlandia Hall does not force any “big idea” on the shore of Lake Toolo and does not present a monumental presence on Mannerheim Street.
Figure 2: Seinajoki Town Hall Complex conveys a variety of spatial expressions and ideologic content along its singular axis.
**In Dialogue with the Site**

Critical Regionalism emphasizes the building, not as a free standing object, but as an act of building. The building, together with its landscape, establishes a territory and engages in a dialogue with its site.

Aalto has utilized two primary techniques in relating his buildings to their sites. At the Villa Carre (1956-59) and the Main Hall of the Technical University (1965-69) at Otaniemi, Aalto has created a mediated landscape between the "natural" landscape and the architecture by forming a series of walls and ledges whose purpose is to extend the architecture beyond its walls. *(Figures 3 and 4)* At the Technical University, located 20 kilometers outside of Helsinki, Aalto has literally "grounded" the architecture into its site, making it appear as though the building might have been excavated from the earth around it rather than placed on it. In development of the layout and massing, Aalto has used the natural topography to structure the programmatic functions and massing of the building.

Yet, Aalto does not simply imbed the architecture within the earth; he does not *literally* connect building and land. Rather, he establishes a rapport between the two by "borrowing" elements from each. Instead of allowing the amphitheatre to remain a freestanding, isolated element in the landscape as it is traditionally treated, Aalto transfers the element to the domain of the architecture. In a sense, the landscape is appropriated by the building.
Figure 3: The masses of the main lecture halls of the University step up and curve around to intensify its connection to the architecturally heightened topography.
Figure 4: The strongly orthogonal plan of the Villa Carre is mediated by the articulation of the massing and the movement outward of the angular walls into the landscape. Note the concentric form in the landscape in the upper right hand corner of the plan.
Conversely, the architecture pushes out into the landscape in a series of roughly parallel walls. Yet, the scale of the walls enables their reading as both architectural construction and as abstracted contours. Consequently, the reading of the design is a dual one--of both architecture in the landscape and landscape in the architecture. The visitor need not make a choice of any singular meaning. He/she is enabled a rich and interwoven experience of content.

At the Villa Carre in Bazoches-sur-Guyonne, France, Aalto uses the same curb type walls to express a slightly different attitude towards the landscape. The villa is located on a hillside overlooking an agricultural landscape, the content of which Aalto uses to develop the exterior front entry area, where he plants a regularized, evenly-spaced vineyard. Unlike the parallel, regular steps at the University, the steps at the villa are angular and increase in their distance apart from one another as their distance from the building increases. Furthermore, their forms are organic in nature and modulate as they move down the slope. They become open architectural planters that "degenerate" as they move away from the architecture. They literally resolve the architecture formally to its site.

In both the Villa Carre and the Technical University, Aalto establishes a dialogue between site and building which is rich in its associations, vital in its expression, and complex in its possibilities.
Architecture as a Tectonic Fact

Critical Regionalism "favors the realization of architecture as a tectonic fact rather than the reduction of the built environment to a series of ill-assorted scenographic episodes." An awareness of the requirements to build within a region are important in establishing a meaningful relationship between the whole construction of the project and the way in which the construction is expressed. Frampton suggests that it is necessary to express these facts throughout and not to resort to single moments of folly that are designed to highlight some particular joint or single column. Alvar Aalto's design for Villa Mairea, outside of Normarkku in western Finland (1936), incorporates two separate structural systems, yet each is critical to the spatial articulation and extended relationships that are so brilliantly established. (Figure 5)

Aalto uses a column and slab system in the major living spaces which open out to the garden. Though he uses steel columns to support a concrete floor and roof system, Aalto's bunching of columns and their irregular spacing intensify the planar qualities of the ceiling and floor, thus, emphasizing the interior's spatial relationship to the outside. He changes to a bearing wall system in the more utilitarian wing of the house where the spatial qualities are more concerned with single rooms rather than larger, merging spaces. The tectonics of the construction change with the intent of the program and ideology of the spaces, from the concrete

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3Ibid., p. 316.
Figure 5: Alvar Aalto allowed the tectonics of the construction to intensify spatial qualities.
bearing walls of that wing, to the post and beam construction of the patio roof and sauna.

Architecture as a tectonic fact does not attempt to fit into the Miesian ideal of expressing the structure directly and does not subscribe to the Richard Rogers school of expressing all of the mechanics of the structure and the services. Instead, this tactic of Critical Regionalism derives its importance from the more straightforward and meaningful expression of construction and materials which is associated with vernacular languages of building.

*Emphasis on the Tactile*

Critical Regionalism "emphasizes the tactile as much as the visual."\(^4\)

Sight alone is not capable of accessing the qualities of place. The simulacra excludes the tactile dimension of works through its reliance on the visual, which, in turn, relies on the paradigmatic distance with which we tend to operate as a vestige from the perspectival developments of the Renaissance. Frampton notes this practice in his article "Intimations of Tactility,"\(^5\) where he emphasizes the way in which this paradigm of rational perspectival vision contributes to a rational distancing which architects design within and build into their works.

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\(^5\)Ibid., p. 53.
It is this author's contention that evoking an emotional experience is necessary to begin to understand the totality of a work— to gain an understanding of the architecture beyond the visual aspects of space by feeling the quality of warmth from sunlight, the smell of the vegetation, the intermittence of a breeze, the sensation of the materials by human touch, and the quality of materials as they are altered by natural phenomena—sunlight, wind and rain. As Frampton has well articulated, "The tactile returns us literally to detail, to handrails and other anthropomorphic elements with which we have intimate contact."\(^6\)

The emphasis that Aalto placed on the tactile, the details and the craftsmanship, engenders his work with a lasting and transcendent value. In his design for the Villa Mairea, Aalto meticulously articulated all the surfaces with which one would come in contact. For instance, the metal handrails on the stairway are wrapped in leather and the steel columns in the living room space are wrapped in cane. The floor surface is highly tactile, as well. A rough stone at the front entry changes to a smooth, brick tile paver in the foyer and changes again to a wood floor as the floor rises to the main living level. This transitional quality of the materiality of the floor surfaces is important in establishing both a rhythm of walking as well as an intimate feeling for the warmth of the spaces.

\(^6\)Ibid., p. 54.
Perhaps one of the most notable examples of Aalto’s ‘emphasis on the tactile’ is his careful attention to the articulation of the sauna at Villa Mairea. *(Figure 6)* The tactility of the wooden building is accentuated through the juxtaposition of other materials such as the stone paving and massive stone step; the steel seats on which rest the wooden poles supporting the roof; and the orientation of the wood siding. Since the sauna is deeply-rooted within the Finnish culture, the intimate tactility in which Aalto renders it is important in establishing a connection to more traditional sensibilities about building and the relationship to the larger landscape.

Frampton has noted the tactile qualities of the entry sequence into the main council chamber of Aalto’s Town Hall for Saynatsalo, a small town on an island in central Finland (1950-52). Despite its civic function, this experience is as intimate as that which he designed in Villa Mairea. Frampton describes its spatial sequence:

“... the architectural promenade leading to the second floor council chamber is orchestrated in tactile terms. Not only is the staircase lined in raked brickwork, but the risers are paved in brick. The kinetic impetus of climbing is thus checked by the friction of the steps. After this “resistance” the polished timber floor of the council chamber announces its honorific status, through sound, smell and texture, and above all through its slipperiness and its springy deflection under the weight of the body.”

Working with such a conception of tactility intimates a close connection to the earth. Yet, this emphasis on the emotional experience and the

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7Ibid., p. 55.
phenomenal quality of the object does not obstruct a rational understanding of the work. On the contrary, the specificity and careful development of the qualities of its tactile environment imbue an intellectual sensibility to Aalto's work which prevent its being usurped into a nebulous, over-romanticized experience which defies the rationality inherent in the development of the history of architecture. Aalto’s work, though visually provocative, resists the weight and singularity of the visual through a richness of materiality that engages not only the eye but the mind and the body, as well.
Figure 6: Handcrafted wood details and worn wood surfaces are celebrated by Aalto as they come into intimate contact with one’s body in the sauna at Villa Mairea.
Local Vernacular and Universal References

Critical Regionalism incorporates local vernacular elements but also includes universal and foreign references.

Aalto's work has been able to maintain a strong sense of connection to traditional Finnish culture by developing a language of form and materials that derived from historical form-types and reflects the traditional Finnish notion of the landscape and cultural values while simultaneously incorporating spatial sensibilities from modern architecture. Few designers make such a synthesis since it is not easy to adapt alien influences while remaining expressive of one's own regional or national culture. The difficulty of maintaining a sense of rootedness within a regional culture while participating in a growing universal civilization is discussed by Paul Ricouer in "Universal Civilization and National Cultures." Ricouer explains what many in contemporary culture set up as a dialectic, where one must abandon cultural traditions in order to "absorb modern civilization," as a paradox of "how to become modern and to return to sources; how to revive an old, dormant civilization and take part in universal civilization." ⁸

Frampton notes that local or regional culture today is "not [as] something given and relatively immutable but rather as something which has, at least today to be self-consciously cultivated." ⁹ He suggests that in order for an


⁹Ibid., p. 314.
authentic (national or regional) culture to develop within the paradox outlined by Ricouer, it is necessary to incorporate alien influences from universal civilization.

"Traditional buildings in most parts of the world usually reflect the intimate knowledge of a climate, a building material, and an activity typical of its culture . . . "

Vernacular architecture includes those structures which are not professionally designed; it includes the majority of the buildings in our environment—the anonymous buildings. Within a specific culture, the vernacular architecture reflects a harmonious unity between the larger landscape, the site, the plan and the materials. Tradition is dominant in vernacular and is valued over any idea of modern progress, which abandons tradition and values heroic creation. Yet, vernacular is not the simple repetition of typological forms and orderings, nor can it be facilely explained through a functionalist dictum that bases design strictly on specific use. The vernacular language is not purely nostalgic, but illustrates a specific time and place (region) manifest in the permutations that have occurred over a long period of time.

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11 It is noted that vernacular buildings such as farm complexes remain flexible in their accommodation of uses. Within a single culture, spatial needs change over time requiring the typically longer lasting vernacular buildings to be used for a variety of purposes. See Benjamin Gianni's *Dice Thrown* for a discussion of vernacular farm buildings in Ohio.
Vernacular is not singularly nor causely derived from functionalist or climatic requirements but is developed in a more complex manner through the assimilation of alien sources. It is ironic that Frampton posits vernacular as "...once spontaneously produced by the combined interaction of climate, culture, myth and craft."

\[12\] which disregards the assimilation of alien influences, thus, reserving it for the primary criteria of Critical Regionalism.

In modern architecture, meaning has been derived through the value bestowed upon the absoluteness of method and materials; it is self-evident, not referring to anything outside of itself. Vernacular derives meaning through material, method and, ultimately, from the landscape.\[13\] The larger landscape offers much meaning for the vernacular because it provides not only a context for the culture but is also intimately bound to the materiality of the construction. Method is a source for meaning within the vernacular that carries an absoluteness because through its descriptive nature, it is a reflection of the local building practices and the availability of materials in a given place and at a specific time. The fact that over the course of time, the availability of materials changes, is reflected within the built works either constructionally or, perhaps, ornamentally. In the end, the object is the construction, and in a vernacular condition, the construction is the location, the culture and the people.

\[12\]Frampton. Modern Architecture, p. 313.

\[13\]Yates-Burns discusses this concept in the preface to Dice Thrown, p.9.
Vernacular tends toward the arts and crafts aesthetic as well as the moral basis of truth in making via the detailing and ornamentation. Aalto’s Villa Mairea refers to the enclosed form of the Karelian farmhouse complex. The rustic nature of the sauna refers to the most fundamental connection man has to the purity of nature in Finnish culture, as it has historically been the first room to be constructed in the clearing within the woods. (Figure 7) Aalto self-consciously oscillates the detailing throughout the house between machine production and hand crafted as seen in the metal pipe railing around a second floor balcony and the wrapping of the interior steel columns with cane.

The singularly dimensional design encouraged in contemporary capitalist culture wholly appropriates such alien influences rather than adapting and reinterpreting them according to any culturally based value.

As Frampton notes, it is the self-conscious quality of Critical Regionalism that allows it to rise above the contemporary consumer-based cultural conditions which value vernacular as merely a sentimentality for past cultural conditions and aesthetic sensibilities that render it insubstantial in content. Architects must take care to avoid the iconography of kitsch vernacular, or pop-vernacular, that is so marketable within contemporary culture to those who demand the “reassuring image of homely, handcrafted comfort.”

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Figure 7: Aalto's Villa Mairea reinterprets universal conceptions of space and materials through vernacular sensibilities of detailing and building configuration.
Rootedness in the "Here" and "Now"

"At the same time I feel that I am international--but in a different way from the person for whom internationalism is the sole correct approach. That is mere empty talk, if one lacks what forms the background: rootedness in a local situation."--Alvar Aalto\(^{15}\)

Critical Regionalism expresses a rootedness within a culture, a sense of "now" and "this place," which cannot be moved as a prototype from culture to culture or from site to site within a region. This is the most important of Frampton's criteria, as well as the most difficult to diagram or describe in graphic and verbal terms. It is the consideration of the architecture in its totality that is the appropriate description of this principle.

A sense of "this place" has a relationship to regionalism. The conceptual nature of this definition of regionalism is antithetical to a definition that tends toward strict vernacular quotations without transformation and, consequently, resides solely in the realm of aesthetics. Rather, the regionalism that expresses meaningful "placeness" draws from the regional culture and rejuvenates it, re-creates anew which, in turn, shatters the fundamental images that the nation or culture has deemed “right-thinking”.\(^{16}\)

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\(^{16}\)Ricouer. *History and Truth*, p. 283.
Architecture which accepts the "familiar" vernacular and fails to reinterpret is, to some degree, without veracity. It is doomed to depend on other architecture for its meaning. Its reliance on nostalgia trivializes and, therefore, empties the architecture of any possibility of dialogue with contemporary residents who cannot understand the content of appropriated elements from a time past. The more positive regionalism encourages architecture that would be fundamentally damaged and emptied were it moved to a different region.

The sense of "now" embodied by Critical Regional architecture sits firmly at an immediate moment in time--neither in the immediate past nor the immediate future. There is no speculation about progress towards the future nor nostalgia for the past. Architecture that is an outgrowth of this mode of thinking requires no interpretation of iconography nor projection of possible alternative scenarios and, therefore, has an immediacy to its understanding.

Although Aalto's work has shown longevity, it exhibits this sense of rootedness, particularly in the University of Jyvaskyla Student Center. (Figure 8) Here, Aalto relates the architecture's interior to the exterior both directly and metaphorically. A large-span steel structure enables a glass wall to directly engage the exterior remnant forest. Consequently, the metaphoric home of the Finns, the forest, is made part of the content of the architecture. As the student sits in the cafeteria, he/she is not away
Figure 8: The Student Center lobby space is firmly rooted in its place and time and would lose all of its meaningful experiential qualities if it were appropriated for another location.

at school but "at home" in the Finnish mythic homeland that is everywhere. Aalto borrows the metaphor by creating a "forest of columns" complete with bark-referencing tile coverings.

Despite the inference to a mythic past, the architecture utilizes modern conceptions of space. The stairways seem to interject into the space without strict rational derivation, and the non-discreet composition of the spaces convey an entirely modern conception of architecture. In effect, Aalto rejuvenates elements of regional understanding through their expression in new forms and relationships.
PRINCIPLES OF THE BAYOU

In order to gain a clear understanding of how the natural systems and processes of the site and the bayou could inform the architecture, six principle issues that addressed both the physical and geomorphologic qualities of the bayou and its experiential qualities were identified. These six issues are discussed in the following section with accompanying images to evoke a notion of their potential for informing new relationships within the architecture and the larger site.

Development of Events

The flooding which distinguishes the bayou occurs in a very concentrated period of time. A direct engagement of the bayou could then be thought of as a spectacle or event which is acted upon by this concentration of forces and the turbulence associated with them. Greater turbulence is caused as these forces act on single objects rather than being something that is dispersed evenly along the length of the bayou. Figure 9 is a photograph of a chutes ride in an amusement park that occupied what is now known as Woodland Park, just upstream on Little White Oak Bayou from its confluence with White Oak Bayou. The direct connection to the bayou which existed there at the turn of the century is now barely a memory. It suggests a language of structure and event that offer an alternate relationship from the normative attitude of ignoring the bayous, the typical practice in Houston. However, the intention of the design project is not to develop "follies" along the bayou that simply interact with the water or rely on a single metaphoric relationship.
Figure 9: San Jacinto Park was an amusement park that engaged the bayou in a direct manner at the turn of the century.

Transience

The bayou is not a static event. One of its most salient qualities is its movement, both vertical and horizontal. Natural bayou systems tend to migrate laterally and develop very sinuous forms in the landscape. Over long periods of time the curves become very pronounced and begin to elongate as well as become constricted at the neck. The transformations that occur in the configuration of the bayou bed effect the ecosystems to its sides as well. For instance, when an ox-bow is formed, sometimes the area becomes isolated from the stream and either dries up to leave a
depression in the landscape or it traps water and becomes a wetland. An articulation of these contingent qualities, these fluxes in the system, could offer multivalent readings beyond any literal formal translations.¹⁷

The bayou’s transient quality is most readily recognized in Houston as the vertical movement of the water. An interesting aspect of this is the change in the form of the bayou as the water rises. Once it breaks its concrete banks, the form becomes more liquid. It takes the form of the surrounding topography. *(Figure 10)* It can vary rapidly and shift within a short distance from a narrow and deep section to an expansive area of shallow water, all flowing and changing established relationships.

*Figure 10:* The transient quality of the bayou is experienced at one comes across pools of water that remain from the last flood.

¹⁷Such translations would be more in line with the development of an organic architecture where systems and processes are represented in a more literal manner.
Levels

Associated with transience, the bayou is characterized by its constantly changing levels. These levels also have a relationship to the levels or zones of topography. The bayou has the potential to connect all of these levels, so none can really be read as completely discrete and independent. As the level of the water changes, the relationships between the levels of the land masses change as well. Areas of land become unusable as levels are inundated with flood waters. The defined level of the various-severity flood stages establishes conceptual lines of elevation across the landscape which could be articulated literally in a structure or in the landforms. The principle of levels can also be associated with the layers of soil and vegetation as is illustrated in Figure 11.

Figure 11: Levels of soil and vegetation become clearly visible along certain sections of the natural bayous. This is a photograph of Little White Oak Bayou just above the Mile.
Rising Water

An important phenomenological aspect of the bayou is the sense of rising water—of foreboding consumption of all in its path. The threat of rising water is always on the minds of Houstonians when a rain storm occurs. The degree of saturation of the soil is a major determinant of this principle because during the rainy spring season, the threat of rising water is intensified. Houstonians are so acutely aware of this phenomena that if there is a chance of storm, high ground becomes choice parking space realty.

Historically, as is well illustrated in Figure 12, the city has experienced massive inundations of rising water. With the immense amount of development outside the city, in the watershed areas between the bayous, the threat of such inundations has been intensified. Since developers have only addressed the issue of how to get water off of their development, and since no coordinated flood control plan exists between counties, the chances for destruction of property remains a key issue in Houston.
Figure 12: Rising water is a fact of life in Houston as this photograph from 1941 shows.

**Scour/Deposition**

The natural horizontal movement of the bayou is in part a result of the forces which cause scour on the concave bank and (primarily) sand deposition on the convex bank. The geometry of the bayou has a direct relationship with the intensity of these forces and the resultant forms of the banks. A straight stretch of bayou will tend to have even scour and deposition on the banks. However, the natural system will gradually work its way into a more curving configuration at which time the forces of the flowing waters will intensify the scouring on the outside of a bend and the deposition on the inside of the bend. Figure 13 illustrates the phenomena
of scour and deposition in a natural bayou system located to the northeast of Houston.

**Figure 13:** The natural bayou is a very dynamic system and the forces which act upon it create patterns of scour and deposition.
Figure 14: The existing channelized sections are wide and have shallow sloping sides.

Channelization

In the built landscape, a range of channelization techniques is employed, from completely concrete-lined slopes to graded, grassed banks. The Army Corps of Engineers is responsible for the design and construction of the channelized bayous in Harris County. Until recently it was thought that the most efficient solution for handling the evacuation of runoff out of the populated areas was to straighten the natural bayou configurations and to line the new channels with concrete. The Corps would clear away all of the vegetation from the banks in an effort to keep the floodway unobstructed. These channels offer a very stark and "de-natured" expression of the bayous as they traverse the city. In many locations, they are engineered into covered concrete culverts and completely disappear
beneath the surface. Thus, it is extremely difficult to comprehend the relationship between the bayous and the built landscape of the city.

There is currently an initiative towards the design of more environmentally sensitive channels that would allow for vegetation to once again line the bayous and offer a more pleasurable environment for their rights of way to be used for hiking and biking.
INTRODUCTION OF SITE

Historically, the development of Houston has ignored its most significant natural features, the bayous. The grid has been almost mindlessly extended across them without any acknowledgment of the potential for a more meaningful connection to the natural systems of the region. The bayous in Houston have always been considered primarily as drainage ways, as a feature without merit on which to turn one's back. *The operative intention of this thesis is to alter Houston residents' perceptions and intensify their understandings of White Oak Bayou for one mile.* Unlike typical development along Houston's bayous, the project presents a more interactive relationship with the bayou in programmatic development and in the expression of its salient phenomenological, physical and experiential qualities in the development of the thesis's landscape and architecture.

The selection of an appropriate site demanded not only the presence of a bayou but a variety in the bayou's relationships and adjacencies. It was deemed necessary that the bayou be a "non-virgin" site, a body that had had previous interventions imposed upon it and that it have a history and a complexity in its possibilities.

The chosen site is located on a mile-long stretch of White Oak Bayou in Houston, Texas. It is situated between Interstate 10, Interstate 45 and three distinct neighborhoods of diverse socio-economic and ethnic composition. Figure 15 is an aerial photograph of the site and the surrounding conditions. The mile extends from its western end at Stude
Figure 15: Bayou Mile is located at the confluence of two bayous and two interstates.
Park and continues downstream along White Oak Bayou to its confluence with Little White Oak Bayou, just west of Interstate 45. Note that downtown Houston is one mile to the southeast of the site.

The structure and character of the freeways creates a friction and an intense excitement that forms a strong and vital edge to the site. This particular stretch of White Oak Bayou is compelling because of a tension which exists between both the structure of the freeway and channelized bayou and the somewhat segmented parcels of land that are caught between them. *Figures 16* shows two panoramic views of the constrained segment of land in the middle of the mile.

Currently, the mile-long site is mostly occupied by a city park which includes Stude Park at the western most point and White Oak Park just west of Houston Avenue. A 2.2 mile long hike/bike trail connects the two parks and is used frequently by the residents of the three adjoining neighborhoods. Stude Park also contains a public pool and bath house, a community center building and two softball fields.

Analysis drawings of the site included the mapping of infrastructure, natural features, pedestrian routes and flood zones. These maps are represented in *Figures 17-24*. From these analyses, the following qualities and features have been identified:
Figure 16: Panoramic views of the central section of the site.
Figure 17: Channelization has erased all traces of the natural system’s configuration.
Figure 18: The natural forces of a bayou system act more aggressively in specific areas.
Figure 19: Elevation zones were identified to interpret the dynamics of the larger site.
Figure 20: An excitement and a tension is created by the adjacent regional infrastructures.
Figure 21: Pedestrian patterns converge at Houston Avenue and White Oak Drive.
Figure 22: Minimal land is rendered unusable in a three year flood.
Figure 23: The 20 foot elevation zones are inundated during twenty-five year floods.
Figure 24: During fifty year floods all of the land below the 30 foot elevation is submerged.
As Figure 21 shows, Bayou Mile is a meeting ground for the three diverse neighborhoods which adjoin it. The residents cross over the interstate highways at Houston Avenue and along White Oak Drive to use the existing park or to meet friends. The neighborhood to the north, Woodland Heights, was developed in the 1910's by a private developer. Presently, it consists primarily of bungalow type houses with some Victorian style dwellings, many of which have been gentrified and are occupied by urban professionals and their families. Houston's Sixth Ward is the neighborhood to the south of the Mile and is physically separated from the Mile by Interstate 10. The Sixth Ward neighborhood is primarily a mixture of lower income African-Americans and Hispanics. To the east of Interstate 45 is Houston's Fifth Ward. This neighborhood is primarily composed of Hispanic families.

Three zones at an elevation of forty feet above sea level are identifiable as the major occupiable, buildable areas. (Figure 19) One area at Stude Park is currently occupied by a community building and swimming pool complex. It is edged by tall pines to the southwest. The second area is at the top of an isolated section of land that is stranded between Interstate 10 and the channelized bayou. This area is bounded by the freeway to the south which is at grade at this point. Access to this particular area is extremely limited since there are currently no bridges across the bayou. The third, forty foot elevation zone is a small area near the confluence of White Oak Bayou and Little White Oak Bayou. This parcel is situated away from the edge of the bayou on a vacant lot that is bounded by
Houston Avenue, White Oak Drive, White Oak Bayou and Little White Oak Bayou.

*Figures 22-24* indicate the flood zones for the three year, twenty-five year, fifty year, and one hundred year flood levels. These maps illustrate the extensive areas of land that are rendered unusable during the flood events. It should be noted that the area immediately adjacent to the confluence is susceptible to flooding quite frequently. The other major area that is equally susceptible is the land west of Houston Avenue which currently fosters a small, juvenile wetland.

**DESCRIPTION OF THE DESIGN PROJECT**

*Development of the Mile*

The operative intent and permeating strategy of *Bayou Mile* is to alter residents' perceptions of the bayou for this one mile. Rather than rely on an overarching "big idea" which would harshly impose an order on the site, programmatic development of the Mile has been concerned with expressing the natural systems and processes of White Oak Bayou.

The intention is to intensify the experience of the bayou for residents through a number of concentrated *Events*. These different *Events* relate to the bayou differently than do existing structures in Houston. Through these new relationships, people's understandings of the bayou's possibilities will be altered. These relationships and the conceptual forms
Figure 25: The Bayou Mile model at 1"=100' scale.
of these elements are derived from the six issues described earlier in this
text concerning the bayous and its associated territory.

At the head of the mile is the Source. Here, a series of public recreational
pools have been developed as a stepped sequence of terraces. Men's and
women's bath houses, a concession structure and pump building are
articulated on the model. (Figures 25 and 26) At this source point, city
water would bubble up into a shallow pool which would overflow into a
runnel that carries water to the first large pool. City water must be used
because the water in the pools must be potable, and the water in the bayou
contains motor oils and other toxic substances. The self-contained,
recycling water in the pools is meant to contrast with the flowing bayou.
From the source pool, a runnel would also allow some water to flow
west, against the flow of the bayou and be carried out an extended
scupper across the top of a shear concrete wall.

The White Oak Bayou Association is currently lobbying for a sixteen mile
hike/bike trail that would extend from downtown, through this site, and
continue upstream. If this were to be realized, then the Source would be
the first point at which people would become aware of the "altered"
relationships which are set up in this mile.

Downstream from the pools, at a bend in the channelized bayou, another
Event has been developed that intensifies the experience of scour and
deposition along the banks. (Figure 27) A "natural" channel has been dug
Figure 26: The Source consists of recreational pools and bath houses.

Figure 27: An intensification of the scour and deposition forces is manifest at this point.
to create elongated islands that are mounded in a manner which would accentuate the quality of deposition. The first of these two islands, on the north side of the bayou, just east of Taylor Street, is accessed by a new steel bridge. This bridge would be light and minimal in its structure so that one has a decidedly tenuous feeling walking across to the small island.

The second deposition island would be bifurcated by another Event, a clear span structure that would spring from a high elevation on the north bank and carry over to the large isolated area that is caught between the bayou and Interstate 10. This particular bridge curves in the direction of the flow of White Oak Bayou to intensify one’s experience of the force during a flood, or even under normal flows. An outdoor art park is envisioned for this large area of land. Environmental artists would be invited to construct works which may be either washed away in a flood or may be more permanent and interact with the waters or freeway.

Across the bayou from the outdoor art park, the thesis proposes the extension of a small area of existing wetlands which was unnaturally created with the channelization of White Oak Bayou. (Figure 28) This area of low elevation, flat topography is land has been developed into a true wetland. Initial intervention will establish hydrophytic grasses and plants that will be allowed to evolve naturally with the bayou. Two Events are associated with the wetland. First, a boardwalk traverses the wetland, crossing from 'mainland' to 'island' to 'mainland.' Second, as visitors enter the site from White Oak Drive, they may remain on the 40 foot
Figure 28: An expansion of existing wetlands would intensify the understanding of the natural bayou.

Figure 29: The Confluence site is surrounded by regional infrastructure.
elevation and enter the wetland along a pier which extends over the island created by the more natural channel.

The westernmost Event is the Confluence, located at the physical confluence of White Oak Bayou and Little White Oak Bayou. It is this portion of the design project which has been chosen for study in greater detail. (Figure 29) It is through this more detailed development that Kenneth Frampton’s definition of Critical Regionalism has been extended in a meaningful way.

Development of the Sheltered Meeting Spaces
The program has been developed as sheltered meeting spaces for the residents of the three adjoining neighborhoods. This rather non-specific program has been decided upon to minimize any preconceptions associated with a typological program of, for instance, a community center. The resistance in naming the program also avoids concentration on functional considerations, allowing a more concentrated focus on expressing the ideas offered by the features and processes of the bayous. The main floor level plan, cross-section and elevations are illustrated in Figures 30 and 31.

The site is currently vacant and is structured into three levels (refer to back to the Elevation Zone Map, Figure 19). One level is at approximately sixteen feet above sea level, just above the top of the channelized banks of White Oak Bayou, and is subject to frequent flooding. The second level is at approximately twenty-seven feet above
Figure 30: Main level floor plan for the sheltered meeting spaces at the Confluence.
Figure 31: The section and elevation illustrate the architecture's dialogue with the site.
sea level and slopes up slightly to meet both Houston Avenue on the west side of the site and White Oak Drive at the northwest corner. At this elevation, the area is subject to less frequent flooding, but is still susceptible to flooding perhaps once a year. The highest level is at approximately forty-one feet above sea level and is barely above the 100 year flood zone. About one half of the site is covered with dense, mixed hardwood vegetation composed of canopy and understory material.

A new canal has been dug from Little White Oak Bayou. Its primary intention is to intensify the experience of rising water. Locating the main areas for the sheltered meeting space on this newly articulated island would allow water to rise from all sides of the structure as opposed to water simply moving up from one side, from White Oak Bayou to the south.

The formal expression of channelization is incorporated into the development of the architecture by developing the canal in two formal configurations. As the canal flows from Little White Oak Bayou, it is articulated with gently-graded, grassed banks. As it passes through the architecture, it is transformed into a more intensified built expression-- a rectilinear concrete channel that becomes almost a culvert which deposits water into White Oak Bayou. An exaggeration of the forces that cause scour and deposition is created through the arced geometry of the canal. The change from a curving geometry to the straight vertical walled section denotes not only a change in geometry, but a change in material expression of the banks. Its north bank changes from a green, grassy
bank at Little White Oak Bayou, to a stepped gabion stone retaining system, to vertical sheer concrete walls. The south bank is a forty foot high shear concrete wall that emerges from the topography of the island and tightly wraps around to parallel the straight section of canal. *(Figures 32 and 33)*
Figure 32: Bird's eye views of the building from the east and the west reveal the different architectural languages developed in each building.
Figure 33: A plan cut at elevation 30.0 reveals the structure of the retaining wall.
Locating sheltered meeting spaces on this newly-created island prevents any of the three neighborhoods from claiming ownership. The two tenuous connections back to the mainland intensify the experience of isolation from the exigencies of the distinct neighborhoods.

Two contrasting structures comprise the massing of the sheltered meeting spaces. The mainland structure is a thin, rectangular-shaped structure while the larger structure on the island is formed by the arced portion of the canal and transitions into an angular form on the bayou side. The language of the architecture developed on the island is clearly meant to be different than that of the structures developed on the "mainland". The architecture of the island incorporates terraces, shear concrete walls, pergolas and large sloping roofs that all intensify different qualities of being a permanent fixture amid the turbulence of the confluence. The architecture of the bar building and even the articulation of the experiences of the entry sequence are designed to accentuate the qualities of floating and the more tenuous nature of constructing in the flood zone. *(Figure 34)* By the buildings' contrast, a dialogue is initiated between the two. Yet, certain elements carry over to give the two sides a common ground from which the observer may make connections between the two while being able to clearly differentiate the conditions out of which each is given meaning.

The main meeting spaces of the program are located on the island: a 5,000 square foot multi-purpose space, a 1,500 square foot meeting space,
Figure 34: There is a clear distinction between the two buildings, as they are derived from separate conditions, yet the dialogue allows for a common link to the bayou's processes.
and the necessary support areas (kitchen, toilets, storage). The 1,500 square foot space is located on the second level to intensify the notion that as water rises, usable land area diminishes. Smaller, more flexible spaces that may be used for classes, small meetings, or offices are located in the bar building on the mainland. Since occupiable spaces must be located above the 100 year flood zone which has been designated at an elevation of 41.0 feet above sea level, the bar building is raised approximately fourteen feet above the parking area. This creates a covered patio area beneath the building which slips out to the north side along the top of the gabion wall. From this plaza area, one would be confronted by the shear concrete retaining wall under the main building. The paving materials of this plaza change as it extends toward the decomposed granite parking area and is intersected by the hike/bike path.

In the main building on the island, certain walls are poured concrete with formwork holes and panels articulated on the surface. The walls rise directly up from the massive, stark concrete retaining wall. (Figure 34) The south elevation and the entry are all window walls which are articulated in four foot increments. Interior spaces, then, allow one to feel a sense of connection to the terraces and back to the city as the skyline of downtown is strongly visible from the terraces. (Figures 35 and 36) Large, sloping roofs with aluminum standing seam finishes articulate the primary spatial configuration of the interior. Free standing steel sun screens shade the window wall from the southern sun and provide shade on several of the outdoor terraces. These elements are reinterpretations of the free standing wooden pergolas and trellises that are frequently found
Figure 35: The interior space of the lobby is connected to the terraces and to the larger landscape.
Figure 36: The terraces allow one to experience the qualities of the confluence as well as maintain a connection to the city.
in Texas regional architecture. In Frampton’s terms, they are vernacular elements that have been transformed through the assimilation of universal influences. In this case the universal influence concerns their materiality.

Understanding experiential qualities of the architecture is extremely important in discerning how this design has been informed by the particulars of the site. As the visitor enters the site, he/she parks his/her car not on a typical, concrete slab, but on the decomposed granite (porous) parking area marked only by a grove of trees which seem to be the overseers of the parking area. The long horizontal lines of the bar building ground the building in the horizontal landscape of the region. The visitor then either walks up the ramp (handicapped-sloped) between the trees or walks up an open steel stair to the 41.0 foot elevation of the breezeway. (Figure 37)

This breezeway refers to the vernacular dogtrot house which is composed of two rooms on either side of a roofed porch. In the vernacular building type, as one stands between the two rooms, there is a feeling of being in the house and yet still strongly connected to the landscape. In this project, the breezeway functions in a similar manner but is also a place to pause and contemplate the tenuous crossing over to the island.

The concrete slab of the bar building is cantilevered eleven feet over the canal, and a steel structure, which is hung on the shear concrete retaining wall, cantilevers from the opposite direction from the island. These two
Figure 37: The open steel stairs are sheltered from the rain by thin, curved, metal roofs.

Figure 38: Crossing to the island would invoke an intensified relationship with the bayou as one crossed the gap.
Figure 39: The tectonics and materiality of the bridge articulate the change of conditions as one crosses over to the island.
sections of bridge "meet" over the water at a small but perceptible gap. *(Figure 38)* Separate handrails extending from each side manifest the gap in a vertical plane which one can also experience while sliding his/her hand along the railing as he/she crosses the bridge. The aluminum, standing seam roof that covers the breezeway and bridge is clipped to a curved tubular steel frame which is independent of both buildings. During a rain storm, there would be a fantastic sound created by the rain beating down on the non-insulated roof. Visitors may watch the rainwater pour off of the sides of the curved surface.

Upon crossing the canal, the experience would be transformed, as once one enters into the main building, the insulated roof would eliminate that sound. Here, the roofs all slope at sharp angles down toward the terraces, directing rain to a forceful cascade of water from the roof over the double height space at the entry. To the east, a specially-detailed gutter would collect the runoff from the two eastern roof areas and channel it to the easternmost corner of the building where a massive torrent of water would spill out of an extended scupper and through an opening in the top terrace. Thus, the phenomenon of rain is transformed into an event which, furthermore, becomes inseparable as part of the content of the architecture. This water would then flow down a slight trough which is hugs the base of the retaining wall. *(Figure 40)* Shallow steps built into the trough would create a cascading effect and double as functional risers, allowing access to the canal during dry periods. In this manner, one could experience the scale of the forty foot tall wall at an immediate, personal scale.
A major tenet of Frampton's definition of Critical Regionalist design is the quality of the architecture's dialogue with its site and connection to the greater regional landscape. Such a dialogue has been developed between the main building and the island through the articulation of terraces which are both paved and grassed surfaces. *(Figure 41)* The formal expression of the terraces as non-rectilinear forms and non-organic shapes represents an extension of the architecture into the landscape without imposing a strict order. The terraces also bring the flat topography of the flood-prone zone at the confluence up to meet the building in a manner that accentuates the sense of permanence in the architecture through its perceptual grounding.

Introduced River Birches slip in an out of slivers of paved terraces delimiting space as well as filtering the views across the interstate from the meeting spaces. The introduction of the River Birches on the island is significant because they are a species which is not readily found along White Oak Bayou and are, therefore, distinct. Yet, they are native to the region and are extremely tolerant of flooding.

The terraces are extended even further through several elevated walkways that connect the lowest terrace and the small steel bridge which crosses the canal in the flat zone. *(Figure 42)* These walks are elevated thirty inches above the grasses that would be planted in this area. At four feet in width, and with the supports being set back from the edge to conceal their presence, the experience of walking out on them would be tenuous, especially with flood water rushing in and swirling around beneath. This
Figure 40: One could walk underneath the cantilevered terrace to experience the torrent of water as if in a grotto-like space.

Figure 41: Different levels of terraces relate to the ground in different ways. Some cantilever above it; some allow grass and paved edges to blur.
sense of uncertainty and careful negotiation is intensified by the narrow walks. If two couples were walking in opposite directions, then they would have to negotiate their way around each other since they could not pass four abreast.

The quality of transience that is associated with the processes of the bayou is intensified as one walks out and sees the patterns of silt and sand which will have been deposited during the last flood. A concentration of River Birches near the foot bridge intensifies the idea of concentration at the confluence. Inside the confluence of raised walkways, the birches are tightly bunched but, like the dynamic hydrology, "escape," "swirl," and "deposit" themselves on the grass terraces along the canal wall or "land" randomly at the ends of walks.

*Figure 42:* The elevated walks link the actual confluence to the mediated landscape of the terraces and, thus, to the actual architecture.
CONCLUSION

The design project articulates one methodology for extending Kenneth Frampton's theories regarding Critical Regionalism without falling into kitsch quotations of regional elements or relying on a single metaphoric expression of the relationship to the landscape. The thesis illustrates an alternative methodology for defining architecture's content by exploring the natural elements of the site and the natural processes of the region. The design demonstrates the opportunities for deriving content from these intangible natural processes and qualities and the possibilities for transforming them into built expression in the medium of architecture.

It has demonstrated that if architects attempt to understand the processes and systems which form the site, that they do not have to rely upon formal gestures and contrived impositions in order to establish a relationship between the architecture and the landscape. The proposal articulates the possibilities of shared content between the two, a dialogue which contains numerous levels of discourse and, consequently, allows continual renewal and rejuvenation of content and experience.
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APPENDIX ONE: JURY COMMENTS

Attending critics included the thesis committee which consisted of Eduardo Robles, Mark Wamble and William T. Cannady, as well as the following visiting critics: Elizabeth Martin from the University of California at Berkeley; Sanford Kwinter from Los Angeles; and Jeffrey Inaba of Arizona State University. The oral defense of the design project was held at 3:00 PM on Saturday, April 24, 1993 in the Farish Gallery in Anderson Hall at Rice University. After a thirty minute presentation of the project, there was a one minute silence.

Elizabeth Martin was the first juror to speak up. She said that she appreciated the masterplanning of the Mile and suggested that every city should go through a similar type of exercise. She then asked if the fact that the handicapped ramp ended at the base of the Marlboro billboard was done to make some kind of statement. I responded that the billboard was an existing structure and that their relationship was an accident which occurred as the ramp had been extended from the bar building. I kept the sign because it was important that the project work with the existing conditions of the site and not be an act of clearing everything away.

Sanford Kwinter then stated: "This is an awesome project. And you presented it so well that there is nothing to criticize." He mentioned that until this presentation, he had not known what a bayou was and that they existed in Houston. He had heard them mentioned in songs, but that was all. Kwinter discussed the fact that in the three days of juries he had seen most everyone use the grid as a way to connect to the city of Houston.
Yet, it seemed as though the fluidity of the bayous, as developed in the architecture of this thesis, really a meaningful critique of the city and the weather conditions which everyone talks about.

Kwinter discussed the project on several levels. First, he referred to hydraulic cultures such as the Chinese, the Egyptians, and the Indians whose landscapes and lives were developed with a meaningful relationship to the water systems that were required to sustain life and to develop agriculture. He distinguished this “hydraulic park” from any kind of motive oriented system which might be found in the middle ages. Instead, he was referring to the qualities of fluidity and natural fluxes associated with the bayou which were articulated in the design creating an environment based on the flooding and depositional characteristics. Second, he stated that Kenneth Frampton could not have done half of this and that I had definitely taken Critical Regionalism far beyond Frampton’s definition. Third, he mentioned that to be on the site or in the building when it rained and flooded would be exciting. He noted that the metal roofs would take on a liquid quality when so much water was flowing down the slope. However, he question how much water would actually pour out of the extended scupper and through the hole in the terrace.

Jeffrey Inaba agreed with Sanford Kwinter in that I had far exceeded Frampton’s tenets of Critical Regionalism. Jeffrey questioned whether or not the main building was located close enough to White Oak Bayou to allow actual flood water forces to develop on the north side, along the
forty foot tall retaining wall. I did not however, explain that the location of the canal and its geometry were more informed by the principles of the forces of scour and deposition rather than the hydraulic forces of the flood waters.

Jeffrey Inaba brought up an excellent point later in the discussion. He pointed out that the design was more about preparing for the event of the flood rather than allowing for an intensified experience of the post-flood conditions of silt and debris all over the place. He pointed specifically to the raised walks out on the flat of the island and asked what this area might be like a flood. I responded by explaining that since the walks were elevated thirty inches above the grass that one could walk out and see the silt and the new patterns of fluidity left behind by the receding flood waters.

Mark Wamble suggested that the permanence of the mediating landscape, the terraces, might possibly give way to a more transient relationship between the building and the water. By developing a more dynamic relationship with the water and the idea of flux which Kwinter discussed, I could extend Frampton’s principle of establishing a dialogue between the building and the landscape into an even more contingent state.

Bill Cannady observed that the event of the Confluence was similar to the typology of turning ones back to the bayou since the shear wall and curved section of the canal was on the back side of the building. From this observation, he wondered why the design had not addressed the second
type of relationship which exists primarily behind houses in River Oaks where residents have large plinths on which pools and patios sit and that the bayou side of the house then becomes like the front social space. I suggested that this second type was included in the project, at the Source where the pools are on plinths, if you will, and do create a social space on the bayou side of the building.