performing in the landscape:

a community theatre for marblehead, massachusetts

by
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master of architecture at the
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fig. 2.1 Abandoned dock in the Little Harbor, Marblehead, Massachusetts

My life is like a stroll upon the beach,
As near the ocean's edge as I can go;
My tardy steps its waves sometimes o'erreach,
sometimes I stay to let them overflow.

My sole employment 'tis, and scrupulous care,
To place my gains beyond the reach of tides,
Each smoother pebble, each shell more rare,
Which kindly to my hand confides.

I have but few companions on the shore,
they scorn the strand who sail upon the sea;
Yet oft I think the ocean they sailed o'er,
Is deeper known upon the strand to me.

The middle sea contains no crimson dulse,
Its deeper waves cast no pearls to view,
Along the shore my hand is on its pulse,
And I converse with many a ship-wrecked crew.

Henry David Thoreau *"The Fisher's Boy"*

fig. 4.1 The Old Burial Hill, Marblehead, Massachusetts

DEDICATION

This thesis and the many years of education that led up to it would not have been possible without the constant support of my family. I thank them for pushing me beyond what I thought could accomplish and for encouraging me to achieve my highest goals.

This book is dedicated to my family: past, present and future.

*fig. 6.1**

*fig. 6.2**

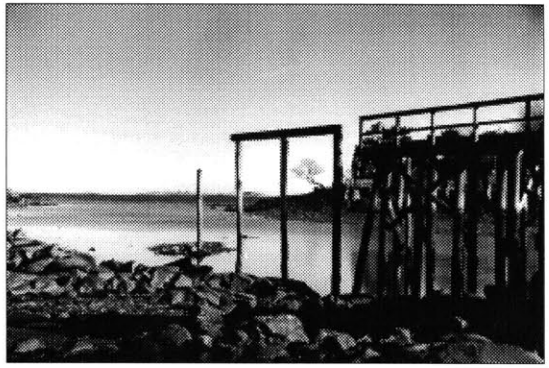

*fig. 6.3**

* *Elements in the landscape*

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ABSTRACT

This thesis is an investigation of our perception of place and what constitutes our experience of place. It is a journey through a multitude of scales: region, site and individual. Architecture, in this sense, is the phenomonological perspective of placemaking and the relationship between human and environment which is often a boundary, but many times a threshold.

Stemming from a criticism of modern architecture that is indeed placeless, this thesis is less about poor examples and more about the question of process. How does one begin to understand the landscape and begin to define a place within that landscape? How does the individual relate to the built environment within the natural context? The thesis, then, defines the individual as the source from which understanding is manifested specifically through sensory perception and place making.

The project is a performance space for Marblehead, a town whose sense of place is deeply embedded within the history of New England. The project is located on the waterfront, where the natural characteristics of the tides and the seasons perform continuously, subtly altering the nature of the site.

This thesis is organized in three parts. The first is a description of the region, the particular site, and the program within that site. The second is a construct of ideas which are related to experience and the forming of our understanding place. The third part is a journey through the site and project, proposing a method through which we may begin to understand the phenomonology of perception and the understanding of place through the design process.

thesis supervisor: fernando domeyko
title: senior lecturer of architecture

fig. 8.1 Graves' Boatyard and Little Harbor, Marblehead, 1940
Chamberlain, ***Old Marblehead: A Camera Impression***

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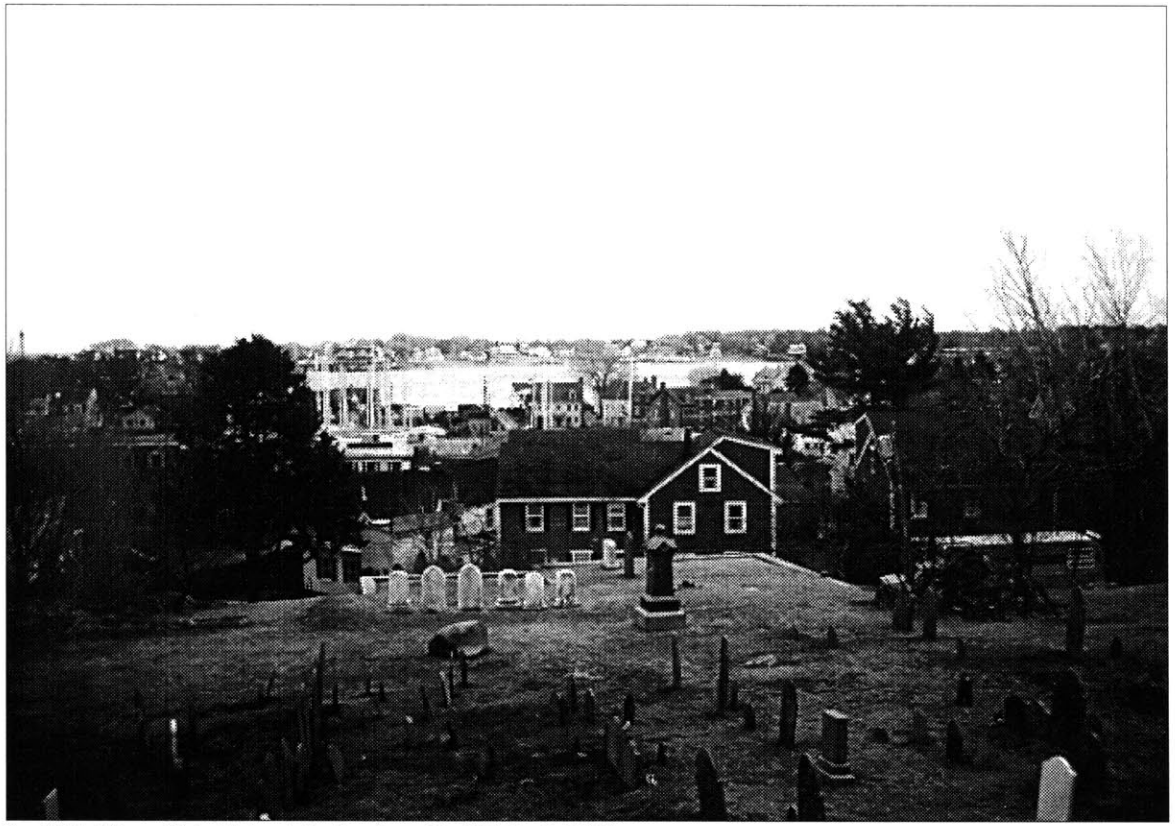
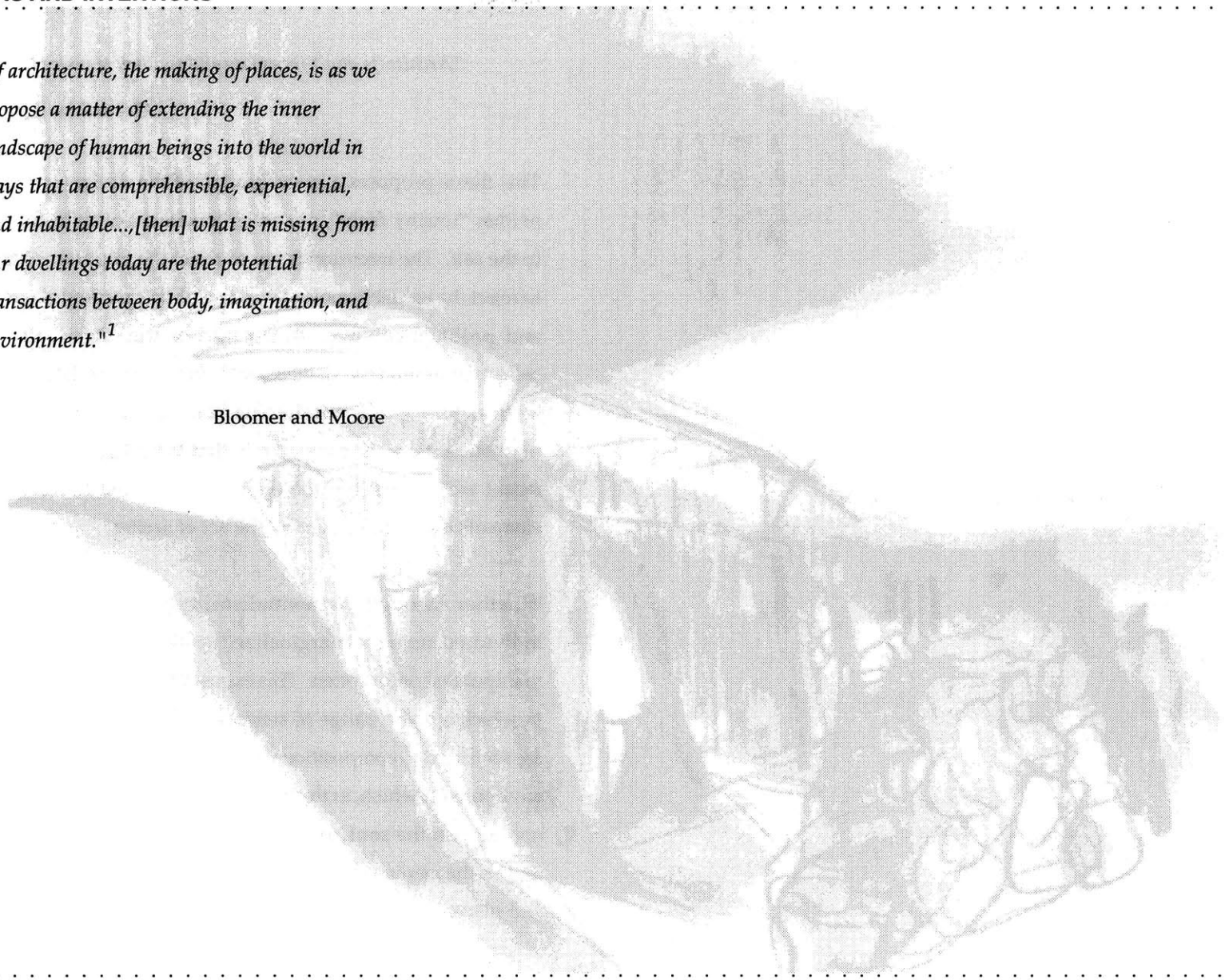


fig. 10.1 View of Marblehead Harbor from the Old Burial Hill

"If architecture, the making of places, is as we propose a matter of extending the inner landscape of human beings into the world in ways that are comprehensible, experiential, and inhabitable...,[then] what is missing from our dwellings today are the potential transactions between body, imagination, and environment."[1]

Bloomer and Moore



human identity in memorable places

"Architects don't invent anything, they transform reality."

Alvaro Siza

This thesis proposes a re-evaluation of the design process which is neither "touchy-feely", nor an endorsement of an historical (re)turn to the self. The intention is not to reject the importance of theory, or to reject the valuable tools of our discipline's methodologies of design and problem-solving. In support of this thesis, the following collection of models, sketches and quotations registers unease with architecture's over-intellectualization, or conversely, its total aestheticization.[2] The concern is that the notion of placemaking in recent architecture has too often been reduced to two-dimensional elements evaluated solely by the act of seeing.

Whether through contextualism, typology or historicism, the individual remains marginalized in the built environment, often manipulated or forgotten. This exposes the limitations of the aesthetic in which a broad range of sensory, emotional and symbolic values are sacrificed to compositional criteria. Design should contest today's environment which, in the barrenness of its sensory experience, does not nourish the soul and provide for the individual. Architecture, then, is the manifestation through which individuals experience space and place.

If architecture furnishes a vehicle for inquiring into the "laws" governing the senses and the transmission of information to the brain, then designers must be able to construct an environment engaging a range of perceptual senses through investigation of material, texture, light, scent and sound. The fundamental question for the architect is **how**? How in the making of a place can architecture enhance the experience of the environment and the development of the individual? This thesis explores these questions through the design of a community theatre on Brown's Island in Marblehead, Massachusetts. The intent is to explore the phenomenological discourses between the body and the experience of place. This thesis questions the privileged position of architecture as a material practice by affirming and heightening the non reducible experiences of life.[3] It is the threshold between the intimate body and the cultural body.

Sensuality triggers the assemblage and construction of culture; architecture becomes both local and universal concurrently. It is more than the "spirit of the materials"; it is an attempt to investigate the formal and phenomenological attributes of materials and their undeniable physicality. It incorporates factors of physical dimension ranging from neighborhood to culture. This includes the natural phenomenon of climate and geography, layered within the culture of a region or place. It is romantic historicism superimposed with consciousness and awareness of the present and future, adapting to and transforming the present landscape as an architectural fact.

fig. 14.1 Cradled by the sea, Marblehead sits high upon its rocky headland.
Chamberlain, ***Old Marblehead: A Camera Impression***

"To stare at the ocean is an aboriginal joy, common to all. We stand before the breaking waves and find renewal in the sea's vast realm. And to live near the shore, knowing that just beyond that line of houses, ridge of dunes, or grove of trees lies the ocean, encompasses the mind in a wordless philosophy in which the cares of man fall away before the wonders of sea and sky."[4]

William F. Robinson

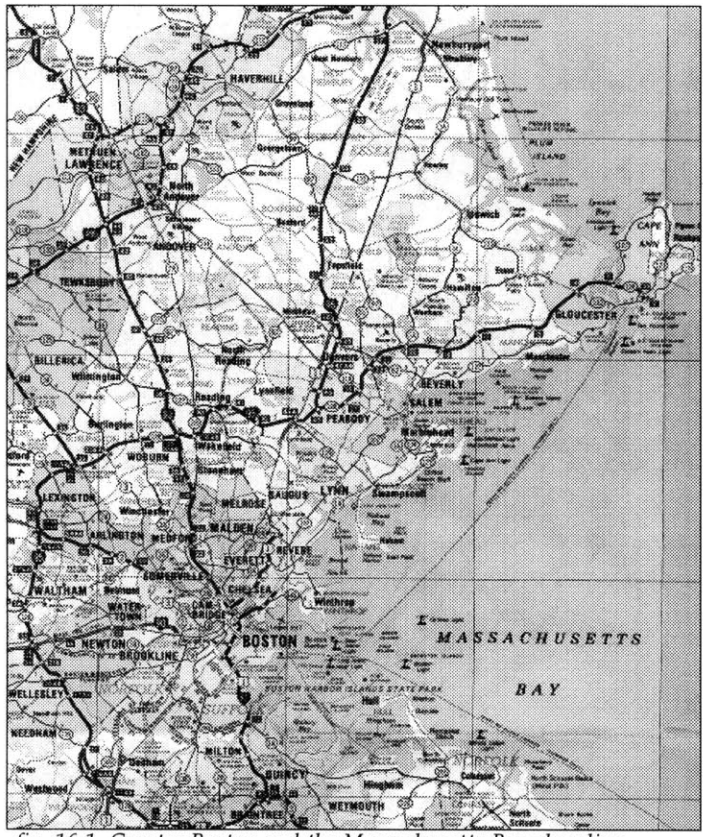


fig. 16.1 Greater Boston and the Massachusetts Bay shoreline.
***Map**: Gousha Travel Publication*

"...let the most absent-minded of men be plunged into his deepest reveries-stand that man on his own legs, set his feet agoing and he will infallibly lead you to water..."

Herman Melville, *Moby Dick*

region

"Like the sea itself, the shore fascinates us who return to it, the place of our ancestral beginnings. In the recurrent rhythms of tides and surf and in the varied life of the tide lines there is obvious attraction of movement and change and beauty. There is also, I am convinced, a deeper fascination born of inner meaning and significance...the primeval meeting place of the elements of earth and water, a place of compromise and conflict and eternal change."

Rachel Carson, *Edge of the Sea*

The region of northeastern Massachusetts is bordered by the climbing hills of New Hampshire to the north, the Atlantic ocean to the east and the port city of Boston immediately to the south. It is characterized by its rocky headland, sandy dunes and marshy inlets. Although seemingly diverse, the shoreline is unified by its geological youth. In effect, the land mass has been carved, formed and changed over thousands of years by glacial movement and tidal currents and shifts. The following study of northeastern Massachusetts aims to understand the physical phenomena of the region and how the qualities of its nature have formed the experiences of individuals for hundreds of years.

Below the rocky peninsula of Cape Ann, the shore curves inward to form small bays along the Massachusetts shore. The smaller harbors within these bays are ancient lowlands flooded by the sea. Here, drumlins and hilly deposits of soil and bedrock protrusions **are** the landscape, changed over time. Some of these drumlins or rocky protrusions, once connected to the mainland, have become isolated by rising ocean levels.

A regional example of the phenomenon of bridging to offshore islands is the city of Boston, where the original drumlin has been filled and transformed as an extension of the shoreline. More locally, Marblehead and Salem harbors are characterized by many scales of offshore land masses. The conflict between individual and nature is apparent: nature severing the continuity of place and man attempting to maintain, even force, the connection.

Northeastern Massachusetts is interesting in its seasonal variety. The average temperature fluctuates by approximately 65 degrees between June and December, while the relative position of the sun changes 50 degrees. The large numbers of deciduous trees change the nature of the region by varying the amount of ambient light. Proximity to the shore serves as a substantial thermal mass component where temperatures and air humidity are regulated by the volume of water. Thus, the ocean regulates the land both physically and climatically.

The shore has a dual nature, it is part land and part sea. During tidal flows it is stable with the sea, and during tidal ebbs it is exposed to the harsh elements of the land. Understanding of the shore comes when we sense the rhythms of the tides which formed the rocky headlands and sandy shores, and when we perceive, with our senses, the quality of life beating at its edge. Each day the shore is different than the day before, the shoreline remains an elusive and indefinite boundary.

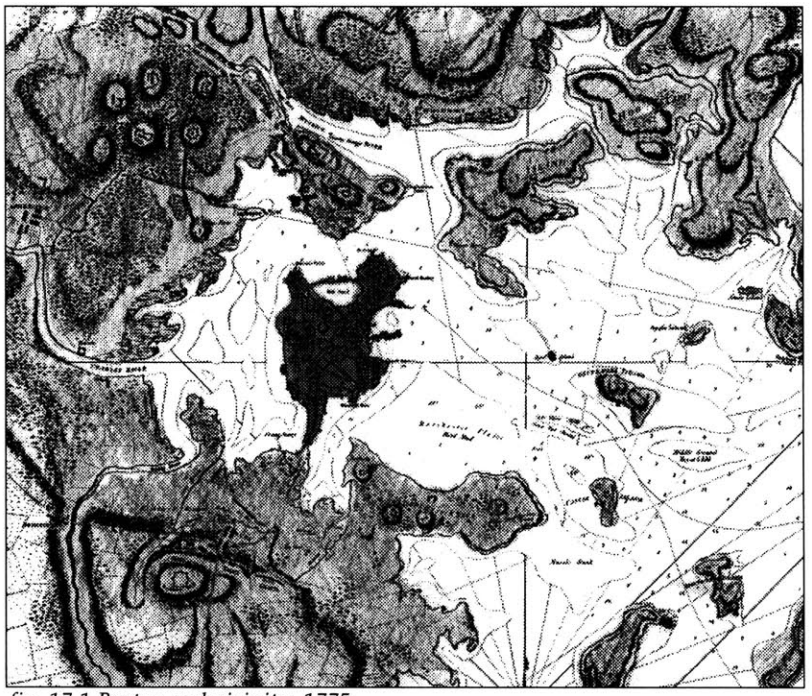


fig. 17.1 Boston and vicinity, 1775.
***Map**: William Faden, Cornell University Library*

fig. 17.2 Boston circa 1882.

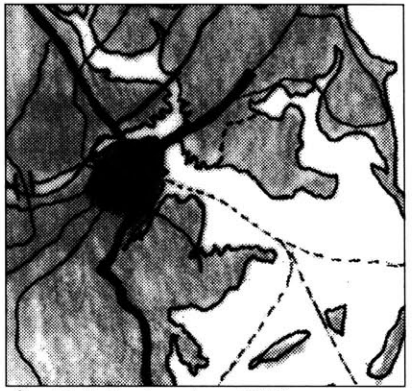


fig. 17.3 Boston circa 1992.

fig. 18.1 Indian settlers greet European explorers at the shoreline. Robinson, ***Coastal New England***

Having an awareness of the culture of the region is as important as understanding the geography and climatology. The Eastern shore of Massachusetts is noted most for its historical background, dating back to the Native American Indian inhabitants.

Cradled by the sea, the shoreline and island inlets provided excellent fishing opportunities. By 1500, Europpean explorers had mapped the coastline for this use. New England, settled by religious outcasts, became a cache for merchants of all sorts. Salem, the first settled area in Massachusetts, was chartered in 1620. By 1649, Puritans outcasts from Salem had meandered south along the coast, to settle on the northern shore of Marblehead harbor.

Settled by Indians, colonized by Puritans and developed by merchants, Marblehead chartered itself as a thriving New England town. Over the years the town evolved from a purely sea-dependent town, to an industrial landscape and finally to a resort town, catering to the boating and tourist industries.

"There is no country greater stored of good harbours than in New England."

John Cabot, *A report to his Majesty circa 1634*

site

Historically, the off-shore islands in Marblehead and Salem harbors have been inhabited both publicly and privately. Brown's Island, once Orne's Island, has been home to a men's club as well as a girl scout camp. At present the island exhibits only ruins of these structures. Neighboring Cat Island, once the home of a children's small pox hospital and sanitarium, is now a children's YMCA summer camp. Gerry Island, to the immediate south of Brown's Island, was once home to one of the most beautiful hotels, as well as some of the most humble fishing huts in Marblehead's history. The country's first naval base, Fort Sewall, is only a few hundred feet southeast of Gerry Island.

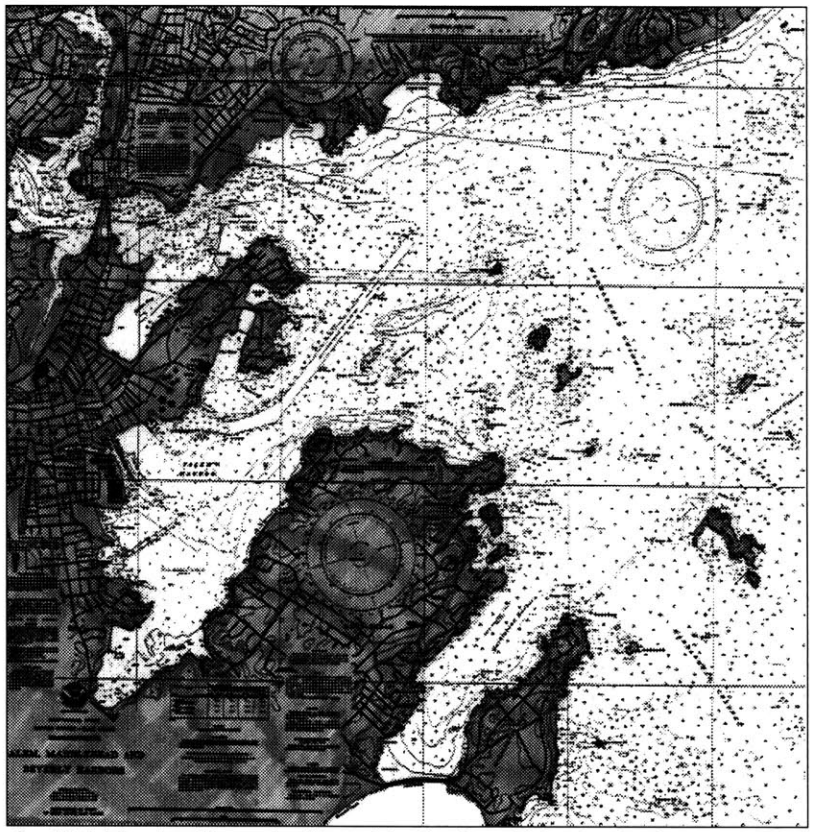


fig. 19.1 The shoreline and offshore islands of Marblehead and Salem Harbors.
***Map**: U.S. Geological Survey*

fig. 20.1 Fort Sewell, 1940
Chamberlain, ***Old Marblehead***

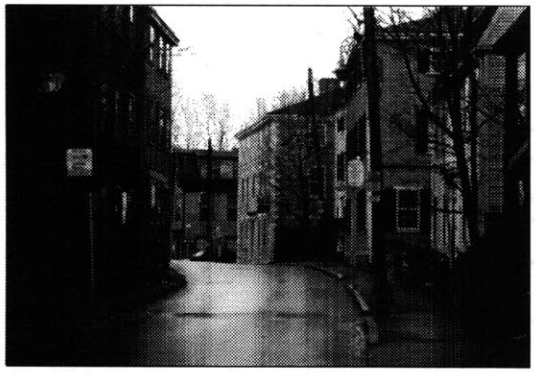


fig. 20.2 Washington Street, 1995

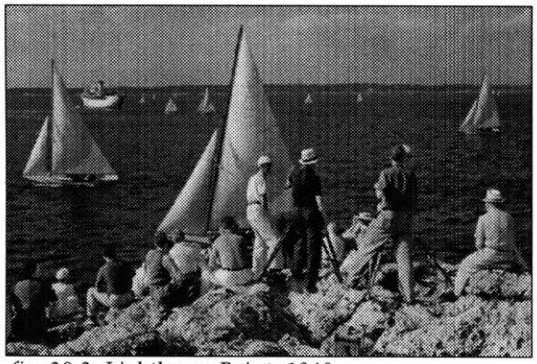


fig. 20.3 Lighthouse Point, 1940
Chamberlain, ***Old Marblehead***

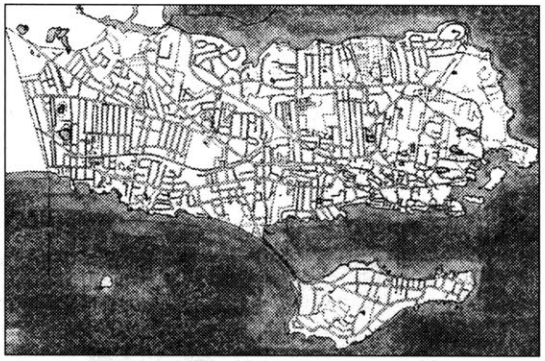


fig. 20.4 Town of Marblehead surrounded by water

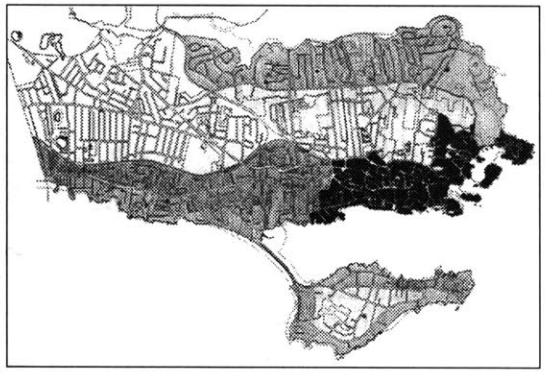


fig. 20.5 Settlement Diagram

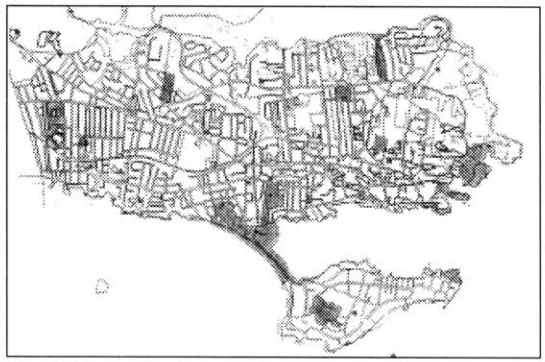


fig. 20.6 Public Space Diagram

fig. 20.1,4 Photograph and diagram show the relationship of the town and the encompassing sea. The changing shoreline affords connections to certain offshore islands during tidal ebbs.

fig. 20.2,5 Photograph and diagram together show the history of the site with relationship to settlement patterns and building types. The shaded regions show these patterns, the darkest area being settled first and the lightest area being the most recently occupied. The photograph depicts the intimate nature between buildings and the street, typical in most New England port towns.

fig. 20.3,6 The photograph depicts typical waterfront activity, while the shaded regions on the diagram are public and/or recreational spaces.

fig. 21.1 Brown's Island with its varied terrain: rocky headland, grassy knoll, sandy beach and marshy inlet.

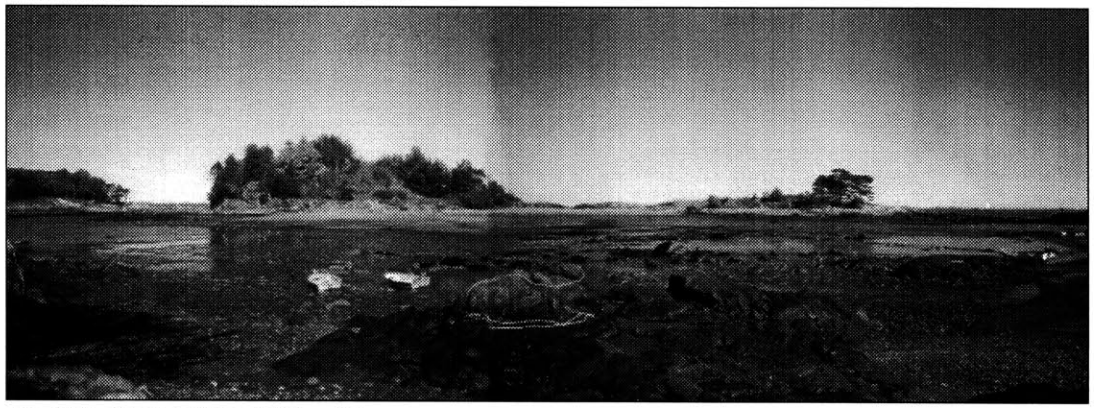


fig. 21.1 Brown's Island at low tide.

fig. 21.2a,b Diagrams show the light and shadows cast in the morning and evening respectively. In comparing the two diagrams, one can discern areas which are always in light and those areas always in shadow.

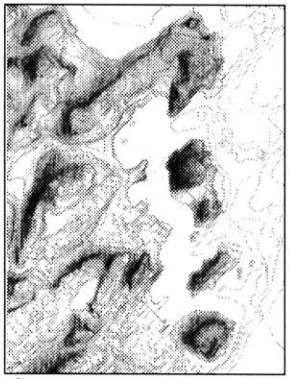


fig. 21.2a East light

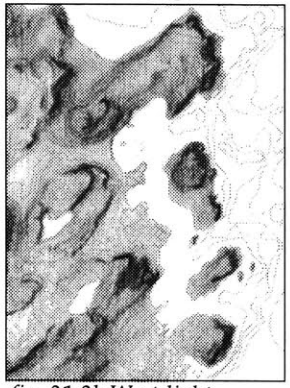


fig. 21.2b West light

fig. 21.3a,b Diagrams show the shaded areas as either calm or windy, which directly influences temperature fluctuations in those areas.

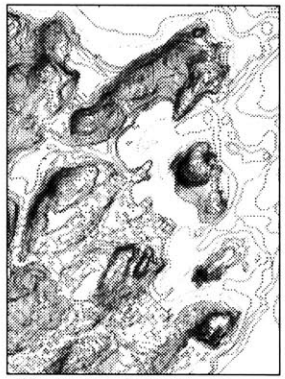


fig. 21.3a Calm areas

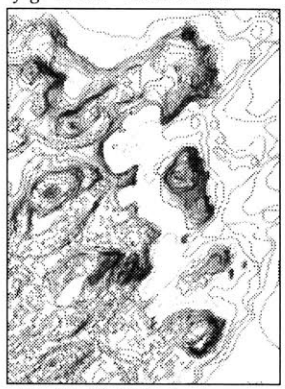


fig. 21.3b Windy areas

fig. 21.4a,b Shaded regions on the diagram relate to the surface textures of the immediate site and its surrounding area.

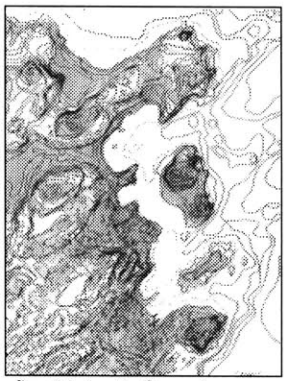


fig. 21.4a Soft surfaces

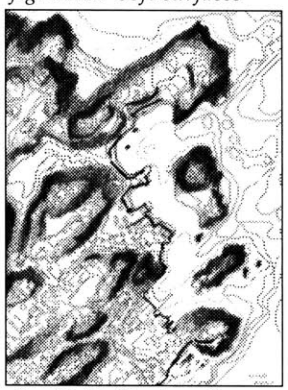


fig. 21.4b Hard surfaces

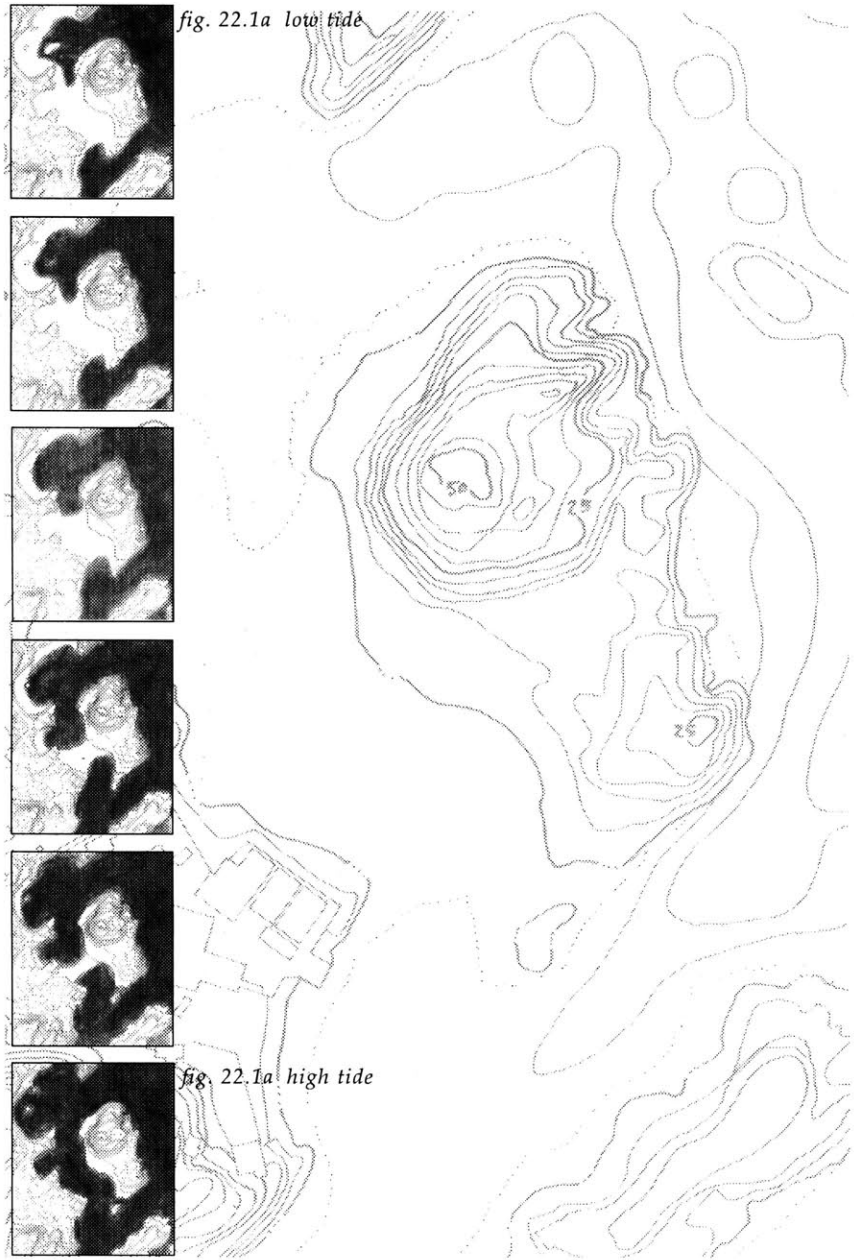


fig. 22.1a low tide

fig. 22.1a high tide

"I remember reading as a child about a fantastic castle-like place set on a rock in France. Wide-eyed, I learned how it was encircled twice a day by tides that came in at 'the speed of a galloping horse'."

Christopher McMillan, *The Archangel's Mountain*

The project is located on Brown's Island in Marblehead's inner harbor. A unique feature of the five acre island is its western shore, which is an extension of a sand bar. This sandbar, or tombolo, can be traversed on foot during low tide, linking daily use patterns with the ebb and flow of the tide. The tides are a continuum, peaking twice each day and twice each month during full and new moons. 'Great tides' occur during the spring and fall equinoxes, when the Atlantic's approach is an impressive event.

The island's varied terrain also includes an open grassy knoll facing southeast, an elevated and woody area to the northwest and a rocky precipitous edge on the eastern shore line. These areas have characteristics that are well suited to certain activities. For instance, the grassy knoll is a perfect place to sit and picnic on, while the rocky edge makes for a meditative spot to experience the power of the ocean. The south face of the hill provides a vantage point of the harbor and town. Seemingly, the land indicates opportunity for certain activities due to the inherent qualities of each area.

Sensory qualities of the site are the salty air and cool ocean breezes. Another means of analysis is the study of movement, the manner in which water, animals and people move through the site. Previous structures and use patterns of the site are landmarks, registration points within the natural landscape with which we orient ourselves.

The reasons for choosing an island location are many. An island isolates people from physical contact, while simultaneously instilling a need for communication. Islands, because they are detached and removed, have been used to isolate criminals, social outlaws, and ill-ridden, diseased individuals. They are a refuge for the rich, the thinkers and those in search of themselves. In the latter case, the physical island is merely a manifestation of the introspective and provocative island of the soul. In this sense, the island is a means of meditation which connects or bridges the gap between understanding ourselves and our place in nature. Architecture, then, is the connection between individual and nature, and the building is the threshold.

fig. 23.1 View of Little Harbor and Brown's Island, 1940. Chamberlain, ***Old Marblehead***

fig. 23.2 A walk on Brown's Island, 1994.

fig. 24.1 Theatre of Science, 1978, conceived as a mechanism for conducting architectonic experiments.
Rossi, ***Works and Projects***

"Theatre is a three-dimensional and three-way event, actor or actors communicating, not simply with you, the spectator, but with you and he, or she, over here and that group over there. All interact with the other....The sense of danger, of community and of shared experience felt at a successful theatre occasion is what distinguishes live theatre from cinema..."[5]

Ian Mackintosh

fig. 26.1 Commedie dell'Arte: Platform stage and actors.
Leacroft, ***The Theatre***

evolution of theatre

"The world hath often be compared to the theatre..."

Richard Sennet, The *Fall of Public Man*

Architecture and drama are sister arts, but like most sisters they fail to bring out the best in each other.[6] Shakespeare and Moliere were happiest with the barest necessities of performance, while Ibsen and Checkov asked for a bit more. Intimate theatre was considered a room, while those most architecturally interesting were the Greek theatres of 300-100 b.c., the Roman theatres from a.d. 100-300, the theatres of Renaissance Italy and of Europe and America from 1700-1875, all periods which reflect an ebb in drama.

Are theatres judged solely by their functional terms or by their aesthetic beauty? If the latter was the case, one would expect most theatres to be succesful performance spaces. The way in which each successive architectural style has tackled the problem of comfortably seating a large number of people facing a stage are in ourself of considerable interest. Historically, it seem as though the form of the theatre has conditioned the form of drama. The cry for new theatres in which to perform new dramas has been raised before there were any new dramas to perform. Is there more to design than this? Is there more to the experience of theatre than this? What is the relationship between the theatre as architecture and the living drama of its time? These questions are buried in the manifesto of this thesis and its proposal.

Originally, theatre was merely a means of gathering large numbers of people to an event. The physical settings generated conventions which the audiences accepted but, which in turn began to modify the event they had come to witness. These settings had created a gulf between the audience and the event, in the sense that the stage became increasingly a world of its own.

At present, the theatre finds itself in a strange half-way position, anxious to preserve the repertory of the past, searching for new conventions, trying to decide what kind of architecture, if any, is suited to its needs. Hankering after the ritual of earlier periods, it is unable to break free from the demands of entertainment. What, indeed, is the ritual aspect of drama? How did it arise? Can it be recaptured?

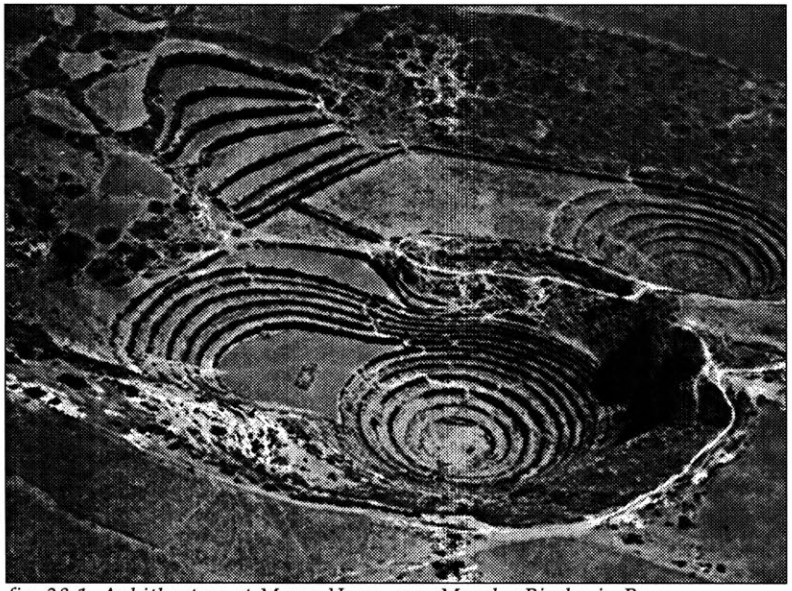


fig. 28.1 Aphitheatres at Muyu-Uray, near Macchu Picchu in Peru.

Within one square a thousand heads are laid,
So close that the heads of the room seem made;
As many faces there, filled with blithe looks,
Show like the promising titles of new books
Writ merrily, the readers being their own eyes,
Which seems to move and give plaudites;
The very floor, as t'were, waves to and fro,
and, like a floating island, seems to move,
Upon a sea bound in with shores above.

Roaring Girl, 1611

landscape as theatre

> *"When it is a matter of controlling or manipulating the environment, analogs can be extremely helpful; yet if we are again to learn how to respond emotionally or aesthetically and morally to the landscape we must find a metaphor-or several metaphors-drawn from our human experience."*[7]
>
> J.B. Jackson

Theatre [is] thus a useful and appropriate metaphor, but more than that, it gave the ultimate three dimensional form to all the choreographic, aesthetic and philosophical theories redefining individuals in the world. We speak of the "scene of the crime" or talk about the setting of an event, referring to the word scene, which has become a place where something happens.[8] Consequently, we have adapted the traditional and historic meaning of stage to the theatre of the world. In this sense we are simultaneously actors and audience, which explains our narcissitic tendency to put ourselves in centerstage, so to speak.

The amphitheatres in Muyu-uray, located in Peru, are beautiful examples of a purely landscaped space where three of the four theatres are formed as a circular space. This is indicative as to how people tend to gather around to view an activity. This first form is often referred to as the arena form, as the activity was often some kind of athletic event.

It is logical, then, that theatre developed as a means of occupying a place in the landscape. Theatre developed as a place to perform and, more importantly, view rituals. A naturally dishing hillside was used to sit upon and view a sacrifice or oration. These amphitheatres tended to have commanding views of the landscape, whether it be water or land. Natural scenery had indeed become the backdrop of the action. Soon the ritual elements were adapted to and performed, by the Greeks, as drama. The use of the hillside proved to be a perfect arrangement for assembling the greatest number of people as close to the action as possible. A steep seating rake on the hillside had acoustic merit, since the sound traveled a lesser distance to reach the audience, which served as an absorptive surface. Whether or not this was planned is conjecture, but the fact remains that the Greeks may discovered something quite fascinating.

As the theatre became more secular, the Romans adopted the Greek amphiteatre as a model and developed the semicircular form as a perfect half-circle. Also, by enclosing the theatre in a building, the Romans had privatized the original idea of a public forum. The addition of the skene replaced the open backdrop with a solid form, often with openings for passage through. Acoustically, the skene proved beneficial by reflecting more of the sound from the stage or orchestra out toward the audience. The seating rake became even more severe in order to get the maximum number of spectators near the action, minimizing the construction.

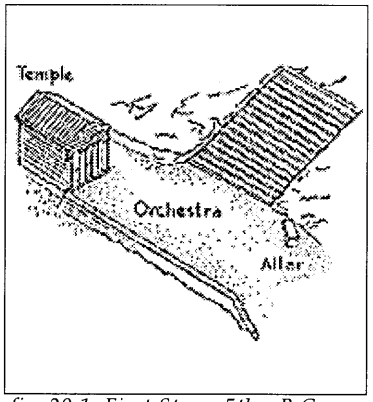


fig. 29.1 First Stage, 5th c.B.C.
Leacroft, ***The Theatre***

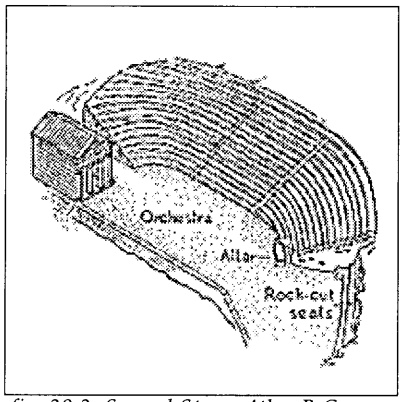


fig. 29.2 Second Stage, 4th c.B.C.
Leacroft, ***The Theatre***

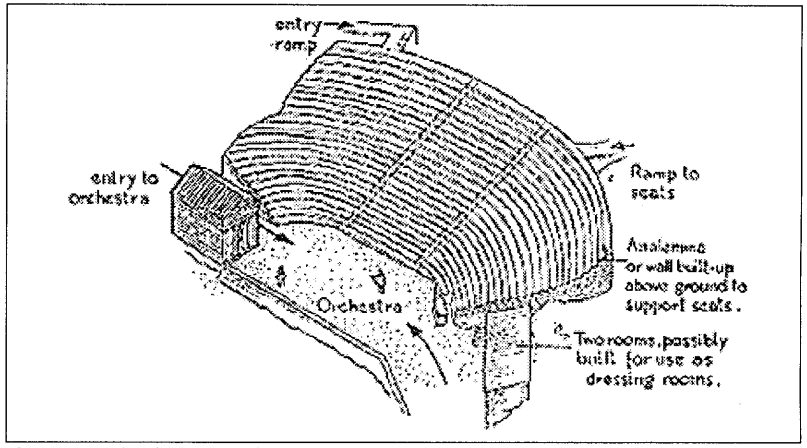


fig. 29.3 Third Stage,3rd c.B.C.
Leacroft, ***The Theatre***

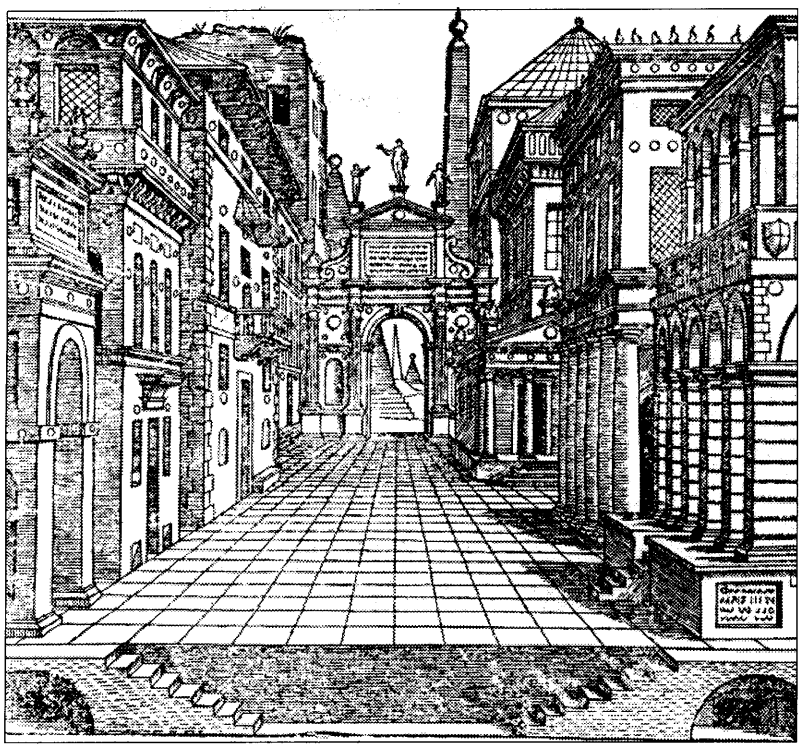


fig. 30.1 Serlio's Tragic Scene
Izenour, ***Theatre Design***

The Dark Ages challenged art as meaningless and frowned upon performances other than events of jurisdictional honor. Over the next several centuries, theatres and performers were denounced as queer. Bohemians banded together for safety, earning their keep by performing amusing acts for money. The gypsies of *la strada* traveled on a daily basis, and were often forced out of towns for their peddling.

It was not until the Italian Renaissance that theatre and the arts made their way back in the mainstream. In the 16th century, Venice became the center of attention. Serlio constructed a means of viewing performance in three perspectives: the tragic, comic and satyric scenes unifying the intellectual concepts of time, place and action.[9]

It was from Italy and the Renaissance that the proscenium was developed as a means of viewing theatre through a window into another world. The proscenium framed the sets, which were constructed as one point perspectives. It was at this constructed viewpoint that the patron of the theatre would sit. Consequently, the form of the theatre had become and elongated ellipse with a focal position as the perfect viewpoint. The audience slowly receded to the opposite side of the proscenium, and the relationship became one of viewing rather than participation, which the earlier theatres had accomplished in their more intimate form. For centuries standard theatre developed around the illusion of space achieved by the use of color, form and light skillfully used in the stage and skene.

It was at this point in history that geographers developed a means for depicting the landscape. Explorers and map makers contributed a more accurate knowledge of the earth's surface, which was employed in the development of literature and drama. The geographer and cartographer undertook the world and the bond between people and the land they occupied, emphasizing the human or political aspects of boundaries, territorial divisions, language,[10] towns and cities.

Landscape can be understood as the element in which human action is performed, as well as the context within which it is located. Although, the more developed the scientific and intellectual drama becomes, the less the landscape metaphor seems appropriate. Scenery has replaced natural context as the backdrop to the action, the emphasis on illusion and deception.

Thus, architecture plays a major role in the theatrical experience, and the appreciation of the role of place in theatre making and going. Central to this thesis is that architecture is one of the most vital ingredients of the theatrical experince and one of the least understood. The aim here is to explain the contibution of sense of place to the theatrical event. Then, the architecture of the theatre is both physical and metaphysical.[11]

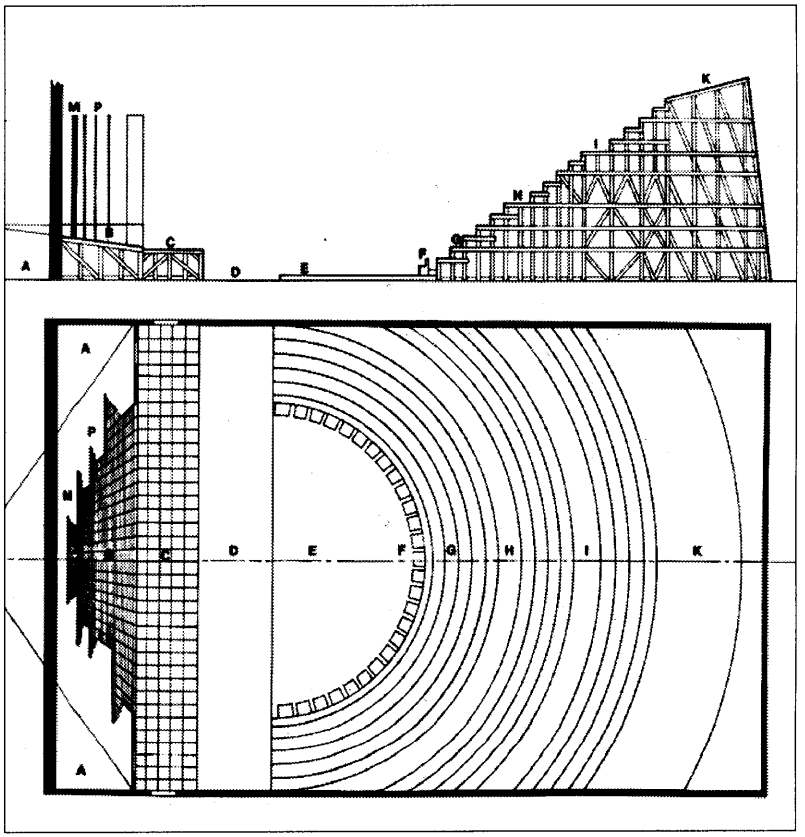


fig. 31.1 Plan and Section of theatre by Serlio
Izenour, ***Theater Design***

fig. 32.1 In Le Corbusier's Ronchampthe light activates the material and the space.
Jeanneret, *Le Corbusier*

> *"...more than the other senses, the eye objectifies and masters. It sets at a distance, and maintains that distance. In our culture, the predominance of the look over smell, taste, touch, hearing, has brought about an improverishment of bodily relations...the moment the look dominates, the body loses materiality."*[12]
>
> Luce Irigaray

The following is a collection of theories and discoveries which substantiate the argument for amore complete understanding of sensorial perception and the place making. This thesis is concerned with the activation of that awareness throughout the design process. The discovery, in this case, is the nature of human perception informed by the senses, both physical and intellectual.

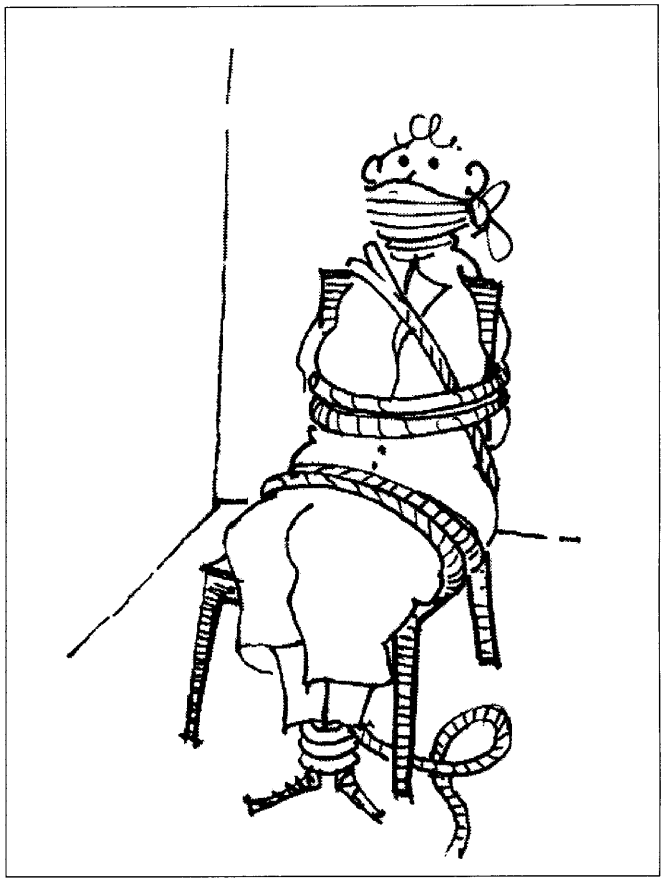


fig. 34.1 Limiting the organs of aesthetic pleasure to sight.
Bloomer and Moore, ***Body, Memory and Architecture***

After the 17th century, theories of how we sense beauty began to influence our understanding of the experience of architecture. Cartesian "rationalism" proposed the assignment of meanings that are deduced and not "sensed" while the Enlightenment echoed the Platonic metaphor of vision which connected sight with light and truth. Although civilization had been concerned with instrumental reason, culture began to address itself to the expression and the realization of the being.

In essence, the visual sense had been exalted for so many centuries that other means of sensing objects had been regarded as inferior and less important in the formulation of a knowledge of objects, including buildings. In all its modesty, the 19th century denounced the body in rational discussions about architecture and touching was something one performed with a Victorian glove.

It was not until the Gestalt "form" theory of the 20th century that visual studies had an alarming impact on architecture. However, historian Geoffrey Scott advised not to accept a standard of architectural beauty derived from visual criteria alone. In his discussion on scale and form, the question of perceiving the environment as a holistic experience drew on the need to establish the means of experience itself—the senses.

The five basic senses were re-examined to establish a more perceptive set of senses, as far as placemaking was concerned. Environmental psychologist J.J. Gibson described these senses as "active systems constantly seeking out information from the environment, [including] the visual system, the auditory system, the taste-smell system, the basic-orienting system and the haptic system.[13] The latter contributed more actively than the other senses to the understanding of three-dimensionality—the ultimate goal of architectural experience.

The basic-orienting sense is what informs us what is up and down with respect to a ground plane; whereas the haptic sense, or kinesthesia, is the sense of touch reconsidered to include the entire body, not just the hands. The haptic sense includes all aspects of sensual detection which involve internal and external physical contact which may be extended or even amplified by the use of a cane.

"One has in mind a whole range of complementary sensory perceptions which are registered by the labile body: the intensity of light, darkness, heat and cold; the feeling of humidity; the aroma of material; the almost palpable presence of masonry as the body senses its own confinement; the momentum of an induced gait and the relative inertia of the body as it traverses the floor; the echoing resonance of our own footfall."[14]

Kenneth Frampton

Kenneth Frampton liberates the importance of perspective as it relates to his theories on Critical Regionalism. He states that the whole range of our sensory perceptions are registered within ourselves and are liberated through experience. Touch, for example, relates to our immediate experience, and that tactile quality instills in architects a desire to work with and understand properties of materials. Frampton challenges universal civilization with his *"Six Points of Resistance"*, the basis of which is concerned with architecture's relationship to the smaller culture by tectonic, site and material specific facts. It is less of a style, and more a critique of common issues.

"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 speak of a world of feeling as we do of a life of thought."[15]

Yi Fu Tuan

Yi Fu Tuan argues that the authentic experience of place yields a complicated set of circumstances, rich in specific sensory and psychological detail. How then can one incorporate this knowledge into the design or making of a place? There are three basic concerns, the genius loci, the awareness of the design criteria and the realization of the place as a means and not and end. These design initiatives allow for a more holistic experience which incorporates all the senses, giving opportunity for all individuals to participate with and appreciate the environment more thoroughly.

Tuan notes the richness and range of human environmental experience. Instead of resorting to convenient and conventional categories, he focuses on issues of space and place. Tuan develops his ideas from the perspective of experience by describing situations that occur. He focuses on certain issues including experiential perspective, the body, personal relations, architectural space and visibility. Tuan asks, in what way do people attach meaning to a specific place and why?

"A concrete term for environment is place...Place is evidently an integral part of existence. What, then, do we mean with the word "place"? Obviously we mean something more than abstract location. We mean a totality made up of concrete things having material substance, shape, texture and color. Together these things determine an environmental character..."[16]

Chrisitan Norberg Schultz

Christian Norberg-Schulz identifies the influences of the environment on our perception of place. Insofar as his book implies the purpose of architecture is more than functionalism, it is a discussion of perception and symbolism as a means of understanding the idea of place and, more intriguing, the art of placemaking.

David Seamon collects a series of critical essays on environmental design and the built environment with a specific focus on architectural experience and significance as a means of place-making. A place being an integral part of the psychological and social well-being interpreted from the inside out. Seamon highlights the relationship between livability and the built environment. The phenomenology provides an important intellectual means for understanding and interpreting art and science as well as architecture since they are all means of communication.

"What is a sense of oneself? To a large extent, it has to do with touch, how we feel. Our proprioceptors keep us informed of where we are in space...but, above all, touch teaches us that life has depth and contour; it makes our sense of the world and ourselves three-dimensional."[17]

Diane Ackerman

Diane Ackerman describes how sensory the world is and confirms that the only way to understand the world is by detecting it through the 'radar-net 'of our senses,defining the edge of our consciousness. She describes how mind **and** body together, make sense of the complex environment by cataloging experience by taste, touch, smell, hearing and vision. What is the quality of light? What are the materials and textures? What are the sounds and smells particular to that area? What are the views? She explores the origin of the senses, their evolution and the roles they play in the development of people and their environment.

> *"I thought then that the first feeling must have been touch. Our whole sense of procreation has to do with touch. From the desire to be beautifully in touch came eyesight. To see was only to touch more accurately. From touch there is a striving to touch, not just touch, and this developed what could be sight. When sight came, the first moment of sight was the realization of beauty itself, which is stronger than any of the adjectives you might add to it. It is a total harmony you feel without knowing, without reservation, without criticism, without choice."*[18]
>
> Louis Kahn

Authors Bloomer and Moore introduce architecture from the standpoint of how buildings are experienced, and observe how one reacts to a certain architectural fact and provide a means for evaluating one's experience of that fact. They attempt to create an understanding of how buildings affect individuals and communities emotionally, as well as how they provide people with a sense of identity and place.

Architecture and Body encourages the re-evaluation of the body as a design initiative in architecture. It is a collection of essays and works describing the failure of modern architecture through intellectualism and aestheticism and howcontemporary culture supports the importance of vision over all other senses. The book acknowledges the need to re-examine the body and the experience of place, engaging **all** of the senses. Marble asks to what extent can architecture heighten the experience of one's existence within the environment?

"The Bauhaus wished to avoid conventional architectural thinking and to liberate the creative capacity of its students. Instead of listening to lectures on traditional methods of employing materials they were to learn for themselves through their own experiments. By recording their impressions of the various materials they worked with, the students gathered a compendium of valuable information for future use. Emphasis was not laid simply on the appearance of surfaces but particularly on the feel of them. The tactile sense was trained in experiments with textures systematically arranged according to degree of coarseness. By running their fingers over the materials again and again, the students were finally able to sense a sort of musical scale of textural values." [19]

Steen Eiler Rasmussen

In his book, Experiencing Architecture, Rassmusen describes architecture as a synthesis of many events. These range from basic observation, to scale and proportion, including textural effects, daylight, color and sound. He searches for the answers to these questions by providing examples of day to day items in belief that one day architecture may be understood by means of experience.

> *"[But] I do not blame anyone [they] did not realize how difficult they were making my examinations, nor did they understand the peculiar difficulties I had to surmount. But if they unintentionally placed obstacles in my way, I have the consolation of knowing that I overcame them all."* [20]
>
> Helen Keller

Helen Keller's, The Story of My Life is an account of a woman without senses of sight and hearing. It depicts the physical, intellectual, emotional and mechanical complications of a deaf-blind woman at the turn of the century. Her ability to survive and prosper in an environment in which she could not see or hear is a tribute to her sensual awareness and adaptation to a world by touch, taste and smell alone.

In a beautiful collection of stories and essays, author Oliver Sacks describes the challenges of the deaf in a completely visual language. He displays how their experience casts light on the method of communication. Sacks looks at language as a means of communication, development of the nervous system and formulation of communities and cultures. The book affords a new perspective on language, biology and culture.

In his book Touching The Rock, author John Hull gives a first-hand account of his loss of sight. The author comments on his own difficult transition from a world of seeing to one of darkness, ultimately finding himself lost in a world he thought he understood.

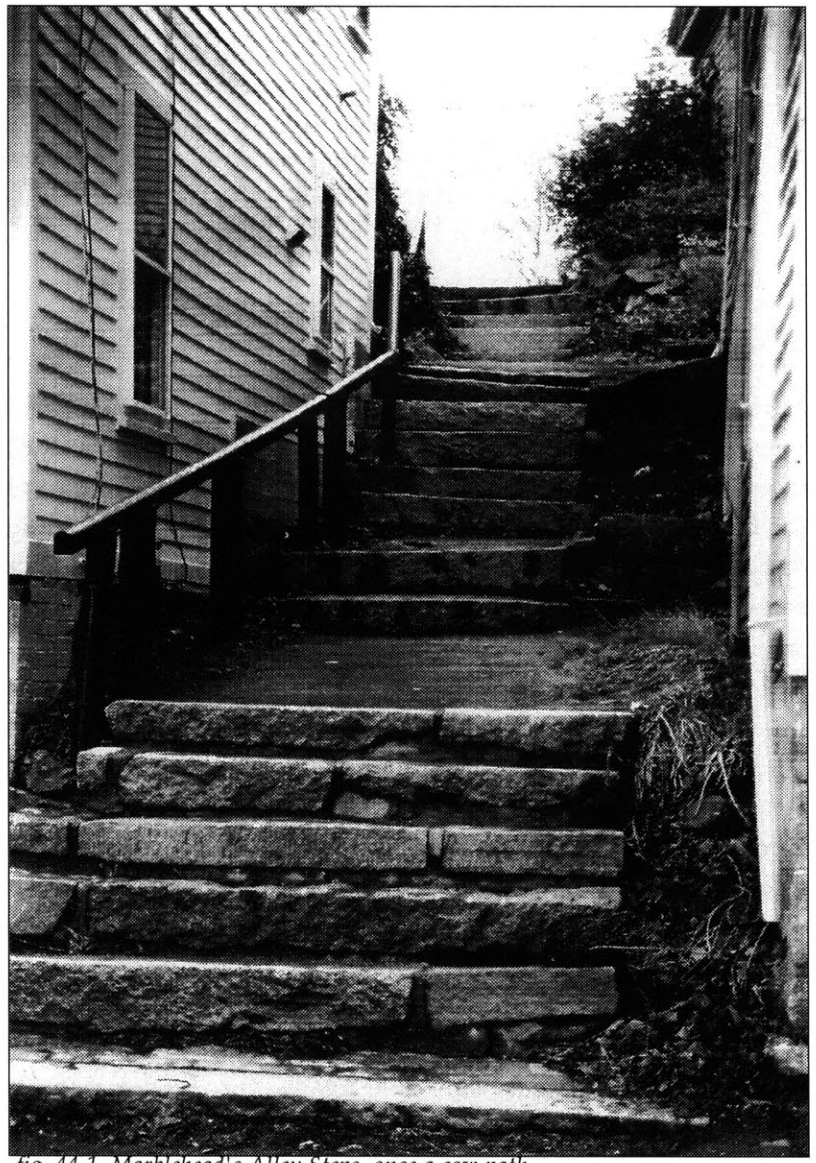


fig. 44.1 Marblehead's Alley Steps, once a cow path.

"The initial mystery that attends any journey is: how did the traveler reach his starting point in the first place? How did I reach the window, the walls, the fireplace, the room itself; how do I happen to be beneath this ceiling and above this floor? Oh, that is a matter of conjecture, for argument pro and con, for research, supposition, dialect! I can hardly remember how. Unlike Livingstone, on the verge of darkest Africa, I have no maps to hand, no globe of the terrestrial or the celestial. If ever I possessed a compass, it has long since disappeared. There must be, however, some reasonable explanation for my presence here. Some step started me toward this point, as opposed to all other points on the habitable globe. I must consider; I must discover it."

Louise Bogan, *Journey Around My Room*

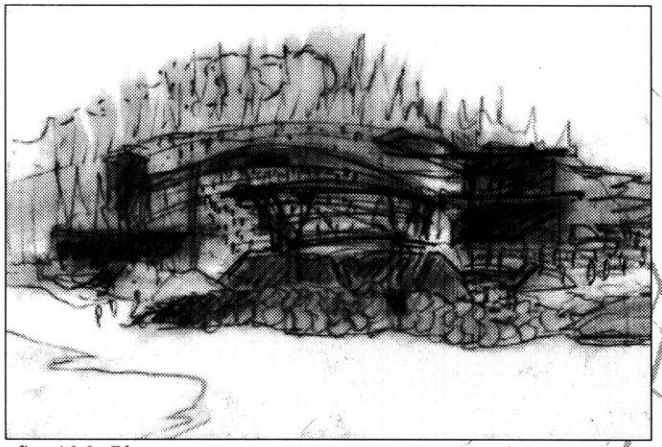


fig. 46.2 Place

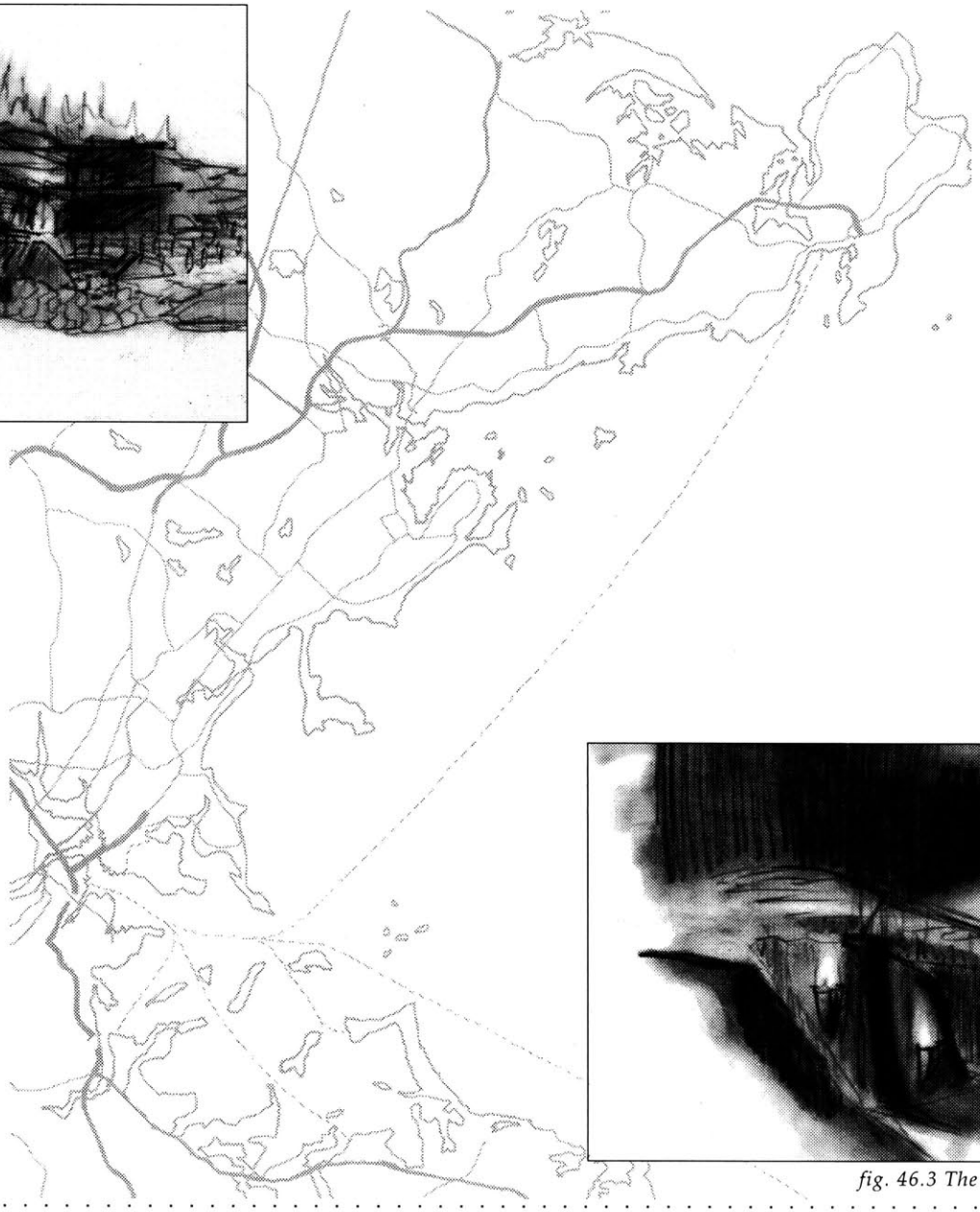


fig 46.1 Region

fig. 46.3 The individual's experience

experience

There exists a harmony between us and the world, and the knowledge of our existence is manifested through our experience of place and journey. We perceive this harmony at various scales, individual, place and regional. Within these scales, the elements of time, self and nature are realized. Since this thesis is an inquiry of design method, it is critical to **construct** the methodology. The focus is the following points:

> An **individual**'s sense of perception relates not only to mind, but body as well. Most think of the mind being located in the head, but physiological research shows that the mind travels the body, synthesizing perceptual information as intellectual fact.
>
> Our sense of **place** is very much related to the physical nature of a site. Climate, geography and light are the most dominating forces to the individual, and are means of articulating building and construction methods relating directly to the gravitational forces of nature.
>
> The **regional** aspect of experience encompasses the social interactions between individuals and the environment. It is also a cultural phenomena, and architecture provides a means for defining that social interaction.

These constructs are the impetus of the thesis and catalyst to the design method. The premise is further strengthened by the idea of linking these scales of perception to time, to self and to nature. The design process of this thesis is two-fold; first, how does one site a building in the landscape, and second how does one design that building?

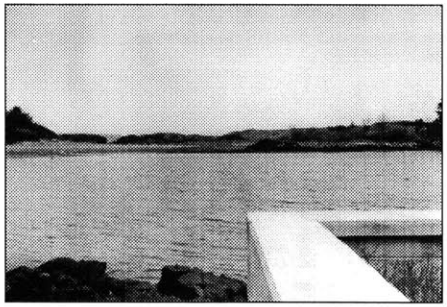


fig. 48.1a high tide

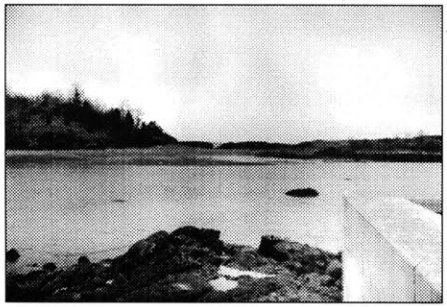


fig. 48.1b after one hour...

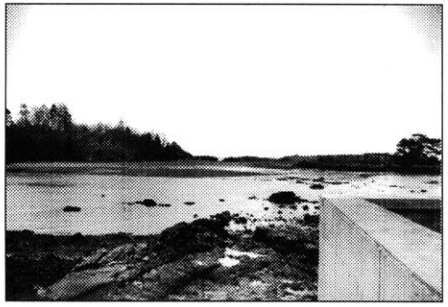


fig. 48.1c afer two hours...

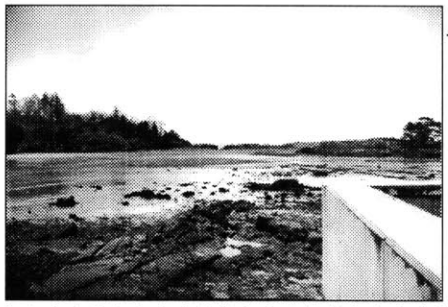


fig. 48.1d after three hours...

time and nature

The nature of any site is altered with time. The constant shift in tidal currents and the passage of the sun on its seasonal path are the patterns and continuities of this site. The land functions as a time piece, articulating the days, months and years. The wearing shoreline and overgrown paths are witness to the physical presence of time. The land, the individual, represents the temporal and the sea, nature, represents the permanent.

What is most interesting is not how our senses span distance or culture, but how they span time. Our senses connect us intimately with the present in ways that our thoughts never could, and our memory is a composition of sensorial experiences.

individual and collective

The program of a performance space initiates discussion of individual **and** community; however, there is an introspective quality related to building in the landscape. If this is so, then it should follow that the design process develop from the individual's experience in a collective environment. The instant the individual is placed in a communal setting, such as the landscape, collective issues become apparent. Theatre, in this sense, intensifies the importance of one's experience, in light of the holistic design. In the simplest terms, landscape and building are the articulation of path and place.

human and wilderness

The wilderness, in its vastness, is unknown to humans. A natural curiosity has urged the individual to establish a relationship with the wilderness. Often the relationship is a boundary seperating the known from the unknown, making a very clear distinction between the two. With advances in science, humans have been able to comprehend a substantial amount of information. Our dominance over nature has led us to desecrate the very earth which gives us life. Therefore, there is a need for establishing a symbiotic relationship between human and wilderness, a dialogue manifested in the architecture itself.

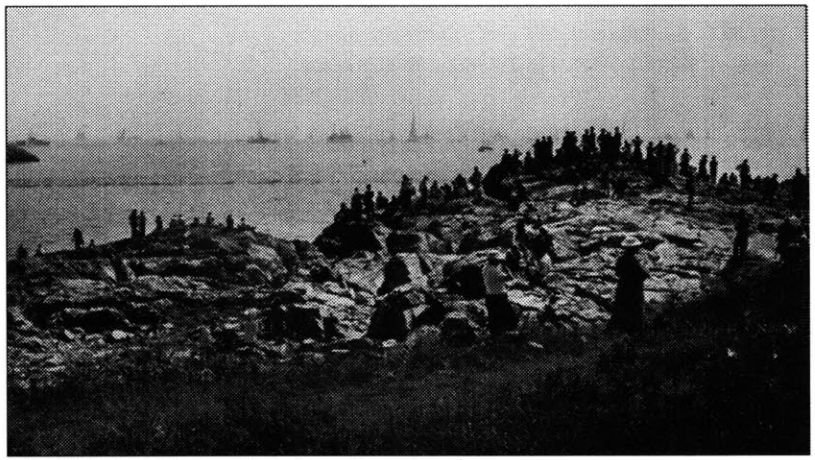


fig. 49.1 Spectators gather along the rocky edge.
Chamberlain, ***Old Marblehead***

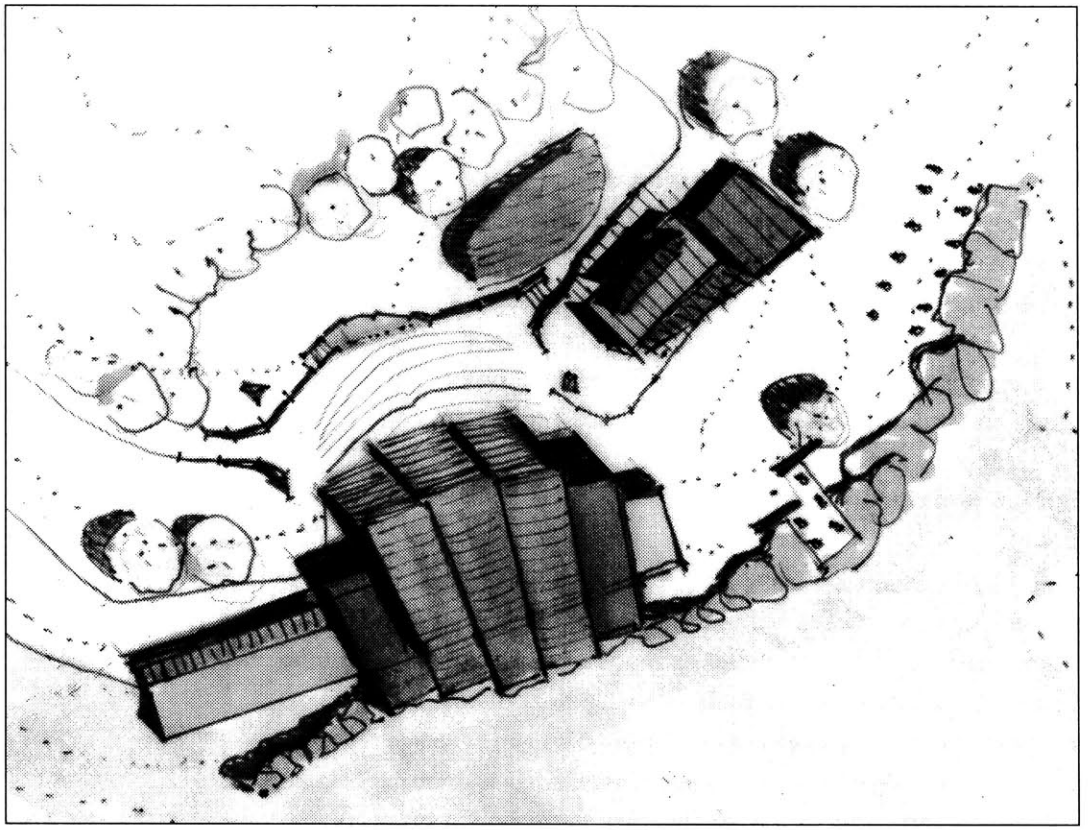
fig. 49.2 Remnants of human activity.

fig. 50.1 Roof plan at 1:40 scale shows the design elements directly related to the main theatre space.

Stage:	*1800s.f.*
Side stage/Storage:	*2600s.f.*
Control Room:	*300s.f.*
Workshop:	*1200s.f.*
Dressing Rooms:	*500s.f.*
Concessions Pavilion:	*600s.f.*
Restroom and Facilities:	*500s.f.*
Observation Deck:	*300s.f.*

Other landscape elements (not shown in sketch):

Dock:	*800s.f.*
Observation Tower:	*300s.f.*
Light Towers (2):	*200s.f.*



view from above

Topographic models reveal less about the physical experience of the place and more about the intellectual facts, which is inherently the problem of large scale models. In some sense, the larger scale models arehelpful in developing an attitude toward the site. The physical qualities of water being the harsh and forming element, and the land being soft and maleable are conflicting. The metaphysical nature of building on an island with the land (finite) on one side and the ocean (infinite) on the other, became a subject for critical discussion. Placing a building on the edge of the water establishes a confrontation between the forces of the tides and the wearing headland, implies a direct connection to the ocean. Building on the interior of the site, between the two sides, is more indicative of the nature of the relationship to the land and sea, and building becomes a threshold.

The ultimate decision was **how** the building would perform in the landscape. Is it an object of destination, or an element within the landscape? The latter implies a more direct relationship with the whole site and a more complete understanding of the procession through the site.

fig. 51.1 Shows the geological information of the formation of the area. Glacial movement over 20,000 years prior carved the landforms, while the changing tides have altered the coastline.

fig. 51.2 Diagram of movement patterns within the site.

fig. 51.3 Map showing views and relationships to surrounding landmarks.

fig. 51.1 Site model at 1:100

fig. 51.2 Map of existing paths

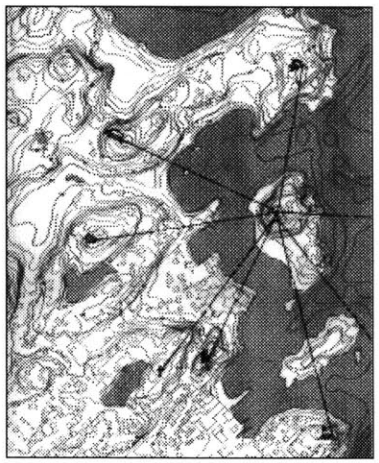


fig. 51.3 Island as central location

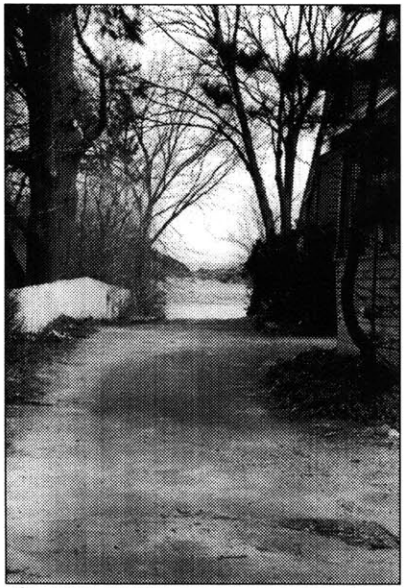


fig. 52.1 Public access road, March

fig. 52.1,2 Photographs show the public access road to the site. The quality of light and enclosure changes drastically through the seasons.

fig. 52.3 Photograph shows the quality of the path to the site. An intimate quality of closure and framed views into smaller spaces give Washington Street its own identity.

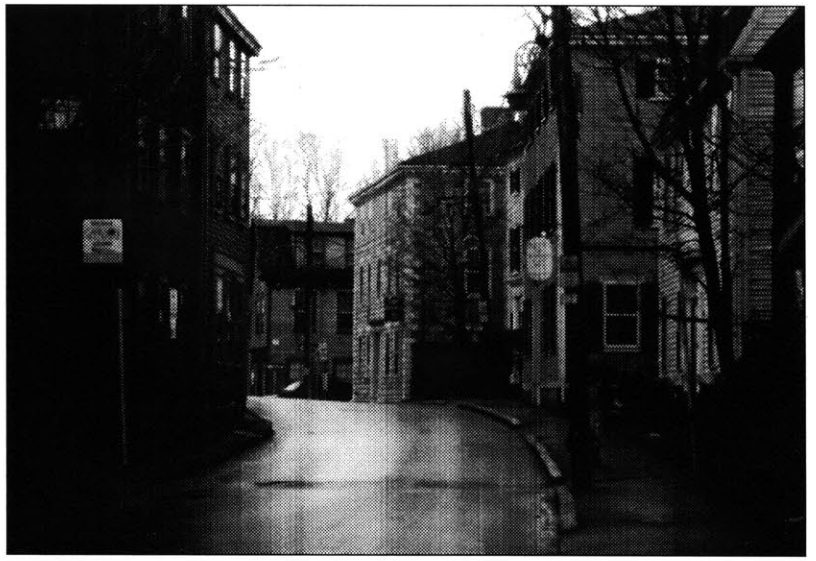


fig. 52.3 Washington Street, January

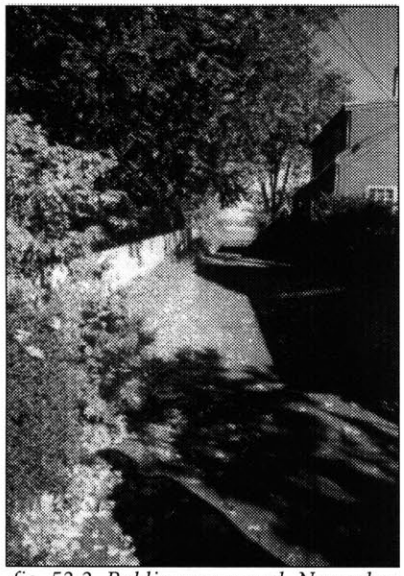


fig. 52.2 Public access road, November

"...a boundary is not a place at which something ends, it is where something begins it's presencing..."

Greek philosophy

extension of town

By constructing a community building on Brown's island, the public has essentially recaptured a privatized section of the waterfront. The location of Brown's Island as the center of the original harbor symbolizes the relationship between individual and collective.

Since the island is an extension of the land, it is critical to understand the larger, more significant relationship with intimate pedestrian nature of Marblehead. One can imagine this theatre as an extension of the town, across the sandbar, into the landscape . In this sense, the "theatre" exists as a series of performance places along a path.

The historic landmarks throughout Marblehead are referenced as posts embedded within the sandbar, extending the walking tour of Marblehead into the ocean. These posts record the passage of time by the ever-changing levels of the tide, and become timepieces measuring devices for tide levels and sun location. Just as the posts are revealed as the tide ebbs, the access to the island is revealed as a natural connection articulated with simple elements

Water access on the land side of the island provides opportunity for dialogue with the water as well as, the land below the water's surface. Here, a small platform responds to the changing water heights. The wooden dock rises and falls around stone piers, which anchor the platform to the land below. As the tide flows, the platform acts as a floating dock, and when the tide ebbs, it becomes a dry surface to sit upon. In this sense, the platform is both performing, and a performance place. Here, the opportunity for conversation develops between land and water.

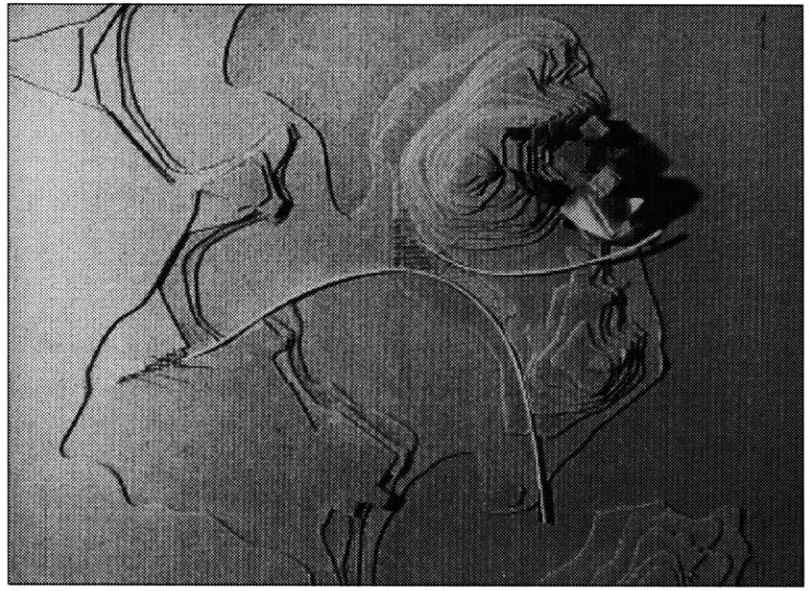


fig. 53.1 Concept model showing relationship of island to shoreline.

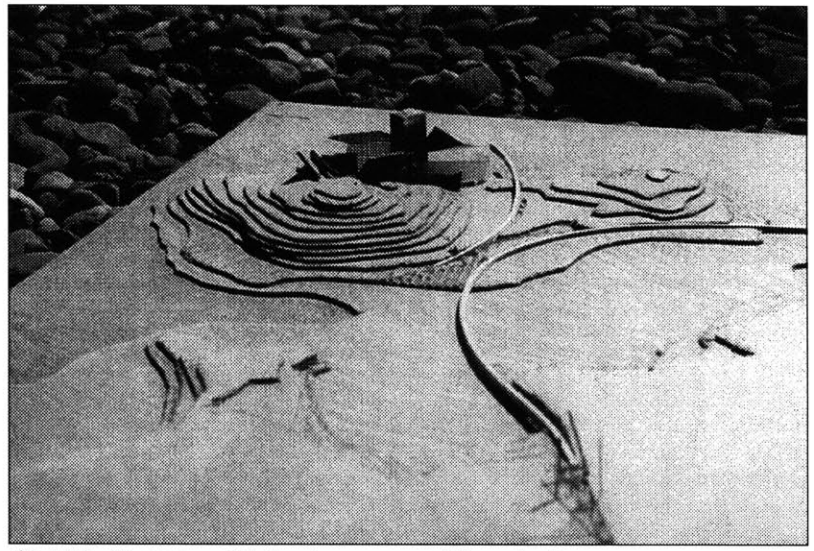


fig. 53.2 Concept model showing movement through site.

fig. 54.1,2 Photograph and sketch are the experience of moving across the sandbar and into the site...

fig. 54.1 Revealed connection across sandbar showing path to site.

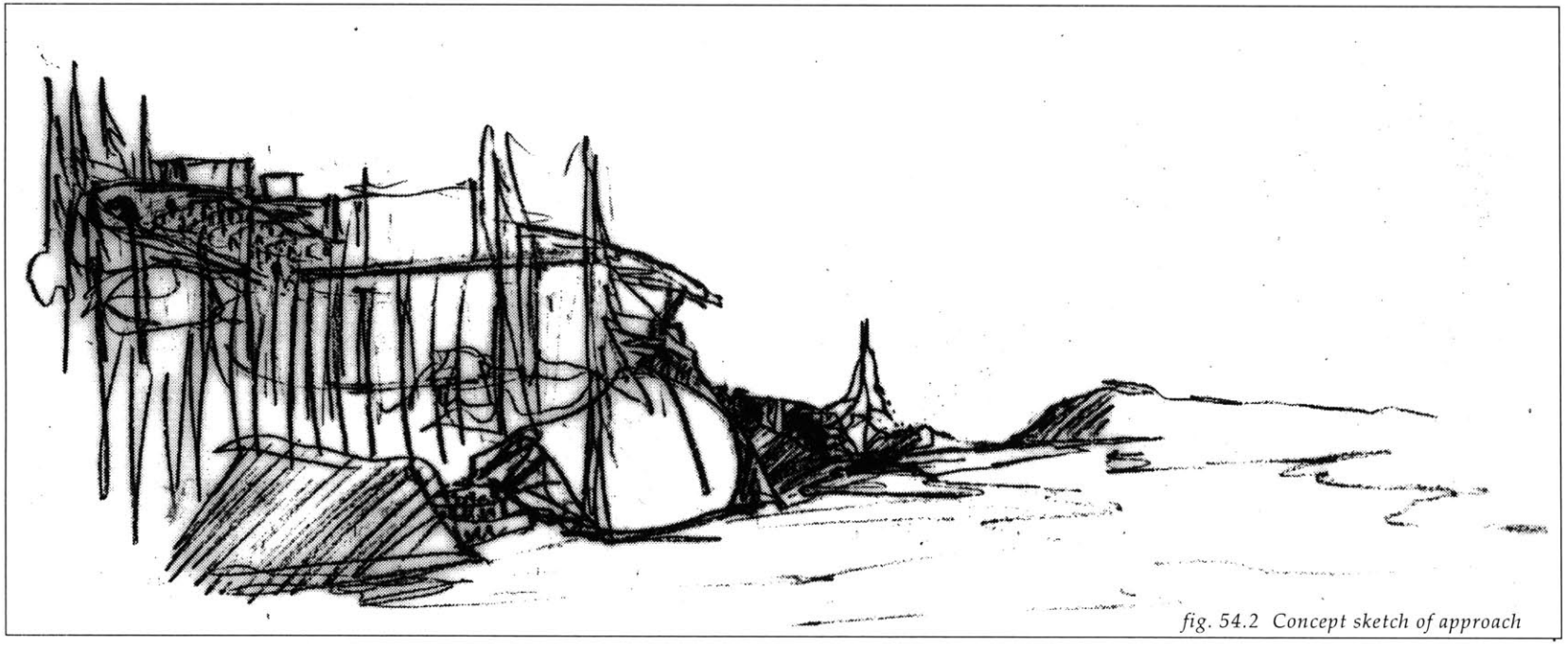


fig. 54.2 Concept sketch of approach

The next series of discoveries came when modeling the procession through the landscape. Many passes were taken at 1:40 scale, providing a better understanding of the size and placement of the program. The following four schemes are design ideas of what and where the theatre could be.

fig. 55.1,2 Concept sketches of relationship of elements to the landscape. Stage canopy emerges and is supported by rock base, while the other pavilions are silent partners in defining the place within the landscape.

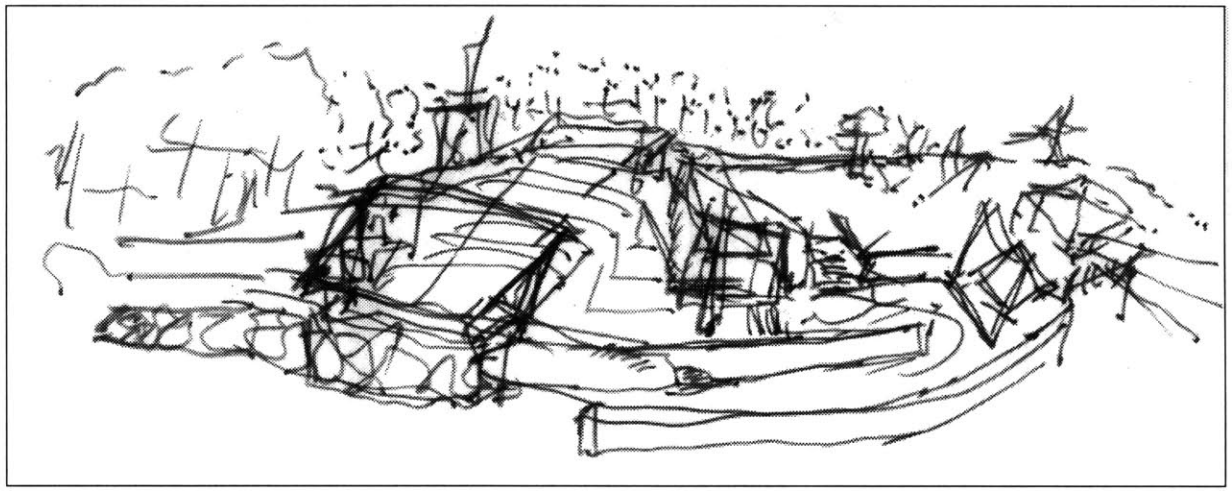


fig. 55.1 Theatre as elements performing inthe landscape.

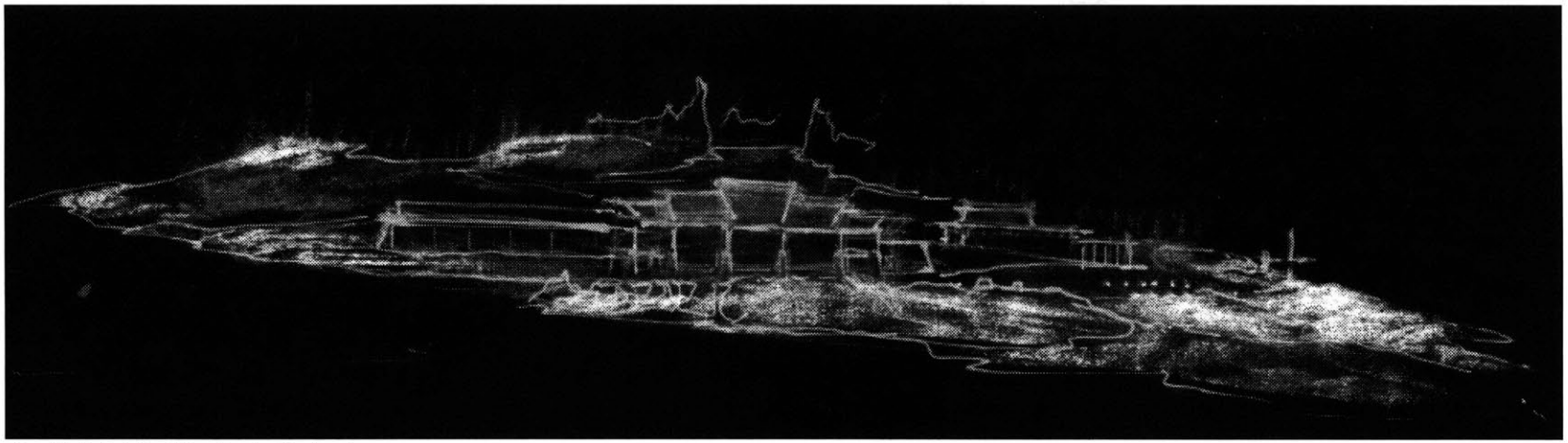


fig. 55.2 sketch of theatre in the landscape

fig. 56.1a

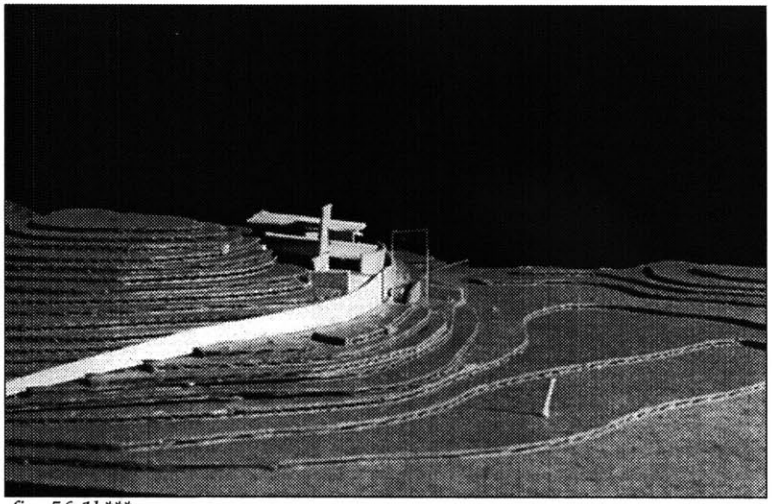


*fig. 56.1b****

fig.56.1a,b The first pass at this scale deals with an initial landscape gesture, a wall along which to move. Spaces register off this wall, private on the hillside, and public toward the open sand flat. The location of the landscape walls site the theatre in a position between the land and sea, as a threshold to the rest of the site. Criticism of this scheme is that the wall acts as a boundary between the sandflat and the hillside, making the theatre too private.

fig. 56.2a

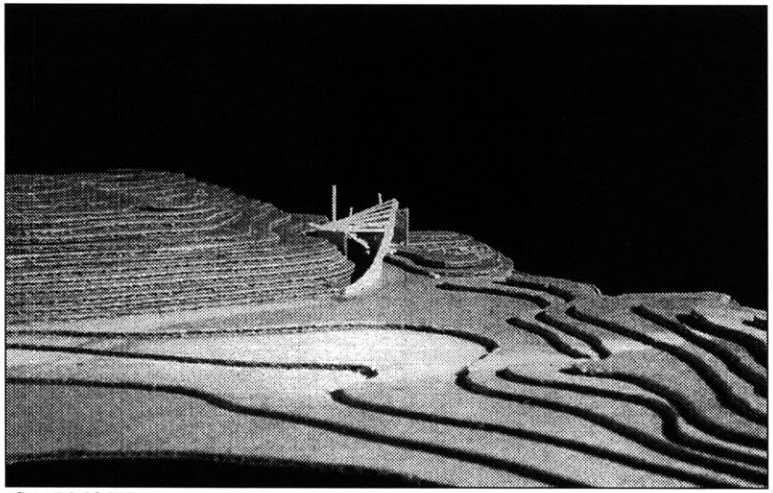


*fig. 56.2b****

fig. 56.2a,b The next pass investigates a more direct connection to the water edge and the sand flat. Movement along a wall is the transition from landscape to building. The wall also is the support for a timber roof structure which also appears to spring from the landscape. This scheme proved to be too detached from the town, and the theatre became an object, or destination point.

A third pass integrates the existing vertical rock face as an edge along and through. This compressive procession is similar to the narrow streets and passageways in the town, and elements in the landscape are framed through small openings in the rock wall. A pavilion marks the entrance to the theatre. Movement continues along the back side of the wall through a gallery area, fronting on the main theatre space. Beyond the theatre, on the town side, is a workshop and dressing areas. This scheme has potential, while it questions whether the program of a standard black box theatre is appropriate for the site. Perhaps the landscape calls for a more direct connection with the performance

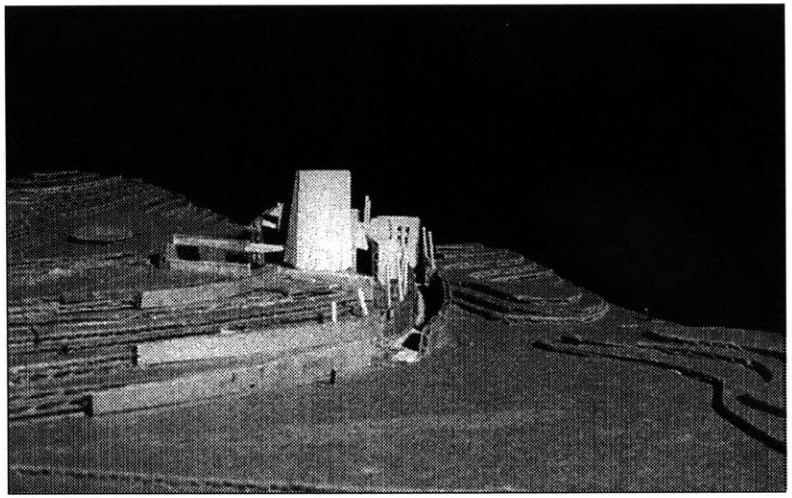


*fig. 57.1a****

fig. 57.1b

The final pass incorporates elements from prior schemes. It includes a procession through the rock enclosure which terminates in a observation pavilion. Other pavilions and landscape walls define the outdoor performance space. The walls and pavilions are elements in the site which act perspectively to enclose the open-air theatre. This scheme also includes, a tower beyond the concessions pavilion, perched upon the Eastern slope of the island.

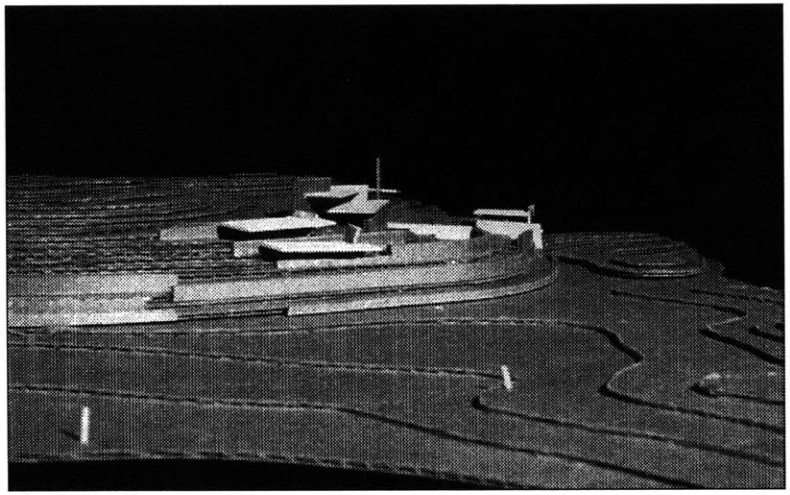


*fig. 57.2a****

fig. 57.2b

fig. 58.1 This scheme at a larger scale shows the organization of spaces and distribution of program withinthe site. Bass wood, chipboard and plexi-glass are used as analogs to the actual materials used in the construction. The important elements in this scheme are the landscape walls which define the hillside seating, the steel and glass stage canopy and the small concrete workshop and concessions pavilion.

*fig. 58.1***

Materials and textures of the landscape, modeled at a larger scale, provide information regarding the qualities of the landscape: the rocky edge of the hill, the soft sand-flat area, the screen of the three tops and the rocky, uninhabitable, ocean edge.

This larger scale incorporates the tectonic quality of materials and their light and acoustic implications. Any performance space, whether enclosed or not, requires attention in this respect. Building an amphitheatre on a hillside is the first step in tackling some acoustic concerns. Carving into the hillside and using landscape walls and smaller structures to define the control area are employed as architectural and acoustic elements.

There is also the issue of lighting, whether natural or artificial. Models show the quality of materials and daily light patterns associated with the site. All elements, both natural and built, cast shadows and reflect ambient light. During daylight the site is lit naturally, while artificial lights are employed in darkness. Artificial light is provided by large scaffold-like towers throughout the site. The stage structure becomes a light container, as well as a shade device.

*fig. 58.1** East light*

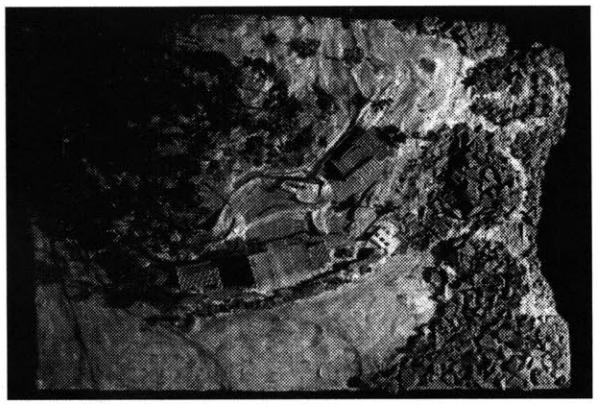


*fig. 59.2** South light*

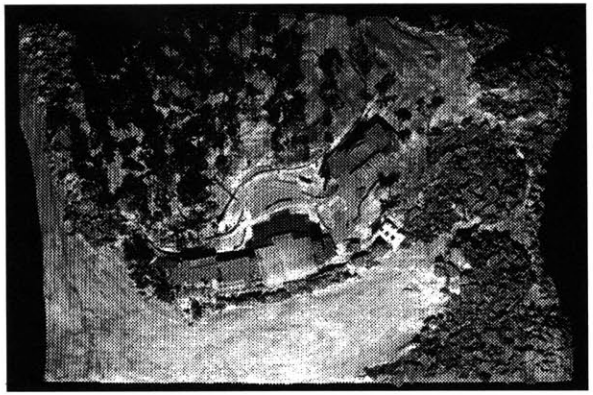


*fig. 59.3** West light*

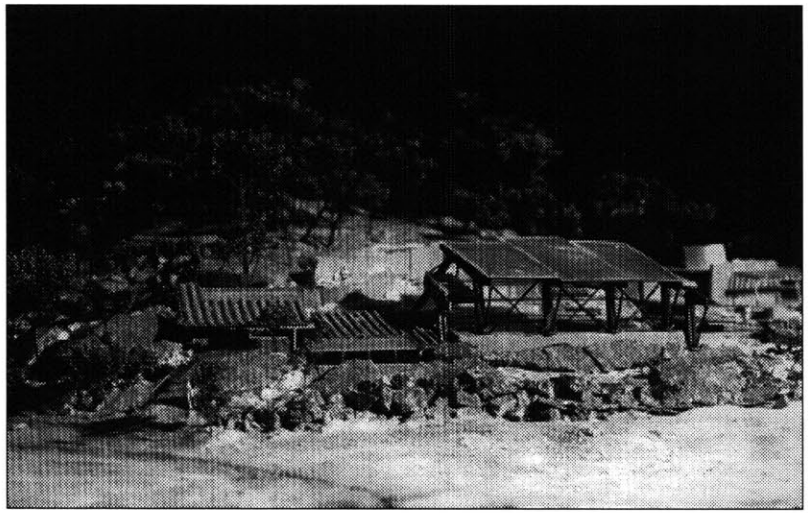


*fig. 60.1***

fig. 60.1-4 Photographs show the relationship of the stage canopy as the hierarchal element in the composition. The workshop and concessions pavilions with the landscape walls define the outdoor space of the theatre,acting as acoustic elements by containing and dispersing sound in the intimate space. The hard, impermeable quality of the glass and steel canopy structure provides a reflective surface as a backdrop to the performance. The transparency of the glass reacts with the sunlight to produce many different lighting effects, depending on the quality of the light. The glass surface is reminiscent of the water's surface, some times reflective and sometimes transparent.

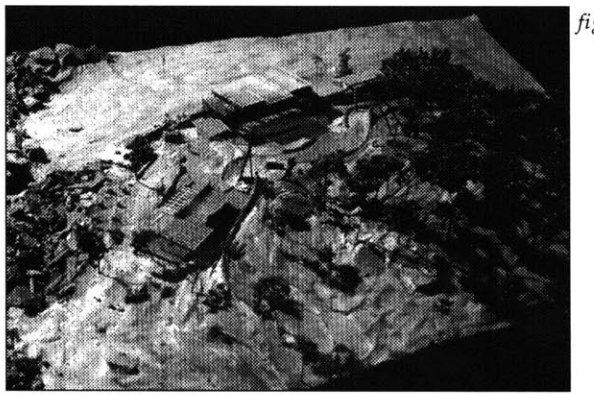


*fig. 60.2***

*fig. 60.3***

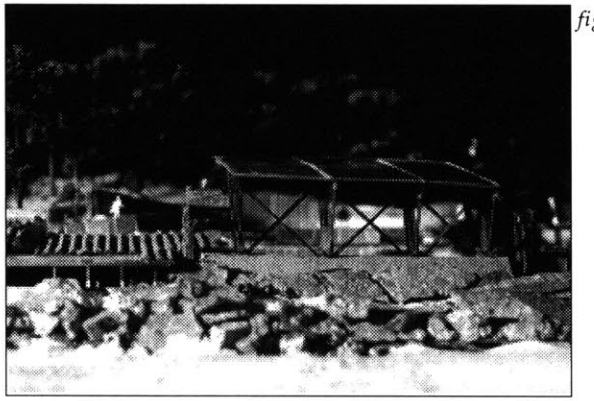


*fig. 60.4***

fig. 61.1-3 Working drawings explore the section of the site. A vocabulary for building in the hillside is developed as a series of retaining walls. The keying of the concerete walls displays the forces of the earth, while simultaneously creating space for activity on the horizontal, and vertical, planes. The walls carve paths through the hillside while also acting as acoustic baffles, deployed in positions which retain views through the landscape in one direction, while forming an 'acoustic wall' in another direction. As one progresses through the site, the walls begin to emerge from the earth and transform into a screen, so the walls are used both as solids and screens. Vertical posts, organized in a grid pattern, intersect the horizon and break the strong horizontal plane of the ocean. The structure seems to breakdown in scale and material as one nears the water, moving from land to sea. This idea is intensified by the land, as the public pavilion is located in a large flat area with a commanding view of the vast ocean.

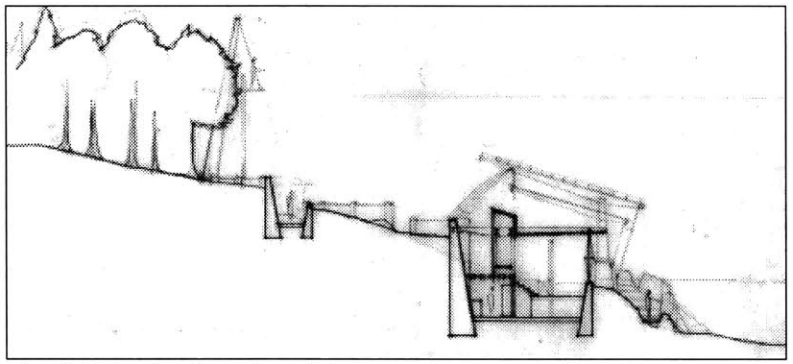


fig. 61.1 Section through workshop space.

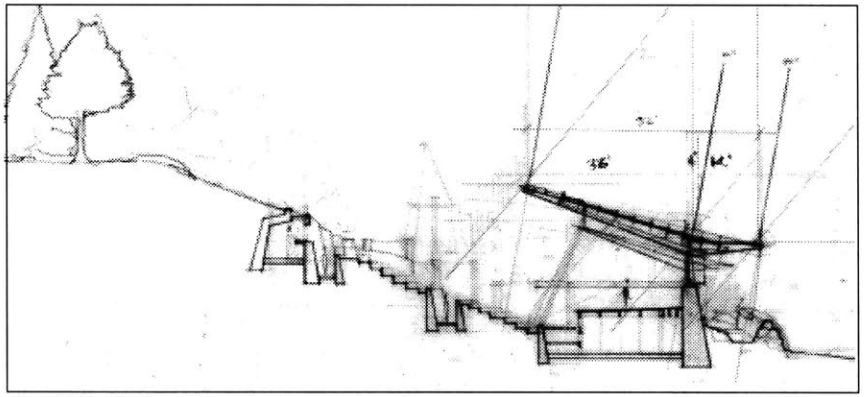


fig. 61.2 Section through stage and seating areas.

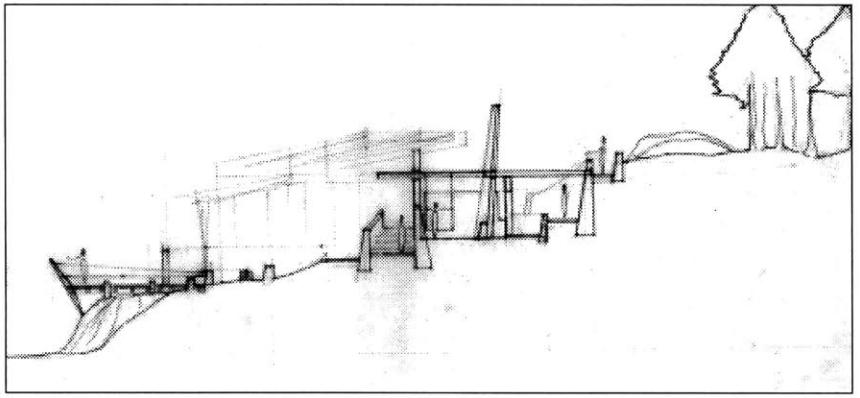


fig. 61.3 Section through restroom and concessions pavilion.

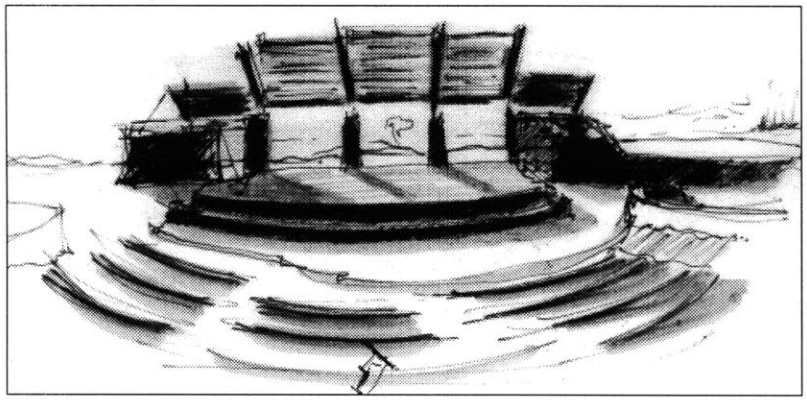


fig. 62.1

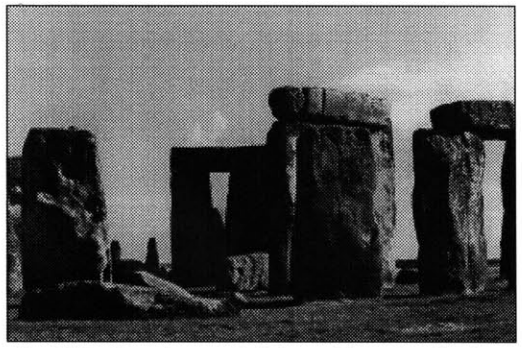


fig. 62.3 Stonehenge, Salisbury Plain, England.
Kidder Smith, ***Looking at Architecture***

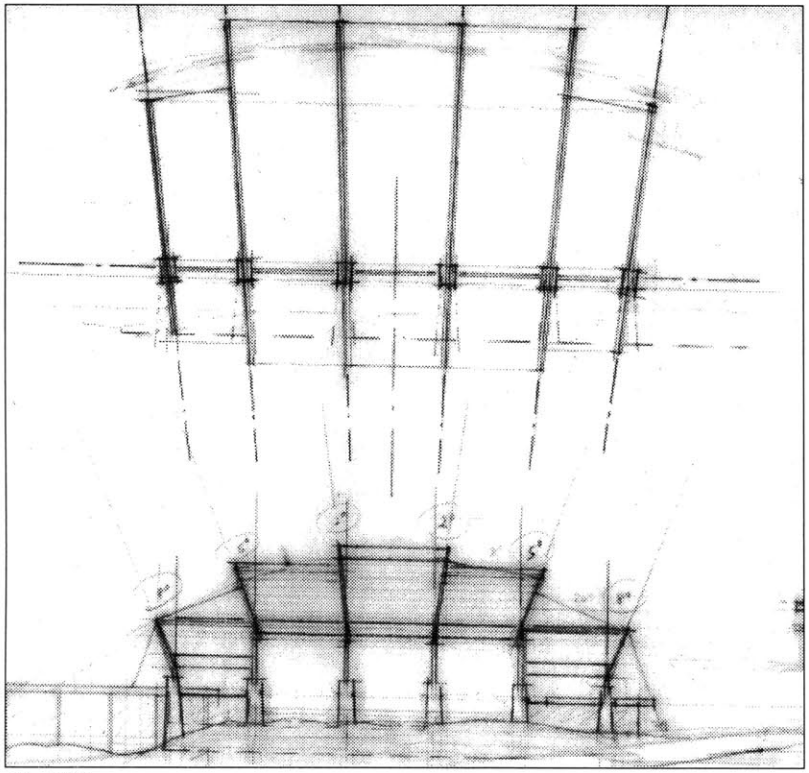


fig. 62.2

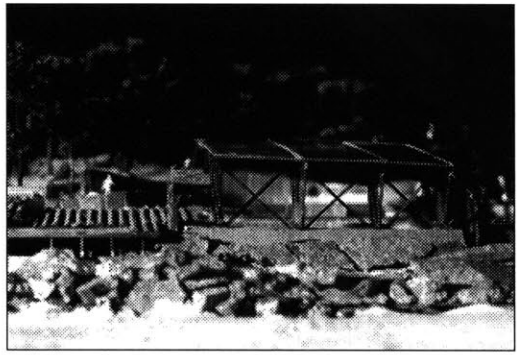


*fig. 62.4***

fig. 62.1-4 Vertical elements intersect the horizontal plane, acting as timepieces recording the daily sun movement through shadow patterns. A canopy acts both as a shading device, and a container for capturing light. The reflective quality of the glass works both acoustically, and visually. Here, time is measured both in sound and light.

fig. 63.1-4 A 1:2 scale model of the stage structure displays the details of construction and materials in a steel frame and glass structure. The glass acts both acoustically and visually; sound waves reflect off the impermeable surface toward the audience, while views of the landscape beyond are afforded. Steel louvers on the structure regulate the amount of light admitted on the stage side, and may be positioned to maintain views through the structure across the landscape. Concrete piers support a series of cantilevered armatures, braced in both the horizontal and vertical directions by cable stays and glass sheer panels. The dropped end bays are triangulated to prevent any racking that may occur due to wind loads.

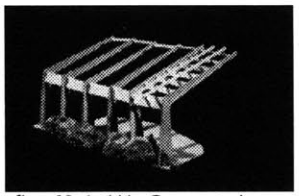


*fig. 63.1a*** Concept A*

*fig. 63.1b*** Concept B*

*fig. 63.3*** Detail*

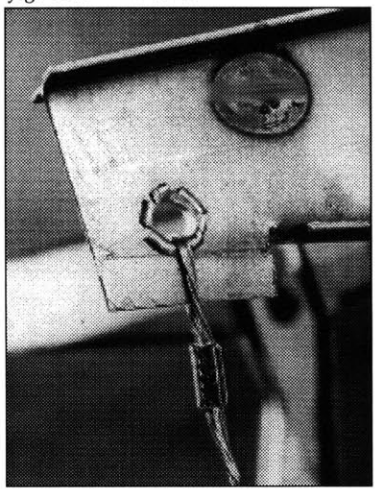


*fig. 63.4*** Detail*

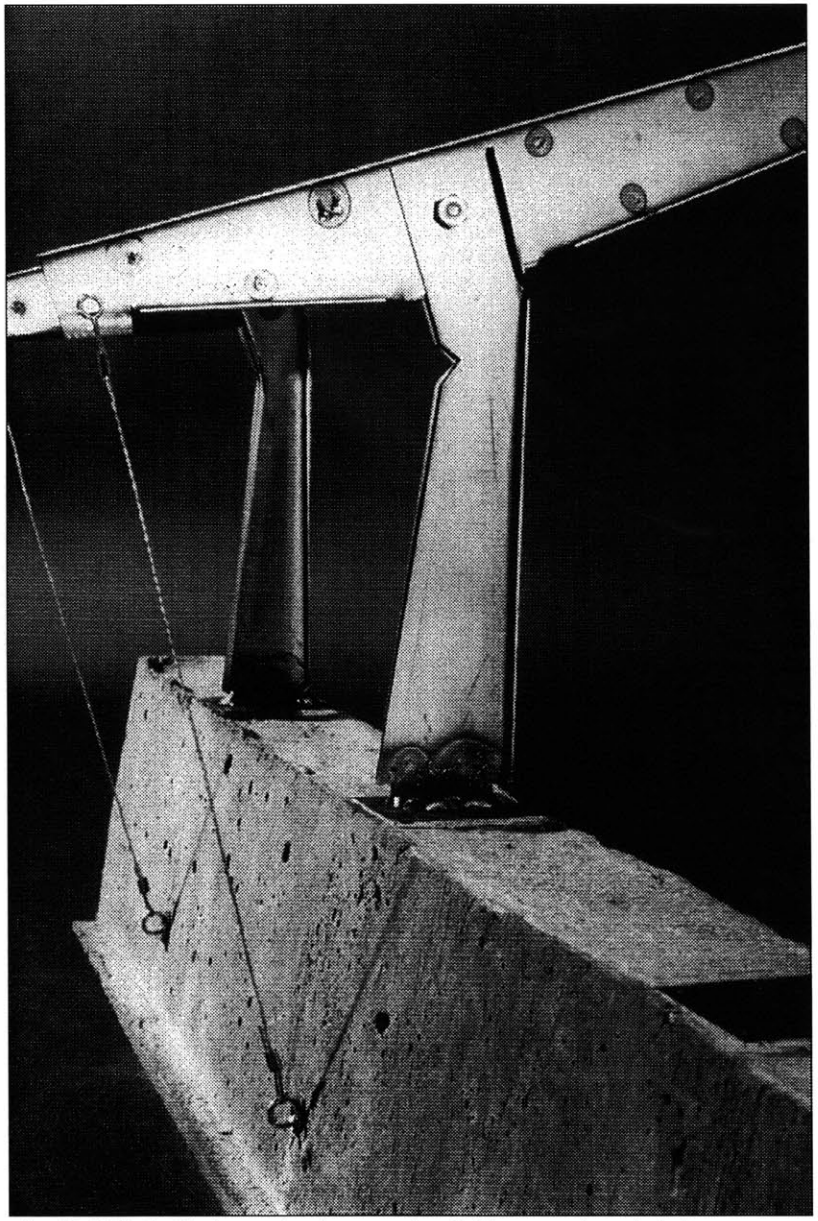


*fig. 63.2*** Preliminary structure constructed in concrete and steel.*

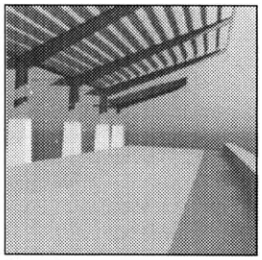


fig. 64.1a June 21, 6a.m.

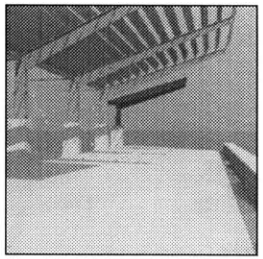


fig. 64.1b June 21, 7a.m.

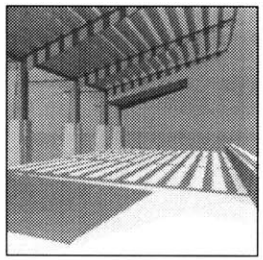


fig. 64.1c June 21, 8a.m.

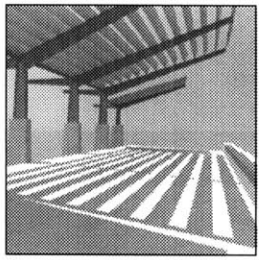


fig. 64.1d June 21, 9a.m.

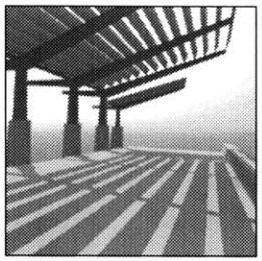


fig. 64.1e June 21,10a.m.

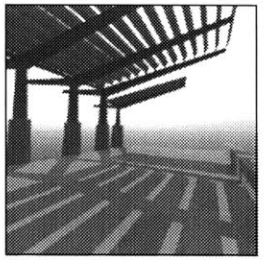


fig. 64.1f June 21, 11a.m

fig. 64.1-4 Images from a lighting program for a computer model give an approximate method for measuring the light quality in a space. It is also a valuable design means for predicting the quality of light in certain areas, at certain times, around the globe. There are also acoustic programs and software available for the analysis of sound in a space. These are quantitative means for measuring the quality of light and sound in a space.

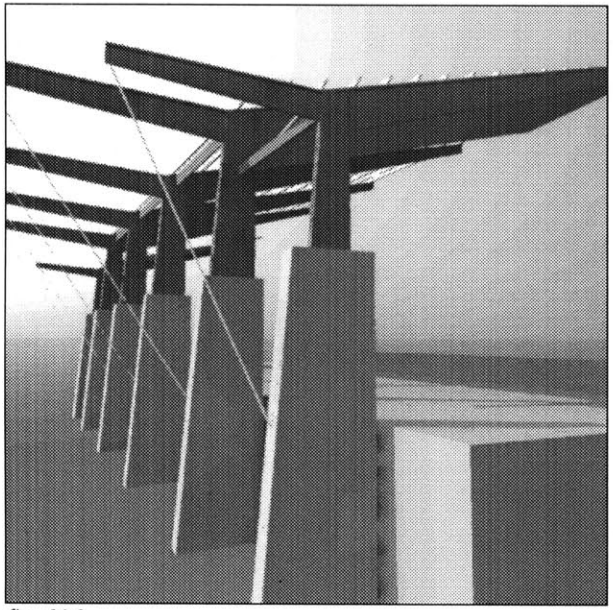


fig. 64.2

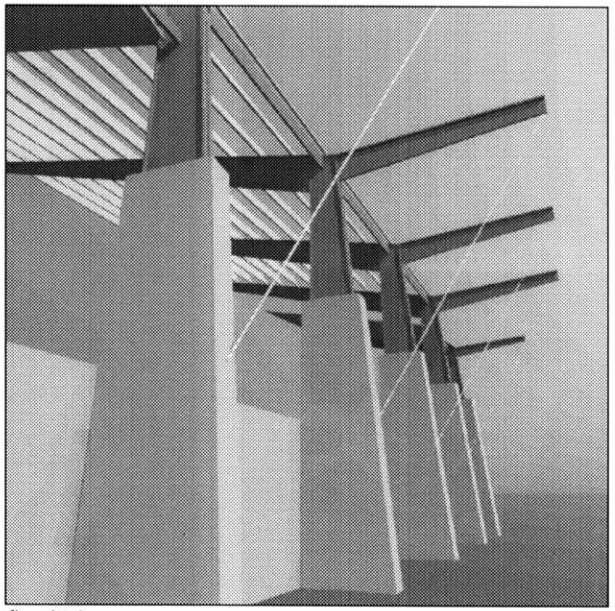


fig. 64.3

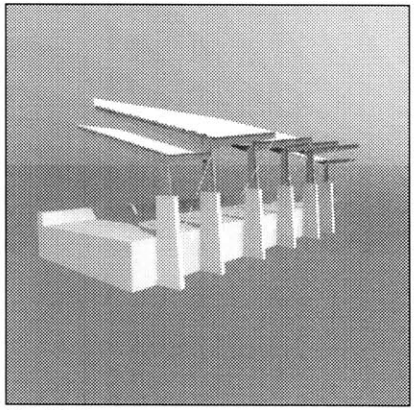


fig. 64.4

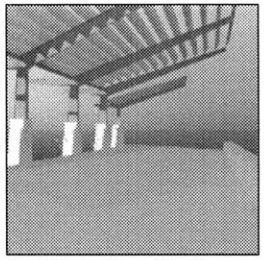


fig. 65.1a Dec. 21, 6a.m.

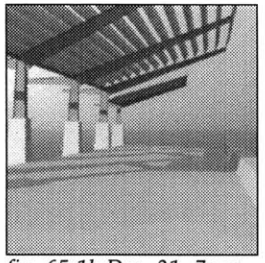


fig. 65.1b Dec. 21, 7a.m.

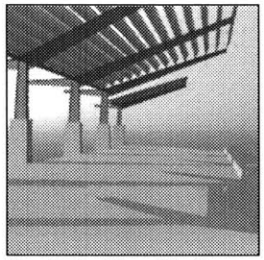


fig. 65.1c Dec. 21, 8a.m.

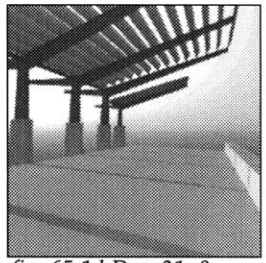


fig. 65.1d Dec. 21, 9a.m.

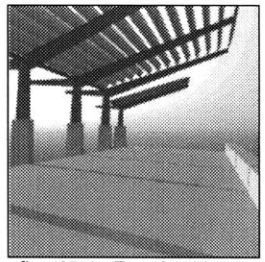


fig. 65.1e Dec.21,10a.m.

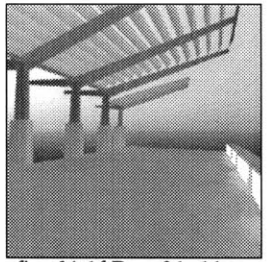


fig. 64.1f Dec. 21, 11a.m

fig. 65.1-4 More images from the lighting program supply information of space as well. Three-dimensional computer models are rendered according to general light characteristics of an area by is latitude and longitude. As a design tool, this program, as well as acoustic programs, can be used to determine optimum position for walls and roofs of certain materials. This particular model was helpful in determining the spacing and mobility of the canopy louvers, as well as the height of the side stage pavilions.

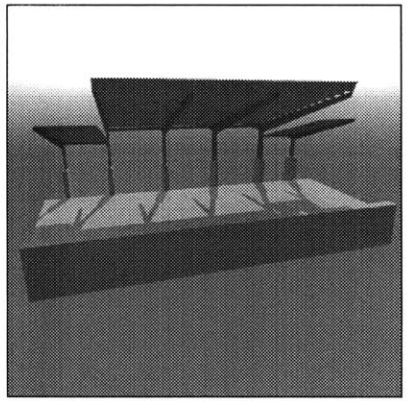


fig. 65.4

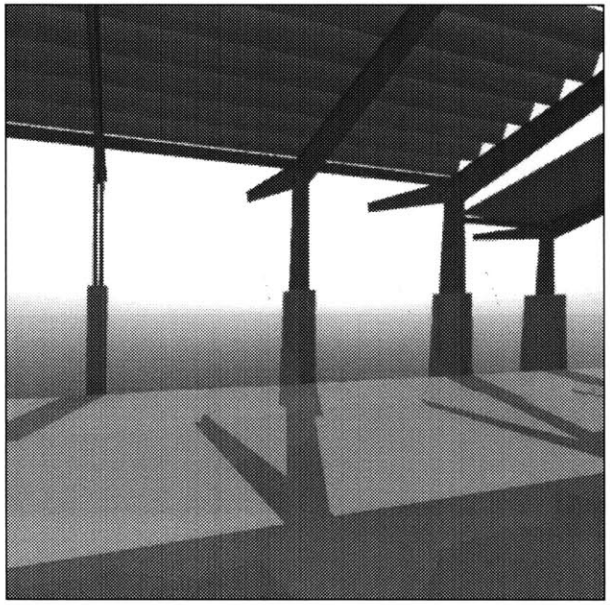


fig. 65.3

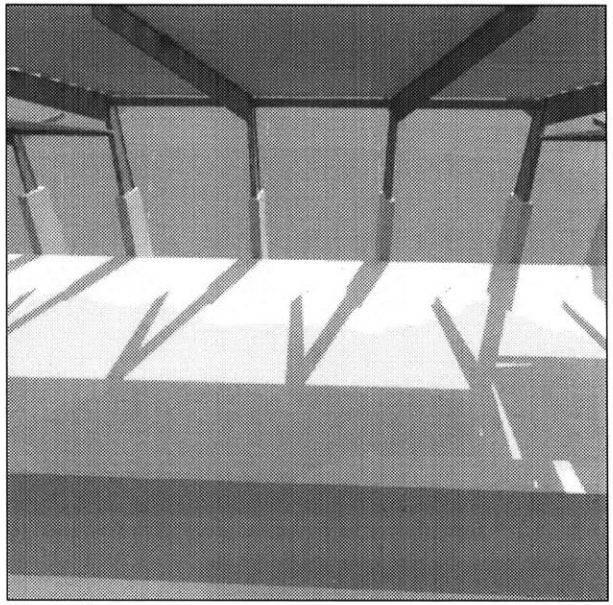


fig. 65.2

fig. 66.1™ Elevation of performance space with steel and glass canopy structure framing the landscape.

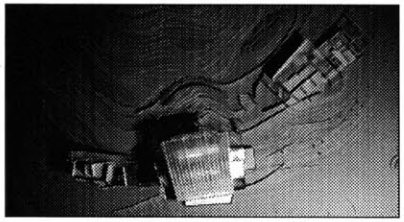


fig. 67.1™

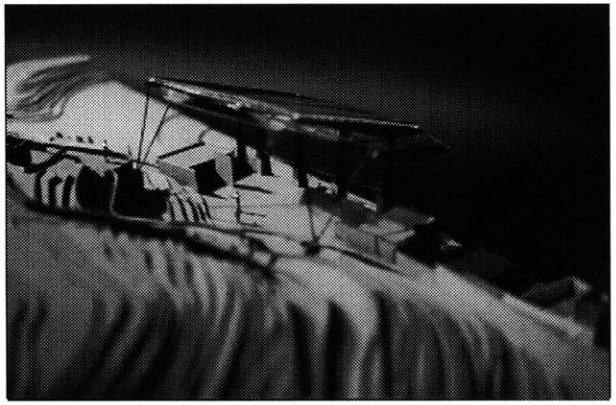


fig. 67.2™

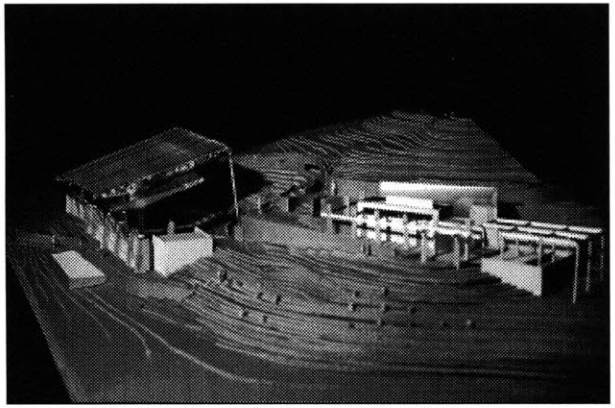
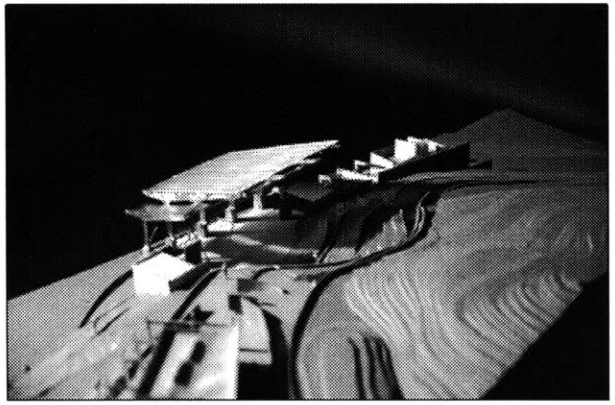


fig. 67.3™



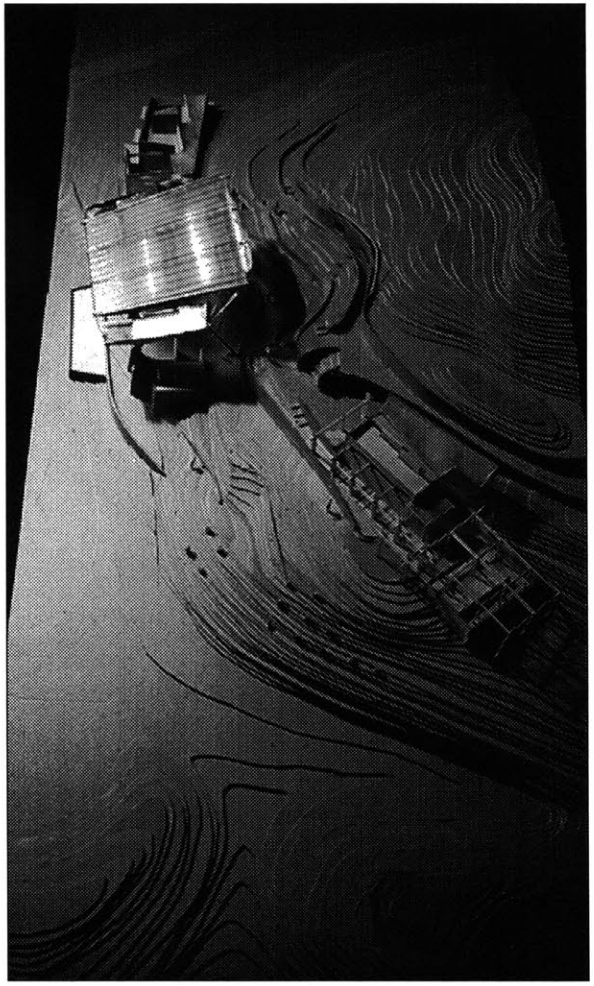
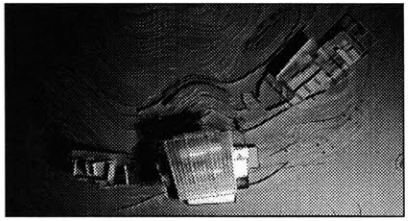


fig. 67.4™



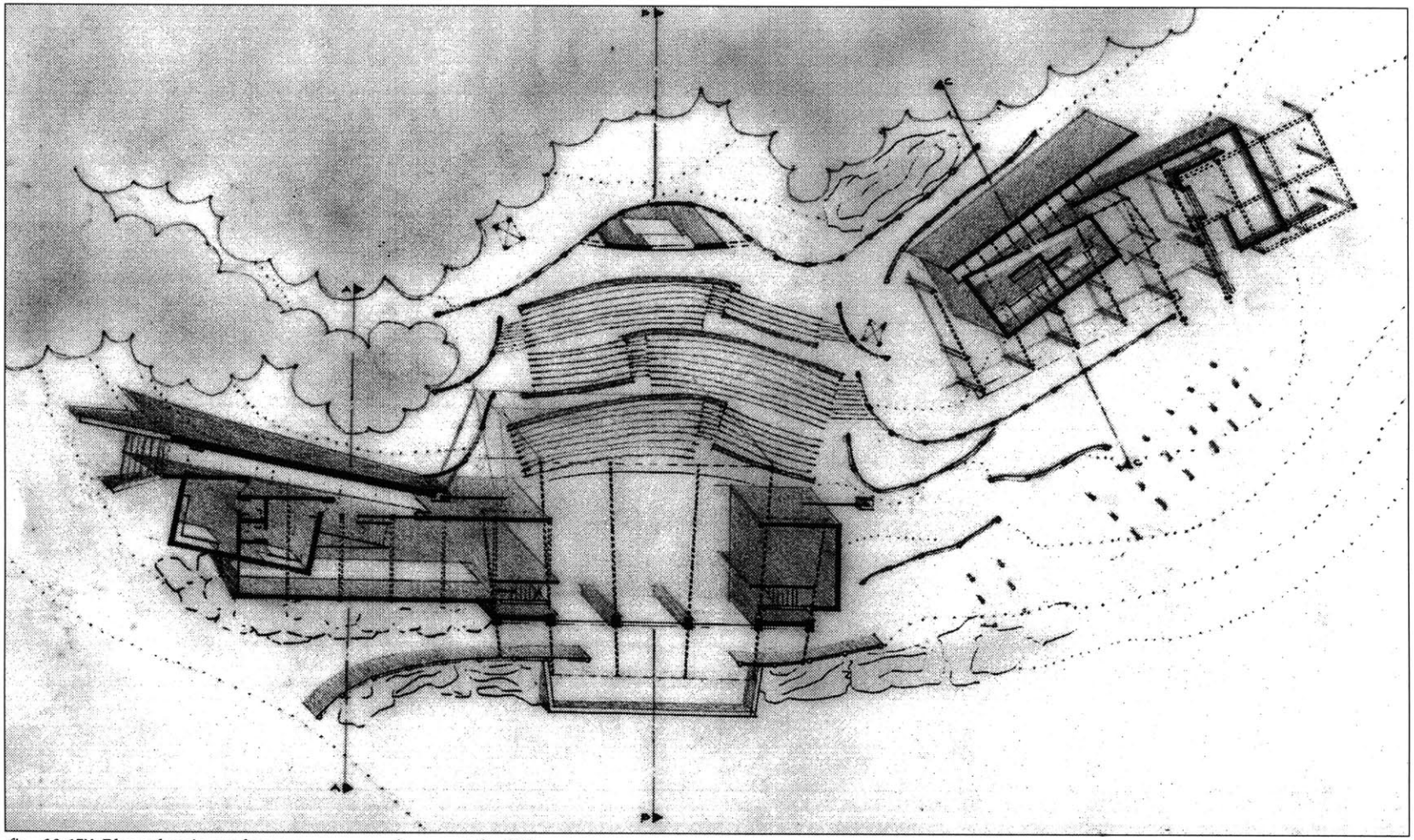
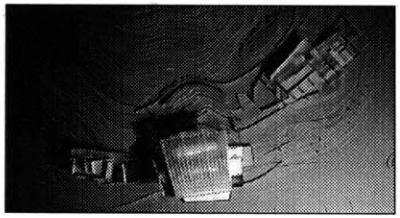


fig. 68.1™ Plan of main performance space and support facilities.



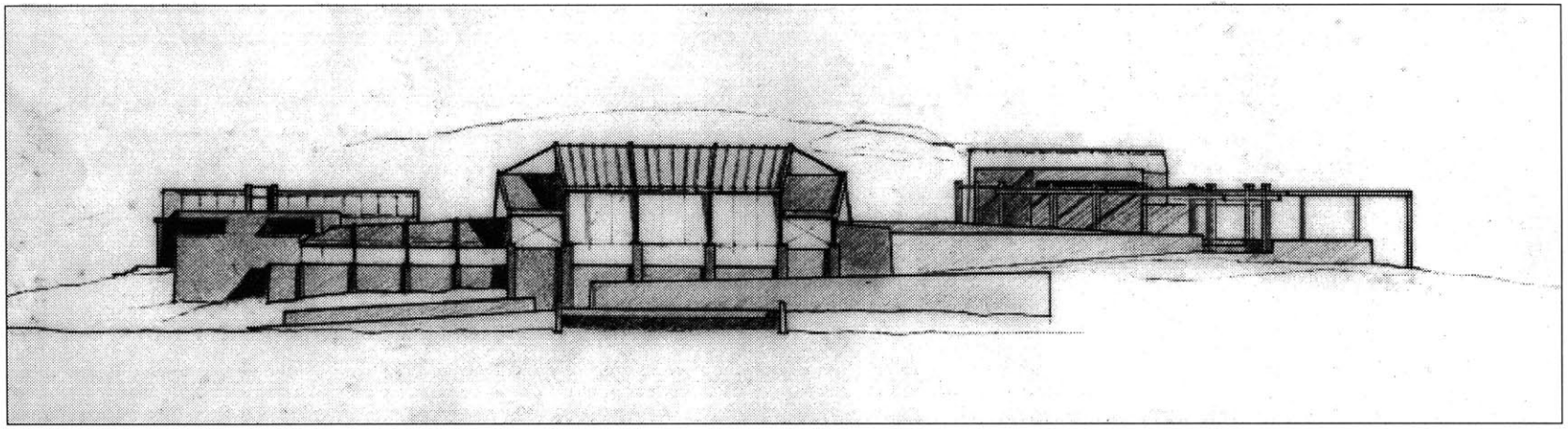


fig. 69.1™ South elevation

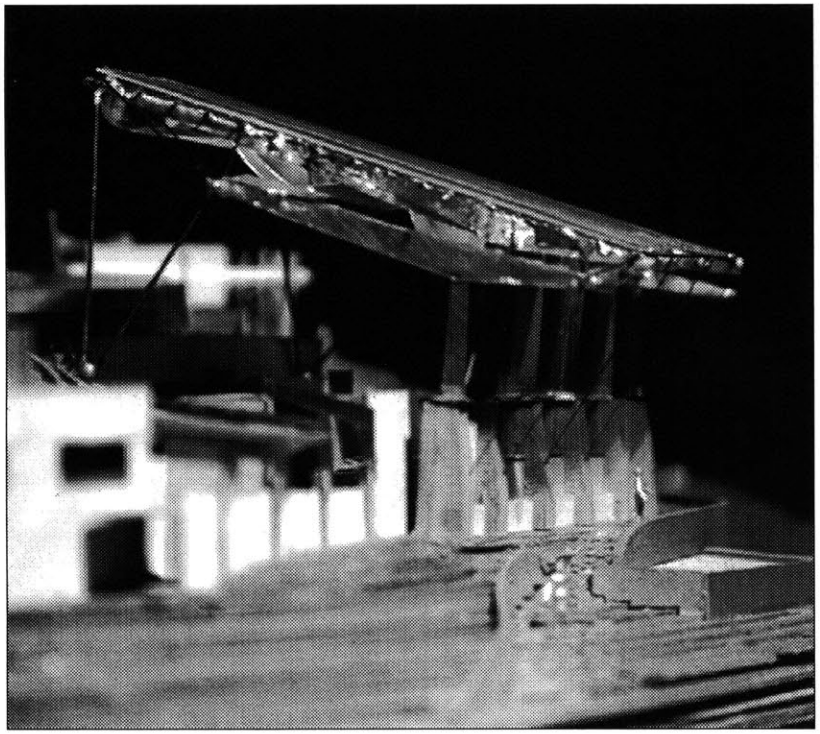
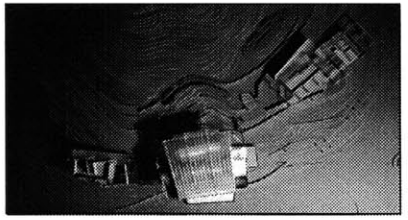


fig. 69.3™

fig. 69.2™



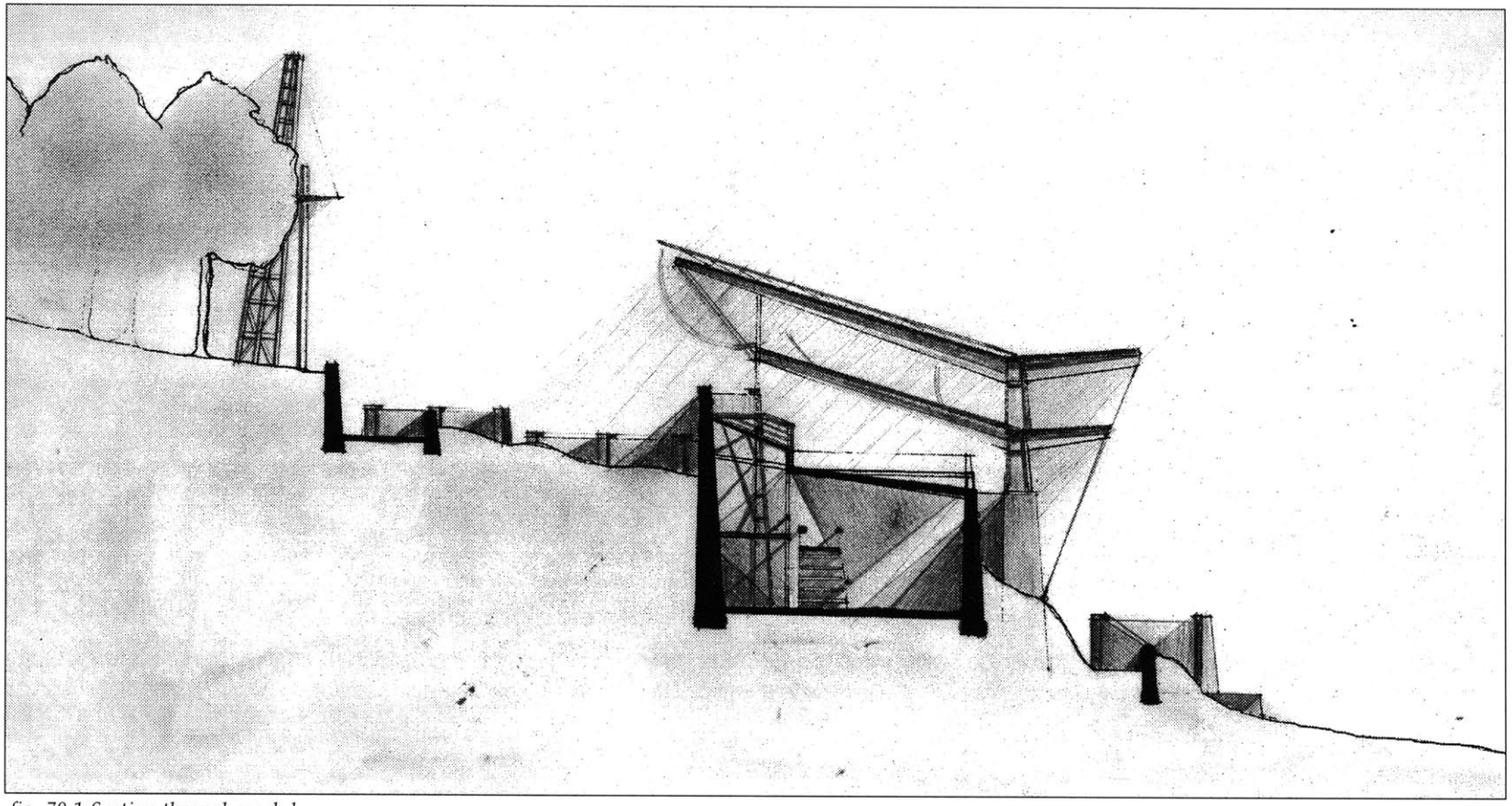
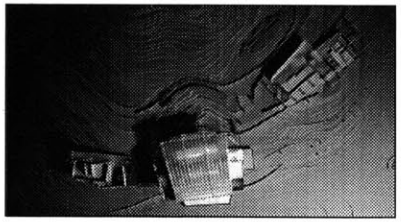


fig. 70.1 Section through workshop space.



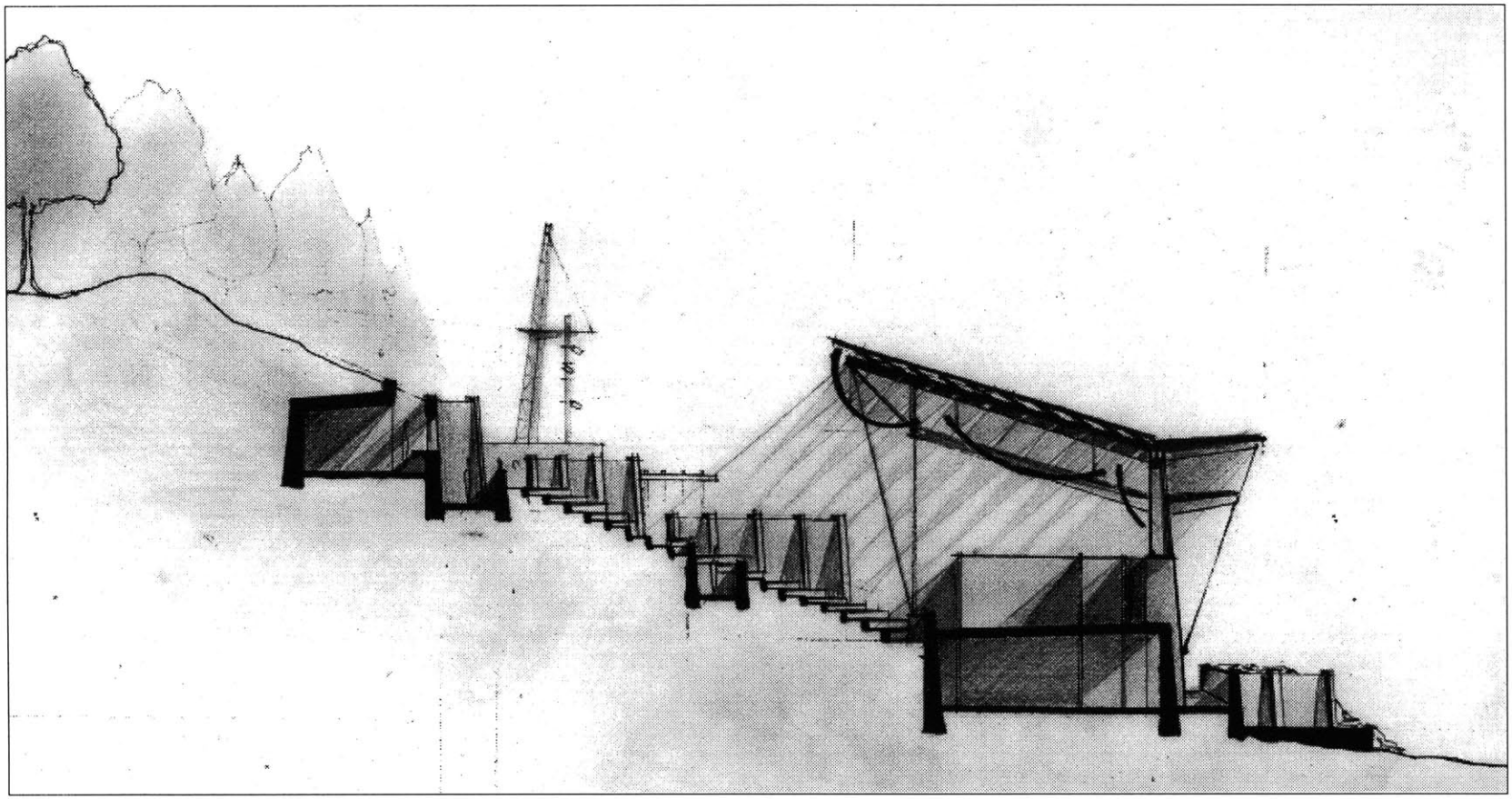
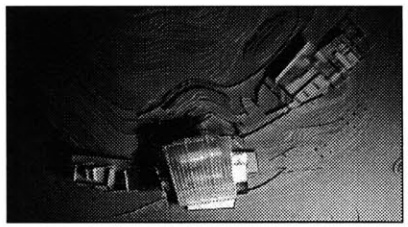


fig. 71.1 Section through stage and main seating bank.



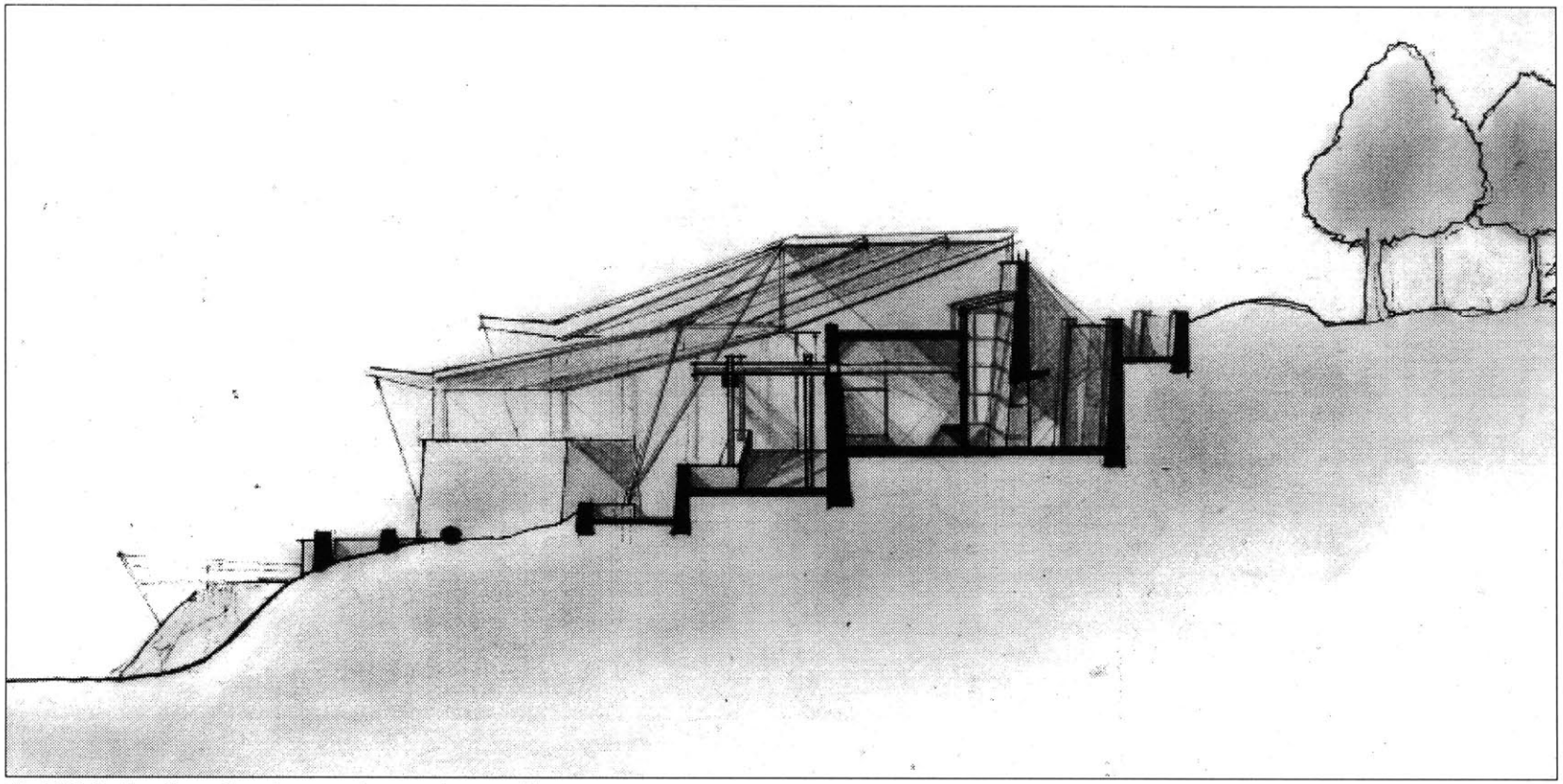
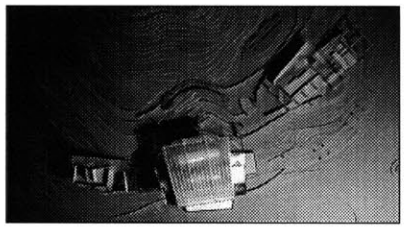


fig. 72.1 Section through restroom and concessions pavilion.



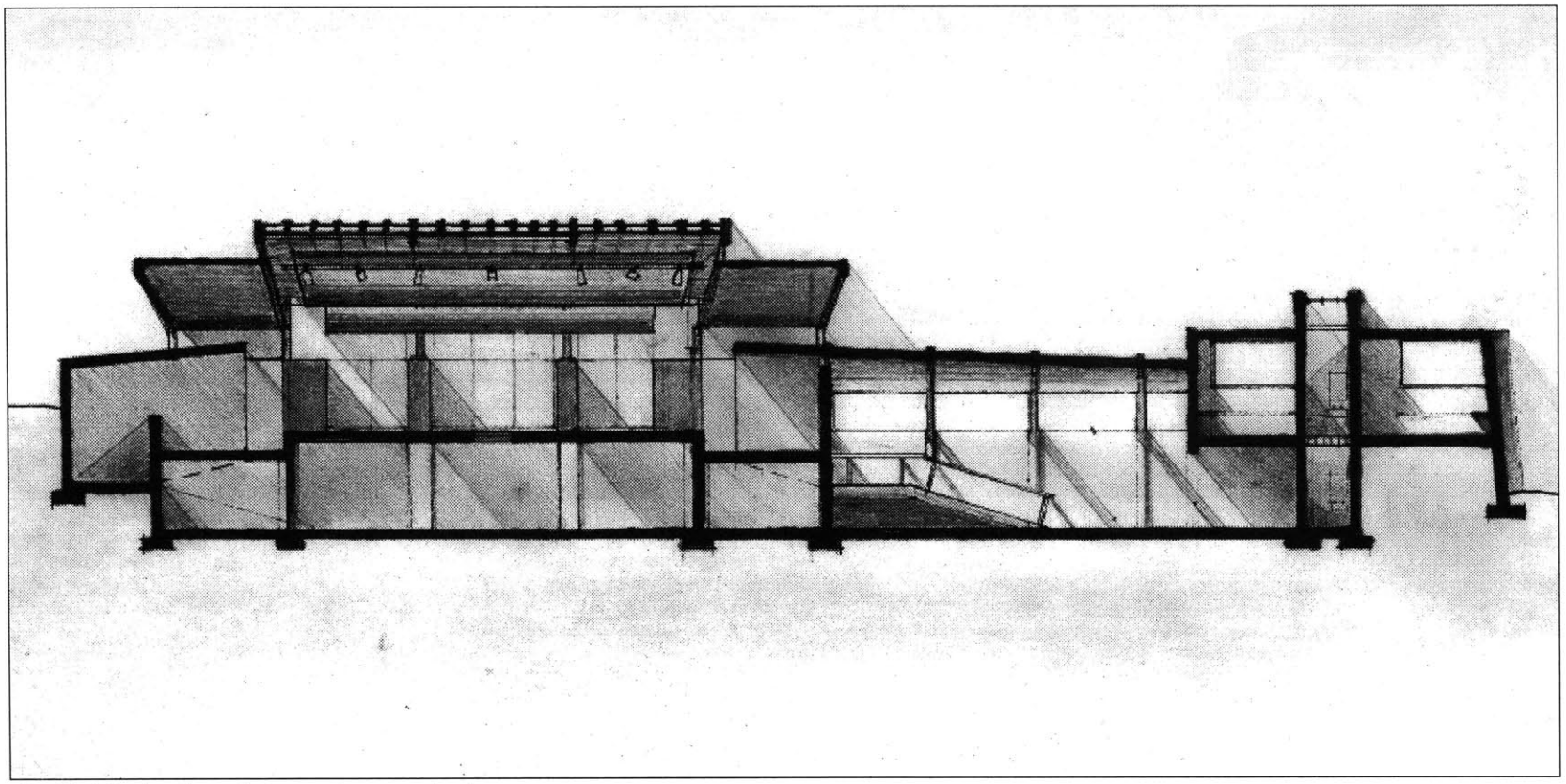
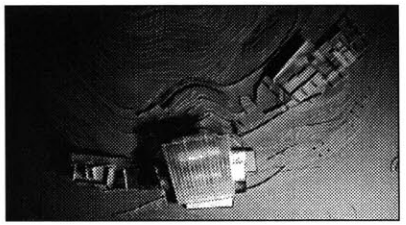


fig. 73.1 Section through stage and canopy structure.



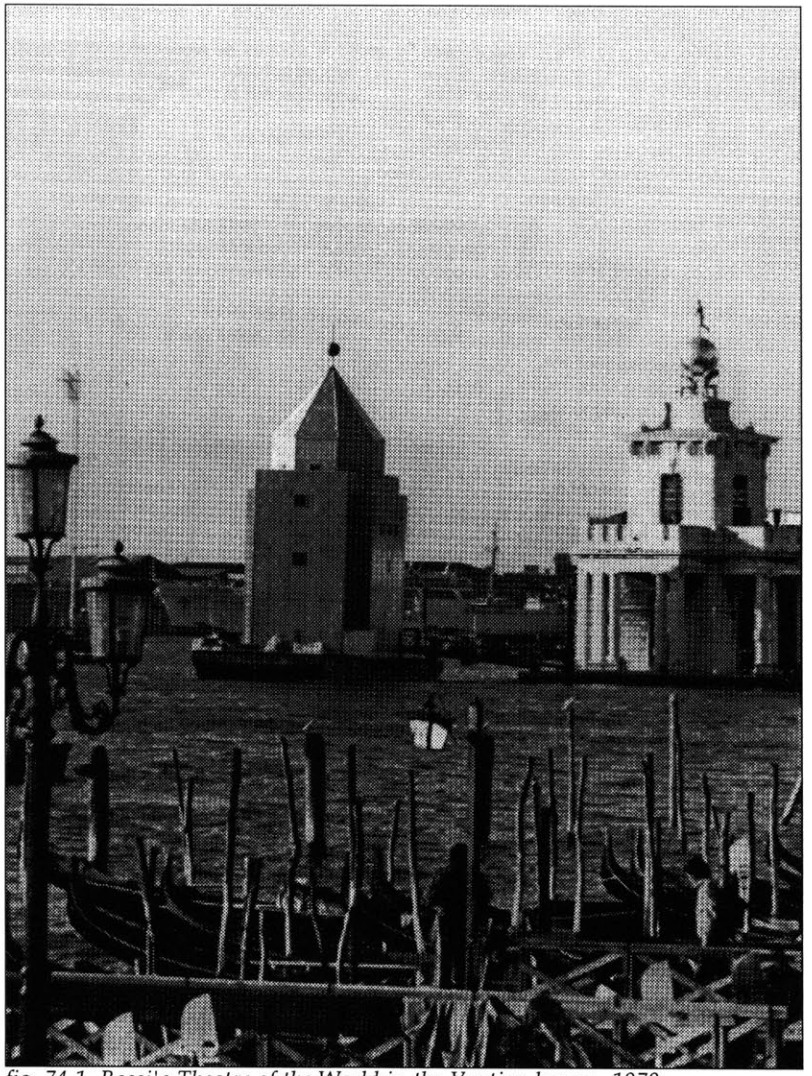


fig. 74.1 Rossi's Theatre of the World in the Ventian lagoon, 1979.
Rossi, ***Works and Projects***

PRECEDENTS AND OTHER REFERENCES

In order to better understand the working theatre, it is necessary to gain insight into its evolution, privatization and transformation. Local research provides a familiarity of community theatres which, ultimately, supports the premise of this thesis. Physically experiencing a space, through sensorial and intellectual observations, records a memory of that place. Enriched, we appropriate our design moves through a more complete knowledge of, in this case, the phenomenology of theatre.

The following studies are organized into three sections. The first is a journal of local theatre site visits, the second is a study of performance spaces as design precedents, and the last is a brief analysis of a place as reference.

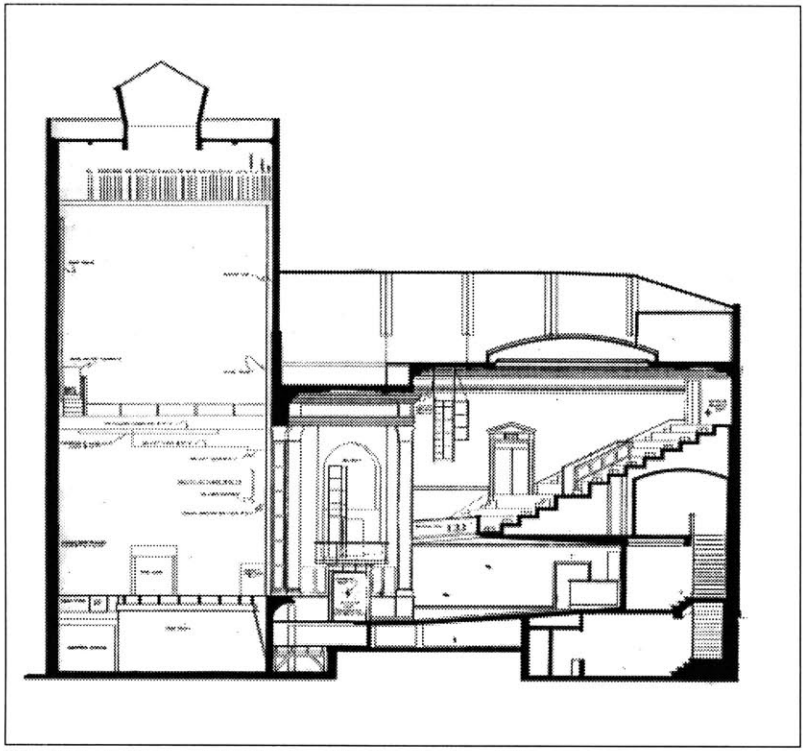


fig. 76.1 Section of Huntington Theatre, Boston, MA

Huntington Theatre, Boston, MA
850 seats; proscenium stage

This theatre was designed and constructed, in 1923, as the first civic playhouse in Boston as the first tax-exempt theatre in the nation. It was located on Huntington Avenue in an effort to establish a new cultural center for the city, being in close proximity to Symphony Hall, the Museum of fine Arts and the Boston Opera House. Prominent Bostonians such as Calvin Coolidge and the president of Harvard University sponsored the Jewett Repertory Fund, which supported its construction.

The next three centuries proved to be difficult for theatre in general with the birth of talking movies and the onslaught of the depression as well as many wars. It was not until the theatre was purchased in 1953 by Boston University and its School of Theatre Arts that it was saved from destruction. Boston University had become the proud sponsor of the theatrical profession by providing a superior performance home for a university-affiliated theatre company that could link professional production and school training.

The theatre faces Huntington Avenue and the original entrance to Symphony Hall. The main entry is above street level delineated by three separate plinths. Doors on these plinths mark the public entry into the box office area, characterized by its tile floor and painted plaster walls reflecting bright light from the outside. The glass-paneled doors retain views to the street and the opportunity, when opened, to take in the harsh sounds of the city. To the right, there is a door into an office area, and to the left, there are doors which open to the lobby during performances.

The space adjacent to the ticket office is a long, thin rectangular volume with double doors at the opposite side. The lobby, or foyer, is more intimate with its polished mahogany wainscoting, dark paneling and soft yellow light. Carpeting deadens the sound from the box office area, allowing for a more quiet space. The street is not visible from this lobby, one has truly entered the theater at this point. Here, one is greeted by a portrait of it's founder upon the staircase wall, personalizing the space. The theatre-goer is presented with an option to enter through either one of the two sets of double doors into the main theatre level, or to climb the stairs, or to descend to the lower level.

Entering the main level of the theatre presents the individual with a grand view of the proscenium stage. The floor rakes slightly to a level that is below the level of the stage and provides a larger range of seating and views of the performance. The interior of the performance space feels small as you enter under the balcony. Carpeted and wall-papered surface treatment of the raked floor and canted walls minimizes direct sound reflection, by defining a volume that is not rectangular.

Transition from the performance space to the lobby is very subtle. The decorative stair invites the visitor up to the balcony area, which is provided with a lobby area of its own. The transition is prolonged as one enters the balcony through a vomitorium, or passageway . The rake of the balcony seating is more substantial than that of the the theatre, affording a better view of, and proximity to, the stage. This closeness sharpens the acoustic quality if the performance space by reducing the distance which sound must travel.

The ceiling of the main performance space is painted plaster and is characterized by a recessed domed volume. This volume provides a window through which the lighting crew will observe and run the show, hidden from view. The landscape of the ceiling provides for a better disbursement of sound throughout the whole space as well as an architectural detail.

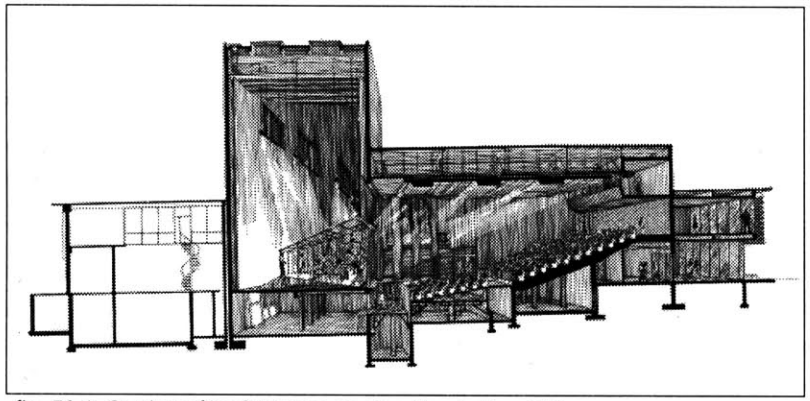


fig. 78.1 Section of Loeb Drama Center, Cambridge, MA
*Izenour, **Theatre Design***

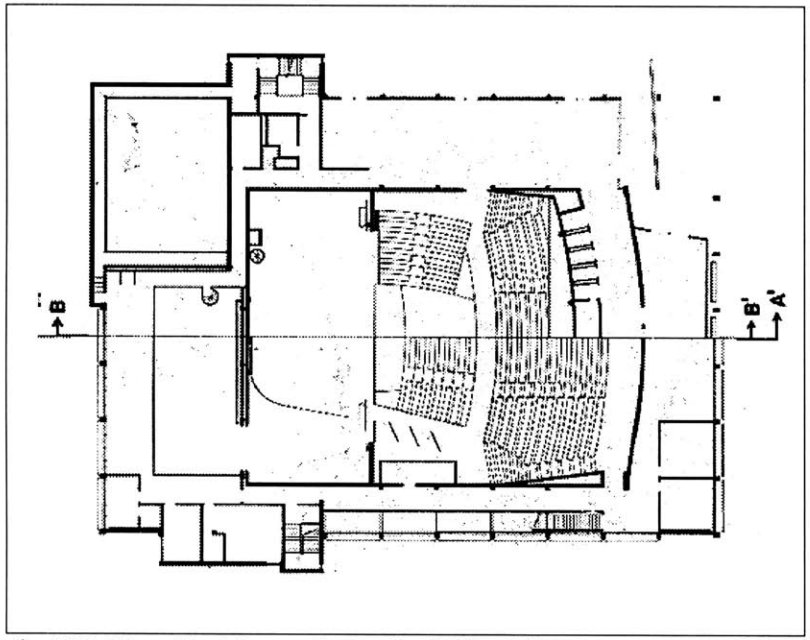


fig. 78.2 Plan of Loeb Drama Center, Cambridge, MA
*Izenour, **Theatre Design***

Loeb Drama Center, Cambridge, MA
556 seats, flexible proscenium/thrust,

The Loeb Drama Center, designed by architect Hugh Stubbins, was opened in 1960 by Harvard University's Faculty of Arts and Sciences. The center houses a 556 seat mainstage with variable seating and stage arrangements. The stage is also flexible, running on three seperate hydraulic lifts. An interesting aspect of the design is that this theatre is actually three buildings with flexible roof joints, joined together by common door sound lock areas. This design accommodates the acoustic isolation of the different spaces without losing proximity. In addition to the mainstage theatre, there is an experimental theatre located adjacent to the mainstage theatre. Flexibility has proved to be the common amenity in most contemporary experimental theatres, as its premise seeks to promote diversity and discovery.

The approach to the theatre is from Brattle Street and Harvard Square, the entrance is located on the corner closest to the square. From the outside, it is possible to see into the lobby. The upper floor cantilevers outward, creating an overhang, under which visitor moves into the gallery. This space is bordered on three sides with glass, used as transition from the outside, as a transparent, yet impermeable, wall.

The volume of the space is linear and seems quite tight by compressing the body between a slightly convex solid wall and the glass wall. In the more quiet and subdued space of the lobby, the materials change to a carpeted floor, for sound absorbency, and masonry walls. Small lobby spaces are located at the outer edges of the builing.

The main level of the theatre, has both flexible and permanent seating available. Stage apron, orchestra pit and proscenium width are flexible, multiplying the number of production possibilities. The upper seating is raked close to 30 degrees,and acts as an absorptive wall to minimize sound reflection.

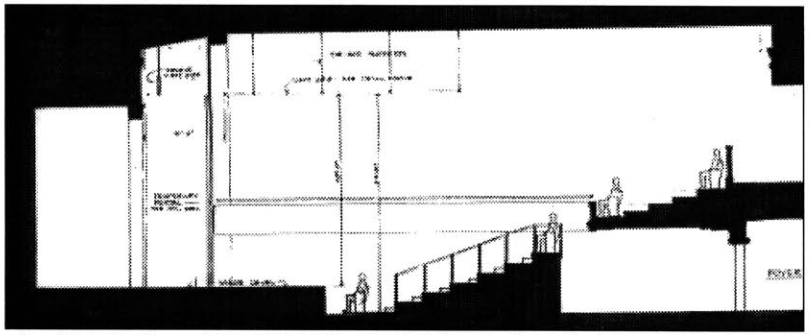


fig. 80.1 Section of Merrimack Repertory Theatre, Lowell, MA

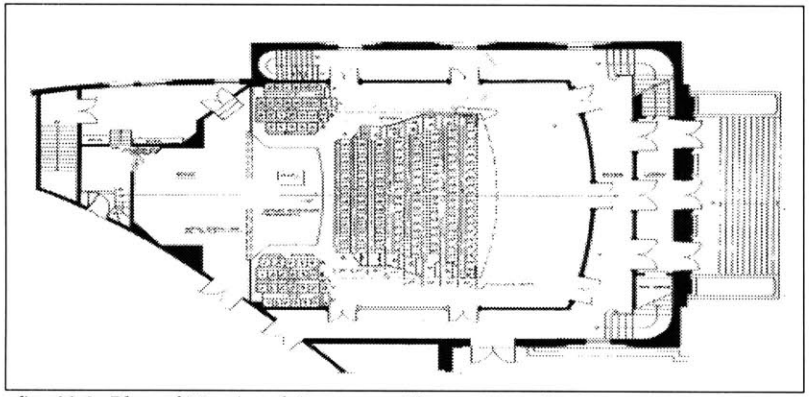


fig. 80.2 Plan of Merrimack Repertory Theatre, Lowell, MA

Merrimack Repertory Theatre, Lowell, MA
386 seats, modified end stage/thrust

The location of the theatre is in Lowell Massachusetts, an old mill town with a great history and community atmosphere. In the 1920's the city dedicated a large neo-classical auditorium building complex as a WWI memorial, which houses an auditorium space in addition to smaller lecture spaces. The theatre is located in one of the smaller lecture spaces which is devoid of any backstage area.

Ten years ago, the Merrimack Repertory Theatre Group moved into the vacant space and initiated a renovation project. This renovation altered the 386 seating arrangement retaining the existing balcony space, treated the raked seating space with cushioned seats and expanded the stage height to add a lighting grid system.

The theatre is located off the main street of the downtown of Lowell. A plaza marks the entrance of the original neo-classical building which is diagonally related to the street. Large formal steps lead to the entrance of the main auditorium building.

The visitor moves up the steep steps encountering three pairs of double doors, which open to a very tight foyer space. At one end of the foyer, there is a small opening in the wall identifying the box office. A stairway at the opposite end of the foyer leads to the administrative area below. The materials in this area are hard and cold, stone floor and granite and plaster walls. Also, tthe space lacks natural light.

Adjacent to the foyer, the lobby area is surfaced with softer more absorptive materials, including: wood, carpet and wall-paper; although, there is minimal space to move, due to the tightness of the space. This compressive quality urges the visitor to move along and around the wall, into the theatre spacel.

The performance space is characterized by a proscenium/thrust stage configuration. The steep rake of the seating allows for an effective acoustic wall and provides a commanding view of the stage area. When stepping into the center of the space, one feels the volume increase as the floor of balcony above has given way to ceiling. The balcony, an original construction, has proved to be a great place to view a performance. From the ceiling is hung a rather substantial steel grid system to support lighting instruments. This not only technical implications, but it is also an important acoustic addition by dispersing sound throughout the space. The rear wall of the stage area is a hard curved form which serves as a hard backdrop to reflect the sound out toward the audience.

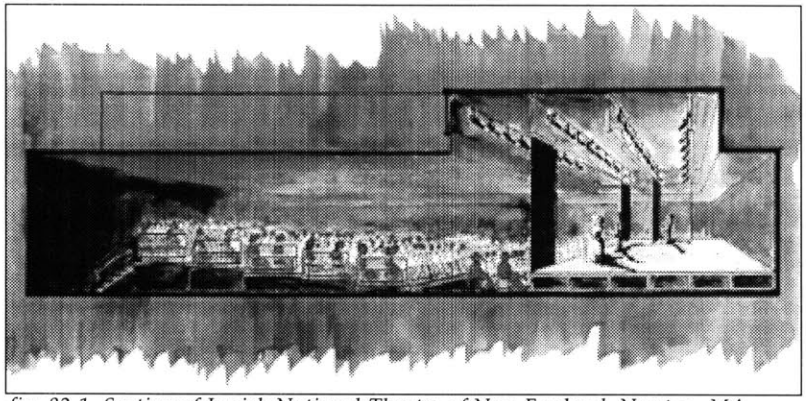


fig. 82.1 Section of Jewish National Theatre of New England, Newton, MA

Jewish Theatre Of New England, Newton Center, MA
250-450 seats, thrust stage 24'x20', wings

The Leventhal-Sidman Jewish Community Center (LSJCC) acquired land for the construction of a new community center. Plans included a standard proscenium theatre space for approximately 600 people with full 30' stage height. Adequate side space and fly space were also amenities of the construction plans. Unfortunately, as construction progressed and funds depleted, the design was compromised to adjust to financial restrictions. As a result, the theatre space had been reduced to a multi-use auditorium with capacity for 400 people.

Ten years ago, the LSJCC initiated its ambitious program of concerts, theatre and performances to the Greater Boston community through the Jewish National Theatre of New England. Since the popularity of cultural arts, programs at the center can no longer be accommodated by the present facility, renovations are being proposed in an effort to increase comfort and technical aspects of production, with an ultimate plan to completely rebuild the theatre.

One approaches the auditorium through the atrium of the main entrance into an atrium, bounded by glass walls. The reception desk, elevators and box office are in this space. As a part of the long continuous lobby wall, the box office remains obscured, hidden from immediate view.

Patrons enter the small auditorium through the lobby wall. The space is static and predictable due to its rectangular volume and lack of detail, either visual or acoustic. The stage is a wood and steel post platform stage two feet high, lacking an orchestra pit, side stage area, work area and fly space.

Acoustically, the rectangular volume with its parallel walls create standing waves which continue to flutter within the space. Although parallel walls are desirable for extending the body of the music, they are not the most ideal form for speech articulation. Flexible plastic chairs and metal seating with painted wood decking make for hard reflective surface, compounding acoustic problems. Quality performances may be first rate as far as talent, but they are severely compromised by the form, materials and treatment of the space.

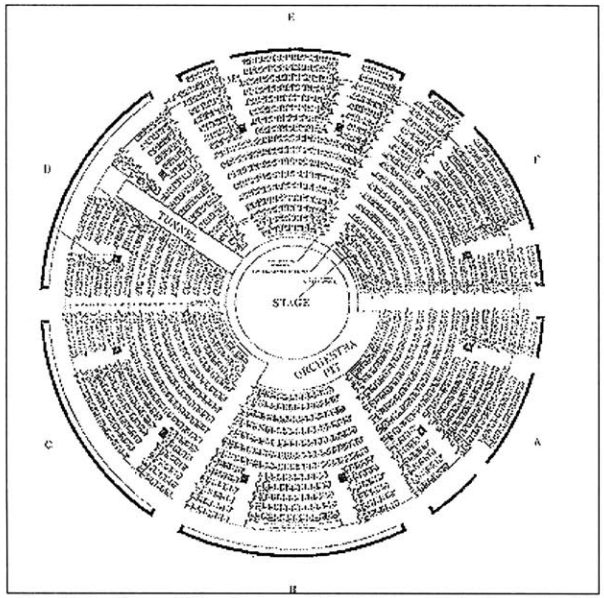


fig. 84.1 Plan of North shore Music Theatre in Beverly, MA

North Shore Music Theatre, Beverly, MA

1800 seats, arena, 32'x32'

This theatre was an original member of the 'Straw Hat Theatre Group' of the 1960's. During the summer theatre series, North Shore developed as a prominent theatre whose attendance was constantly rising.

The building was constructed as an open-air theatre in the round. The circular building has a corrugated steel undulating roof with open sides, which could be covered with canvas in poor weather. The seating was a stepped surface affording unobstructed views of the stage. The structure is a steel truss cantilever system working to support the roof, whose center portion is a cupola-like opening.

Most of the renovations that had changed the appearance of the theatre have occurred within the last 12-15 years through an Endowment for the Arts. Input from audience pools and workers guided renovations to include creating a hard outer wall to provide for more climatic, acoustic and lighting control. This allowed the theatre to extend it's season from April-November. The floor was replaced as a bowl rather than stepped surface with trap space under the stage floor for more flexibility. An orchestra pit, a lighting and fly grid, in addition to a new lobby and shop addition, rounded out the renovations.

The theatre is located on a long winding road in a heavily wooded area of Beverly, Massachusetts. The theatre is precluded by office buildings and small corporate headquarters, separated only by a wall of thick pine trees. Located at the base of a small hill, the theatre is surrounded by a large parking lot.

The main lobby space of the theatre fronts on the beautifully landscaped hill-side, accessed by two pairs of double doors which open to the concession area. The entrance is adjacent to the rest rooms causing circulation problems during intermission. Glass doors afford view of the hillside, while solid walls, constructed in modular sandstone units, contain the lobby space.

The entrance to the actual performance space is through another set of doors, which open directly onto a carpeted aisle surrounding the space. Each doorway fronts a corridor which runs directly toward the center of the stage. The seating is arranged in an arena configuration which surrounds the stage 360 degrees. In effect, there is really no front or back to this arrangement. Orientation in an arena configuration is associated with a clock, with North as twelve o'clock.

Arena stages create a different feel as far as the performance. Theatre-in-the-round is more life like in that one viewer sees another viewer across the action. So, one experiences someone else experiencing the same performance from a different viewpoint. In effect, the performance becomes more life-like in that the viewer is not always in front of the action, sometimes to the side or even behind.

In the arena configuration, sets become more frame-like,almost translucent, while lighting and costuming become the dominating scenic elements. Theatre-in-the-round establishes a more natural way of gathering around an activity. It constitutes a manner of expressing the presence of theatre and performance, and defines a more intimate actor-audience relationship.

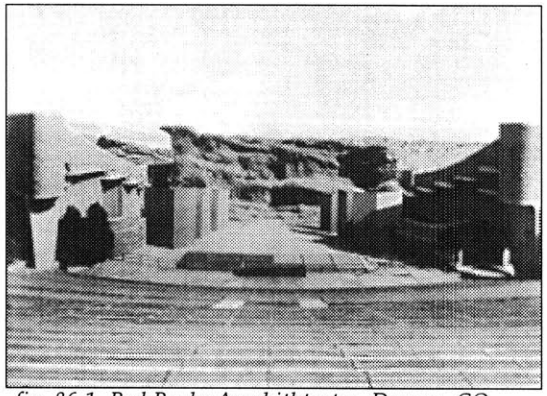


fig. 86.1 Red Rocks Amphithteatre, Denver, CO
*Silverman, **Contemporary Theatre Architecture***

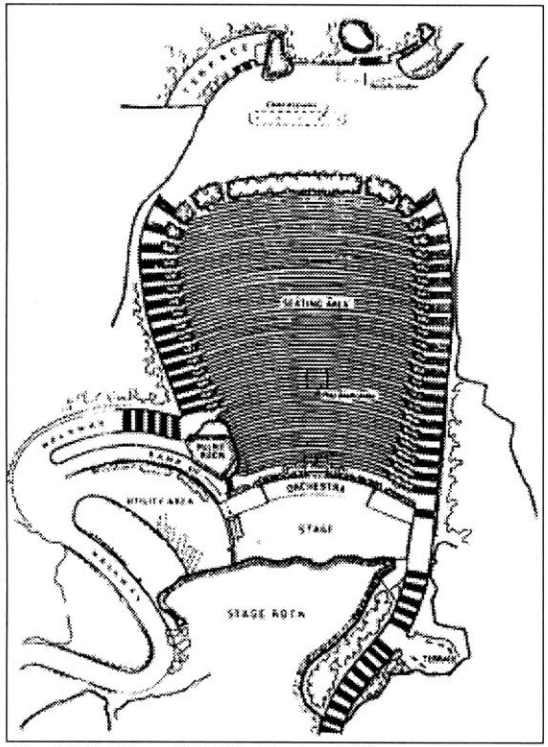


fig. 86.2 Plan of Red Rocks Amphitheatre, Denver, CO
*Silverman, **Contemporary Theatre Architecture***

Red Rocks Amphitheatre, Denver, CO
10,000, natural proscenium/amphitheatre

Red Rocks Amphitheatre was built in 1942 with design additions sometime in the early eighties. The theatre, situated between towering red sandstone cliffs, provides excellent natural acoustics suitable for musical and ballet performances. Although it was not originally designed with a proscenium arch, it functioned as a proscenium stage by its relationship with the audience in the confines of the sandstone walls. The natural rock formations and the structures flanking the stage enforce the picture frame effect. In the renovation, a trussed lighting grid was added above the stage area as a covering and lighting mount. This element became the physical proscenium.

Other additions consisted of concession areas and bath rooms at the sides, and the rear of the theatre. Parking is located down a series of steps which run between the natural surroundings. The main access if from behind the large 'stage rock'.

The sound is naturally superb in this space due to the natural amphitheatre formation of the cliffs. The further back in the space, the more prevalent the echo, likewise, the further up in the hillside, the more of downtown Denver is visible over the large "stage rock'. The downtown acts as larg backdrop to the activity. Concessions and rest-rooms are dispersed throughout the performance site.

The stage is built above the ground level, with an orchestra pit space accommodated. The constructed side walls are made of course sandstone modular units, which contrast the smooth sandy continuous surface of the natural rocks. Acoustic sidewall panels are located on the stage for additional acoustic support. There is a rock to one side of the seating about one quarter of the way up, called 'pulpit rock'. Here, a spot-operator might shine a light from during a show.

fig. 88.1 Surflight Theatre, Beach Haven, NJ

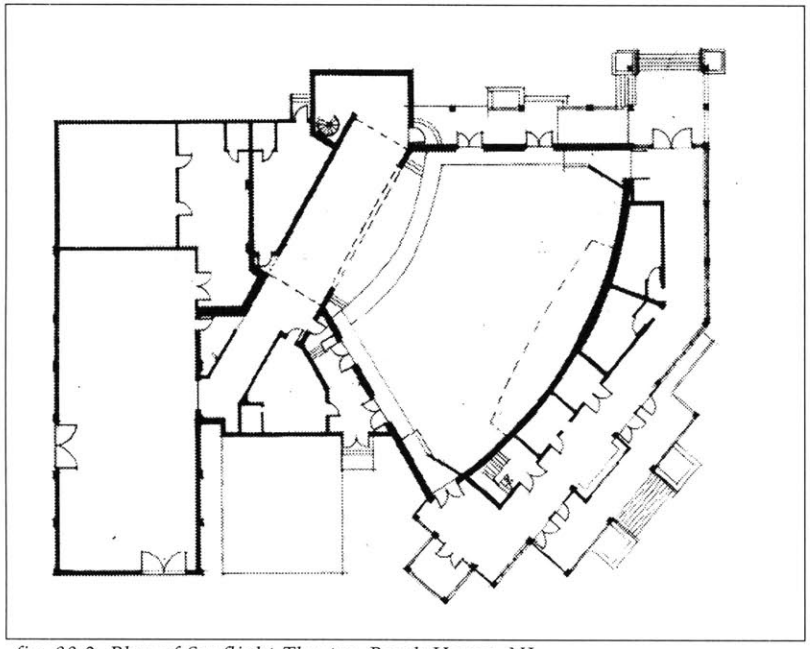


fig. 88.2 Plan of Surflight Theatre, Beach Haven, NJ

Surflight Theatre, Beach Haven, NJ
450 seats, proscenium stage

Surflight Theatre was constructed circa 1960 in an effort to provide the oceanfront community with Broadway caliber productions. Located on Long Beach Island, just a short drive from New York City, the theatre has grown into quite a booming attraction. The island, measures approximately 17 miles long and 1/4 mile wide, and can be accessed by a mile long causeway across the bay.

The theatre's original form was as a small wood barn about 100 feet long, by 30 feet wide, with a makeshift proscenium and backstage area. By 1985, additions and alterations to the theatre provided an outdoor gathering space, a new stage and auditorium and transformed the old space into a scenery and costume shop. The new theatre has more technically advanced lighting system, a fly system of both hemp and counterweight construction and an administration area above the entry, with an ocean view.

The approach to the theatre is off the main street of Beach Haven. Residences and accommodations are very close, so more patrons seem to walk to the theatre than drive. The building is sited diagonally off the corner of the intersection of two roads, thus creating an outdoor gathering area. The entrance is a covered deck area which wraps the construction of the lobby. This open-air wood constructed deck is a good precursor to the softer, more quiet lobby space. Theglass doors of the lobby open onto the deck and outdoor gathering area.

Unfortunately, the theatre space is the least successful in appealing to the human scale in terms of scale and texture. At the rear of the space are two balconies that are successful in at least dispersing some of the incidental sound. The balconies provide some refuge from the harshness of the masonry walls and rear wall, as well as the corrugated ceiling.

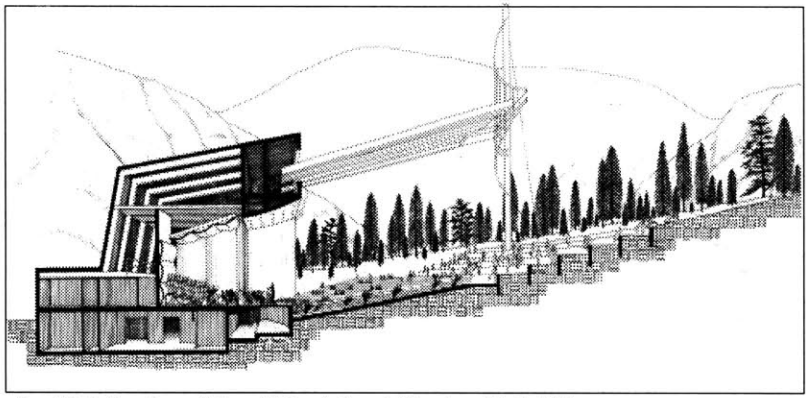


fig. 90.1 Section of Gerald Ford Amphitheatre, Vail, CO
*Izenour, **Theater Technology***

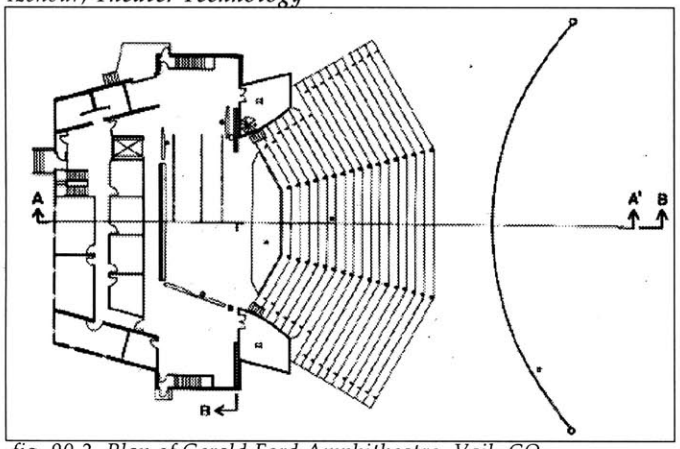


fig. 90.2 Plan of Gerald Ford Amphitheatre, Vail, CO
*Izenour, **Theater Technology***

Gerald Ford Amphitheatre, Vail, CO

1,200 seat performance space for both drama and music

The theatre was proposed in 1983 and realized that same year. The outdoor theatre has a dual purpose; the first intent was to provide a stage for both theatrical and musical performance, and the second was to accommodate a fixed bank of approximately 1,200 people under a retractable canopy. The canopy would act as a shading device for the fixed seating bank. The grounds of the theatre should also accommodate a terraced lawn seating area for approximately 2,000 people (the wine and blanket crowd).

The canopy was designed as an inflatable Dacron sailcloth tube attached to a multiple pulley system that, when inflated, would run out on cables to a tensioned cable structure behind the main seat bank. These tubes could deflate and be stored in an enclosure over the stage area, automatically retracting itself when the air pressure in the tubes was released.[21]

The main stage area is a steel-framed primary structure, designed to have a power-operated hinged acoustical shell ceiling. Manually pivoted acoustical shell side walls are also part of the original design. The stage area is accommodated with orchestra pit-stage-apron traps.

The theatre can be accessed from many directions, one of which is the bike and walking path which runs thoughout Vail Village. Small pavilions and sculptures are located along this path which meanders through the town. The theatre is located on this path, just beyond the Betty Ford Alpine Garden.

The entrance to the theatre space is defined by two structures, a large

concrete structure and a smaller concrete structure. The larger structure houses the backstage area, the rest rooms and the support and dressing areas for the theatre. Flanking the main structure is a concession pavilion.

the two structures form the enclosure of the space. It is not until one walks around the main seating bank, to the right, that one starts to feel the enclosure from the canopy above. As it is an outdoor theatre, most of the differentiation between areas of transition are achieved with surface textures. The paved walking path continues into the theatre space and follows the outside perimeter of the main seating bank between the main seating and the terraced seating . The seating bank access ramp is stepped in concrete, while the outer bank is terraced in high concrete walls and diminishes into the sloped grassy section, bounded by tightly planted pines, forming a soft, acoustic back wall.

In this type of outdoor performance space, there is a great deal of attention paid to the placement in the landscape as well as the type of enclosure. Outside, there is a tendency for noise to dissipate rather quickly, so it is important to bound the intimate area with some vertical element. In this case, it is the slope of the hill and the use of the trees. In this respect, the stage canopy acts as an acoustical shell as well as a shading device.

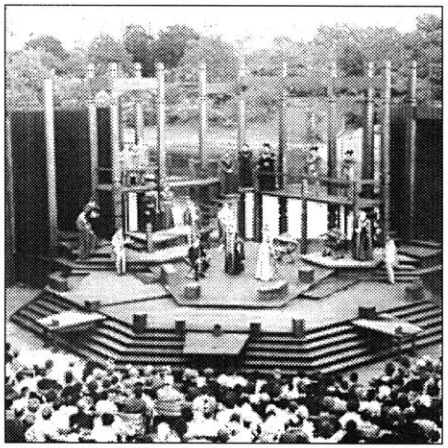


fig. 92.1 Delacourt Theater, New York
Silverman, ***Contemporary Theatre Architecture***

Delacourt Theatre, Central Park, New York City, NY

The Delacourt theatre is an open air theatre with capacity for over 2,000 spectators. Designed for Shakespearean plays, the stage is a simple platform with Central Park and Manhattan as a permanent backdrop. The theatre is flexible in its use for ballet and musical performances. The Greek amphitheatre seating provides intimate seating with excellent acoustics.

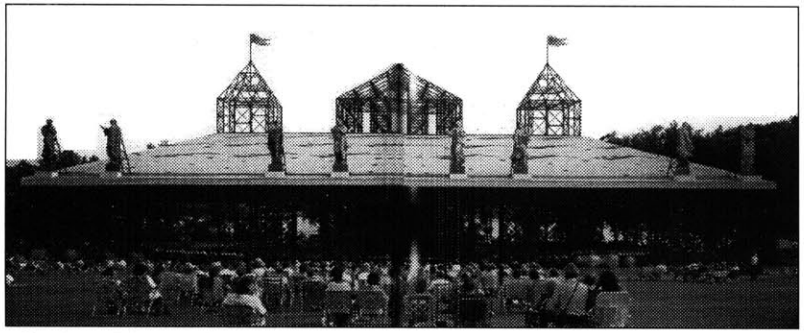


fig. 92.2 RiverBend Music Theater, Cincinnati, Ohio
Paul Warchol Photos, Architectural Record

fig. 92.3 RiverBend Music Theater,
Paul Warchol, Architectural Record

Riverbend Theatre, Cincinnati, OH

Michael Graves' Riverbend Theatre serves as a 5,000 seat vehicle for the Cincinnati Symphony Orchestra. The pavilion, constructed in 1984, has permanent seating and a landscaped lawn area bounded by a semicircular colonnade. Although designed afford river views, the open-truss steel columns and scaffolding-like towers command the space. The million dollar acoustics and the sweeping panorama draw lawn chair toting spectators religiously.

Acropolis, Athens, GREECE

This magnificent site is huge, but comprehensible and visible all at once. It is big enough for human interaction. Although set apart from the city below, it commands it. There is just enough access to make the uphill path seem a special event, a quest in fact.

The hilltop buildings are cut from marble, with bulging columns and capitals supporting heavy entablatures. The Parthenon's columns lean to show their support of the structure of the entablature, designed to be seen from below. Here, the place of arrival rewards the body's exertions and fills us with wonder. With Athena's temple to right, the human body is united with the divine.

The acropolis has changed over time. The Parthenon was once painted, and there were votive tablets along the steps. Yet, there has always been an order; something makes it clear that those buildings are in the right places. Places that respond to a human sense of order which proceeds from the body and must, therefore, have been there from the beginning.

Constantinos Doxiades' method of laying out the hilltop is convincing. It seems a sensible way to layout a special place that must be entered from a specific point. From the point of entry, radial lines 30 degrees apart, intersect the points where the corners of the buildings fall. So, the buildings in their varying perspectives seem to complete the built enclosure from that point. When the observer moves the long views are retained and the enclosure shatters.

The collision between the rugged site and the ordered buildings is the acropolis its character, commanded by its varying heights and coarseness.

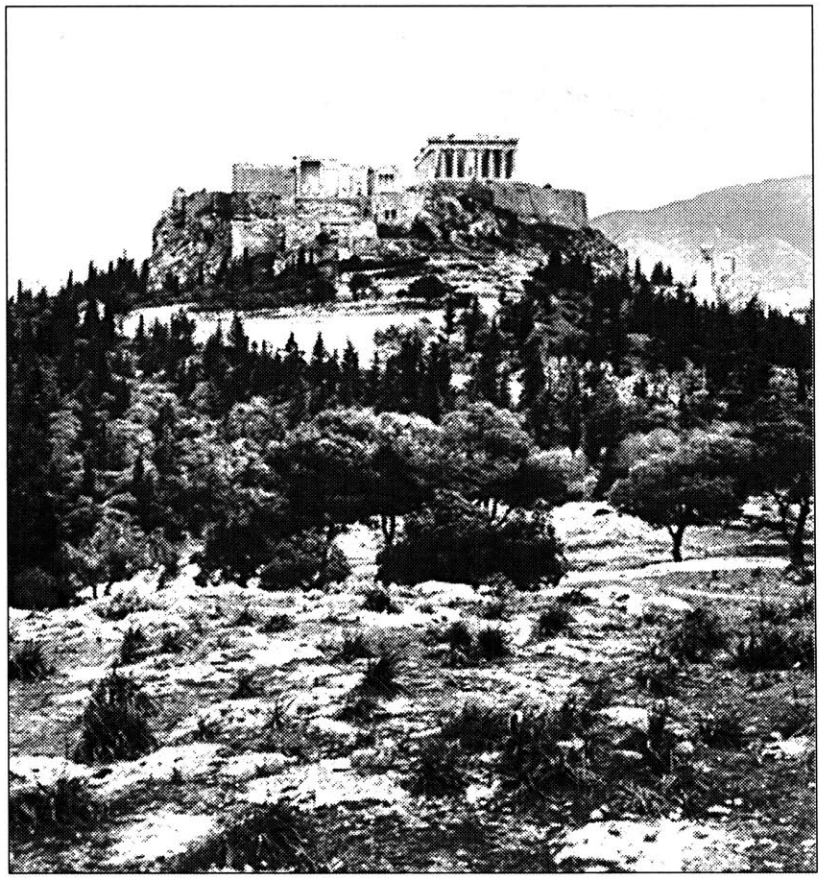


fig. 93.1 Acropolis, Athens GREECE

fig. 94.1 ™

CONCLUSION

This thesis a means for understanding how one experiences and place; and more importantly, how one derives a methodology for designing and building in the landscape. Since the phenomonology of experience is a vast realm, the investigation of a specific place was essential in determining qualitative issues of landcscape, program and construction.

One begins to understand the meaning of a place on many scales. The history and culture of a region is a running tally of how individuals have come to exist in their place, whereas the physical nature of the geography, climatology and cosmology are the basis by which individuals react to the phenomena of their environment. These are truths, while culture and history are attitudes and accounts of these truths.

In some sense, this thesis is ambitious. Not only does it encompass the design of a building, but it is a critical look at the process of designing a place within the landscape. It is an abstract and philosophical premise for design methodology, undertaking issues of culture and regionalism, while simultaneously reaching into the very soul of the individual. Qualitative issues are, and can be, strengthened by quantitative fact.

NOTES

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9 **Ibid.**, p.73.

10 **Ibid.**, p.69.

11 Mackintosh, p.3.

12 Iriguay, as quoted in Craig Owens, "Feminism and Post - Modernism" in Hal Foster, ed., *The Anti-Aesthetic*, Port Townsend: Bay Press, p. 198.

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CREDITS

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fig. 8.1 Chamberlain, Old Marblehead: A Camera Impression, Hasting House, p.52.

fig. 14.1 Ibid., p.42.

fig. 16.1 Map: North Eastern Massachusetts, Gousha Travel Publication, 1992.

fig. 17.1 Map: Boston and Vicinity in 1775, Cornell University Library, 1992.

fig. 18.1 Robinson, Coastal New England, Little, Brown and Company, p.21.

fig. 19.1 Map: Marblehead and Salem Harbors, U.S. Geological Survey, 1992.

fig. 20.1 Chamberlain, p.39.

fig. 20.3 Ibid., p.65.

fig. 23.1 Ibid., p.68.

fig. 24.1 Rossi, Works and Projects, Gustavo Gili, p.100.

fig. 26.1 Leacroft, The Theatre, Methuen & Co., p.23.

fig. 28.1 Rudofsky, Architecture without Architects, Museum of Modern Art, p.8.

fig. 29.1,3 Leacroft, p.4.

fig 30.1 Izenour, Theater Design, McGraw-Hill, p.44.

fig. 31.1 Ibid., p.44.

fig. 32.1 Jeanneret-Gris, Le Corbusier, Simon and Schuster, p. 75.

fig. 34.1 Bloomer and Moore, Body, Memory and Architecture, Yale University Press, p.26.

fig. 49.1 Chamberlain, p.65.

fig. 62.3 Kidder Smith, Looking at Architecture, Harry Abrams Publishers, Inc., p.10.

f ig, 74.1 Rossi, p.118.

fig. 76.1 Courtesy of The Huntington Repertory Theater.

fig. 78.1,2 Izenour, Theater Design, p.250-251.

fig. 80.1,2 Courtesy of The Merrimack Repertory Theater.

fig. 82.1 Courtesy of The Jewish National Theater of New England.

fig. 84.1 Courtesy of The North Shore Music Theater..

fig. 86.1,2 Silverman, Contemporary Theatre Architecture, **survey 26.**

fig. 88.1,2 Courtesy of Surflight Theatre Company

fig. 90.1,2 Izenour, Theater Technology, McGraw-Hill, p.359-360.

fig. 92.1 Silverman, survey 11.

fig. 92.2,3 Paul Warchol, *Architectural Record*, McGraw-Hill, Oct. 1996, p.127-9.

fig. 93.1 Bloomer and Moore, p.108.

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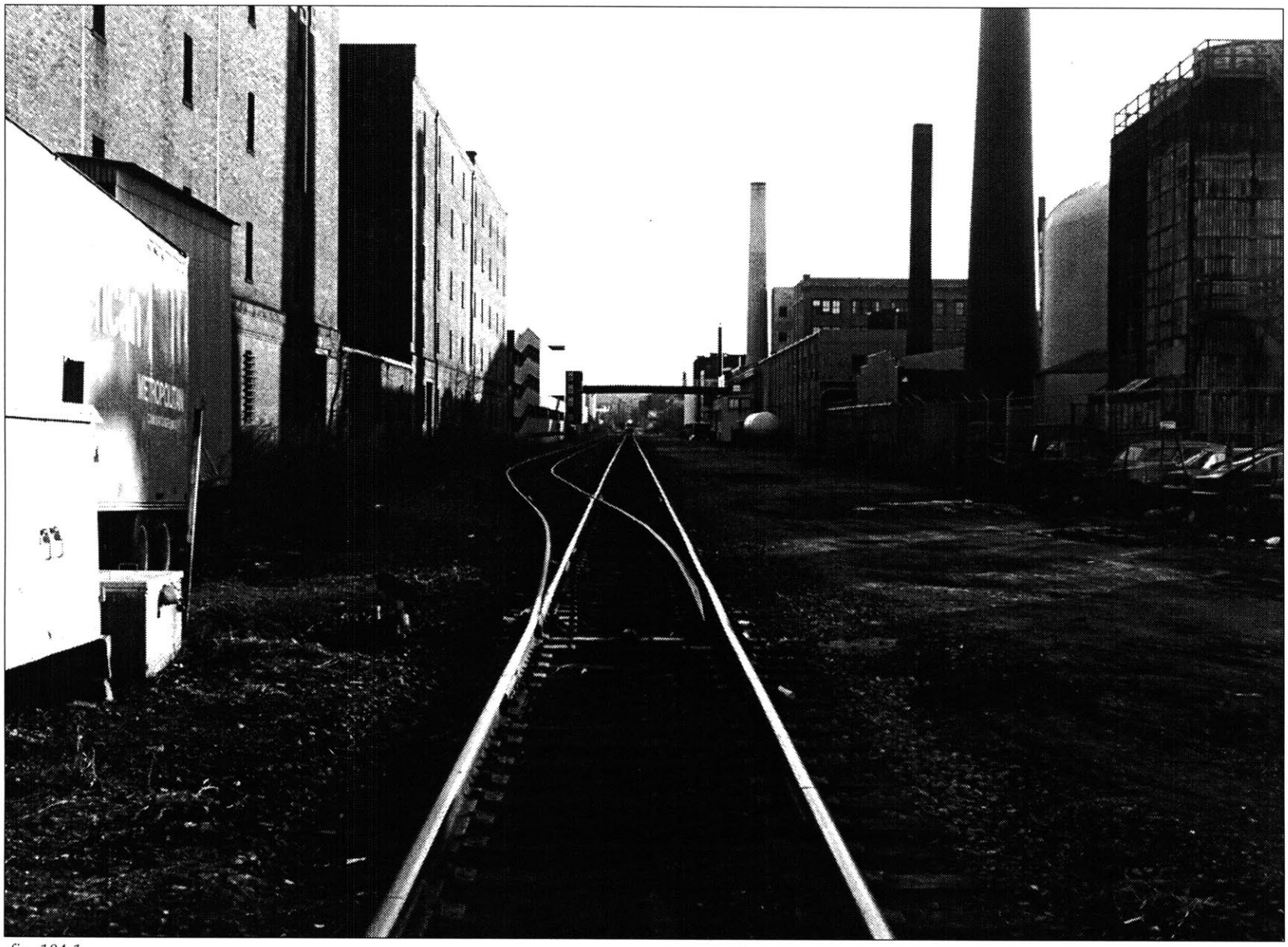

fig. 104.1

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