REFLEX MOTION:
Choreographing the Design of a Performing Arts Center in Hadley, Massachusetts

by Julia M. Bernert
Bachelor of Arts
Hampshire College
Amherst, Mass. 1979

Submitted to the Department of Architecture in partial fulfillment of the requirements for the degree Master of Architecture at the Massachusetts Institute of Technology

June 1987
©Julia M. Bernert 1987
The author hereby grants to M.I.T. permission to reproduce and to distribute publicly copies of the thesis document in whole or in part.

Signature of the author: 
Julia M. Bernert
Department of Architecture
May 8, 1987

Certified by: 
William L. Porter
Professor of Architecture and Planning
Thesis Supervisor

Accepted by: 
Julian Beinart
Chairman
Departmental Committee for Graduate Students
Abstract

Reflex Motion: Choreographing the Design of a Performing Arts Center in Hadley, Massachusetts

by Julia Bernert

Submitted to the Department of Architecture on May 8, 1987 in partial fulfillment of the requirements for the degree of Master of Architecture

Thesis Supervisor: William L. Porter
Title: Professor of Architecture and Planning

This thesis investigates an architectural design process through the techniques of intuitive drawing, conversation analysis, videotaping, site totems, and a reflexive journal. The design project is a performing arts complex in western Massachusetts. The program includes a performance theater for music and dance, an outdoor amphitheater, a rehearsal building, a café', and living space for forty performers.
ACKNOWLEDGMENTS

thanks

first to John then to my family
then a big thanks to Dave for all the good
ideas and other brain type stuff
thanks to my buddies at MIT Heidi and Gert
thanks to Bill and Fernando
and oops, I almost forgot, thanks to all my
long-suffering friends in J.P.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>chapter</th>
<th>page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. INTRODUCTION</td>
<td>9</td>
</tr>
<tr>
<td>2. THE WORKING METHOD</td>
<td>10</td>
</tr>
<tr>
<td>3. SITE DESIGN / beginnings</td>
<td>11</td>
</tr>
<tr>
<td>4. SITE DESIGN / inventory</td>
<td>19</td>
</tr>
<tr>
<td>5. SITE DESIGN / process</td>
<td>25</td>
</tr>
<tr>
<td>6. ESSAY ON &quot;PERFORMANCE&quot; by David Bogen</td>
<td>37</td>
</tr>
<tr>
<td>7. SCORING TEXT / VIDEO TRANSCRIPT</td>
<td>45</td>
</tr>
<tr>
<td>8. BUILDING DESIGN</td>
<td>57</td>
</tr>
<tr>
<td>HOUSING</td>
<td>59</td>
</tr>
<tr>
<td>REHEARSAL SPACE</td>
<td>65</td>
</tr>
<tr>
<td>AMPHITHEATER</td>
<td>67</td>
</tr>
<tr>
<td>THEATER</td>
<td>71</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>101</td>
</tr>
</tbody>
</table>
"I drink a second mouthful, in which I find nothing more than the first, a third, which gives me rather less than the second. It is time to stop, the potion is losing its magic. It is plain that the object of my quest, the truth, lies not in the cup, but in myself. The tea has called up in me, but does not in itself understand and can only repeat indefinitely, with a gradual loss of strength, the same testimony, which I, too, cannot interpret, though I hope at least to be able to call upon the tea for it again and to find it there presently intact, and at my disposal, for my final enlightenment.

I put down my cup and examine my own mind. It is for it to discover the truth. But how? What an abyss of uncertainty whenever the mind feels that some part of it has strayed beyond its borders; when it, the seeker, is at once the dark region through which it must go seeking, where all its equipment will avail it nothing. Seek? More than that, create.

Marcel Proust, SWANN'S WAY
trans: C.K. Scott Moncrieff
New York: Random House, 1928
pgs. 61-63
1. INTRODUCTION

This thesis topic is the fruit of several kitchen table conversations between the unlikely combination of an architectural student and an ethnomethodologist. Our talks centered on the spatial implications of language and the general topic "how architects work". As an architectural student, I was interested in my own working method (or lack thereof), and as a linguist, David was interested in the manner in which architects use language and visual artifacts. A potpourri of desires, ideas, and methodologies has established my approach to the actual thesis design topic, which is the design of a performing arts center complex on a rural site in western Massachusetts.

During an architectural education we are exposed to many "design processes". Each studio instructor presents their own methodology as a means to achieve the end product of this process, the building(s). During my tenure as an architectural student I have been exposed to many of these strategies for design, and have utilized them in studio projects with varying results. Consequently, when afforded the opportunity to work semi-autonomously on a thesis project I have chosen to generate and investigate my own design methodology. For the duration of this thesis project I have concentrated on a more personal procedure: the goal being to evolve further my own perception of what transpires when we start with an idea, concept or parti- and follow it through to completion and construction, (or in the case of the thesis, to the end of the allotted time frame.)

Another premise designers and architects are taught to maintain is that there are external references which are valid for any given design situation. Before starting out on our design, we are encouraged to investigate the work of other architects considered to be relevant to the situation, and also to look at the landscape or urban environment for "visual clues". Although I do not dispute the validity of this method, especially in the case of fledgling architects, I have concentrated on a design methodology that is more personally referent. In a formal sense I have become my own reference.
2. THE WORKING METHOD

The work contained in this document is meant to serve as a score [much like a musical or choreographic score] for a three and one-half month long design investigation. The work generated has divided itself up into three main categories; the first being the site design, the second a collaboration with a friend who studies another discipline [ethnomethodology], and the third a more detailed description of different buildings on the site, most notably a "dance path" theater.

The kinds of work done have also been typed: drawings, both sketch and hardline generated in and out of a sketch/journal, models, in wood and cardboard, paintings in watercolor, writing, done throughout the design process as a means of keeping in touch with my personal design methodology, and video and audio transcripts of conversations and drawing exercises.

I found this project to be alternately exhilarating and frustrating; being in-tune with oneself during a design is essential but it is much more fun when the design is going well. The notions I will take with me from this collection of work are those of introspection and the willingness to change, they have taken their place among the most important tools contained in this architects' blue pencil box.
3. SITE DESIGN—beginnings

FIRST SITE VISIT  OCTOBER 22, 1986

"I'm hoping this thing is going to work...
I've just left the car and I'm walking behind the Hampshire College Physical Plant building, which looks like a bunch of barns...Going by a big old apple tree, gonna look for an apple, they're a little bit moldy...
I'm walking south, towards the site, on the left is a field of new mown hay, the trucks are just gathering up the bales on the right in another field with big, circular swaths of hay cut out.
Going back now, past a small pond, with a stream running out of it, down a path.... heading right towards the sun now, its a beautiful October day, four o-clock in the afternoon. Can see the late summer bugs in the sunlight and I'm below what might be the site......
It's on my left and I'm kinda seeing the bottom of the hill and the ridge above from the southwest corner....Still bright green, hasn't been hayed, and surrounded by what look to be predominantly oak, and ash trees-black ash I think, a few white pines, few birches which really stand out, and it's sloping up steeply at the very corner that I'm at, and then gradually up, towards a very sharp line of trees.......and walking diagonally across this field is about 225 of my steps.
It's pretty square looking.
I'm going on now to find Peter, walking down a path, kind of around a corner of the site, or what could be the site. Down now, on my right, is a fairly open woodland with rocks, dogwood undercanopy, and tall oak trees. (Plane noise) crossing a tiny stream now, coming back up, there's another pond. I'm going up again towards the sun, through an old field... It's been left about seven or eight years, small trees and lots of goldenrod, lots of red berries and dogwood....Can hear a lot of planes, more than I remember. Mourning doves, blue jays and robins.

I'm walking towards a beautiful mountain, rounded ridge in front of me- the land slopes relatively gently up, for about another half mile, and then steeply up to the ridge of the mountain...looks like its about a half to three quarters of a mile away Almost due south.

Kind of walking parallel to the edge of the field, now I'm taking a right, heading west. Down towards another field which is just full of goldenrod....It's already turned white. And I see Peter, taking a nap...he just waved...
John and I drove out to the site yesterday. We left at 9:30 arriving to South Hadley at 11:30. It was a very cold February day with clear skies and frigid temperatures—probably not much warmer than 10 degrees F. The wind was blowing 10-20 knots from the North West—the direction of the Connecticut River. We spent about three hours walking around, looking, absorbing the "aura" of the place—John taking photos and attempting to pace the periphery of the site (not possible, too much snow...too deep.) I just looked, attempted to lie down in the snow for awhile to soak up vibes. Most of what I soaked up was melted snow—through my wool pants. The trip was useful for several reasons:

This is the second season I have visited this spot and the differences in the natural qualities inherent in the land are quite incredible. When I first visited, the lushness of nature was everywhere:, seeds blowing in the wind, brilliant leaves, balmy breezes, birds singing— and a denseness and fecundity to the place that was apparent everywhere. On this second, winter trip, the landscape was quite barren and transparent—the only sound was the whistling of the wind and the rattle of dries seed pods on the hickory trees. The absence of shelter [natural or built] was always present. My face stung from the wind—a scarf was essential. To look into the wind was hard—it made my eyes water.
OBSERVED SEASONAL DIFFERENCES

With the leaves gone, the edge of the field was much less defined- the transition was much less on/off in/out. Also, the various edges had different qualities. The south side- the side facing the upward slope of the mountain is much denser, larger trees- hemlock and white pine. The east side, bordered by barbed wire fence all but covered in snow, was the least defined, however a few yards into the woods there was a deep ravine with a frozen stream below. The same is true on the west side except the trees are denser, and the stream almost abuts the edge- it is less possible to go into the woods. The northern edge, (downhill side), has a lowland swampy portion also bordered by a stream and pond. So this means that the land, as I see it now, has less than distinct borders as provided by the trees, but very defined edges none the less because of topography and streams.
SITE DESIGN — inventory

SITE INVENTORY
I.Regional factors
The site I have chosen to build the music and dance center is in Hadley, Massachusetts. Hadley is a small, agricultural town of 9,000 citizens in the Connecticut River Valley. The circumstance that makes Hadley a likely candidate for a facility of this type, and differentiates the town from other small farming communities in New England, is the nearby presence of not one, but five universities and colleges. Within a seven mile radius to this site are approximately 25,000 college students. Because of the annual influx of a diverse and numerous student population each year, the cultural and artistic climate in the area is exceedingly rich and active. The nearness of two major metropolitan areas (Boston is a two hour drive, New York three hours by car or train) help provide for a lively calendar of music and dance performances throughout the year.
The five college collective shares some academic facilities, a shuttle bus system, and several visiting professors. It does not seem far fetched to imagine that they: (the University of Massachusetts, Hampshire College, Amherst College, Smith College and Mount Holyoke College) might be willing to pool resources to build a combined performing arts center.

II. Natural Site Features

The Connecticut Valley Lowland presents the best example of differential weathering and erosion in the [southern New England] region. The lowland runs from New Haven northward to the northern border of Massachusetts, splitting southern New England more or less in half. In contrast to the hard crystalline rocks on the higher ground on either side, the rocks of the lowland are tilted beds of softer shales and sandstones. Erosion has carved out a broad valley that, near its southern end, is some 800 feet below the land that borders it. The Connecticut Valley lowland is of great interest to geologist and naturalist alike. Because the rocks are much younger and less altered than those on either side, the geological record is easier to interpret. Some of the strata have yielded abundant fossils, almost all of dinosaur footprints.

For the naturalist, the area exhibits a wide range of habitats, each with a distinctive community of plants. The climate in the lowland is somewhat warmer than on the higher ground on either side. As a result, there are some plants and animals normally found farther south that extend their ranges northward here.1

The macro climate of the Connecticut River Valley region is of an inland type, with wide seasonal temperature swings, steady light

winds from the south west, severe winters (5,800 degree days per year) and hot summers. Snow covers the ground in most years from early December to April, the last frost usually occurs in May. The land on the valley floor adjoining the site is part of a choice agricultural territory known as the "Asparagus Valley". Farmers in the area specialize in three crops: tobacco leaves for wrapping cigars, apples, and asparagus.

The size of the plot of land on which I've situated the Performing Arts Center is about 18 acres. It is presently owned by the town of Hadley and leased by local dairy farmers for haying. Adjacent to the site on the north is farmland, and on the west are four or five residences. The eastern edge is bounded by conservation land owned by the town of Amherst, and to the south is the steeper slope of the Holyoke Mountain range, owned by the U.S. Government and the state of Massachusetts. (There is a missile tracking station at the top of nearby Bear Mountain).

The nature of the terrain where the site is located is predominantly gently sloping, with a high elevation of 400 feet and a low elevation of The % slope on the greater part of the land is about 3%, although there are several steep ravines created by streams adjacent to the clearing.

Some of the major foci and vantage points on the site are: the knoll on the western edge, the two streams and pond, the top of the cleared area of the hayfield where one can see out across the valley to the ridge
on the other side, and the bottom north western portion of the clearing where one can see both the pond and the top of the mountain range to the south.

There is quite a large amount of drainage runoff from the mountain range that occurs on or adjacent to the site. The field is bordered on three sides by water, further increasing the sense of "specialness" one encounters there. To the west and east are streams; the western stream has become the "mountain stream" and the eastern stream the "valley brook". Both lead to the pond at the northern edge of the site, called the Hadley Reservoir on my topographic map. These water bodies all experience seasonal fluctuations, although all three are extant year round, and the pond is a favorite local swimming hole.
Vegetation is varied along the different edges of the site. Along the southern and western edges are typical "midslope" plant communities composed of Birch, Hemlock, Hickory, American beech and White Pine trees with Flowering Dogwood and Mountain Laurel shrubs. The trees have never been cut and are very large. Undergrowth is dense. Along the eastern side is post agricultural forest composed of white pine, red maple, grey birch, aspen and oak trees. Along the northern edge is a flood plain plant community. Present along this edge are red and silver maple, sycamore, river birch, and eastern cottonwood trees, with an abundance of brambles and vines such as virginia creeper.
5. SITE DESIGN—process

THE CONCEPT OF THE TOTEM

This is an idea first formalized for me in a sculpture class with Michael Singer, although I'm sure that it has played a role in my work and the work of many other designers and architects. The idea of a totem relates to the land, and the conceptual framework that forms a structure to delineate decision making. It is tied to the desire for eloquence in design— a bit formalistic in approach— although this is perhaps what appeals to me about it. My own approach probably has operated in this way in the past but without the naming of the parts. Other names for TOTEM could be "parti" or "concept" or "big idea"

TOTEM: n. 1. a natural object or animate being, as an animal or bird, assumed as the emblem of a clan, family or group. 2. an object or natural phenomenon with which a primitive family or sib considers itself closely related. 3. a representation of such an object serving as the distinctive mark of a clan or group.
TOKEN: n. 1. something meant or serving to represent or indicate some fact, event, feeling, etc.: sign: to wear black as a token of mourning. 2. a characteristic indication or mark of something: symbol. His shabby suit was a token of his poverty. 3. A memento: souvenir, keepsake. The seashell was a token of their trip to Atlantic City.

10. To be a token of; signify, symbolize.

So, this idea of a totem is probably one step removed from the natural world into the world of emotion... 'karma, aura, gut-feeling' It's not like trying to identify a type of bird or plant to create these buildings in the likeness of...

The totem/token idea is more a conceptual thought process to clarify and direct my thoughts.

So, after all that, did I come up with a token/totem for the site? Well... no. The only one that really came forward was not a pretty one. It was the shape of the lowly bramble bush. This shape was also coming forward in other ways in the landscape—most notably in the shape of the hill behind the site. You could see the relation of the field to the mountain from the road now because all the leaves are off the deciduous trees in the foreground. The mountain is literally a duplication of this shape— or vice-versa and the field a white swath before it. Anything placed on the field will be silhouetted against the dark mountainside—something to be cognizant of. The other thing about those brambles is the way they grow. They send out runners. Springing out sporadically into the surroundings. This was more apparent yesterday because they were outlined against the snow. Dark brown-red. Although it is probably not good to take this concept too literally, it does hold some meaning for the way to aggregate onto the main form of a building.
PROCESS THOUGHTS

1) There are two possible approaches to the site— one is the traditional approach tractors use when they come up to mow the hay. This is a very straightforward entry— the field is apparent and revealed as soon as you enter. You are also on axis with the mountain. The second approach is from the eastern side— it would involve bridging a small ravine with stream beneath. You would enter at mid-field along the direction of the mountain range, but would not be able to see it (trees along the southern side would block the view). So, from this perspective, the entry along the northern side has more of an anticipation to it— the eastern side, more subtlety.

2) In the “painting” I have tried to score the site, using symbols and colors. There are symbols like: (this) which in my mind relate to several ideas:
- centering
- focus
- gathering
- concentration
- and totem (This last one is still undefined and was not involved in the initial choice of shape. The choice of the symbol was related to the performance idea— viewing— and then began to gather these other meanings as I worked)

I began by placing the performance space (large) in the center of the field— a natural expressive and expansive point. Related to this (in the southeast corner by entry point two), I put practice and living space. These areas penetrate the edge. In the southwest corner, facing the mountain, I put an outdoor performing area. This form related reciprocally with the indoor space. In the interim are other symbols which are connectors— not necessarily physically defined, they could be vegetative.

PROCESS THOUGHTS SITE MAP FEBRUARY 20
Most of the discussion centered on the choreography of the arrival sequence and on the nature of the aura of the site. Discussion of topography and edge zones.
I found it very difficult and even a little embarrassing to try and explain the first site organization sketch. There are several reasons for this:
1) The intuitive approach requires very little thought but brings out many issues, and the analytic approach requires a lot of thought but in the end does not coax out new issues or areas of pursuit.
With this in mind, I feel that in order to pursue my intuitive feelings I had ignored a lot of sacred architectural icons— like accuracy, scale function, and relationships of spaces, etc., but in the end I prefer to operate initially in that way. This first drawing didn't have to answer questions, just bring them up.
So, anyway, things to think about:
1) Need accurate site plan to scale 2) Need some diagrams of possible approaches and topographic relationships, related to views and locations 3) Parking 1000 cars!! How much space does that require?
Events: Attempted to organize 600 cars worth of parking and to determine preliminary site organization[s] decided by various schemes of access. Also considered were environmental/climatic factors, which also had an effect on functional placement of activities and circulation paths.

Response: The painful "parking" exercise was actually very beneficial because it allowed me to determine two important ideas:

a) There needed to be two parking lots—one public and one private. Cars could be placed at mid-site elevation enabling me to access the performance center at grade or above (from the public side).

b) The "sanctity" of the original field surrounded by streams and mountain range could remain unchanged. I am planning to bridge the stream for pedestrian access—there will be an alternate lower route into the site for emergency vehicles and trucks.

Response: There seems to be a programmatic need to increase the amount of housing/apartment space at the site. This is in order to get the place "cooking" and to provide for less formally generated intermingling of the various artists and the public. Therefore, the program was increased (heaven help me) to include some artist/performer living space. (Artist shanty town as metaphor) A kernel of this housing area could be part of the original site development.
Colored Pencil Site Plan Study 1" = 40 '
1] We go to the land [site] with out totems on our shoulders [our kin]. This is [has] an embodiment of history [personal/cultural]. We take them [the totems] down off our shoulders and put them there on the land. Each time we visit the place [work on the problem] we put down more totems [and we leave with tokens perhaps]. After a while these totems begin to populate the site and it becomes alive for us, peopled with our ideas.

"The experience of our bodies, of what we touch and smell, of how well we are "centered", as dancers say, is not locked into the immediate present but can be recollected through time. 4 In this sense the problem [process] can become historically related within its own context to both designer, [infer user here...] and the landscape.

2] Idea about the "scheme" - that the two groups of buildings would form walls for a recreation of the original field definition.

3] Idea about the "scheme" - the performer silhouetted against the sky or the mountain


---

4. Moore, Charles and Bloomer, Kent C. Body, Memory, and Architecture, pg.X

3. Halprin, Lawrence 1959-1971, pg.7

NOTEBOOKS
"Although differences between what can be expressed in language and what can be expressed in visual form are obvious to anyone who considers the two modes, the case for visual expression is a fairly recent one. Thus Suzanne Langer says somewhat combatively: "I do believe that in this physical space-time world of our experience there are things which do not fit the grammatical scheme of expression. But they are not necessarily blind, inconceivable, mystical affairs; they are simply matters which require to be conceived through some symbolistic scheme other than discursive language. Language is by no means our only articulate producer."

Suzanne Langer, Philosophy in a New Key: A Study in the Symbolism of Reason, Rite, and Art
pgs. 71-72
Some of the work accomplished within the thesis framework was done in conjunction with a friend, David Bogen, who is also an ethnomethodologist (a branch of linguistics). The work we have undertaken together has been thought provoking and interesting, and has contributed considerably to the quality of the design work generated. The essay that follows was written by David after many conversations about architecture and language (and the language of architecture).

This essay is intended both as a theoretical contribution to the work of designing a performance arts center and as an initial investigation into the usability of grammatical analysis for the study of socio-spatial phenomena. We will therefore begin by saying something about what we mean by 'grammar' and 'grammatical analysis'. This introduction will also serve as a way of specifying the relevance of grammatical investigations to the work of architectural design.

Grammar begins with inscription, and inscription is possible only in the presence of grammar. Thus, all inscription is both constitutive of and in accord with grammar. In this way, grammar and inscription are related internally as convention to application, or as praxiology to praxis.

Classically, writing and grammar emerge together as the location and fixation of living speech. Plato spoke of the "gift of grammata" as that "external" thing which "comes to the rescue" of speech, and which works as a "remedy" brought
to our memory. Grammar, as the formal relation between writing and speech, is the arche-taking of speech as an object. Thus, grammar operates in the space of its own externality to living speech; grammar is the 'view from above' of speech-made-visible in writing. Here grammar and theory coincide.

Still, while the classical moment of grammar is its own externality to living speech, it does not thereby give up all internal relation to the occasions of speech. While the work of inscription does not fix the event or occasion of speech, it fixes the meaning (noema) of the event.

What in effect does writing fix? Not the event of speaking, where we understand by the "said" of speaking that intentional exteriorization constitutive of the aim of discourse thanks to which sagen - the saying - wants to become Aus-sagen - the enunciation, the enunciated. In short, what we write, what we inscribe is the noema of speaking. It is the meaning of the speech event, not the event as event.

The internal relations of speech and grammar are, in the classical sense, logical relations. The concrete location of those relations is writing conceived as a mode of memory.

The classical affiliation between grammar and logical form is intensified in the post-classicist assimilation of grammar to a branch of linguistics. The constitution of the abstract phenomenon of 'language' necessarily confines 'writing' to the position of a "translator of a full speech." But this confinement of writing to the signifier of the signifier of language could not fully preserve the internal relation between grammar and writing unless it was accompanied by a new metaphysics of inscription:

If the theory of cybernetics is by itself to oust all metaphysical concepts - including the concepts of soul, of life, of value, of choice, of memory - which until recently served to separate the machine from man, it must conserve the notion of writing, trace, gramme [written mark], or grapheme, until its own historico-metaphysical character is exposed. Within grammatical investigations, the exposure of the metaphysical character of cybernetic theory is tantamount to the disassembly of the various 'mentalisms', and the subversion of logical determinisms through the explication of the logic of social (i.e. grammatical) praxis. In this, abstract compulsion is displaced by social convention and training. This initial move was accomplished in the writings of the later Wittgenstein.

Wittgenstein wrote that, "Essence is expressed by grammar," and "Grammar tells what kind of object anything is." These passages allude to the autonomy, or the arbitrariness of grammar. That is not to say that grammar is immaterial, or that it is the product of capriciousness or historical accident, but simply that nothing lies behind it. Nothing escapes grammar.

When we say that nothing escapes grammar, one thing we mean is that even the 'strange', the 'unaccountable', etc. (that is to say, the 'non-conventional') appears to us within a conventionally ordered structuration of intelligibility.

2Ibid. p. 320
4Ibid.
For instance, feeling astonishment at having your evening meal interrupted by a troupe of Highland Dancers is occasioned by the presence of certain circumstances - e.g., you are in your own home, it is late, you have started what you took to be an ordinary meal, you are alone, you had no reason to expect dancers this evening, etc. - and a fortiori the absence of certain other circumstances - e.g., you are neither in Scotland nor Scottish, it is not your birthday, you do not recognize any of the dancers, you are not fond of bagpipes, you do not know any practical jokers, and so on. Taken together, these presences and absences warrant (conventionally) the feeling of astonishment. Here you might: i) confront the dancers as trespassers, ii) see your spouse laughing in the corner, iii) remember that a colleague had promised you a "big surprise," iv) patiently wait for some further explanation, v) conclude that you, or the dancers, (or all of you) are risking the limits of sanity, etc. (Likewise, if the reader is amused by the image of a band of kilted Scots dancing through somebody's dining room, then this is the result of imagining certain sorts of dining rooms and certain sorts of persons, and not imagining perverse cases such as dinner at the Greenmantel Inn in Edinburgh during festival time). The lines and contours of convention (and hence grammar) are as various as they are deep.

The logic of social practices is not, however, limited to the articulations of speech. Social practices must, as it were, provide for the possibility of speech by opening up the world as an intersubjectively lived-space. In this sense speech presupposes a logical grammar of inhabitation.

In his essay on Artaud's "Theater of Cruelty," Derrida attaches this priority of inhabitation to the production of temporal orderings:

Cruel representation must permeate me. And nonrepresentation is, thus, original representation, if representation signifies, also, the unfolding of volume, a multidimensional milieu, an experience which produces its own space. Spacing (espacement), that is to say, the production of a space that no speech could condense or comprehend (since speech primarily presupposes this spacing) thereby appeals to a time that is no longer that of so-called phonic linearity, appeals to "a new notion of space" and "a specific idea of time. 6

Within grammatical investigations, the use of the tape recorder and other means of electromagnetic inscription has led to a steady transformation in orthographic representations of speech. While remaining attached to notions of phonic linearity, the orderings of speech can now be seen as primarily spatial and rhythmic structures:

you could choose to have (...) the possibility of opening—

where there =yeah=

but then ()

if you had another opening (...) you could work (...) with the trees as your intimacy there (..) off of that other opening.

' n y' have your tree

=say there (...) right, (3.0)

Here, the classical relationship between grammar and speech is momentarily reversed: it is no longer grammar which comes to the rescue of speech, but electromagnetic recordings of speech which provide for the articulation of grammar. This momentary reversal is, however, still wedded to the historico-technically limited conception of inscription. The linearity of grammar is the outcome of a specific mode of attention to speech: viz., attention to orthographic inscription as the privileged record of speech.

The general revolution in the technical means of inscription signals the breakdown of grammar’s dependence upon orthographic inscription through, inter alia, i) the development of phonography and other means of audiographic inscription, which free speech (the utterance) from language (the sentence); ii) the development of photography, cinematography, and other means of videographic inscription, which allow visual analogues to keep pace with the "fleetingness of speech"; and iii) the resynchronization of these two forms of inscription in the production of complex audio-visual environments.

If we accept that grammar and writing are internally related, then it should be no surprise that transformations in the techniques of inscription are coincidental with shifts in what we can mean by 'grammar', and hence shifts in grammar. Benjamin was amongst the first to comprehend the grammatical ramifications of the general revolution in the means of inscription:

...for the first time in world history, mechanical reproduction emancipates the work of art from its parasitic dependence upon ritual. To an ever greater degree the work of art reproduced becomes the work of art designed for reproducibility. From a photographic negative, for example, one can make any number of prints; to ask for the "authentic" print makes no sense.7

Transposing 'the work of art' onto social practices, we can say that the general revolution in the means of inscription means that social practices become increasingly detached from ritualistic origins, and ever more aligned with the anticipation of their own reproduction. (As the genetic template renders non-sensical the authenticity of 'the self', so 'identities' become the choice between and the pursuit of various 'self-images'; contingent stabilities are interspersed with regular crises, these crises marking the rhythms and stages of life). Former certainties of, e.g., location, perspective, and sense are now disclosed as merely possible alignments; as partial and fragmentary realities in need of constant reassembly and maintenance:

The shift is analogous to the shift from a geocentric to a heliocentric cosmology. The geocentric view establishes the observer in a fixed position at the center of the solar system. Her position is unvarying. The observed movements of the planets are their movements. Once the heliocentric view prevails, the observer is found

to be herself moving in relation to what she observes as moving... Once her own position is seen as a moving relation to what moves, it is possible to grasp her observations as a relation rather than as objectified.\(^8\)

The painter maintains in his work a natural distance from reality, the cameraman penetrates deeply into its web. There is a tremendous difference between the pictures they obtain. That of the painter is a total one, that of the cameraman consists of multiple fragments which are assembled under a new law.\(^9\)

While the work of reassembly is conventionally ordered, it overflows the boundaries of speech both in the incarnate experience of the production, and in the experience of the finished product (which must, in some sense, 'speak for itself'). As grammar shifts to include new conventions of production, so grammatical investigations must seek to establish themselves on a different (non-)footing.

The foregoing is intended to suffice as an argument for the expansion of grammatical investigations to include, and indeed to be founded upon, the investigation of socio-spatial phenomena. This move necessitates an expansion of the vocabulary of grammatical investigations. A partial inventory of this vocabulary includes concepts of location (here, there, local, locale, allocation, dislocation, time, place, placement, displacement, replacement, in, out, I, we, they), participation (attention, reception, presence, absence, perspective, pairs [e.g. audience/performer], triplets [e.g. audience/interviewer/interviewee]), circulation (cycle, traffic, turn, speed, speed-up, slowdown, delay, pause, gridlock), transition (arrival, departure, entrance, exit, beginning, ending, passageway, former, next), proximity (edge, zone, adjacency, non-adjacency, near, far), volume (shape, size, compression, decompression, expansion, contraction, echo, echo-time), anticipation (expectation, projection, imagination, possibility, direction, affordance), perceptibility (visible, invisible, audible, inaudible, light, dark, opaque, transparent), perceptual accomplishment (hearing, seeing, smelling, tasting, touching, noticing, understanding), and so on.

We reason that the proper field of grammatical investigations is limited only by what they turn their attention to and the means of inscription at their disposal.

Grammatical investigations and the work of architectural design overlap to the extent that they share a common interest in inhabitance. Expressed formally, this implies a common interest in the constitutive structures of socio-spatial organization.

Now it might be argued that architectural design is not so much interested in structure as it is in structuration. This would seem to point to a significant difference between grammatical investigations and the work of architectural design: that while the former 'leaves everything as it is',\(^10\) the latter finds its raison d'être in transformation. If we follow this line of thought, we are inclined to say that while grammatical investigations are designed to explicate inhabitance, the work of architectural design is the designation of inhabitance. But we should move more carefully here.

1) It is important to recognize that the work of architectural design always, at least implicitly, involves the projection of inhabitance onto some real-imaginary space. Even in the most minimal usages - e.g. a human figure as a

---

\(^8\)Dorothy Smith, "On Sociological Description: A Method from Marx," \textit{Human Studies}, vol. 4, p. 322

\(^9\)Benjamin, op. cit., pp. 233-4
feature of scaling - inhabitance makes primary contact with design. This establishes grammatical investigations as potentially a primary mode of reflection within the work of architectural design. For example, if the use of the human figure as a feature of scaling appears as a conventional property of a certain sort of work, then the ways in which this usage is maintained as an intelligible practice might be of significant interest to grammatical investigations. If we then go on to explicate the ways in which this usage makes its appearance, we are, at the same time, making visible for the practitioner her ways of doing that practice. Those practices are thereby opened up to the possibilities of criticism and change founded in a theoretical understanding of the working grammar of architectural design.

ii) It is important to see that while the work of architectural design, as a mode of inscription, 'leaves its mark', we still need to ask what that mark amounts to in practice. Certainly if we look at the transformation of an empty field into a performance arts center, something seems to have changed. But did it matter for the work of architectural design whether anything was ever built? Or is 'building' more the work of construction than of architectural design? Priority must be given to the studio, the drafting table, the site visit, the plan, the elevation, etc., as the real-imaginary spaces of architectural design work.

iii) Finally, if architectural design work intends, primarily, the designation of inhabitance, then it will inevitably express a tension between what we have termed 'directions' and 'affordances'. Both rely upon the conventional predispositions of virtual inhabitors, but while the former attempts to use these orientations for its own instrumental purposes, the latter relies upon its knowledge of convention in opening up the space to its inhabited definitions. Neither orientation is preferable. Both modes of designation are seen as having appropriate occasions of use. The distinction between them is intended to ongoingly reflect the moral character of specific design decisions.

10 Wittgenstein, op. cit., paragraph 124.
Transcript 3.31.87

DB: Monk11 writes about the play between convention and space: that convention precedes the inhabitance of any particular space both in the imagination of inhabitance and in the space as its uses. If you remember, we were talking earlier about the various senses of 'performance'. Monk wants to talk about the audience as performers, but here he is moving back and forth, and muddling the senses of 'performance'.

There is the sense, coming out of the work on 'performatives' in speech-act theory, that every linguistic event involves a performance of some kind or another. This is a naturalistic conception of 'performance': that every natural-language speaker is a performer in each and every thing they say. This is an appeal to pre-theoretical conventions that would always precede, say, coming to an artistic performance space.

Another way of using the concept of 'performance' is to speak of 'audience as performance', but now in the specialized sense of 'audience as a part of the artistic production'. This local sense is perhaps the more original sense - 'performance' as the carrying out of a command or duty, as an emphatic completion of a piece of work, as a definite set of acts done at a specific place and time - and we would then want to ask whether the first sense of 'performance', the naturalistic sense, is a legitimate extension of this concept, or is instead another concept entirely.


JB: But I would think that part of performing would be that you are really not performing in this second sense unless you are aware that you are. So the audience that claps, uses that convention, would not be performing because they are not aware that they are. We can compare this to the talk about the site plan. From a design standpoint, in the auditorium where everyone is facing the stage, if some of the audience were to walk across the stage, they might have that sense of being a performer, but it wouldn't necessarily make everyone in the audience feel the same way.

[Although if they were recognizably audience members, the rest of the audience would be implicated in the action and would feel that implication.]

But if we imagine the public space, or a more open space, where there are people sitting around the edges, and where the hapless adventurer walks across the ombalos of the site, then that is a more subtle and interesting case of implied performance.

DB: Monk also talks about 'the degree of identity or drift' that the viewer is 'allowed' in a performance space. But this can also be seen as a bit self-congratulatory, since the authority of a space - if it is unpolicemust appeal to the very deep conventions of the audience as the tools and devices of the common culture which, amongst other things, provided for their entrance into the space in the first place. Here the space overestimates its own powers of imposition.
JB: But then it is important to look at the sense of 'allowing' here, because, say, with that center section, you were saying that I was 'allowing' it to happen, and I was saying that I was 'affording' it. Here the quality of the edge makes a big difference.

DB: But then you need to be careful about the notion of an 'edge' which is what usually gets something like mediating or overlapping zones off the ground. While it may be very obvious that some qualitative change has taken place in the movement from one place to another, there are various overlaid transformations taking place, none of them necessarily changing together, so that a zone is - or can be - a somewhat artificial construction. It only seems to make sense where you can talk about simultaneous transformations in a collection of overlaid elements: a change within the structure of lamination.

Within this, entering and exiting might be conventional edges, where the design would work with the meanings-determinate, ambiguous, or polysemous) of these edges.

JB: One thing I found interesting in the things you wrote was this idea of the design process as also a performance.

If our heading is 'performance', I can think of three levels of scoring which could be overlaid. One would be to talk about 'design process' as performance, which is more like the Halprin stuff, maybe scoring the notebook. The second would be the site material as performance, which might include two sub-pathways: one would be arrival and exiting, arriving, entering, starting, ending, exiting, and departing, and the second would be going from larger public space to the concert hall pathway, or what I now want to call 'the dance path', which involves ennobling the sense of the place as the place I started with and this pond.

The idea is that because it is going to be a small hall, and because there's going to be both music and dance going on there, different dance and musical forms have different requirements both acoustically and in terms of size, stage orientation, dimensioning, etc. So there are two theaters, the first one I'm calling the dance path theater, which is more these steep bleachers over this very linear stage, which people can access either from backstage, or from in front, which makes the performance more like a parade. The second one is the more classical amphitheater. That would be for, say, a chamber group. It is a more acoustically tight place to play. But then there are possibilities throughout the space for staging.

I would be interested in doing a score of this concert hall.
7. TRANSCRIPT OF SCORING (EXCERPTS 4-5-87)

JB: so what I wou- (...) the first thing I would do:
(...) might be to: ((pointing with index finger,
moving right to left))(..................)

put a datum line on here (.................)

DB: okay (...........................) and then (......)
are we gonna have several? ((moving hand from
left to right)) (..........)

and work our way kind of down like a text? (.....)

JB: could do that, yeah.

DB: yeah (.) that's- (...) that would be good because
that's ah (...) ((reaches for legend)) pretty
much (.....) a relation of movement (.....)
movement departure (...) we'll have to find a new
way to talk about departure.

JB:  yeah ........................................

so this is datum line one ((laughing))

(737)

JB:  and I'd say (...) judging from the- this ah:: (...) reference painting=

DB:   =umhmm=

JB:   =that we might- it might be a good place to (...) ah:: (...) to arrive (.........) maybe going across the river.

DB:   (...) and then not bother about the other side before that.

JB:  yeah.

(833)

JB:  so what I would say would be (.............) we have arrival as- (....)

DB:  dots. (..........................) maybe=

JB:   =so
y-you were saying arrival was just (.....) your presence and not necessarily (............) an event. (.)

DB: yeah. eh-i think I think what we can (. . ) do with arrival for instance is ahhmm: (....) it's not an event until it has something like entry. (.)

JB: ummm=

DB: =right (.) so there's there's the idea of arrival and departure are the same thing. ((moving right hand back and forth)) (.)

so whatever they would be- (.....)

JB: so, if we have: (..........................) we might as well (....) just do it ((laughing)) see what happens. find out what ( ) and if we say- (....) are we gonna go- (....) do you want to start there? (....) might as well do it like- (....)

DB: like a text=

JB: =a text (....) yeah (.....)

DB: so:: (..................)

(912)

JB: see and I would say that (....) we should maybe (.....) do something like (..........................) this

DB: to denote the transition?

JB: yeah (....) well the th-th-that's an intensification. (.)

DB: okay (....) uh:mm (..........................) an::d (............) at this point (.....) you're also involved in (....) ((picks up

in this sort of thing, right? unless it's going to be extremely directional.

JB: (..........................) it's not it's (.....) low key.

DB: '(. . . .) umm: (..........................) ((smiling)) low key. ((reaching for yellow)) (..........................) and where are you looking? (....) are you looking you looking straight ahead? (.)

JB: you're looking almost ahm: (....) y'know one eighty (.....)

DB: so=

JB: =but you're=

DB: =can the hands present themselves this way? (.....)

JB: whichever way you think (............) probably (............) opening out

(1025)

DB: we can talk about some of the affordances that are there, an- and we don't need the writing or the notes (. . ) for instance (. . ) ahm (............) when you first entered (....) right (.) ahm: (....) when you- when you've arrived at a place right so: ((pointing to reference painting)) let's just say we're not- we're not toward the bridge we're sort of in this area in here

JB: ummm

DB: right? (.) ummm
DB: now here ((pointing with little finger))

as you- as you come out of ((moving finger from right to left))

a compression then you- you have another entry right? (....)

JB: definately.

DB: (...) a very strong one (...) ah:m

Jakobson: (..............)

DB: =yeah one of the-
the-ah sense of that to me (...) just before you-
(...) was (...) ah: using this ((pointing to stamp in JB's hand))

w- with this

as entry? was that sort of visual

(...) ahm field (...) ((moves right hand in arc))
so maybe something that opens that way=

JB: =yeah,
that's what I was thinking (...) that this is the

brackets on the (...) datum (...)

DB: =right=

JB: =for example (...) and then this would be (..............................................................)

and we might say (..................) like that.

DB: strongly (...) three dir.

JB: no i would say s-strongly (...) two directions.

DB: (.....) has n-yeah

JB: (................................) there's a lot that's going

on- (handing DB the stamp)

JB: (................................) we're going to have some in this (...) stuff.

DB: (....) over here

(1953)

JB: we're going to have another affordance symbol

for sure.

DB: (....) has n-yeah

JB: (................................) there's a lot that's going

on- (handing DB the stamp)
affordance in the center at least.

..................................................... ah:mm:
(........) and

JB: (.........) i would say there's even ((pointing with index and little fingers))

DB: (.........)

JB: (.........)

DB: (.........)

more

DB: (.........)

okay (.........)

49
DB: this. (...)

ah::m: (............................) but the starting and the stopping is itself in brackets. In terms- i-it's also an anticipation. right? so i-it's like this. ah::m

DB: =okay (...)

JB: or next to the dance path. (...)

DB: certainly gathering is like this incredibly strong thing. so maybe (...) just a set of those guys?

JB: yeah () but also- (...) uhm (.............) oh we have this ((pointing with index finger)) (...) yeah so this this ((pointing with little finger))

DB: tha- that's still outside an:- and that shou-

JB: happens again (...) yeah

DB: so we'll put this like this

DB: we'll just take as- double means (........)
der- say triple would mean maximum intensity ((pointing))

DB: oh (...) let me see one other thing (...) it's that the dots also indicate duration. (...) so this might be a shorter one and a longer one-

JB: okay we'll put this like this
JB: now also (...) this: ({ })
would also (...) (like) (........) that you could
(... have

({}) because we're

on the dance (...)

path you could have (........)
just (...) walking (...) talking, depending on what else is going on there. (..................) and then (..) there's ah:: (............................................)
DB: okay (-----) i don't want to get to complicated but (----) i've got (----) this guy stops

then i'd like to (-------------------)

i'd like to bracket them (-------------------)

the ah: (-------------------)

DB: then we need some departure. (------) right?
JB: you know what else is (....) going on

(______________________________________________________)
8. BUILDING DESIGN

This portion of the thesis outlines design work completed on specific buildings at the site. Within the performing arts center complex there were four buildings or groups of buildings that were detailed. These four are:

1. HOUSING
2. REHEARSAL BUILDING
3. OUTDOOR AMPHITHEATER
4. PERFORMANCE THEATER

As the most design time was spent on the performance theater, I have included detailed program and process documentation for this building only. The other three buildings were treated as "sketch designs", and are depicted as such. The sketches are meant to serve as departure points for more detailed design investigation.
Design ideas for the housing at the site went through several transformations. At first I felt that the housing should be mobile, very much like "camping" at the site. This would provide for informal intermingling between artists and public, and also provide the performers with the utmost flexibility in choosing their living space. The "mobile campsites" idea proved difficult to resolve and was supplanted with a "frameworks" idea. An infrastructure would be provided and artists would infill with "shanty"-like living spaces. This seemed to be allot to ask a visiting performer to do, and the "framework" became a more formalized scheme for housing clusters.

The housing design attempts to integrate the affordance of performance possibilities into the artists living spaces without compromising the intimate scale and sense of privacy required for comfortable living. Some of the precedents and references used in the design process drawn are shown here; Balinese village form, workers housing in Hawaii (circa 1920), and a group of miner's wagons de-wheeled and planted along the Hollyford River in New Zealand. These are obviously very
idiosyncratic references [taken from personal travels], but they are all of appropriate scale, and the individual house is seen as part of a larger organization in the landscape.

The housing clusters are comprised of three or four very small cabins which form a courtyard suitable for small, informal "house concerts" for up to fifty performers/viewers. Each cluster has a collective kitchen dining house, which is shared by the eight to ten resident artists of the cluster. Each group of houses is accessible by car, parking for two to four cars is provided. Additional cars would park beyond the river boundary.

The individual houses each have two or three small bedrooms, a bathroom with shower and a sitting room with wood or coal stove. The houses are wood frame with standing seam metal roofing, concrete masonry unit foundations and a light panel construction exterior skin.
Housing, north elevation

Housing, south elevation
Housing, partial floor plan
Rehearsal Building

The rehearsal building is located in the southeast corner of the site. It contains the following spaces: two dance rehearsal spaces @ 1280 sq.ft. each, a small outdoor court directly adjacent to each rehearsal room, one shared changing/shower room @ 1000 sq.ft., a reception area with sitting spot @ 1024 sq.ft., ten musician's practice rooms @ 100 sq.ft ea. which are clustered around a two story atrium [400 sq.ft.]. With circulation area, coatroom and lavs, the total square footage of the building comes to about 6000 square feet.

The building is designed to reflect and harmonize with the form of the large performance theater. The roofs are sawtooched and covered with standing seam metal roofing, and they rise with the building as it moves up the field. The overall ambience of the space is similar to urban artist's loft spaces.

The building also creates a private courtyard to the east. While visiting the site in October 1986 I felt that this corner of the field had a special, quieter quality [possibly because the land is more flat]. This is a place for practice outside, away from the eyes of visitors. On the interior of the building the primary circulation spaces run along this courtyard edge.
Alvin Ailey Dancers in concert

rehearsal building, plan

rehearsal building, section
Amphitheater

The amphitheater is a large, public outdoor performance viewing space located in the southwest corner of the field. The major portion of seating provided is informal, created with landscape terraces which merge with the forest along the edge. As the amphitheater form turns away from the slope of the hill, the landscape oriented seating terraces give way to constructed seating, the thought being that the seating would become less connected to the ground as it moves further away from the slope of the field. This constructed seating is akin to wooden bleachers at sporting events.

Sketches for the design of amphitheater
The amphitheater form is OK but there perhaps could be some subtlety in how the earth generated forms meet up with the floating forms—perhaps there could be a pathway through. Also, there should be more connection with the place—ie: landscape, inherent in the organization of the other buildings.
The shape and character of the site (land) also suggest greater importance for the building— the building becomes more of a "gem", less a dispersed entity in the landscape— the site is really quite stage-like. One way to think about the land was in relation to activities. The open field is so much a performance space, a natural stage. One feels so much on display there— I can imagine wanting to get into the woods— in the summer in the shade of the trees, and in the winter for a break from the wind. Also to feel just a bit camouflaged. This suggests that some activities relate more to the edges than the center of the space.
Dance Pattern #3, Imperial County, Ca.
This irregular Paleo-Indian snake dance pattern was created by dancers who stood side by side and moved in a regular sequence. The pattern is nearly 3/4 of a mile long and 6 feet wide and may have been in use for thousands of years.
"After the activities that secure to primitive peoples the necessities, food and shelter, the dance comes first. It is the earliest outlet for emotion, and the beginning of the arts.... Primitive man, poor in means of expression, with only the rudimentary beginnings of spoken language, universally expressed (his) feelings through measured movement. Nature about (him) moved rhythmically, in the wave motion of the waters and the wind-blown fields; the sun and the moon rose and fell; (his) own heartbeats were rhythmic. It was natural, then, that (he) should create rhythmic movement to externalize any felt joy. (He) danced for pleasure and as ritual. (He) spoke in dance to (his) gods, (he) prayed in dance and gave thanks in dance. By no means all this activity was dramatic or theatrical; but in (his) designed movement was the germ of drama and theater.... Where ever primitive peoples are found and their customs studied, there is ritual and usually dramatic dance...."5

"The dance, which used to make due with any hall available for public events, in recent years has tended to be performed in theaters designed specifically for this art form alone.... Financial feasibility aside, a modern dance theater must provide an extremely flexible stage, a spacious orchestra pit, and a steeply amphitheatral auditorium where the audience can experience a three dimensional sense of space.

Dance is an art form that acts upon the audience through movement and the composite pattern of the dancers in space; therefore, a three dimensional view is essential to the success of a performance....The open stage and arena can often be used to good effect, but the area of the stage is too small to allow for ample development of the choreography."6

---

5. Contemporary Theater: Evolution and Design pg. 10-12
6 ibid
references on this page are all from the work of Alvar Aalto. His theater designs proved very influential in the early stages of design because of their sympathetic relationship to the landscape.
PROCESS THOUGHTS  MARCH 20, 1987

A major shift in the concert hall design occurred around Monday/Tuesday this week—I'll try to explain:

I had generated a radial concert hall with an intersecting lobby space. Diagrammatically it looked like this:  

I had also made a small model 1/40 to put on the site model and was not pleased with how it sat on the landscape. The changes after were generated through the following set of information:

1) discussion at the admissions committee meeting of circular buildings (needless to say, this was a discussion that was quite negative in tone.)
2) Saw Ben Schlanger's prototypical design for a linear theater
3) Desire to make a more dynamic space for dance to occur in
4) Desire to place the building more correctly with the landscape and the large public space—also to reflect the movement on the hill of the amphitheater
The result is more interesting—both programmatically and spatially. The diagram is more like this: ref: dwgs.6,7 With two strong forms shaping a "dance pathway". The seating can be interchangeable with facilities for concert music, small ensemble or experimental dance forms. This also allows for "cafe' seating" on the center floor which would be good for jazz performances. The lobby then, would be part of the "dancepath, but should be acoustically separate when required.

"Sound and vision could be relayed from one room to another, and for certain works all rooms could be used at once, so that the listener could "wander in space through the multi-layered composition ...as if you were walking through an enormously enlarged score." Stockhausen compares his layered polyphony with the paintings of Bosch, where half-human, half-fantastic creatures meet with objects from different periods of time in an imaginary architectural or landscape setting. In addition to this increased awareness of the acoustic and spatial ambience of music, composers are also tending to be more aware of the visual context, partly because of the dominance of visual images in the present day world. Some have transgressed completely from a conventional architectural setting. The American composer Charles Ives (1874-1954) spent nearly two decades from 1911-1928 writing The Earth and the Firmament, or Universe Symphony, which would have spread over the entire landscape, with groups of musicians gathered on hills and in valleys to sound a joyful, disordered freedom. This is similar to Debussy's idea of music composed especially for the open air, on broad lines, with bold instrumental and vocal effects, which would sport and skim among the tree tops in the sunshine and fresh air. Harmonies which would seem out of place in an enclosed concert room would be in their true environment here."7

7. Forsyth, Michael Buildings for Music pg. 324
The Space Theater of Our Era

Figure 274. (Above) Schlanger's theater: plan. Credit: Ben Schlanger. (Below) Theater of Thorican in Attica: plan. According to Dörpfeld and Reich Das Griechische Theater: author's archive.

The linear theater design of Ben Schlanger compared to the Greek theater of Thorican in Attica.

Figure 275. Schlanger's theater: section. (Credit: Ben Schlanger.)

Sketch by Stokowski for a stage setting.
PROCESS NOTES  APRIL 4, 1987

Have not written in one and one half weeks. Its been an intense drawing time- working out a solution to the "dance-path" hypothesis described in the last entry. The process is best described by the series of drawings. Comments have been mostly on the structure and framing plan, the infamous ring beams. The basic organization seems OK, but the structure needs to be a little more interactive and expressive- the theater also can extend farther that 180° and the structure of the roof support should not duplicate the change of elevation at grade, it can float over.

theater plans and section Mar 25-30
NOTES APRIL 6, 1987
One thing that I keep thinking is that at some point it becomes important to decide consciously what I want to hang on to. For example, the dance path idea keeps encountering resistance from reviewers. For some reason it doesn't sit right with people. I keep holding on—perhaps there is a transformation of the concept into something else, but perhaps it is right as it is. One way to decide would be to ask some dancers what they would feel like in that space....

theater plan— a new totem— Mar 30
Theater zoning studies to show the proper proportion of public to production zones.
theater references: these include work by Chernokov, Molnar's "U-theater", the Berlin philharmonic [Scharoun, 1963] and F.L. Wright's Humphrey theater, 1960.
I am discouraged. This roof structure is driving me crazy. The IDEA however is to sweep the roof up and around- almost taking energy from the pond and directing it up to the mountain.
Model as site motion study

Alvar Aalto, church, Finland 1962
APRIL 18, 1987

Have revised again the performance center design. This is a list of goals established before undertaking the re-design as a way of making decisions based on predetermined goals and objectives.

1) Bring path from mountain to pond through the theater
   a) public space as performance
   b) linking activities together
   c) linking outdoor spaces
   d) landscape/groundform connections to major site natural features—mountain field pond

2) Provide for alternative types of viewing
   a) traditional proscenium or half-round form
      Good for acoustics, if listeners are not too far from the stage, this form also emphasizes the control the artists can exert over the space. The form preserves the quality of artifice inherent in some kinds of performances.
   b) "Dance path" smaller experimental form which is more linked to processional forms of movement—linear movement. This form is also related to the notion of dance as an occurrence in everyday life—the joy of everyday movement celebrated
   c) "Dance concert" form linking to the "disco" type audience participation that is more a part of the contemporary music scene. This type would have a space for viewing musicians/dancers and a space for audience participation (this would work well in the collegiate atmosphere of the Hadley area).

3) Keep the building as low as possible to minimize impact on the site and the surrounding community. The concert hall should be visible from the road, but not as a solid entity, more as a collection or aggregation of forms. This is similar to the nearby topology of farm outbuildings with the punctuation of a silo.
Theater West elevation study

Theater North elevation study
1st FLOOR PLAN
THEATER Section
Aalto, Alvar  

Alexander, Christopher  
1986: "The City is not a Tree" Zone, Vols. 1-2 pp. 128-149

American Federation of Arts  

Athanasopulos, Christos G.  
1983: Contemporary Theater Evolution and Design [New York : John Wiley & Sons]

Benjamin, Walter  

Bloomer, Kent C. and Charles W. Moore  
1977: Body, Memory and Architecture [New Haven, Yale University Press]

Bridges, Marilyn  

Budihardjo, Eko  

Burke, Edmond  
1968: A Philosophical Enquiry into the Origin of Our Ideas of the Sublime and Beautiful [Notre Dame, Notre Dame University Press]

Callendar, John Hancock  
Cogswell, Margaret (Catalogue organization)  

Cooke, Catherine  

Coulter, Jeff  

Derrida, Jacques  

DalCo, Francesco and Giuseppe Mazzariol  
1984: *Carlo Scarpa the Complete Works* [N.Y.: Rizzoli]

Editors of Architectural Record  

Fleig, Karl  
1975: *Alvar Aalto* [New York, Praeger Publishers]

Forsyth, Michael  
1985: *Buildings for Music* [Cambridge, MIT Press]

Garfinkel, Harold  

Garfinkel, Harold and Harvey Sacks  

Garnett, William  
1982: *The Extraordinary Landscape* [Boston, Little Brown and Co.]

Grotowski, Jerzy  

Geidion, Sigfried  
1954: *Space, Time, Architecture* third ed. [Cambridge, Harvard University Press]
Halprin, Lawrence
1978: Process Architecture no. 4 - Lawrence Halprin

Jefferson, Gail
1985: "At first I thought...." paper presented to the
Temple University conversation and discourse analysis
conference, March, 1985

Jencks, Charles
1973 Modern Movements in Architecture [Garden City, N.J.,
Doubleday, Anchor Books] pp. 335

Jorgensen, Neil
[San Francisco, Sierra Club Books]

Langer, Susanne
1948 Philosophy in a New Key; A Study in the Symbolism of Reason,

Maclean, Norman
1976: A River Runs Through It and Other Stories
[Chicago, University of Chicago Press]

Meier, Richard
Rizzoli Books] pgs 239-261

Monk, Philip
in Chantal Pontbriand (ed.), Performance Text(e)s & Documents
[Montreal: Parachute], pp. 145-48

Nicolaides, Kimon

Piano and Rogers
undated: Centre Pompidou [New York, Rizzoli Folios]

Norberg-Schultz, Christian
1965: Intentions in Architecture [Cambridge, MIT Press]

Proust, Marcel
1928: Swann's Way, C.K. Moncrieff (trans)
[New York, Random House] pgs. 61-63
Ricoeur, Paul

Sacks, Harvey

Smith, Dorothy

Stafford, Barbara

Stone, Harris

Taylor, Brian Brace

Wertheimer, Max

Wittgenstein, Ludwig