ARCHITECTURE OF REALITY AND IMAGINATION

by

DOUGLAS E. DICK

An undergraduate thesis submitted in partial fulfillment of the requirements for the degree of

Bachelor of Architecture

Approved by:

Peter Kommers, Thesis Advisor

Robert Utzinger, Director

MONTANA STATE UNIVERSITY
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Signed: Doug Dick
Date: June 15, 1981
To my mother and father
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FORWARD

In order to provide an adequate background for this thesis I feel a need to define the scope and intentions. First, this is in no sense a general, all-encompassing manifesto on architecture, nor is it intended to be the singular driving force (tours de force?) behind my work in the future. It is more of an investigation at a personal level of the scope and capacities of the architect’s creative role in the making of architecture.

My interest in this topic was aroused by recent first experiences in a professional architectural firm. It was at that point I felt a need to explore my position as a creative individual in a field of undeniably pragmatic utilitarian focuses.

At this point I would like to thank some people for help and encouragement that proved invaluable to my growth and development during this project: Peter Kommers, thesis advisor; Robert Utzinger, director of the school and committee person; Tami Katz and the Lair Hill Historic Conservation District advisory council; my friends and classmates who have provided a warm and vital learning and living environment and finally a person unnamed but very close. I owe much to you all.
Light the first light of evening, as in a room in which we rest and, for small reason, think the world imagined is the ultimate good.

Wallace Stevens
THESIS STATEMENT

Architecture is the symbiosis of reality and imagination; The celebration of the real and necessary through analysis, synthesis and the artistic intervention of an esoteric thought.

THESIS PROJECT

A medium density, medium income speculative housing development in the Lair Hill Historic Neighborhood of South Portland, Oregon.
INTRODUCTION: PART ONE

........ I am the necessary angel of earth
since, in my sight you see the earth again.\(^1\)

Wallace Stevens

What is the position of the creative individual, the poet, in a modern world of material preoccupations? Where does the inspiration radiate from? The poet, Wallace Stevens, in his essay, The Necessary Angel, addresses these questions. Stevens suggests that his role could be likened to a necessary angel through whom the world is seen afresh. The world; reality, becomes the inspiration; the media for an understandable dialect; and the poet becomes the interpreter. This idea suggests an interesting paradox; that imagination and reality are intertwined and that both are integral to our perception and experience.

The tone of this introduction should not confuse the meaning of the search. This is not a formal investigation of human perception, the psychological self, nor of any general philosophical concern. It is a study of concrete ideas; of objects and of environments. What this search expresses in terms of a thesis on architecture is a new, more concrete definition of what architecture means with regards to human usage and experience. It is to provide an idea of what aspects of the natural environment the architect actually effects and perhaps controls. Ultimately this is a search for the point at which and the subject through which the architect's ideas and imagination might voice their presence.

In light of the real, physical qualities architecture must possess, it can no longer be the abstract, utopian idea that once manifested it during the modern movement. Architects must direct their imaginative urges towards the real; the built. We must become, once again, imaginative builders. In construction (the physical embodiment of architecture) lies character and form, the things that physically define architecture. Because we create, through the real, concrete medium of architecture; we control certain parts of the built environment. This is both our greatest opportunity and most pressing obligation.
PHENOMENOLOGY: RECOGNITION OF THE REAL

Our everyday life world consists of concrete "phenomena". It consists of people, of animals, of flowers, trees and forests, of stone, earth, wood and water, of towns, streets and houses, doors, windows and furniture. And it consists of sun, moon and stars, of drifting clouds, of night and day and changing seasons. But it also comprises more tangible phenomena such as feelings (personal interpretations). This is what is "given", this is the "context" our existence.  

Christian Norberg-Schulz

Christian Norberg-Schulz observes an ideology common throughout man's existence, but one somehow lost or ignored during the scientific onslaught of the twentieth century. It is an ideology concerning observation and experience (interpretation). He refers to it as phenomenology; a return to "things". Norberg-Schulz refers not to a revival of materialism (in an economic or physical sense) but rather a recognition of the enlightened experience and interpretation of the physical, material "phenomena" around us.

Though, perhaps, this new concern for phenomenology, or the return to things, is a departure from mainstream modernist thought; it certainly is not unprecedented in the modern era. Particularly in poetry, literature and painting, the concern for "things" has been portrayed both expressively and meaningfully (and, I might add, popularly).
Wallace Stevens has created poetry of both eloquence and imagination dealing with a strict dialogue of the real, concrete world. He, in fact, suggests that imagination cannot exist without reality and the real experience, "it must come to this, no ideas without a prerequisite antecedent in the physical world." Consider this poem from the collection The Auroras of Autumn:

Anecdote of the Jar

I placed a jar in Tennessee
And round it was, upon a hill
It made the slovenly wilderness
surround the hill.

The wilderness rose up to it,
And sprawled around, no longer wild.
The jar was round upon the ground
and tall of a port in air.

It took dominion everywhere,
the jar was grey and bare
It did not give of bird or bush
like nothing else in Tennessee.

The poem is about reality, about things, experiences and interpretation. He rejoiced the physical action and the object (much like a subjective observation), he made no deductions and created no theories. His expression relied on the interpretation of the real event. (As an additional observation, the poem also made references to the man-made object and its relation to and effect on a particular environment. This also reflects an interest in "things" and an attitude sympathetic towards phenomenology.)
Similarly in painting individuals have exploited dialogues of a realistic basis. David Hockney's rather narrative, documentary work expresses reality as a "picture". He, in fact, qualifies his work by stating, "I like to do pictures." Though this seems to be a rather flippant approach, it manifests itself in realistic representations both meaningful and open to interpretation (Figure 1). Andrew Wyeth, through expression and a precise technical means, creates powerful images of almost "super-real" character (Figure 2). Wyeth's work seems to express the same qualities that Stevens' poems do, eliciting similar responses. Both artists' work represent a symbiotic relationship between imagination (as seen in the artist's expression) and reality (the real object and/or event).
It is from these precedents in poetry and painting that a similar phenomenology of architectural interpretation might be developed. Architecture is, however, a difficult art. It demands more than an expressive interpretation of reality. It is also by necessity servile. Architecture must satisfy a function, it must possess its own structural internal coherence, it must exist in a certain given locale and must be both experienced and perceived by the human body and mind. An understanding of the reality of architecture must therefore be achieved; to discover the source of an expressive interpretation, the source for a phenomenological approach.

Architecture in its most general sense has two basic parts; the physical object and its physical surroundings. The relation between the two and the human perception of the two form the basis of architecture.

Because the physical surroundings (or architectural environment) precludes the architectural physical object, it seems appropriate to begin there. Norberg-Schulz refers to this pre-environment as “place”. Place to Norberg-Schulz is a concrete space, defined in a phenomenological sense by “things” of particular properties. The resultant place has both structure and character. Structure meaning the physical aspects, while character is determined by the formal characteristics of the place. Place must be both analyzed (in structure) and interpreted (in character).

Upon the recognition that architecture begins with a pre-environment or context (place); the architectural object (the building) may be approached, in abstract study, in terms of particular intrinsic qualities of interest in a phenomenological study.
In perhaps the earliest study of the architectural object, Vitruvius described a building’s most basic qualities as being of firmness, commodity and delight. Firmness referring to structure (the physical integrity of the building), commodity to function (the servile aspects of architecture) and delight to the expressive qualities of the building (ornament, decoration, etc.). Though these categories do certainly overlap and have a breakdown of smaller categories, they do provide a sort of list to check a building for completeness. They form a beginning, a basis for analysis and interpretation.

It is thus the recognition of architecture’s two basic elements and their synthesis that creates the physical integrity of architecture. In this process of recognition and synthesis the architecture through his involvement, becomes a proponent in the creation of the built environment. Through his interpretation and expression the two parts become one to form an integral new “place”. The importance of the architect’s interpretation and expression of reality is paramount.

Before entering a further study of architectural phenomenology, I must reiterate some preoccupations and biases. My search is for an art of construction or building, of creating architectural environments and objects. My interests for the most part, therefore, lie with architects and architecture that express or consider these biases. It is through the work and writing of architects that I hope to develop a personal understanding of architectural expression and interpretation.
PHENOMENOLOGY OF THE ARCHITECTURAL PLACE

And how can I express poetry in my art? As one expresses poetry, by first living it. For poetry is life. To express life we must know life and understand it in its bearing. To know the simplicity of life you must grasp its complexity; we must view it from many angles; envisage its many moods and seeming contrarities; and to know its complexity we must grasp with all our power of understanding, its deep down simplicity.  

Louis Sullivan

“Place” presents to the architect many concrete characteristics that might lend themselves to creative expression. Most important to an expressive usage of the qualities of “place” is a sensitive understanding of the particular place. Norberg-Schulz calls for a “friendship” with the particular place. By such an environmental friendship he implies a respect for the place in both its structure and character. Upon this friendship one can begin to interpret the physical aspects of the place, imaginatively. The place may, in fact, provide the inspiration or intent that might become a direction for the creation of the architectural object.

To understand a particular place is to differentiate it from another place and to differentiate means to interpret differently. Inherent in this is the idea of regionalism (an overused but nevertheless valuable term). In regionalism is a source for expression and imaginative interpretation. Alvar Aalto, for example, though certainly of the modernist tradition, transformed open generalized modern space into complex organizations that beautifully interpreted the Finnish landscape. Gideion said of Aalto, “Finland is within Alvar Aalto wherever he goes. It provides him with that inner source of energy which always flows through his work. It is as Spain is to Picasso and Ireland is to James Joyce” (and perhaps Maine is to Andrew Wyeth and America is to Wallace Stevens) (Figures 3,4).
It is with a similar respect that Venturi is able to interpret and imaginatively express the American "place". The Trubeck and Wislocki houses on Nantucket Island beautifully exemplify the island's sense of place in a modern dialect. Venturi with Denise Scott-Brown effectively attempted to establish similar understandings of more difficult American places. Studies of Las Vegas (the commercial strip) and Levittown (the American Suburb) developed friendships with these very real (but often ignored) environments (Figures 5,6). It is through this understanding that the architectural object develops an appropriateness and validity with relation to its architectural place.
PHENOMENOLOGY OF THE ARCHITECTURAL OBJECT

Louis Kahn has referred to ‘what a thing wants to be’ but implicit in this statement is the opposite: what the architect wants the thing to be. In the tension and balance between the two lie many of the architect’s decisions.9

Robert Venturi

Relating to the architectural object (the building, its parts and related functional criteria) is a wealth of sources for the creation of an imaginative architectural reality. As the poet transforms the banal, everyday experience (through the medium of the written or spoken word) into poetry, the architect transforms the banal, everyday experience (through the medium of architecture) into poetry. Implicit in this is two things; the architectural object and the architect’s firmness of intent (an idea I first became exposed to by Paul Shepheard, my teacher at the Architectural Association School in London in 1980).

Walls and windows, roofs and columns, floor and doors all become a media for the architect’s ideas, interpretation and expression (through the guidance of function and usage). More than just the architect’s private media; they are also things the observer, the person who experiences the object, can see and personally interpret. They provide the architect and user with a common, understandable dialectic. Beyond these physical aspects of a building are functional (or programmatic) characteristics, which through design and synthesis become another interpretive media available to the architect. These first two groups of sources or medias for the architect’s imaginative purposes are in Vitruvius’ terms—structure and commodity. The third Vitruvian category, delight (the other amenities or superficial things like ornament and decoration) provides the final media for the architect. It is within these three portions, that comprise the architectural object, that the architect creates his palette for the making of the architectural object. And through the synthesis of these, the building is created.
In dealing with the idea of the architectural object and the architect's imaginative interpretation, therein, an important overriding criteria is that of the architect's intentions or the firmness of his intent. This could be interpreted as the theme, concept, idea or inspiration that directs the architect's imaginative interpretation of Vitruvius' three categories or parts of the architectural whole. It refers to more than just the development of such ideas or inspirations; it suggests the forceful and deliberate implementation of them. It seems the coherence, unity and overall success of the process of creating an imaginative, useful architecture depends on this type of deliberate, cognitive approach.

Once again I refer to the works and writings of Robert Venturi. He perhaps most profligally exemplifies the creation of architecture in terms of a phenomenological approach. His work is the synthesis of pragmatic (and sometimes frivolous) criteria as interpreted by an imaginative eye. Firmness, commodity and delight are sources for an expressive solution. And, as one might discern from the quote beginning this section, Venturi recognizes the paradoxical position of the architect, as both interpreter and creator.

The Venturi residence in Chestnut Hill, Pennsylvania, completed in 1962, exhibits quite well Venturi's preoccupation with the real. In this house he utilizes pragmatic complexities inherent in the modern dwelling and creates a functionally and compositionally imaginative and rich living environment (Figures 7,8,9). The individual household elements themselves (fireplace, stairway, windows, etc.) due to economic constraints must become the focus of Venturi's creative impulse. Yet even though so much attention was given to the parts and the programmatic requirements and their specific needs, Venturi's basic intent in the project was never lost or misconstrued. Regardless of any "complexities and contradictions" the house remained just that, a house, with a very easily understood and recognizable image.

A second and perhaps more explicit example is the Wislocki and Trubeck house development on Nantucket Island. Here Venturi was once again presented with the need
for residences which meet the requirements of a modern lifestyle while maintaining a
not-so-modern appearance. And, once again, he looked at the pragmatic requirements
of a modern lifestyle and the necessary elements of a house to achieve both ends.
Program and building become "what they want to be" but are also what Venturi
wanted them to be; Nantucket Island vernacular. At yet a higher level of control the
two houses respond to another of Venturi's intentions; that they visually relate to
each other as did the two Greek temples of Selinus, with their bodies turned slightly
toward each other as if involved in conversation with one another.\textsuperscript{10} The final result
of this tug-of-war between reality and the architect's desire is a contextually responsive,
functional and intensely individual solution. (Figure 10).
ON TYPE

To understand the question of type is to understand the nature of the architectural object today.11

Raphael Moneo

Following the discussion of the architectural place and object I find an opportunity to introduce a mutually applicable concept; that of type. Type or typology is a concept preoccupied with the object and the environment created by objects. Type can most simply be described as a concept which describes a group of objects characterized by inherent structural similarities.12 Architectural elements, entire architectural objects (buildings) and architectural environments are all made up of types and are themselves types. The built world at one level or another is comprised of types or the overlaying of types. Raphael Moneo suggests that the architectural design process is a manner of transforming the elements of a typology (a formal structure of types) into the particular state required by the individual single work.

“Type” as a formal structure, is closely related to reality with a large variety of concerns running from social activities to building relationships and organizations to building construction types.”13 Any particular architectural environment (place) can be described by some type. For example at a large scale city planning configurations constitute a type. At a small scale building organization within a particular site also forms a type. Yet smaller is the building type and its internal configuration of spaces. Upon discovering and studying these different typological series a very concrete, physical understanding of a particular place results. At this point the type “can thus be thought of as the frame within change (imaginative interpretation and expressive development) operates, a necessary term to the continuing dialect required by history.”14 With this attitude the type becomes a way of denying the past and a way to look towards the future. The recognition and utilization of the type therefore creates a close tie with the fabric of the particular place.
Also, the idea of the type deals quite closely with the idea of the architectural object. By merely calling a building such as a house; "House", you are recognizing a type. Along with the type is a regionally distinct set of biases and interpretations of the type and a resulting recognizable frame within which change (imaginative expression and interpretation) occurs. Within the building type is a series of other types such as elements like columns and windows that may also become frames within which change happens. More simply stated, each definable architectural element and building type becomes a possible source for the interpretation of the architect’s imagination. It is in the overlaying of these sources of frames that the richness and depth conspicuously missing in much architecture can be found and manipulated.
ON IMAGINATION: CONCLUSION

The imagination will alter the image (of reality) according to its own individual requirement.15

James Baird on Wallace Stevens

Initially it was my intention to express the symbiotic relationship of reality and imagination with regards to architecture. As the discussion progressed it became apparent that the relationship between reality and imagination implied more. Creative thought and imagination not only describe and interpret reality but also ultimately manipulate and change the image of reality. But to what degree may this manipulation and change take place? Since architecture is an art of shared experience, expectation and interpretation it must communicate a recognizable message through a common dialect (as mentioned earlier). To accomplish this the participants, the observer, must understand the image he sees and experiences. In the absence of shared expectation and understanding people quickly become inarticulate and communication and interaction break down. Therefore, though our (the architect's) imagination may go beyond the conventional thought of our day it must still be based in part on our understanding of the past and present and their achievements.16

Perhaps then I should slightly redefine my thesis. Maybe architecture is not only the synthesis of reality and imagination but also recognition. If I might expound on an already eloquent, articulate statement, Architecture is "what it wants to be" and "what the architect wants the thing to be" and what the individual perceives the building to be.
PART TWO: INTRODUCTION

Project: A medium density/income housing development in the Lair Hill Conservation District located in South Portland, Oregon.

Part One of this thesis dealt with biases and pre-occupations with respect to the creation of architecture. It represented only my attitudes at a certain point in time and was not meant to dictate design. Nor was it conceived as a recipe type set of directions for design. However, because it expressed my ideas it also ultimately formulates my design work. Part Two of this thesis is the application of these ideas to a realistic yet hypothetical design problem. The sequence of Part Two was arranged to parallel the writing in Part One to help clarify to the observer (and myself, I suppose) the architectural manifestation of the more generally focused ideas of Part One.

THE ARCHITECTURAL PRE-ENVIRONMENT

In order to achieve a "friendship" or a true understanding of place (or more specifically of a site and its context), as Norberg-Schulz suggests, an analysis and interpretation of the pre-environmentalist's structure and character must be undertaken. It is through this friendship and through the "types" created by analysis and interpretation that the basis for the architectural object may be formed.
STRUCTURE

The Lair Hill Historic Conservation District is located in South Portland (latitude 46°) approximately ten blocks south of the central downtown area. Lair Hill is bounded on the west by Portland West Hills, to the east by the Willamette River and to the north by the late 1960s Portland Urban Renewal District (Figure 1). The specific site involved in this study is located at the northern edge of the Lair Hill area bounded on the west by Barber Boulevard (a heavily used vehicular artery to the city center), the east by Second Avenue (a tertiary access street), to the north by an unused parcel (which also falls within the jurisdiction of the Lair Hill Conservation District) and to the south by Lair Park. The site is a two block parcel (2.5 acres) and was valued by the Portland Development Commission at $3/square foot (Figure 2).
The site due to its topography and location with respect to the West Hills and the Willamette River has fairly constant climatic conditions. The prevailing weather flows up the Willamette from the north to the south along the ridge formed by the West Hills. Other climatic conditions are: yearly rainfall, 50 inches; average high temperature, 66° (in July); average low temperature, 38° (in January) and total degree-days, 4143 (Figure 3). Due to the northern slope of the site solar insulation is at best moderate, along the south edge of the site. The north part has quite low insulation levels.
FIG. 5

Existing on the site are ten buildings, four of which are structurally unsound and generally unsafe. The remaining six buildings are safe and in fair to moderate condition with the building in the far southeast corner being recently remodeled. If a true effort is being made towards developing this site in housing, I must express my concern that all the existing buildings be removed (hopefully intact and able to be placed on another site in the neighborhood). The resulting added neighborhood population and a reduction in the individual unit cost (made possible by more units on the site) will hopefully justify such a removal of adequately useful buildings. Also hopefully the new development will, in the immediate and distant future, enrich the neighborhood as these individual buildings could not (Figure 5).
FIG. 6

Sensory conditions existing on the site deal mainly with noise levels and desirability of views. Noise is a problem near the frequently used vehicular arteries (Barber Boulevard to the west in particular because of the mass transit lines). The interior streets offer little problem with excessive noise. Along with the noise caused by traffic are related undesirable olfactory and visual conditions. In general the views experienced from the site are quite enjoyable as the Lair Hill neighborhood is rather picturesque and pleasant. To the west the West Hills made a high level desirable view, but Barber Boulevard makes the low view unpleasant. To the east Mount Hood and the Willamette River provide nice visual features and to the north downtown Portland and Mt. St. Helens provide out of the ordinary features (Figure 6).
FIG. 7

Vehicular movement channels physically define the site. Barber Boulevard on the west is a heavily used commuter artery and the neighborhood mass transit link with the city core. Second Avenue and Hooker Street are tertiary streets that mainly provide access to Lair Hill Neighborhood residences. Meade (forming the north edge of the site) is an undeveloped tertiary street. Within the site (bisecting it) is another undeveloped tertiary, Third Avenue. Both of these could be easily developed or vacated with reasonable evidence of need as the project develops (Figure 7).
FIG. 8

Though Lair Hill is in essence an island amidst vehicular ways, it is within itself mainly a pedestrian environment. From the site several important pedestrian links should be noted: the connection with Lair Park (and the neighborhood center), the other neighborhood residences, the YMCA and downtown Portland. Any development in the neighborhood should not only welcome but should also foster pedestrian transportation (Figure 8).
FIG. 9

With regards to the physical arrangement of buildings on a particular block (Lair Hill is made up primarily of 200’x200’ blocks), for the most part houses and apartments are generally arranged around the perimeter of the block. Set back requirements or design guidelines in the area generally suggest similar arrangements of new buildings. Seven foot front yard set backs and eight foot side yard requirements express this desire for conformance. Within this perimeter grouping of buildings is an open space that is quite often used communally by the inhabitants of that particular block (Figure 9).
FIG. 10

Also with regards to the physical arrangement of buildings is the facilitation of parking. Because the Lair Hill neighborhood was developed around the turn of the century, the automobile was not generally given special accommodation, but when accommodation was made it was usually done within the living structure itself or nearby in an out building. Neighborhood design guidelines suggest therefore that parking be facilitated within the living structure or at least in small well landscaped lots. The City of Portland requires one parking space per living unit on site. Besides this the area comprising the Lair Hill Conservation District is fortunate in that permit parking is used within the neighborhood (Figure 10).
CHARACTER

An understanding of the basis of Lair Hill's more ethereal qualities lie in its beginning and development. Lair Hill was a turn of the century worker's neighborhood comprised primarily of residences, small businesses and manufacturers and neighborhood service buildings. Because the neighborhood pre-dated the use of the automobile, it had a true pedestrian character. It was a very tight knit neighborhood; one very open to the street. Neighbors not only shared property lines, but also friendships. Because of the density (and I suppose the income of residents) private open spaces were quite small, most open areas being public in nature. Privacy for the most part occurred within the home. This was truly an urban residential neighborhood; it was not suburban in character. Being a worker's neighborhood it was by necessity of an essence in character; rich but plain, diverse but austere.
Today, as then, Lair Hill’s most profound feature is the close neighborhood atmosphere. Though a substantial loss of population and density occurred and though the automobile has become an integral part of its landscape, Lair Hill still maintains a certain special recognition of place. Its spirit is still people and neighborhood and the beauty of a necessary environment. This character is well interpreted by Wallace Stevens in his poem, “The American Sublime”:

How does one stand
To behold the sublime
To confront the mockers
The mickey mockers
And plated pairs?

When General Jackson
Posed for his statue
He knew how one feels
Shall a man go barefoot
Blinking and Blank?

But how does one feel
One grows used to the weather
The landscape and that
And the sublime comes down
To the spirit itself.

The spirit and space
The empty spirit
In vacant space
What wine does one drink
What bread does one eat?

The built environment reflects this spirit of place and with that spirit formulates Lair Hill’s character, so special and unique. This spirit and character is traced to two overlapping but separate aspects of the neighborhood’s buildings; first is the building as an independent object and secondly the buildings as a group and the relationship created therein.
Volumetrically the buildings (the architectural objects) are quite simple and plain. The forms (both gable and hip) present strong geometric shapes (Figures 11,12). The individual building may be comprised of singular shapes or of combinations of these abstract shapes. These combinations (sometimes composed, sometimes juxtaposed) are normally expressive of the different function and usage within. For example, the greater extent of the house functions occur within the mass of the major geometric volume, while functions like entry, parking or exterior/interior usage might become an additive, saddlebag form or volume (i.e., the entry porch, garage and balconies) (Figures 13,14,15,16). These seemingly banal simple shapes portray the everyday lifestyle that exists within the neighborhood. As with “The American Sublime” the true beauty of Lair Hill lies in its essence.

FIG. 11

FIG. 12
It would, however, be a mistake to describe these built objects as plain, in the sense of being devoid of interest or detail. In fact some are rather richly embellished with a gingerbread type ornament tightly covering the simple geometric volumes (Figure 17). For the most part, though, the interest and richness comes in details of a more necessary nature. Windows, doors, eaves, soffits and columns take on an integral ornament and decoration; where care has been taken to expressively accomplish necessary building tasks. For example, the simple act of diverting and controlling rain runoff has become a source of expression and imaginative interpretation (in window frames, entry covers, scuppers, etc.) (Figures 17, 18). Most of the detail and ornament on the buildings is very flat and surface oriented (though quite textural). An interesting example is the care taken to imaginatively express the exterior wall surface through nothing more elaborate or extensive than shingle and siding manipulation. These expressive qualities are quite like those admired by Louis Sullivan, Frank Lloyd Wright (integral structural ornament) and the arts and crafts enthusiasts. Ornament seems to be utilized more in the manner originally suggested by the definition of the word ornament; to lend grace. And decoration is also accomplished more in keeping with its original meaning as derived from its base word; decorum: what is needed for a thing to function properly.
The buildings of Lair Hill, as a group, seem to also possess peculiar and unique characteristics. Regardless of the diversity and personality found among the individual buildings, an all-encompassing visual and perceptual unity exists. The neighborhood is visually bounded by a wall of separate buildings that form a unified rhythmic cadence; a repetition of rather vertical, skyward reaching objects (forms) (Figures 19, 20). This repetition and syncopation of masses and voids provide an immensely diverse and textural environment that nevertheless possesses a strong feeling of enclosure and a generally strong sense of place (in the true sense Norberg-Schulz refers to in Genius Loci). Once again the building’s close proximity to the street enhances the tight knit pedestrian atmosphere of the original neighborhood.

Referring once again to the personable qualities of the neighborhood architecture, the buildings seem to have a dialect all their own and try to converse with the passerby on the street and other adjacent buildings. Their strong frontality and upright stature actually gives them a rather human appearance or quality.

FIG. 19

FIG. 20
THE ARCHITECTURAL OBJECT

The development of the architectural object may be described as a two part process. The first part being the collection of abstract information, ideas and criteria of special significance to a specific building type (in this case, house or housing). This phase might be called programming. During programming the Vitruvian description of architecture's essence can more concretely be defined; what exactly is the building's function and use (commodity), and what are the possible, proper and appropriate construction ideas and forms (firmness) and finally what are the areas in which the lightness and acuity might be added or integrated (delight). The second part then is the synthesis and the imaginative interpretation of this programmatic information that results in the architectural object. It is important not to negate the effect that the understanding of the architectural pre-environment will have on the development of the architectural object. Biases and images are developed from the onset of the project and are developed, changed and modified throughout. This is by no means a linear process, it is a complex series of simultaneous studies. For the sake of clarity I have attempted to analyze the process in a sequential manner similar to the breakdown of ideas in Part One; it may be slightly misleading.
PROGRAM

Because the nature of this development is such that the developer of the housing is not the actual owner or user, an attempt must be made to identify and describe the anticipated user. Inherent in this search is looking at the general characteristics of Lair Hill that attract people. Quite certainly one of the major amenities is its location with respect to downtown Portland, secondly the desirable living conditions within the neighborhood and thirdly the historic atmosphere.

It was my concern as well as the housing policy of the Portland Development Commission, the Lair Hill Historic Advisory Council and the developer, that this site be developed in moderate income housing. Because of the amenities just mentioned it is quite obvious that the site would be marketed as high income housing; however, the need is for medium income housing close to the downtown area.

With this criteria in mind an understanding of the user is beginning to formulate. Possibly the best indicator of the potential user are the current residents. The Lair Hill population is made up of predominantly young singles, couples and families, young professionals, students and others interested in Lair Hill's dichotomy of urban and residential lifestyles.

The understanding of these general characteristics of the user helped to develop a notion of type of units (in number of bedrooms) to be used and an approximate number of units for this particular site. An attempt was made to create a marketable mix but also of importance was providing for a diverse occupancy that would add to as well as take from the neighborhood (Table 1).
TABLE 1

<table>
<thead>
<tr>
<th>Unit type</th>
<th>Percentage of total on site units</th>
<th>w/40 units on site</th>
<th>w/50 units on site</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 bedroom/efficiency</td>
<td>20%</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>2 bedroom</td>
<td>40%</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>3 bedroom</td>
<td>30%</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>4 bedroom</td>
<td>10%</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

With respect to the individual units, some fairly specific sizes must be developed. These sizes (in square footage) are general sizes that include the entire space and circulation (except garage) (Table 2).

TABLE 2

<table>
<thead>
<tr>
<th>Unit type</th>
<th>Minimum Size (sq. ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 bedroom/efficiency</td>
<td>min. 700 sq. ft.</td>
</tr>
<tr>
<td>2 bedroom</td>
<td>min. 900-1000 sq. ft.</td>
</tr>
<tr>
<td>3 bedroom</td>
<td>min. 1000-1100 sq. ft.</td>
</tr>
<tr>
<td>4 bedroom</td>
<td>min. 1200 sq. ft.</td>
</tr>
</tbody>
</table>

Within the general size of the living units a further breakdown can be made to achieve a better understanding of sizes for the domestic spaces we are all quite familiar with (Table 3, from Unterman, p. 63).
TABLE 3

<table>
<thead>
<tr>
<th>Space</th>
<th>1 bedroom/efficiency</th>
<th>2 bedroom</th>
<th>3 bedroom</th>
<th>4 bedroom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Living room</td>
<td>160</td>
<td>160</td>
<td>170</td>
<td>180</td>
</tr>
<tr>
<td>Dining room</td>
<td>160</td>
<td>100</td>
<td>110</td>
<td>120</td>
</tr>
<tr>
<td>Kitchen</td>
<td>60</td>
<td>60</td>
<td>70</td>
<td>80</td>
</tr>
<tr>
<td>Bedroom (primary)</td>
<td>120</td>
<td>120</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>Bedroom (secondary)</td>
<td>(none)</td>
<td>80</td>
<td>80</td>
<td>80</td>
</tr>
</tbody>
</table>

Of course facilities like toilets, storage and mechanical space are all required to be included of reasonable size. Storage is particularly important, Unterman and Small suggest: 5'-0" linear feet of closet for the primary bedroom, 3'-0" linear feet of closet for secondary bedrooms, 3'-0" linear feet for a closet near the entry and 1'-6" linear feet of closet for linens near the bedrooms. Also general storage should be provided: 150 cubic feet for one bedroom/efficiency apartment, 200 cubic feet for two bedrooms, 250 cubic feet for three bedrooms and 300 cubic feet for four bedrooms.

Beyond the more general spaces in a residence some spaces of a more specific nature are required. Chernayeff and Alexander in Community and Privacy, suggest that spaces such as the outdoor room (to bring nature into the residence), a room of one's own (for individual personal privacy), a family hearth, an integrated service core and rooms of climatic hierarchy (such as entry foyers and vestibules) be also included in the program as important residential spaces. They also strongly recognize the need for privacy both between individual units and within individual units; this puts special emphasis on shared walls, shared exterior spaces and sound alleviating transitions between rooms.
within the unit. It is my own observation that the residential unit should achieve all these needs in an open, airy, spatially interesting manner. Especially within the inner areas of the units, natural light is a very important consideration.

In addition to the spatial requirements of the speculative residential unit, several other general concerns are important in the programming process. First is energy conservation and the use of solar heating and daylighting. Secondly vehicular access and on-site parking, thirdly the idea of change within the the adaptability of the individual units and finally a phased construction process.

To effectively create an energy efficient and/or passive solar building some general criteria must be recognized from the onset of the project. Building location on the site in relation to other buildings and natural features is important. An attempt should be made to place the building so that shadows are not cast on it during mid morning hours until late afternoon and that the outdoor spaces also be free from shadows. Also of importance is the general building orientation and shape. Probably the most important aspect of this is attempting to maximize the building's east/west length and minimizing the north/south length. This provides for maximum solar exposure and minimum depths for natural light to penetrate. Attempts should be made to develop a tight, buffered envelope on the north side.

The location of indoor spaces can help create an energy efficient building by creating a buffer zone on the north side through the placement of spaces that require minimum levels of heating and lighting (such as closets, hallways and utility spaces). Spaces that require substantial heating and lighting should be arranged along the south exposed side. The protected entrance is a feature that can help create a more energy efficient space by minimizing infiltration through the creation a double entry air lock buffer between inside and outside. With this general criteria and the proper application of passive and active solar energy techniques, an energy efficient building might be achieved.¹⁷
Vehicular access into the site is another consideration that is necessary in the design's early developmental stages. The city of Portland requires one parking space on site per housing unit. The Lair Hill Preservation District Guidelines also suggest that parking be within the building structure or in small well landscaped lots. Placing the vehicle within the envelope of the living unit by code requires the garage space to be separated from the living area by a one hour fire wall. For good marketability a certain amount of on site auxiliary parking (for extra cars, storage and R.V.'s) would also be desirable.

Providing degrees of adaptability and provisions for user change within a speculative residential unit require that, from initial ideas, the project must be viewed, quite literally, as a framework for the lifestyles of unknown users. The building must be seen as an environment in which the user creates a collage, of sorts, of his personal possessions and characteristics upon the physical manifestation of the architect's ideas. The creation of an austere, empty environment does not fulfill the criteria I am discussing; instead conscious attempts must be made at providing: rooms that may perform several functions (such as a bedroom that might act as a study), rooms that can be enlarged or subdivided, visible storage for personal possessions and collections, reasonable degrees of clear wall space for flexible furniture arrangement and outdoor/indoor spaces that can provide for combinations of these needs and are able to be enclosed for added weatherized floor space. Quite basically the user must be remembered as being an individual and/or family.

Because of the needs of the developer, this project must be able to be built in a phased progression. Such a phased project will allow the developer the choice and opportunity to build as financing allows and the market suggests. This phasing suggests that even when the overall project scheme is only partially finished, the completed units must function properly and should visually appear complete so that immediate occupancy might be facilitated.

James Braid, "The Dome and the Rock." p. 16.

ibid., p. 27.

ibid., p. 23, 24.

ibid., p. 22.

Raphael Mono, "Oppositions" p. 47.

Vincent Scully, "Shingle Style Revisited," p. 35.


"Nicholas Stangos, "Pictures by David Hockney," p. 12.


ibid., p. 6.


FOOTNOTES
BIBLIOGRAPHY


ON SITE UNITS - 38

EFFICIENCY - 6
TWO-BEDROOM ROWHOUSE - 8
TWO-BEDROOM DUPLEX - 8
THREE-BEDROOM ROWHOUSE - 12
FOUR-BEDROOM - 4
TWO BEDROOM DUPLEX - 760 sq ft, 900 sq ft