THE PLANAR DIMENSION

A COMPOSITE OF COMMUNICATIVE AND AESTHETIC VALUE

AN ARCHITECTURAL THESIS

A STUDY IN THE ELEMENTS OF CONTEMPORARY FORM

Timothy F. Robertson
May 1986
College of Architecture and Planning
Ball State University
Muncie, Indiana
THE HUMAN BODY, THIS ENVELOPE OF FLESH, IS MERELY THE VESSEL WHICH PERMITS THE MIND TO PERCEIVE ITSELF.

- Gerard A. Schreiner
FOR MOM AND DAD - A PRODUCT OF THEIR SUPPORT.
THANKS TO ALL THOSE WHO UNDERSTAND. TO THOSE WHO WERE THERE - AND UNDERSTOOD WHEN I WASN'T. TO PROFESSOR DAVID MACKEY FOR ALL HIS HELP AND SUPPORT - FOR PUSHING ME TO DO SOMETHING DIFFERENT. TO ALL MY ROOMMATES - WHO DO UNDERSTAND. AND - SPECIAL THANKS TO MY PARENTS - FOR ALL THEIR LOVE AND SUPPORT - WITHOUT WHICH, NONE OF THIS WOULD BE POSSIBLE - I LOVE YOU BOTH.

- T.F.R.
1986
Thesis Committee

Chairperson: Professor David Mackey

Members: Professor Art Schaller
         Professor Carole Tiernan

Jury Members: Professor Gil Smith
              Professor Yung Ho Chang

Research Person: Nina Marshall
                 Professor of Art - Ball State University

Alan Joyaux
Ball State University Art Gallery
<table>
<thead>
<tr>
<th>CONTENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract .................................................</td>
</tr>
<tr>
<td>On Order ................................................</td>
</tr>
<tr>
<td>On Meaning ..............................................</td>
</tr>
<tr>
<td>Proposal ..................................................</td>
</tr>
<tr>
<td>Formulation ..............................................</td>
</tr>
<tr>
<td>Background ..............................................</td>
</tr>
<tr>
<td>The Problem .............................................</td>
</tr>
<tr>
<td>Objective ...............................................</td>
</tr>
<tr>
<td>Approach ...............................................</td>
</tr>
<tr>
<td>Expectations ............................................</td>
</tr>
<tr>
<td>Other Thoughts .........................................</td>
</tr>
<tr>
<td>Conceptual ..............................................</td>
</tr>
<tr>
<td>A Small Dwelling .......................................</td>
</tr>
<tr>
<td>Project ..................................................</td>
</tr>
<tr>
<td>Bibliography ............................................</td>
</tr>
</tbody>
</table>
In a world where buildings are frequently judged upon the merit of their visual appeal, it becomes necessary for those buildings to live solely on the quality of what can be shown and not said. A conscious attitude toward the creation of such architecture is of vital importance to prevent those frequent afterthoughts that constantly keep creeping up. The body of the following text emphasizes the existential importance of awareness toward the elements that constitute contemporary three-dimensional form.
Save the fact that order exists at many levels and in many sub-systems within various cultures and societies; this order is established as a system organized by the inhabitants of said culture or society itself. It is this dissected sub-system, by nature, that allows man to perceive his own existence in our world. Order exists in various social, political, religious, and economic systems that allow a culture or society to function under some uniform organization in attempt to reduce what might otherwise be called chaos. However, it is not the logical, structured system of order in these sub-systems that seems significant in the organization of elements in our total world. Although order can be defined at both the micro and macro-scale, it is that overall, universal order that permits these sub-systems to exist - ordered - which interests me as the most significant order that is present.

I have often attempted to concern myself with this existentialist question of order with very little or no success. It has at times been both pre-occupation and obsession to no avail. We are all familiar with the ill-defined and loosely used phrase about, "The Universal Laws of Nature." It is, however, the intrinsic nature of these laws that lies at the crux of my interests. Although attempts at defining the(se) abstract origin(s) seemed many times to be somewhat subjective and incoherent, I was quite pleased (and relieved) to read Louis Kahn's Between Silence and Light. He wrote this of order:
"I tried to find what Order is. I was excited about it, and I wrote many, many words of what Order is. Every time I wrote something, I felt it wasn't quite enough. If I had covered, say, two thousand pages with just words of what Order is, I would not be satisfied with this statement. And then I stopped by not saying what is, just saying, "Order is." And somehow I wasn't sure it was complete until I asked somebody, and the person I asked said, "You must stop right there. It's marvelous; just stop there, saying, 'Order is.'"

A simple, yet most provocative definition of Order I have found yet. It suggests not simply Order in the measurable sense, but the unmeasurable as well.

We might simply view the universe, metaphorically, as an over-scaled machine mechanism, operating and functioning with exact precision and timing, with all its elements juxtaposed yet coherently in sync with each other. Man himself, biologically, might be viewed with similar associations to its delicate network of nerves, vessels, and arteries that, in all its complexity, operates harmoniously as a single entity. It can be said that this, symbolically, is Order through the measurable means. Yet, this analytical (as I should not try to be scientific) analysis denies, perhaps, the most spiritual quality of our existence - the order of the mind - that quality reserved for the unmeasurable which makes the order of our existence as thinking organisms most perplexing.
Without attempting to understand the complete workings of the brain here, it is one's intuition that allows one to wonder - to think - to realize - to know. Kahn said this of intuition:

"Your intuition is your most exacting sense, it is your most reliable sense. It is the most personal sense that singularity has... We must learn to honor the mind of one within whom lodges the spirit. It doesn't lodge in the brain, which is simply a mechanism. So the mind is different from the brain. The mind is the seat of the intuitive and the brain is the instrument which you get potluck from nature; that is why each one is a singularity. If it is a good instrument, it brings out the spirit within you."

Gerard A. Schrainer also wrote: "The human body, this envelope of flesh, is merely the vessel which permits the mind to perceive itself." It is the mind that creates these "Universal Laws of Nature," yet, what order is it that creates the mind and permits it to exist within an already complex system? This abstract order, whether a singular being, power, or order in itself, is simply that--abstract. Someday, in the order of life and death, we might each know and understand - individually. ORDER: just is. We might say - It exists within the mind itself.
Architecture is an expression which desires a response - "it is fundamentally experiential and therefore its communication is based upon one's ability to sense." Thus, Art and Architecture communicate through images that appeal to the senses. The response to an expression is the relationship of emotions as well as ideas. Both Art and Architecture are dependent upon the manipulation of geometries under a basic structure and order which allows for the existence of a multiplicity of meanings within its framework. In a society of multiplicity, it is contemporary architecture which lacks, and is in greatest need of, this multiplicity. The intention of this study is to provide a threshold for the transformation between ideas and creations. Thus, the union of Art and Architecture in this study is to provide insight into the expression of, and response to, building and meaning in architecture.

The problem of meaning, in architecture or any other art, "is a laborous task with very subjective and ambiguous results." Beyond its reality, the meaning of a creation lies almost as much in the personal response it arouses as in the personal expression which created its existence. Meaning varies with the individual and with time - the events which influence one before and after he experiences and re-experiences a creation. This is not to suggest that meaning is instable. One, having experienced, "somehow knows meaning, even if the meaning he knows is valid only for himself." The emphasis is on the intuition and singularity discussed in the section "On Order." The desire of the artist is to bring pleasure to as large a number of people as possible. He must abstract reality for experience through imagination. "If we are moved by something, it has meant something, perhaps something important to us." Interpretations formulate meaning. The architect, as a sculptor of our experience, manipulates the physical (reality) to attain the intuitive.
"The significance of architecture is found in the distance between it and function." That is: to remove architecture from function after ensuring the observation of functional basics. Architecture has progressively become 'construction.' Economics and technology have reduced the 'handi-craft' into a machined, industrial design. Its modes and methods have become, in the sense of creation, a 'plastic' expression. By the invention of modernism, everything is strictly determined by its contrast and relationship - thus, it sees architecture as a multiplicity of planes. These planes, and their relationships, constitute the expression of three-dimensional form in contemporary architecture. Its transformation into planes, that are a necessity in building, can be directly related to the planar surface that the artist relies so heavily upon. The basis for development of a conscious creation of 'planar' architecture lies in the investigation of the elements that make-up the structure of contemporary three-dimensional form.
Research data of supportive statements is taken from the writings of the modern avant-garde Piet Mondrian:

- "ethics and aesthetics are one"

- "although all we perceive must pass through the filter of our senses, we can still arrive at an objective truth which exists for all things and for all time."

- "reality reveals itself by substantial, palpable forms, accumulated or dispersed in empty space. these forms are part of that space and the space between them appears as form, a fact which evidences the unity of form and space."

- "these components then, are the basics of all reality: space, forms, and their accumulation or dispersal—in other words; their positional relationship to each other."

- "the elements of form have a particular aspect; every fragment, every plane, every line has its proper character."

- "Plurality of forms, lines, colors and empty space creates relationship. In single forms, the proportions of the different parts of these forms represent the relations that create rhythm. It should be emphasized that forms, colors, lines, and spaces are as important as the relationships, and conversely, all means of expression determine the character of the rhythm."
The evolution into an analytical approach to sculpting the environment stands in time as the impact of man in the universe and his ever-changing existence through representation. Such evolutions from cave dwellings to the Gothic cathedral shows this constant struggle of existence and attempt to conquer the natural world. The problems of architectural representation and value have long plagued the architect in his attempt to develop the built environment. The most promising statements are taken from the text of LeCorbusier. He wrote:

"You employ stone, wood, and concrete, and with these materials you build houses and palaces. That is construction. Ingenuity is at work. But suddenly you touch my heart, you do me good, and I say: 'This is beautiful.' That is architecture. Art enters in. But suppose that walls rise toward heaven in such a way that I am moved. I perceive your intentions...you have established certain relationships which have aroused my emotions. This is Architecture."

The emphasis here is on that of intent and emotion; the unique perception of the individual. The importance lies in the development of its cultural level and architecture as a communicative art.

"The life of modern cultured man is gradually turning away from the natural: it is becoming more and more abstract. As the natural (the external) becomes more and more 'automatic,' we see life's interests centering more and more around the 'inward.'" It is the autonomous life of human spirit becoming more conscious.
Architecture has progressively become 'construction.' The contemporary architect lives within 'building practice' - outside art.

"That architecture must be entirely form-expression is a traditionalistic view. It is the vision of the past. The new vision - accommodated by modernism - takes its viewpoint everywhere and is nowhere limited - thus, it sees architecture as a multiplicity of planes. Ornament has been much reduced in advanced modern architecture. In such architecture, beauty is no longer an 'accessory' but is in the architecture itself. Where brick construction once needed curved vaulting to enclose space, re-inforced concrete and steel have given rise to the flat roof.

Also in our outward surroundings, another beauty is being manifested quite apart from architecture. Fashion in dress, for instance, shows the abolition of structure and the transformation of natural form: an annihilation of nature which does not impair beauty - but transforms it. Structural and aesthetic purity are merged in a new way. Architecture was purified by utilitarian building with new requirements, technology, and materials leading to a purer expression of equilibrium and to a purer beauty. Its transformation into planes has allowed the viewer to experience architecture more and more abstractly."
The invention of structural steel, in its replacement of the more brittle limitations of cast-iron, has released numerous examples in the evolution of architectural expression. It has not only made possible structural spans of enormous lengths, but has helped re-define the concept of enclosure and expression of form. Its destruction of the craft has led to mechanically produced metal panels and glass that now constitute the curtain wall. This, along with the development of the green house concept, have re-defined the enclosure properties of the wall and the relationship of inner and outer space. It has produced space frames that hover over free planes supported at only four remote points.

In short, it has reduced the massive form-expressive architecture of the past into a series of enclosure defining planes. Steel and its sibling products have made possible the ability to structure and to represent an almost infinite number of forms that the creative mind can conjure-up.

The basis for a sound development of architecture today is to overcome every idea of form in the sense of preconceived type or symbol. It is necessary to pose the problem of architecture completely afresh.
The problem stems from the stylistic evolution of contemporary architecture, in terms of its creation, through technological changes and the modern conception of space. It has reduced the view of architecture to its simplest elements of points, lines, and surfaces which constitute its form and space determination.

The intent of this proposal is to investigate these elements and conceptual relationships as an integral part in the design process of creation. Its goal is to consciously utilize a parallel between the conceptual in art and the conceptual in architecture by an approach relative to the structure and composition that both possess.
The objective of this project is not about building type, but the process of building. It allows for the freedom to do - "it is not as important what you do - only that you do." It allows for the freedom to read, to doodle, to paint, to build, and to design. It is a personal investigation. The results are a personal expression to provoke personal response.

If the drawings suggest architecture - I am fortunate. If the models suggest place - I am pleased. If either moves you to investigate - I have succeeded.
The approach to this problem takes on a somewhat peculiar path, but as the final product will suggest: the order of the elements are the sum of its parts. The single elements are relative to the whole - rather than the whole of the elements.

The original investigation was inspired by a previous project completed in the winter of 1985 [see design for a pediatric clinic]. An interest in the visual and communicative properties of architecture resulted in the investigation of architecture as an object, void of specific building function, and a desire to create for the sake of creation. Paradoxically, it is not until the final product that we actually see the significance of creation itself.

The first phase was unfortunate, as it was an analytically based investigation of pictorial structure and composition. Conceptual investigation of the Mondrian aesthetic and color balance led to a desire to apply pictorial elements toward three-dimensional space. This second phase is manifested in "A Small Dwelling" - the application toward existing space. The results of the first two phases forced their evaluation to be assessed as objects unto themselves. The significance of these are to be found more importantly in the final phase which, in its entirety, envelops the complete aspects of architecture: the dialectical relationships between nature, architecture, and the human dimension. Here, then, lies the significance which gives the act of creation its ultimate existence.
The expectations and outcomes of this research are concerned with far more than the consumption of further knowledge. They are less concerned with particulars and specific products; but, rather in the development of a conscious, consistent attitude and approach toward the creation of contemporary architecture. Its significance is in the view one takes prior to the design and creation of architecture that will continue to supplement my growth as a designer, sculptor, and builder of our outward environment.

Because this thesis remains an entirely subjective and personal experiment, there are no written conclusions beyond the final model. In keeping with the nature of meaning, one must [after seeing] form his own meaning and come to his own conclusions as his intuition and interests direct him. Ludwig Wittgenstein once wrote: "What can be shown, cannot be said."
"In all art, it is the artist's task to make forms and colors living and capable of arousing emotion. If he makes art an 'Algebraic Equation,' that is no argument against the art; it only proves that he is not an artist."

- Piet Mondrian

"I believe in an 'Emotional Architecture.' It is very important for human kind that architecture should move by its beauty; If there are many equally valid technical solutions to a problem, the one which offers the user a message of beauty and emotion, that one is ARCHITECTURE."

- Luis Barragan

"What can be shown, cannot be said."

- Ludwig Wittgenstein

"Art lives solely on the quality of meaning and the embodiment of it."

- Anonymous
• "When we turn inward upon ourselves, we turn aside from truth. When we carry out inner experiments, we inevitably contradict objective experiment."

- T. Flynn

• One never knows - does one?

• If one does know - does everyone else?
The first phase consisting of conceptual drawings and models are derived from the theoretical writings on the aesthetics of Piet Mondrian [see Proposal]. They concern Mondrian's theories on the accumulation and dispersal of palpable forms - positive vs. negative - balanced relations - and the opposition of two extremes. The canvas plane or sheet of paper are viewed as Mondrian's "empty space." Mondrian discusses balanced relations as not the relationship of male to female - but the male/female relationship.

![Diagram]

Accumulation/Dispersal of elements (A - B).
Balanced Relations
male
female

They also concern the idea of pictorial structure and composition as they relate to aesthetics. Figures 1 through 4 illustrate:

1. An Ensemble of Elements
2. Structuralism
3. Arbitrariness and Pattern
4. Complexity and Order

These objects are viewed as works or objects in themselves, and relate solely to themselves and no other.
THANKS TO MY ROOMMATE - MARIANO RODRIGUEZ - FOR ALLOWING HIS
BEDROOM TO BECOME AN EXPERIMENT.

The small dwelling is a product of the desire to extend the
classical into reality. The environment is a bedroom located at
my student residence: 224 S. College, Muncie, Indiana. The
framework for conception was a parallel between the conceptual
series in phase one - applied to three-dimensional space. The
environment was viewed as an autonomous object void of physical or
social context, and - by virtue of its relatively small size and
awkward scale, is composed of proportional relationships inherent
only to itself. Perhaps the only relationship to human scale is
thus two-fold: the standing figure and over-head plane - and the
reclining figure and vertical planes. The realization of elements
within the existing space is an extension of the statement on the
elements of contemporary form. The object is a spatial "shell"
made-up of points, lines, and surfaces [see Conceptual section:
points, lines, and surfaces]. The axonometric illustration
emphasizes the existing elements that constitute its spatial
construct - and - the elevation illustrates the relationships
between those elements themselves [see Conceptual: Mondrian]. The
"shell", then, is the canvas boundries that provide structure for
composition and the elements that create, or exist within,
introduce the complexity within an order. The attempt is to create
a continuity between horizontal and vertical relationships and the
emphasis of line that provide the visual relationships to the
whole. The premise here is, that treated as a sculptural element [which, by the way, is what architecture essentially creates], the secondary elements that construct it are more inherently viewed toward a whole that they all create. This, then, allows the transition toward the third phase that might be contradictory, but views the elements then as autonomous objects themselves.
At this point in the process, it became quite obvious to the observer that these earlier manipulations of geometry, color, and form are essentially - without purpose. The intent of the artist, as discussed earlier, is to attain the intuitive - the spiritual quality of the unmeasurable [see Order]. Mentioned in Meaning: Interpretation and association become the generators of meaning that result from our experience - this experience being human experience. Here, it was decided that a place of experience was essential to investigate the possibilities that exist in architecture - as an object of experience. The function is to visit. The intent is to investigate.

The site is an island off the shore of Prarie Creek Reservoir, Muncie, Indiana. The site was chosen for its numerous possibilities for experience. The basics of nature: land, water, wind, and sun - are the existent features that interact with architecture that provide experience. While the theories of opposition, relationship, and balance are retained in its conception, the introduction of wonder, realization, and intuition move the object from its intransitive state of reality to the intuitive. The attempt is to include the inevitable human experience that ultimately allows architecture to exist as an art.
Architecture, as a communicative art, and the intent of this project might be more easily understood through our basic communication of literature, or the written text. The poetics of architecture is more easily understood by the poetics of the written text. The French structuralist Roland Barthes describes two texts: The readerly and the writerly. The readerly is one that the reader can only read - then accept or reject. It is a reference - "the reader, during the process is idle - intransitive." The writerly - "is one which the reader writes or re-writes in reading it" - he is no longer a consumer, but a producer. His explorations allow the reader to obtain a very personal relationship with the text. Its advantage is its plurality - its multiplicity of meaning. He writes:

"In this ideal text, the networks are many and interact, without any one of them being able to surpass the rest; this text is a galaxy of signifiers, not a structure of signifiers; it has no beginning; it is reversible; we gain access to it by several entrances, none of which can be authoritatively declared to be the main one; the codes it mobilizes extend as far as the eye can reach, they are indeterminable [meaning here is never subject to a principle of determination, unless by throwing dice]; the systems of meaning can take over this absolutely plural text, but their number is never closed, based as it is on the infinity of language. . . .I am not hidden within the text, I am simply irrevocable from it; my task is to move, to shift systems whose perspective ends neither at the text nor at the 'I'. . . ."
While Barthes refers to literature, his description, though, is the desire to attain the intuitive - the unmeasurable. This plurality, or multiplicity, is the desire of nearly every work of art. The provision of multiplicity provides the essential experience to reading architecture.

The project is two-fold - the duality between:

1) The geometry which we manipulate to attain the intuitive.
2) Architecture vs. Nature: The dialectical relationship between architecture as itself and nature as itself - complimentary or dissonant.

The attempt is to control elements. The pavillion, the pump station, and the outhouse are existing elements on the site [see photographs]. The conception is the reaction of opposites: built vs. natural. The purpose is to move the existing [intransitive] to the transitive through interpretation and association within the experience - one element reacts with another to complete its meaning. It is fragments - parts relative to the whole - the whole exists within the mind. Its developments are:

- tension
- harmony
- framing/focus
- contrast
- complexity
- wonder
- realization
It is about the process of building. It is composed about the site and is as much about the site as the elements themselves. Without axial or ordered planning - it releases the visitor to the possibility of discovery and the site becomes dynamic and alive (like a painting or sculpture) rather than static and predictable.

INVESTIGATE!


