ARCHITONIC DWELLINGS

AN EXPLORATION INTO SELF-EMPOWERMENT, PERSONALITY ASSESSMENT, AND PRODUCT DEVELOPMENT TO PROVIDE SPACIAL AND CULTURAL ENRICHMENT FOR THE UTILITARIAN DWELLINGS OF THE LOWER TO MIDDLE CLASS
At the conclusion of five years of school I owe thanks to countless people who have inspired and challenged me to grow as an individual and as a contributing member of society and the profession. But special thanks go to the people who first made it possible for me to get here, and then continued to give me the love and support to make it through; these are my Mother, Father, and two Grandfathers. I would also like to thank Art Schaller, Carlos Causceli, and Kenton Hall as my thesis advisors for sharing their time and guidance in the evolution of this thesis. Finally, I would like to thank Robert Young for opening my eyes to personality assessment, for without his contribution a significant realm of this thesis would truly be missing.
Architonic Dwellings

An exploration into self-empowerment, personality assessment, and product development to provide spatial and cultural enrichment for the lower to middle class

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The act of architecture is problem solving, and design. It is my belief that these are the most powerful tools an architect possesses. Presently the profession of architecture is in dire economic condition, I believe that part of the burden of responsibility lies on the profession by not exploring alternatives to the status quo. Therefore, my thesis is about problem solving; not merely finding economic alternatives to market problems, but more importantly, integrating new social changes in the way the profession deals with the general public. It is my position that the architectural, and associated professions, have made themselves inaccessible to the vast majority of the public. The profession has geared itself to the economically elite of our society, catering to corporate, government, and wealthy individuals; people with readily available resources, and the knowledge capable of hiring architects for their required spatial needs. While this is a logical market for architects to peruse, it unfortunately leaves the vast majority of the population far removed from the talents of our profession. The problem I'm attempting to solve during the course of my thesis is making architecture accessible to the common man.

The walled city represents the small segment of the population that the architecture profession caters to, and the inaccessibility of that the "outside" general population has to the profession.
In my thesis, I have chosen to work within the architectural and residential environment as they exist today, and that will seemingly exist for the foreseeable future. This is not a futuristic thesis based on trying to solve the needs of a distant generation. Nor does it take the conventional mind set of just lowering cost. It is an attempt to provide solutions for today's architectural needs for those that typically are out of the reach of an architect.

It is an attempt to deal with the segment of our population ranging from college and beginning professionals, to middle income families. This is the portion of our society which has a degree of economic resources available but still finds itself out of the reach of architectural services. In addition they have several other factors against them architecturally enriching their home environments. This is the segment of our population which must, due to any number of reasons, have the freedom to move. They often do not own their own home but, instead are in contractual agreements prohibiting any alteration of the property in any manner. This contractual agreement is economically reinforced by the inhabitants desire not to invest in what they can not take with them on their next move; or they like most lack the design skills to make effective changes to their environment.

In the study of architecture there are five basic components to a building: the structural system, the enclosure system, the circulation system, the mechanical system, and finally the spatial system. In most cases the socioeconomic class of people I am dealing with have the first four systems reasonably well taken care of for them. It is the last system, the spatial system, in which I will be dealing with. I will be investigating how to make the spatial system, which such a large segment of our population is in need of, available to the general public. By developing a system which allows the home owner the opportunity to make effective design decisions I hope to achieve these goals.

The following diagram illustrates the integration of the different systems that compose a piece of architecture. My thesis will investigate how you integrate the spatial system into a building when it has been initially underdeveloped.
Part of the solution to my thesis will be to study traditional architectural elements such as doors, windows, ceiling and wall treatments, lighting, electrical, and storage systems. By studying these elements I will break them down into their most basic parts, and then study ways in which they can be reassembled and constructed within the shell of an existing building. By doing this I will create an architectural spatial system which was missing from the original spatial system. In economic terms this system would be classified as cost effective, personalized, mass produced, architectural interiors.

While mass production and consumer decision making have served examples such as the auto industry well it is not as easy in the architectural market. Educating, or self empowering the consumer on how to effectively purchase the best suited system is the second half of this product. Since this system is to be cost effective, the present system of a full time professional architect working for you will be a by-gone notion. Since the project will be a marketed commodity it will need the standard marketing procedures, including a catalog. The catalog is where I propose the introductory education/self empowerment phase begins. The education/self empowerment phase is so important because once people have the skills to improve their environment they will begin to take action.

In the catalog the consumer will be enlightened on possible life-styles, they will learn about the importance of a quality home environment, there will be examples of people who have implemented systems, with details about the installation process, the delivery process, plus specifications of all the many possibilities for each product. After this initial phase the client may visit a showroom for more information, and purchase if they so choose. The show room provides the consumer up-close viewing of the product lines, but more importantly in-house consultants can give on the spot design assistance. Based upon the consumers aesthetic taste, budget, home layout, programmatic, life-style, and personality preferences the consultants can give effective and rapid design assistance. With computer animation capability the consumer will be able to visualize their home in-store before they make a purchase.

The following diagram represents how an underdeveloped spatial system can be developed with a well integrated series of objects.
To represent the idea of a non-descript environment I have selected the following illustration by Aldo Rossi. Philosophically his work embodies the concept of using the building as a backdrop. Therefore, my thesis of bringing your experience to your dwelling fits in not only with the work of Rossi, but the simplicity that he strives for to represent the underdeveloped architecture that the lower to middle class must so often live with.

The above drawing of Rossi’s is intended to illustrate the simplicity of his interiors, and the potential for development.
**ACCESSIBILITY**

Making quality residential readily available to all sectors of our society regardless of their ability to afford design professionals.

**FLEXIBLE**

By creating an interchangeable system that can be reconfigured, and which individual pieces can be adapted to multiple functions the system attempts to meet the changing needs of the user.

**SELF EMPOWERMENT**

Through education, free design assistance, and straightforward assemblage techniques residential dwellers will have the power and desire to take action upon their environments.

**TRANSPORTABLE**

The system is to be created of interlocking, knock-down pieces which individually can be easily carried by one person.

**PERSONALIZED**

By offering aesthetic, and functional choices in the context of personality assessment, and design assistance the system is geared to meeting the needs of the individual.

**ECONOMICAL**

The system is economical since all pieces can be standardized, and most pieces can be used in multiple adaptations.

**SYSTEM GOALS**
Due to socio-economic factors millions of people considered lower to middle income have limited economic freedom.

Due to their socio-economic stature they are forced to live in architecturally non-descript environments.

An overabundance of architecture, and design professionals has not corresponded into an over-abundance of design assistance in dwellings for the lower to middle income segment of our society.

Through consciously marketing the "over-looked" segment of our society, architectural professionals can begin to reach the greater whole of our society.

By using traditional marketing and industry techniques, the architecture profession can reach society with cost effective alternatives to today's building practices. In addition to these techniques, consumer education, used in conjunction with marketing, can show the consumer that the quality of their home environment need not be held captive by their socioeconomic stature. By demonstrating effective purchasing procedures, with a well balanced product line the consumer will now feel that they can single-handedly make effective design decisions.

Using outlets with in-house design consultants gives the consumer the chance to see the product line in-person before the purchase is made, and also allows for design consultation for the undecided consumer.

Tactics such as reducing the products shipping container will help reduce cost. With smaller packaging the consumer will be able to further reduce cost by transporting the system with their own vehicle. Since the system will be of "knockdown" construction, installation can be done by the consumer without any special tools. With these cost-conscious considerations in effect the system can be easily taken down transported and reconstructed if a move is necessary.

The final phase is a low cost, "accessible," architectural solution for a large majority of our population that can not afford today's architectural process, and who do not have the design and construction skills to do it themselves.
PRIMARY USE

STABILIZE MODULAR SYSTEM
SUPPORT FREE FORMS

COLUMNS
SHELVES
CABINETS
BOOK CASES

SURFACES
TABLES DESK

CABINETS
SHELVES
BULK STORAGE ENTERTAINMENT

CAPITAL

SHAFT

SURFACE

BASE

2' MODUAL

MODULAR SYSTEM SCHEMATIC
FREE FORMS ARE DESIGNED TO PROVIDE A RELIEF FROM THE ORDERED NATURE INHERENT IN A MODULAR SYSTEM. THEY ARE MOST COMMONLY IMPLEMENTED AS CEILING PLAINS, EITHER ATTACHED TO THE CAPITAL OR COLUMNS.
These three environments embody the past and present day notion of architecture in their expression of function and identity of the user. Unfortunately, these uniquely suited environments are not possible for all but the most economically elite members of our society.
The notion of accessibility implies that roadblocks must be removed in order to get the inhabitant closer to a well designed, suitable environment. Unfortunately one of the costliest steps in the building process is the designer, therefore an alternative solution had to be found. The architect/designer supplies a knowledge of the clients needs then mixes those with a certain amount of intuition to arrive at a solution. The personality of the client then becomes an alternative to the architect/designer. By using the Myers-Briggs Type Indicator™ to analyze ones personality the intuitive function of the architect/designer can be augmented with a low cost analytical alternative. Part of the Myers-Briggs measures your cognitive preference, this is the function that indicates your perception of space, therefore your spatial preferences are revealed through your personality type. And when your spatial preferences are combined with programmatic needs, and aesthetic preferences, they can be assembled into a suggested design. At that point the client can either choose to use the suggestion, or supply their own intuition and fine-tune the design towards their desired effect.
Thomas Jefferson's home, Monticello, by no means fits my definition of accessible, but it does well represent the significance of the personality quotient. The physical environment plays an important part in the way we interact, work, play, love, and live. Therefore, our environment must be uniquely suited to the way go about these functions as individuals. By understanding the personality we can begin to hone our environments to our unique characteristics.

Thomas Jefferson's home, Monticello, remains a good example of a personalized environment. Jefferson designed his home to accommodate his own peculiarities in working and behavior. Because he hated staircases, he hid them in walls. Because he often entertained around the fireplace, he constructed a dumbwafer rising from the wine cellar into the mantle, allowing him to serve wine to his guests without interruptions from servants. His bed lies between the bedroom and library so that he could rise in either room, depending on his mood. All of these devices enabled Jefferson to negotiate with his home according to the task he intended to pursue and in the manner he preferred. His house was flexible enough to allow him to do different things at different times. Monticello adapted to Jefferson's needs and desires and did not force Jefferson to adapt.

Every home, in varying degrees, resembles Monticello. People build, arrange, and rearrange their homes to help them live the way they choose. Few would decorate a bedroom wall with pictures of a neighbor's family. Fewer would place a bed in a bathroom.
Fewer still would put the garbage disposal in the den. The point of ordering a home is to allow the most effective pursuit of whatever it is the owners intend to do there.¹

Therefore, the personality quotient is not the method of design, it instead becomes the looking glass into a person's preference for space.

¹ Cecil Williams, David Armstrong, Clark Malcolm, Negotiable Environment, Facility Management Institute: Ann Arbor, Michigan, 1985
PREFERENCE

ENERGY

EXTRAVERSION

I

INTROVERSION

PERCEIVING

SENSING

INTUITION

PEOPLED

THINKING

FEELING

JUDGING

LIFE STYLE

MYERS-BRIGGS TYPE INDICATOR
PERSONALITY CHARACTERISTICS

Usually have original minds and great drive for their own ideals and purposes. In fields that appeal to them, they have a fine power to organize a job and carry it through with or without help. Skeptical, critical, independent, determined, sometimes stubborn. Must learn to yield less important points in order to win the most important.

AESTHETIC PREFERENCE

Clean, distinct, natural materials, contemporary with warmth.

PROGRAM

The primary need is for storage and display. As a Visionary Eric tends to focus on things that he has achieved, and created. He has a large collection of books, artifacts, paintings, pictures, plants, and personal items. He also needs to have his information readily available at all times. While entertaining is not his primary focus he likes to retain the option of a suitable social environment when called for.

RESIDENCE

A medium sized efficiency of 550 Sq./Ft. in the heart of Washington D.C., the efficiency consist of a kitchen, bathroom, closet, and a main L-shaped living room.

ERIC

THEME: INFORMATION

VISIONARY
PERSONALITY CHARACTERISTICS

Serious, quiet, earn success by concentration and thoroughness. Practical, orderly, matter-of-fact, logical, realistic, and dependable. See to it that everything is well organized. Take responsibility. Make up their own minds as to what should be accomplished and work toward it steadily, regardless of protests or distractions.

PROGRAM

As a Stabilizer Bruno strives for order, and hierarchy. This is reflected in his business sense. He is starting his own company out of his apartment. Therefore the focus is on work, he needs a dedicated work space with the required support. His other requirements are an entertainment center, and a modest dinning area.

AESTHETIC PREFERENCE

Clean, distinct, natural materials, contemporary with warmth.

RESIDENCE

A medium sized efficiency of 550 Sq./Ft. in the heart of Washington D.C., the efficiency consist of a kitchen, bathroom, closet, and a main L-shaped living room.
PERSONALITY CHARACTERISTICS
Warmly enthusiastic, high-spirited, ingenious, imaginative. Able to do almost anything that interests them. Quick with a solution for any difficulty and ready to help anyone with a problem. Often rely on their ability to improvise instead of preparing in advance. Can usually find compelling reasons for whatever they want.

PROGRAM
As a Cooperator Joél creates a family or clan culture. As a preeminent figure in the Tunisian community, and a gourmet cook Joél's total focus is almost on entertaining, and food. In addition since friends often spend the night he needs private sleeping accommodations.

AESTHETIC PREFERENCE
Clean, distinct, natural materials, contemporary with warmth

RESIDENCE
A medium sized efficiency of 550 Sq./Ft. in the heart of Washington D.C., the efficiency consist of a kitchen, bathroom, closet, and a main L-shaped living room.

JOEL
THEME: INTERACTION
COOPERATOR
As a visionary Eric's apartment is loaded with information about his life and aspirations, his appetite revolves around his constant access to most important things in his life. As an INTJ he has more than just the need to see it himself; he also needs to share his work and accomplishment with his friends and family since he places much of his self-esteem in the things he achieves. The apartment is laid out as one space so all information is visible from any point. Since information is the main theme Eric has bookshelves, shelves for artifacts and collections, hanging surfaces for his work, ample surface area for laying out anything that is pertinent at the time, and an area for plants. In addition, he has moderate entertaining capacities for when he chooses to have people over.
As a Stabilizer Bruno quests order and hierarchy. As a *yuppy* he is driven by his desire to achieve in the work place. He is a licensed mechanical engineer, but he is working on starting his own computer information bureau out of his apartment. Therefore Bruno's apartment is suited towards work, and how to keep that function organized within his living space. In addition to work, Bruno needs facilities for his entertainment center which is integrated into the backside of the work center. In addition to work, and entertainment Bruno wanted a more figurative environment for his sparse dining table so he decided to add an overhead plane.
As a Cooperator Joël's apartment is centered around social interaction, and in addition it highlights his love for food. Joël's social traditions are a part of his culture. He is half French and half Tunisian, presently living in Washington D.C., home of a large Tunisian community, this ESFP has become a natural leader in his community. As a Maitred at one of Washington's finest hotel's his hobby is gourmet cooking. Part of the tradition of entertaining at his apartment is that dinner is more than sustenance; it becomes an evening long event, ranging from preparation of the meal, to several courses, to talk, to coffee. Since he often has people over, inevitably a few of them stay over on a frequent basis, therefore he required a separate sleeping area for increased privacy.
While a system of this undertaking would require several aesthetics considering peoples diverse preferences. However, due to constraints of the thesis format, I choose to develop only one of the possible. In the development of the modular system I began to realize there were inherent limitations in its form if it were to be adaptable to conventional construction. That is when the two-part system with the free-form structures were added to augment the aesthetic limitations in the modular portion. As I began to develop a full-scale portion of the modular system I became aware of the significance of proportion, and connections. Examples of these can be seen in the slight entasis on the fronts of the panels, and in the oversized connections for the surfaces. One of the other refinements to the system aesthetic was to express the panel assemblage by emphasizing all connections. In developing this particular aesthetic I choose to work with cherry, maple, and ebonized wood. This was partially influenced by my previous desire to work with hard wood, and by the close interaction I had throughout the year working with my outside thesis critique who was a furniture designer.
In addition to being a study in form and materials, the modular piece was a further development in the notion of accessibility. Since the system must be constructible by anyone, I chose a knockdown system that did not require tools or construction knowledge. The entire system is built out of wood and the connections are tongue and groove, or dovetails.
In an effort to practice effective time management, and to eliminate redundancy the presentation boards were designed in page form so they could be used in the creation of this documentation. All the information on the boards is contained in this book, the book acts to document much of the verbal information presented in the thesis revue, in addition the book provides credit to the sources of my inspiration, further historical information, and finally it attempts to light a path for future development of this work which will happen after my departure from Ball State.
After spending many hundreds of hours on a topic that I knew very little about, before the beginning of the semester, I feel vindicated in concluding that all the time and energy that I have expended on this project will not politely end up in some anonymous black cover buried alongside hundreds of other investigations that only had enough gas to get them to graduation. This thesis has inspired both personal and professional growth, but more importantly I feel as if I have begun to engage a collective energy much greater than myself. I feel as if I have been given the vision to challenge what I feel is one of our most important attributes as humans; the ability to consciously form our environment. What began merely as dissatisfaction eight months ago with the profession's inability to effect the greater whole of our societies need for quality environments has now been transformed into the beginning steps for understanding how to take action on making the needed changes. Therefore, while some may view this thesis with a grain of salt, since it does not represent traditional architecture, they need understand that would be like judging "Gone With the Wind" by only looking at the first frame. In effect I am saying that this thing at over yet, and it won't be any time soon. Who ever said "Architecture is the second oldest profession," was being an optimist in my opinion. Just as change is inevitable, mountains move, and continents collide so must our beloved profession. I believe we live in an environmentally mal-nourished society, and that the disparity between our needs for quality environments and our ability to create them is only getting greater for most. I take heart in the fact that if a few men fifty years ago in the desert could create the potential to destroy the world, that at least there is a possibility that a few more can rebuild it. I included the following cartoon to illustrate the fear, or inability of the profession to chart a new vision. While we and our colleagues have been responsible for many of wonders of the world, in a sense our success has lead to our failure to strive for a more responsive profession.
This thesis has attempted to humanize the modular system by making it responsive to the user needs, desires, psyche, and fantasy. Since this is only the first frame of what could be a long saga, and it was moulded to fit into the semester, I feel that I should give an indication of where it is likely to go. I feel the analogy of what has happened in the revolution of the publishing industry is what needs to begin to happen in the architecture/built environment industry. For starters, this book would not have been possible a few short years ago. I would have had to write several rough drafts by hand only to have to then laboriously typed it up, then crudely cut and paste photos from a Xerox that probably had just run out of toner. Instead of letting professional documents strictly be the domain of publishing houses, and graphic designers I as a student with meager means have been empowered by technological advancements and systems integrations to create a document that meets my needs. At the same time there are no fewer graphic designers working today as opposed to ten years ago. Instead the changes that make quality documents accessible to me only have enabled the professionals to do their jobs better. The lesson learned: while some documents are inherently better than others, today everyone has better documents because there is diversity. Whether you are a student with a simple computer, and a small printer, chances are you can only afford to spend a few pennies a copy. On the other hand a fortune five hundred company producing its annual sales report may choose to hire a graphic designer firm, then have their report sent to a color processing house in a “spare no expenses” presentation. The point of the analogy is to point out in the publishing industry that while things may not be equal that at least everyone has a suitable option that best fits their needs. Unfortunately in architecture there are far fewer options, and the majority are being left out of the picture. Architecture’s technological advances have been symbolized by
industrialized housing which was geared to considerations such as cost, construction, and transportation, unfortunately the user was supposed to adapt to his environment, whereas in the publishing industry technological advances, and standardizations have been so well received because they adapted to the needs of the users, not vice-a-versa.

If architecture is to advance, and this thesis is to have any role in it, I feel that it needs technological advances brought to the consumer level, with standardization. But most importantly, these things need to add up to possibilities, not just a few well wrapped options.
Lisa Taylor, Housing, Symbol, Structure, Site, Cooper-Hewitt Museum: Japan, 1982

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