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Designing and Process

a house for a seamstress
&
a house for a mechanic

May 1995
Department of Architecture  
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a house for a seamstress  
&  
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Bachelor of Architecture Degree Program  
Thesis Design  

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I would like to thank the following people for their time and efforts, and without their expertise the project could not have been as successful. Whether each individual contribution was in design, process expertise, or other, their help was invaluable. Their answers, kindness and patience during the process was greatly appreciated.

Andrew Seager  
Thesis Critic

Pam Harwood  
Thesis Critic
The processes which occur in, around, and to a piece of architecture serve a very important role in defining the architecture, and contribute to the success of the architecture. The buildings journey through time as well as our individual journeys within the building are multidimensional because of the processes. I am going to explore a process; musical composition, performance, and listening, because music causes everyone to react emotionally and interact with it by dancing, singing, etc. Studying and learning from the processes a musical composer uses will help me create a design methodology for architecture to create some of the same qualities of music in architecture. The methodology which I develop will be used to design my thesis project.

I am in the process of studying a method of musical composition. Through this study I am drawing parallels between the two methods of composition and creation of space. Furthermore, I am looking at the interaction the performer of music has with the composition. The best performers do not just read the music, but they also feel it and let it flow from within themselves. Moreover, the people listening to the music are also very active. The music will create an emotional response, either good or bad, in the minds. The music will take them on an imaginary journey which mimics the mood and tone of the music. The total interaction of everyone from the composer to the listener is one of the reasons every one can relate to music at a higher level than most people interact with architecture. Through the study of music’s process, I will create a design philosophy for spatial composition, or architecture.

Musical composers face many similar problems as spatial composers. The main problem is getting people involved with a design, even though they may not understand the meaning or the processes involved. In other words, how do you get one involved with the architecture at the same level which the musical performer is involved with the music. I will be designing a house for a mechanic and a seamstress in my thesis. I believe that it is possible to get a non-mechanically inclined person to "perform" or interact with a house for a mechanic despite a lack or knowledge of what a mechanic does and how it is done, and the same applies with the house for a seamstress. I will explore the issues of how to get everyone to interact with the environment at a higher level despite the fact that the users are not a mechanic or a seamstress.

Each house will be designed as a space for a seamstress or mechanic to perform his/her talent. Furthermore, humans are a very curious species, so I will also account for those people who will watch them perform. Therefore, some spaces will require an allowance for an audience. All aspects of the homes, from circulation to sound to materials, will be considered in detail. Light, shade, shadows, transitions, and patterns will serve as key instruments in the creation of a space. Furthermore, the choreography of the spaces and the elements that define the space will be considered in a similar manner to that of a musician considering instruments and notes.

I will be describing the performance of the seamstress in the seamstress house and the mechanic in the mechanic house. Furthermore, I will be considering how a lay person will perform in the spaces when I program and design the homes. These descriptions will provide the basis on which the thesis will be designed.
This program describes both how one will interact and perform within the spaces as well as the physical characteristics of the space. For this particular design, the narratives describing process of life in the Home for a Mechanic and the Home for a Seamstress are perhaps more descriptive of the spaces and my goals for the design than the numerical data associated with the same spaces.

The Home for a Mechanic is designed around a typical life-style of a mechanic. Both work and leisure are accommodated for in the design. The processes associated with a mechanic's work are considered for the ways those processes affect every day life at home. Their is a definite order in which many of the process must be done and the order in which processes must be done. A mechanic is also required to work in some awkward positions in order to reach a particular part or assembly. A mechanic must also be a technician in today's society. The advancement of computers in new cars has required mechanics to be not only computer literate, but also how to replace or repair the computers. Some of these qualities will manifest themselves in the home.

The Home for a Seamstress is also designed around the typical life-style of a seamstress. The qualities associated with a good seamstress are considered in the design. Seamstresses have an excellent eye for quality and design in the fashion industry. Knowledge of several styles of sewing and patterning is required to create a successful final product, much like an architect. The personalization of clothes is a part of the seamstresses work today. Industry has machines which can sew many of the new products for sale. However, a seamstress is still required to alter and fit some clothes.

The connection and commonalities between these two professions and their life-styles are explored at all levels from the technical to the artistic. Their are many obvious differences between these professions. Those differences range from the tools they use to the product that they produce. However, there are numerous similarities between the profession of a seamstress and a mechanic. Both professions require an eye for detail, assembly, working with their hands, manual dexterity, and even a little bit of salesmanship. The expression of some of these similarities will aid in designing the connection of these two life-styles.

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<tr>
<th>Seamstress</th>
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<td>Sewing Room</td>
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The House of the Mechanic and the House of the Seamstress will be designed with some of the principles of musical composition. I have been drawing correlations between the composer and the architect, the musical performer and the user of architecture, and the musical listener and the user of architecture. Through this study I have drawn conclusions which I have used to design a design methodology for this project.

The composer and architect design many similar elements. Both are concerned with transition, entry, patterning, choreography, and repetition to name just a few. The manipulation and combination of these elements create endless possibilities for a design developed from one idea. Since first impressions are quite important, entry plays a large role in the success of both music and architecture. An entry that is engaging, personal, and descriptive will attract people to experience the rest of the piece at least once. The piece will most likely gain some more supporters.

The transitions in a piece of music are probably more important than they are in architecture as it exist in many projects today. Music must flow through a series of crescendo and decrescendos, tones, possibly rhythm, etc. If the transitions are missing or inadequate, the resulting music will not flow as a coherent whole. Therefore, we are not able to experience the music the way the composer intended and the composition will almost certainly fail. The same standards should apply to architecture. However, many modern architects have failed to recognize the contributions of transition in their designs.

Patterning is a very effective tool for creating both a bass line in music and space in architecture. In music, the bass line creates and keeps the rhythm, which also can be considered a pattern. Even though the bass line is usually not remembered by the audience, it is the foundation on which the composition was built. Patterning is a very effective tool for creating space. The patterns architects create by the simple layering of the wall, structure, and skin can result in a wonderful spaces. Furthermore, most materials have noticeable pattern in either its' surface, or in the way the material in used conjunction with similar units. A brick wall or tile floor are easy examples of how patterns create a better product.

Perhaps the most important element successful music and spatial composition is choreography. Although choreography is usually associated with dance, to choreography is simply to arrange or direct movements. Musical composers are always conscious of how they choreograph the notes and instruments. The time and location in which an instruments joins into a composition can add drama, change the mood, or even the flow. Failure to carefully choreograph addition and subtraction of instruments, crescendos and decrescendos, transitions, etc. is like preparing for failure. The same principles of choreography apply to spatial compositions. The spatial relationship of one space to another, inside and outside space, and materials to space are key in creating a successful place which will be used and enjoyed by its' inhabitants. Spaces which do not flow or transition together well discourages people from going to each space. However, the proper choreography of space and transition will encourage user interaction as well as encouraging them to move freely from space to space.
A musical performer has an intimate relationship with the piece he or she is playing. From talking with musicians as well as personal experience, I have learned that to music well requires more than just reading notes and playing those notes on one's instrument. Music has many qualities, like mood, tone, and rhythm to name a few, that the performer must bring out. Failure to express all the qualities of a particular piece of music would be telling a story in a completely monotone voice. When one listens to a talented musician, for example, the pianist is very intuitive of how the music flows, the tone changes, crescendo and decrescendo, etc. Furthermore, the musician will begin to feel the music flow through his or her body and eventually release itself into the instrument. It is really quite similar to dancing. You feel the beat and rhythm; and you move with it. If one does not move with the music, you look silly. The same applies with performing music, if you do not express all aspects of what the composer has written, the performer sounds terrible.

My goal for this design is to bring the users of architecture up to a higher level of interaction within the space. How does one get an average person to "perform" within a space with similar depth and understanding that a musical performer has with the music he is playing. To accomplish my goal, I will basically be designing the journey of the user as he or she interacts with the space. The journey consists of the sequence in which the person experiences the spaces, the way the space makes one feel, what particular part of the space does the user feel most comfortable in, what does the user want to do in the space, and what time of day the user want to be in a space. The journey will make most of the spatial design decisions quite simple.

Finally, the correlation between a listener of music and a user of space also has some implications. Music has a wonderful ability to inspire us, change our mood, and to spark our imaginations. Perhaps that is why humans love to listen to music and usually have a favorite style, song, and performers. Music is a personal experience for everyone. The same music can evoke slightly different emotions, reactions, and thoughts in every individual. These abilities of music are some of the reasons humans enjoy music. Designing a space which can cause similar reactions to those of music would in my opinion be a crowning achievement.

All of the spaces are being designed specifically for a mechanic and/or a seamstress. However, in the program, I have considered alternative users and how their interest could affect the space. The main design goal, however, is still to increase the level of interaction between the user and the space despite the fact that he or she is not a seamstress or mechanic.
The site I have chosen for this project has had a tremendous impact on my design. The site is located in a rural area that is currently being developed. The site is forested and also has a creek bed which is dry at least part of the year. Upon my first visit to the site, I was immediately intrigued by the creek. I entered the site on axis with the creek, and I started my exploration by following the path of the creek.

The first major asset of the site which I discovered was a large curve. The curve was interesting for numerous reasons. First, the curve in the creek was full of life in its natural state. The curve contained some old unused beaver dams and some interesting rocks and vegetation. The shape of the curve defined two peninsulas, one on each side of the creek. I basically decided on my first visit to the site that the curve in the creek was going to a very important part of the design. Furthermore, it was from these peninsulas that I located two other major assets of the site, the clearing, and the line of trees.

The lone clearing is shaped like an imperfect oval. I consider the clearing an asset because the rest of the site is forested. Therefore, it creates a nice contrast within the site. Since the clearing is easily visible from the curve in the creek, it seemed like a natural place to locate one of the homes.

Conversely, I found the row of trees to be an asset because they create a strong vision line. I was also intrigued by the fact that the line of trees occurs in one of the denser parts of the forest. The clearing and the line of trees are quite different in their appeal and use, but they are inextricably linked. That link was useful in creating the linkage between the house for a mechanic and a seamstress.
A major reason I chose to do this project was to develop for myself a better design process. Through this project I was able to develop a solid design foundation that I believe I will be able to use and develop throughout my career. Two of the major influences on my new design process are site and the processes of the people who will inhabit the site.

I started my thesis in the fall of 1994, and I began by choosing a process, playing piano music. I listened to piano music and sketched my interpretation of the music. These sketches were very useful in beginning to develop a design language. I discovered many abstract similarities between music and architecture. The sketches allowed me to see the structure, rhythm, and movement present in the music. These same principles are used in all architecture.

I developed some quick study models which showed how those principles manifest themselves in built form. I was able to further study the architectural forms that could be used because of these models.

At this point, I chose the project, a house for a seamstress and a house for a mechanic. I chose these particular types for many reasons. The main reason is that they both have very interesting processes associated with their profession. Furthermore, a seamstress and a mechanic are generally gender biased and are also considered to have very few similarities. These reasons made them ideal for my project since it involved expressing the connections that exist between the two sides of the site. I could use these two professions to further show the apparent differences while at the same time strengthening the connections both between the two sides of the site and the two professions.

My next step was to begin designing the site. The creek side walking path was first. The walk was fairly simply designed. I played with some variations of the width and materials of the walk which at the same time designing the shape. I kept the walkway curvilinear to not detract from the intrinsic beauty present in the creek. I designed larger peninsulas at the bend in the creek to make the bend a focus or decision point.

The locations of the house for a seamstress and the house for a mechanic were essentially determined by existing site conditions and assets. The main site issue associated with the locations was strengthening the connection between the two sides of the site and the two homes. I accomplished that connection by using a large curve which serves as the private drives of the residents and as a dominant unifying element, at least in plan.
The design of the houses was driven by the processes associated with the profession it would house. The shape for the house for a seamstress was derived from reapplying the same pattern, a L shape in plan section and elevation. The detailing of the house is also quite important. The seams of the clothes we wear are always evident and are important elements of the design. The joints and structure of the house are all exposed and even celebrated. Furthermore, I was careful to align structural pieces, seams of the materials, and window mullins. I did this to create a pleasant and unified appearance. The full design will be better understood when you read about the seamstress experience. I feel that you can fully appreciate the beauty of the house better by looking at the models, pictures, and the drawings when reading the article also.
The mechanic, on the other hand, is based on the fact that for engines to work properly, all the pieces must work together. Furthermore, there is a definite order in which the pieces must be assembled. I recognized this fact in my design by creating a dominant wall which all the spaces are dependent upon, and the wall, at least in appearance, is also dependent upon the spaces to stay in its intended position. Furthermore, I design some rather confined outdoor spaces underneath the interior spaces. These spaces were created to contrast the openness and bright light of the clearing as well as making reference to the confined spaces that a mechanic must work in on and engine. Like the house for a seamstress, the design process is best understood by studying the pictures, the models, and the drawings when reading the mechanic experience article.
The first view a you will see upon driving to and entering the sitewill be the creek and partially obstructed views of other parts of the site. You will enter at the main entry, located at the center of the south side of the site. You will be entering a space with a totally different feel from that of the road. The tree canopies form an overhead enclosure, and the tree trunks begin to define the space of the site. After parking your vehicle, the creek, views, and sounds of the creek will lead them down onto the path which winds along the bank. The path steps down to the creek, and the steps are the first notes in the rhythm the visitor will create. You will begin to feel secluded from the outside world because all of the framed views and action focuses you toward the central part of the site.

When you begin walking deeper into the site, you will notice the rhythm of your own steps. The path is made of different masonry materials, maybe granite or brick, which produce an audible tone when you walk on it. As you continue down the path, you will likely stay with a rhythm until and the surface material changes. The change in material will result in a change of the tone. The change in material and tone occurs where there is an activity or interesting view. When the change in tone and material occurs, you may take notice and stop to look around. You will begin to get clearer views of the home for a seamstress and a mechanic as you approach the peninsulas.

When you finally arrive at the bend in the creek, you will walk onto one of the peninsulas formed by the bend. That arrival will be reinforced by a change in the surface material and the resulting tone. The bend in the creek is the focus or decision point in the site. You will have clear views of both the house for the seamstress and the mechanic, the clearing, and the line of trees. You will then make a choice to: continue along the creek side path, visit the mechanic's house, or visit the seamstress' house. Each choice has its own appeal. The creek is reason enough to continue to follow the creek side path. Furthermore, six trees which form a straight line when view from the peninsulas are visually appealing, and the opportunity to cross the creek can be an adventure in and of itself. However, I have used these natural elements as well as the designed architecture to draw the visitors to the seamstress house. Finally, you could also choose to visit the mechanics house. The fact that the house sits on the edge of a clearing gives it a quite distinct lighting effect not present in the rest of the site. I played with the lighting in the architecture by creating outdoor space below the interior spaces. The outdoor spaces are shaded and create a pleasant contrast to the brighter lighting of the clearing. I strengthened the edge and shape of the clearing by matching the curve of the dominant wall in the house for a mechanic with the curve of the clearing.

You can wander from one house to the other freely. Though I defined paths leading to each house, you are not limited to those paths. I designed the paths to create an experience for you, but I also designed them to show you the many other possible experiences that exist on the site.
You will enter into the area around the seamstress house at an amphitheater which is focused on the seamstress work space. While sitting in the amphitheater, you feel somewhat confined to the experiences of the seamstress because the amphitheater is sunken into the ground, and the house and surrounding trees limit your view. You will naturally focus on the activity of the seamstress and the house. The visitor's eyes will become intrigued by patterns of the materials on the ground and wall surfaces. The ground level of the house is has a glass wall which exposes the activities of the seamstress. Therefore, you will have a collage of patterns and activities occurring around you while seated in the amphitheater. You will be able to observe the movement and tools of the seamstress while he or she works.

When you leave the amphitheater and continues further into the house of the seamstress, you will enter onto a plaza. You will have many views of the house, the creek, and even the house for the mechanic. You will be drawn inside the house where you can participate in seamstress activities. You will have the opportunity to create your patterns and patterns of movement. This space is strictly defined by the pattern the building materials, the ground plane, the sewing materials, and the pattern of the movements of the people within the space.

After completing their visit to the seamstress house, which includes glimpses of the personal home of the seamstress and how he or she lives, you will move back toward the creek via a path of your choice.
You will enter into realm of the house of the mechanic by a path that continues the curve of the wall. The main wall is the first element of the design you will physically contact. You will also get a choice, whether to go up to the interior spaces or down to the underneath spaces. However, you will likely not go up unless you know the mechanic personally.

When you chose to go down the three steps to the underneath spaces, you will enter into a space which is totally different from the rest of the site. You will immediately notice the low ceiling and feeling of enclosure. This space is the most confined on the site. Your overhead space was diminished when you entered the site, and this space further diminishes it. You will also notice a definitive difference in the lighting. Since the mechanic's house is located on the edge of the clearing, it receives much more uninterrupted natural sunlight than other parts of the site. Therefore, the clearing and the house are washed with sunlight.

Though the space is smaller and dimmer, the space does have its appeal. Your personal experience will differ from everyone else's. For example, to me this space will approximate the feeling of driving along a deserted road at dusk. The peacefulness and tranquility associated with that drive would be very relaxing. You may have a totally different feeling of the space, but that is what I wanted. There is not a wrong experience. You can sit and enjoy a different perspective of the site, or wander underneath the structures and through the main wall to the other side. Your choice will hopefully make your experience quite remarkable.

When you make it to the garage, you must walk by a glass curtain wall which exposes the processes of the mechanic to the outside world. To many people, what a mechanic does is an unsolvable mystery. I did not want to perpetuate that mystery by hiding the processes from the public except when you are actually in the garage. You may sit in the clearing and watch the mechanic while enjoying the sunlight the views of the sky and the site.

You will enter the garage from the west side. Once inside, the garage is large enough for two or three vehicles to be worked on simultaneously. You can participate in fixing the cars, likely with the mechanics supervision. You will be able to use of the tools and get as dirty and greasy as you wish.

When you are finished with the mechanic experience, you can wander back to the creek path or chose a path of your own. Once back on the path. I hope you will look around for other experiences to participate in. Though I only defined two succinct processes, the site offers you many opportunities for other processes to occur.