This thesis investigation and project design were driven by the desire to develop an understanding of how architecture addresses the senses. Guided by the practice of a craft, the vestige of art, architectural history and precedent, and the physiology of the five senses, an idea for a thermal bath was expressed through material. This book is a record of that process.
Learning the craft of weaving has played an important role in the development of my thoughts on the sensual qualities of architecture. Although we may not always be aware of it, each of us has a very intimate relationship with woven cloth. Some type of fabric is in direct contact with our skin at almost all times. Whether it is the clothes we wear, the sheets we sleep on, the towels we wrap ourselves in, or the upholstery we recline on, we are in constant touch with a variety of fibers, textures, patterns, and colors.

The weaver, just as the architect, has to make many careful considerations. An idea for a piece of cloth is refined by purpose, what is possible, and the will. Certain types of fibers lend themselves particular uses and physical characteristics. The warmth and weight of wool is ideal for blankets and sweaters. The durability and absorbency of linen are put to good use as a towel. The porosity and softness of cotton are desirable for making sheets and undergarments, and the delicacy and suppleness of silk make it well suited for the most finely woven garments. All of these fibers and others become engaged with the specifications of the loom and the will of the weaver encapsulated in consciousness and action.

Certainly all of this knowledge is understood by the weaver at some level. But to the astute, this understanding does enhance the apparent beauty of a piece of cloth that is finely woven and well suited to its purpose. The weaver, just as the architect, has to make many careful considerations. An idea for a piece of cloth is refined by purpose, what is possible, and the will. Certain types of fibers lend themselves particular uses and physical characteristics. The warmth and weight of wool is ideal for blankets and sweaters. The durability and absorbency of linen are put to good use as a towel. The porosity and softness of cotton are desirable for making sheets and undergarments, and the delicacy and suppleness of silk make it well suited for the most finely woven garments. All of these fibers and others become engaged with the specifications of the loom and the will of the weaver encapsulated in consciousness and action. Certainly all of this knowledge is understood by the weaver at some level. But to the astute, this understanding does enhance the apparent beauty of a piece of cloth that is finely woven and well suited to its purpose.
The Kunsthaus in Bregenz, Austria is a strong architectural example of this phenomenon. When I visited this building, I was unfamiliar with the project. However, without prior knowledge or the explanation of the designer, I admired the precise and elegant use of material which seemed to heighten my awareness of each of the architectural elements which form this building. The idea is revealed through this cognizance.

You're looking for something, you start to verbalize what it is that you want, and all of a sudden it's there - this strong initial image, or feeling for an atmosphere, which the place and the task provoke... I like to think of a building as something whole and complete, with no part more or less beautiful or important than the others... The building is exactly what we see and touch, exactly what we feel beneath our feet... The sensuous presence of materials defines the space. — Peter Zumthor

Twelve thousand years ago a Stone Age man engraved a scene into rock in the Cave of Addaura. Although we know nothing of his intention or the idea that he wanted to express, we can still appreciate the beauty of the sinuous lines that form these bodies and the evocativeness of the scene in general.

Although the history of art is profuse with examples from which to choose in further illustrating this point, I admire George de La Tour's Joseph the Carpenter and have personal experience with the painting on which it is drawn. I saw this piece for the first time in the gallery of the Louvre in 1999 and was immediately struck, first by the beautiful context of light and shade. As I moved closer, I perceived the light passing through the boy's hand and filling areas through the mirror. I moved and admired the painting for a moment longer and then stopped to read the labels and the description of the work. I realized that I realized that the theory in this painting was successful and was compelled to step back and admire once more the light passing through the boy's hand and how well the light and shade were used to paint the scene, and the way in which the artist used this medium to convey and heighten the perception of an idea.

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While the idea for the Thermal Bath was being refined and developed, I studied and reflected on the long history of public bathing in art and architecture. What are the material qualities of a space that will come into direct contact with the bare skin of the bathers? How will thermal comfort be maintained? What is the quality of light in the space? What will be heard in the space? How is privacy addressed in a public space? How should the building respond to the site? What is the relationship of the bath to the town of Warm Springs?

There were at least 200 bathers there. The sofas were covered with cushions and rich tapestries. The women positioned there, with slaves dressing their hair, were all in a natural state: completely nude. However, there were among them neither indelicate moments nor lascivious postures. They walked and moved with majestic grace. Several of them were well shaped with dazzling white skin and they were adorned only by their hair which had been combed into tresses that fell to their shoulders and were dressed with pearls and ribbons. Beautiful nude women in different postures, some gossiping, some working, others taking coffee or sorbet, and still others casually reclined on their cushions.
Warm Springs is a small community of 500 residents located in the western part of Bath County in the Allegheny Mountains of Virginia. The town has grown up around the spring source whose waters are between 96 and 98 degrees Fahrenheit year-round, and still contain the original timber frame bath house on the site that is still in use today.

This site analysis shows the position of the site along the axis of the valley floor and its location up the course of the river. Three quarters of a mile separates the site and the Bath County Courthouse, whose cupola is clearly visible from the southwest corner of the site. On the following page, a section cut taken perpendicular to the valley floor shows the site, adjacent to Warm Springs Run, and bounded by mountains to the northwest and southeast.
The position and configuration of the bath building addresses the site in several ways. The site's immediate context is characterized by two historical bath houses to the southeast, thoroughfares to the northwest and southwest, and open pasture to the northeast. The "L" shape of the building and adjoining wall enclose the old bath houses and the surrounding lawn while closing the site toward the two nearest roads. This protected, outdoor, public space would provide a place for a variety of activities on both a large and small scale and affirms the historical precedent of the bath as a place for social gathering and entertainment beyond bathing.

The building also establishes a relationship within the larger context of the town of Warm Springs. The 826' wall is aligned on an axis with the Warm Springs courthouse. After walking the length of the wall, and across to the southwest wall of the roof garden, the stone wall yields to the view of the courthouse cupola rising above the tree tops.
The design for the Thermal Bath began with a diagrammatic study of spatial relationships. Two-dimensional ink prints and a three-dimensional paper model were made as thoughts on the function and use of the space were developed together with the configuration of the architectural elements. The two-dimensional plan and section space is united with the design concept through the materialization of architectural elements critical to the sensuality, the eroticized expression, of the architecture. This study raised many questions for consideration:

What is the relationship between the design concept and its functionally purposive concrete realization?

Can the functionality of the space be enhanced by the architectural elements and the materiality of these elements?

How do we perceive these relationships?

How will materials be used to address the design, the function, and the experience?

How will one experience the bath?

How does architecture enhance this experience?

Is it possible to give erotic sensuality to stone, glass, and water?

Form as an end inevitably results in mere formalism. This effort is directed only to the exterior. But only what has life on the inside has a living exterior. Only what has intensity of life can have intensity of form. Every "how" is based on a "what." The un-formed is no worse than the over-formed. The former is nothing; the latter is mere appearance. Real form presupposes real life. This is our criterion: we should judge not so much by the results as by the creative process. For it is just this that reveals whether the form is derived from life or invented for its own sake. That is why the creative process is so essential. Life is what is decisive for us. In all its plentitude and in its spiritual and material relations.
Plate Fourteen

Thermal Baths at Warm Springs

Reflected Ceiling
Pete Samutriun
Thermal Baths at Warm Springs
The main bath space is defined by the massive columns and their corresponding beams which create an alternating pattern of light and shadow. Light slices into the space from the southeast and from overhead, dancing through the steam rising from the water in the large pool. On the northwest side of the building support areas, such as the changing rooms, rest rooms, and showers are contained in spaces with half the ceiling height and soft, even artificial light. A massage room and a series of four smaller, more intimate pools border the southwest side of the building. These pools have water temperatures of 98 degrees, 107 degrees, and 94 degrees Fahrenheit. The aroma room, separate from the rest areas, has a water temperature of 87 degrees Fahrenheit. It is infused with floral scents that gently circulate and fill the air with subtle fragrance.

After entering the building and changing clothes, one moves into the main bath through an atrium space defined by a curved ceiling of wood dowels that reaches up and anticipates the height of the adjoining space. The delicate grit of warm limestone is beneath one’s feet and the sound of splashing water becomes audible as steps are taken toward the next room. The smooth, rounded corners of these massive concrete columns ask to be touched as one passes between them and into the main bath.
Once inside the main bath, one can place his towel on one of the towel bars which are set into a smooth, curved subtraction on the face of each column. The towel is gently warmed by the radiant system that runs within the thickness of the column face. The floor, which also warms to the touch from the radiant system, reinforces the configuration of the architectural elements that form the space. Limestone fills the alternate floor area, reaching out from the central space between the columns and toward the reflecting pool.

When the weather is pleasant, the windows at the front and back of the space, which are held in place successively between columns, may be opened to circulate the air within the space. The track, as a trace of the window's motion, allows anticipation of the window's movement and operation. In inclement weather, air is exchanged through a uniform, low velocity system whose ducts are contained beneath the floor and within the columns. The air movement is gentle and quiet, almost imperceptible.

Ten limestone steps lead down into the four feet-six-inch deep water of the main pool. The regulated variegation of the floor texture can still be felt beneath one's feet. Glimpses of the outdoor portion of the pool and the mountains beyond can be seen between the columns. A third column, which supports one end of a concrete trellis, is not as close as the others.
The outdoor portion of the main bathing pool is surrounded by a shallow reflecting pool. The warm water of the bathing pool isincrementally effervescent as one looks out onto the rounded limestone pool edge, across the placid embrace of the reflecting pool, and up to the top of Warm Springs Mountain in the distance. In winter, the placidity of the pool is replaced by the texture and color of thousands of rounded cobblestones. The view to the sky is ever mediated by the concrete trellis which poetically contains the quiescence of bathing.

Returning back inside, one's eyes must adjust to the changing light. Pausing, again, between the columns, only a small area of the large room is visible. Suspended from the ceiling, and with each step, the view is steadily expanded. After avoiding the linear movement, one moves around the room to its soft roundness.
Supporting Design Work

Three Dimensional Light Filter; Glass Block and 1x4 Cut, Sanded, and Perforated Oak 1997
Object for a Template; Milled and Sandblasted Aluminum 1997
Geometric Object; Polycarbonate turned on a Lathe and wet sanded 1997
Column with an Idea; Stacked and Rotated 2x10 Pine Boards Cut, Sanded and Painted White 1998
Light; Stained Glass 1998
Project for a Town Forum, Blacksburg, Virginia 1998
Model of Santa Croce Dome, Riva San Vitale, Switzerland 1999
Project for a Tower, Rome, Italy 1999
Urban Design Project for Riva San Vitale, Switzerland 1999
Project for a County Library, New Castle, Virginia 1999
Handwoven Shroud Study; Various Sizes and Colors of 100% wool 1999
Handwoven Towels; 100% Cotton Natural Linen 2000
Handwoven Blanket; 100% Cotton Sage Green Chenille 2000
Thesis Exhibit: Thermal Baths at Warm Springs 2000