A Thermal Bath for Eggleston, Virginia:
The Making of Water, Stone, and Light
ABSTRACT

Through the study of architecture, and the thermal bath, one must ask, “How can the experience of springwater, heavy, stone walls, and light contribute to the ritual of bathing?”

The making of stone walls is the nature of the bath. The wall is the primordial state of architecture, and is given autonomy through its passion. The beginning of architecture is mass, and the articulation of it is in the carving, and shaping of the mass to form a place. The passion of the wall is in the power of its nature for placemaking. Not just ordinary place but place for one to sit, and a place that you, or I can inhabit, a near forgotten element of the pre-industrial era of architecture. This is the power of the ruin. The ruin allows for the notion of placemaking (which for the ruin is place-made). The ruin is stripped of all necessity, it is there as the object of architecture, and as the beginning for potential life. The ruined building’s infill is gone, and what is left are the bones of the building, the permanent, the solid, and the everlasting.

But why so much importance upon permanence and lasting in an impermanent world? Because for the very reason that one from another life, or civilization stumbles across a meadow, and upon it rests a thermal bath, in ruin. The ruin, lit only by the sun, reveals itself. In shadow and light, one can then understand the poesis of architecture, and the whisper of architecture will be heard. The public will be moved, and will say, “architecture has moved me, and has touched my soul.” This is permanence amidst the impermanent.
This thesis book, is submitted by Derek M. Hudson, in partial completion of the Master of Architecture degree from the College of Architecture and Urban Studies in the year of 2003, and the Graduate School of Virginia Polytechnic Institute and State University. The thesis was defended on the campus of Virginia Polytechnic Institute and State University in Blacksburg, Virginia on the 2nd of May, 2003.

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DEDICATION

I would like to dedicate this book to my professors, Mike, Bill, and Frank because they have fueled inspiration when there was none, they have relentlessly given time, effort, and above all knowledge. I will ever be grateful. This book is also dedicated to Raeanna, a great wife. Without her understanding, patience, and care none of this would be possible. I dedicate this book to my Lord and Saviour, he has guided me in times of darkness and unrest, and given peace to my soul. All honor and glory to him!
LAND

Water, Stone, and Light: A Thermal Bath for Eggleston, Virginia
Out of the earth, in Southwestern Virginia, along the New River, a spring erupts. According to Plato, all springs were arranged in a circle underground, and that the springwater flowed from cavern to cavern, as if flowing from cup to cup. His pupil, Aristotle concluded that springs were generated by air that condensed, and dissolved into water in the earth’s caverns by an omnipresent cold. Combining both of these definitions will help conjure our definition. Underground water, warmed by earth’s molten lava, causes the water to collect minerals such as sulphur, it then travels from it’s earthen cavern in naturally formed tubes of about 40 to 60 meters long. From friction of the water moving against the earthy tube walls it warms to 250 degrees F. This heat purifies the water, and exits the earth causing a trickle or geyser with temperatures ranging from 60 to 120 degrees F, and thus the phenomenon of pure, sometimes healing, thermal waters.

The southwestern portion of Virginia is country consisting of beautiful landscape that contains the Allegheny mountain range, and intimate, low lying valleys. The village of Eggleston is cradled in one such valley with the New River knifing through the old, worn down mountains.

The historical bath of Eggleston is the site of the spring, which came into its prime in the 1880’s. This is the site of my proposed bath. Early on, the springs were known as the Hygeian Springs. It was called Hygeian because of the purifying and cleansing nature of the thermal water. The Greek god Hygeia, was the virgin of health, and the goddess of cleanliness.

The typological, and classical tradition of baths are rich in the history of man dating back to the hollowed out baths in Piraeus from 2600 b.c. (shown above). Perhaps no other culture initiated the grandeur, and scale of the baths like the ancient Romans, a society that had record of over 800 baths. (continued next page)

The Romans built baths to the far reaches of their empire, some baths could accommodate up to 3,000 bathers at a time. Sites of the baths in the empire include the large east baths in Mactar, North Africa (above left), and the Hierapolis baths in Asia Minor (lower left). These baths have grown into ruins of rain-eroded, and wind-swept solid stone, lit only by the sun. The massive stone walls surrounded pools of thermal water, bathers moved in and out of stone rooms made to be inhabited. The walls were made with an intention of carving out a place, making a space and place within solid mass. The carved walls are an essential, primal need for man to experience place, place that is immobile, fixed, solid, and secure.

The predictability of the stone room allowed the inhabitant to come to a knowledge, and understanding of the place built upon truth. This is the truth of stone; squeezed by weight, it was a pure, and honest gesture towards making a permanent object. The power of permanence is in the passion of the ruin. A ruin has remained and will continue to remain, to cite Louis Kahn, “what will be has always been.” This is the glory of the ruin, to be a part of yesterday, and also a part of tomorrow.
springwater
THERMAL SPRINGWATER

The Circulation of Waters

Pure, Alkaline, Saline, Sulphur, and Calcic 4
This is the classification of the Eggleston springwater, which is tapped close to the river’s edge, and pumped to the bath site at a velocity of 700 gallons per minute at 94 degrees F. The thermal water is conducted to the baths via two chrome pipes with a diameter of 2 inches. The water flows in unrestricted above the surface of the bath’s small reservoir in the mechanical hall. There the water comes into contact with oxygen for the first time. The iron, dissolved in the water, oxidizes precipitating a rust-red deposit on the floor of the 6 foot deep reservoir. A natural deferrization process. Deferrization is a natural water treatment through the exchange of ions when the water contacts air. A small amount of water is diverted from the reservoir directly to the drinking stone where it bubbles up with its full strength of iron, and natural warmth, and then is dispersed into the pools of the bath. This water is then fed from the fresh thermal water reservoir where the iron has been extracted, it flows into the brass pipes set into the walls, and runs off again into channels that flow into the individual pools.5

The tracing of the water becomes a journey, a journey that comes to an end in each individual stone block. From the heat, and minerals the stone rests as a sealed container to the powerful water.

A Thermal Bath for Eggleston, Virginia
The springwater rises out of the earth, its water being warmed by the earth’s pressure, heat, and molten lava. The stone, sliced out of the earth, is cut, and laid upon the mountain’s meadow, it’s laid layer upon layer, stone upon stone. Absolute Black granite, the water’s companion, made dense, and hard also by the earth’s pressure and heat, accompanies the water in this story of the Eggleston Bath.

The stone can hold several qualities that glorify the water, it can reflect the water, it can diffuse the water, the stone can disperse the water, and it is the enduring quality of the bath. The bath sees different water from day to day, and from week to week. The water seeks its level, raising and lowering with every human submersion. The stone is quite different from the water, it lives on, unchanging in character. It is the permanent element that endures well beyond the rituals of bathing. The stone is in harmony with the water, but it also performs a dissonant note in the concert of the bath. The dichotomy between stone, and water is the exploration of permanence to impermanence, figure to ground, and light to dark.

The stone is the material of the permanent, it is the ground for the figure, and it is the shadow of the light. The stone is the predictable, permanent object, in the unpredictable, and impermanent world.
The truth of light can be thought of as a material, or as mass, in a certain nature. The room gets a slice of the sun, and reveals the truth. Light reveals the nature of a material, it reveals the grain of wood, the joint in the concrete, the texture of plaster. We can rely upon light to fill the room, it fills the volume, and can become a solid mass of light. The goal of this light is to touch the soul by glorifying material, and to find the poetic meeting of man and spirit.
Different rooms require different light. In the place of the public, the communal hall, light must be the summum bonum, the highest, and best. The light that pours in from the hole must be manipulated, it must be filtered or shaded to bring comfort to man. Due to the intense power of the light a filter sifts the light from above and allows an ambient light to permeate the hall as it seeps down the walls of stone.

This light pierces the overhead concrete lids. The cavern implies a place of darkness, a place hewn out of the earth and lit by a crack of light in the ceiling of arching earth, and stone. The cavernous light brings forth the age-old knowing and understanding of such light.

The light of the shaft is a light that falls from above and makes a volume in the room. The light reflects itself against the vapor of steamy water and allows the shaft to come into being.
A Thermal Bath for Eggleston, Virginia

nature and order
Water and Stone.

The springwater in the bath is a homage to its nature. The water is not acted upon by gadgetry, water sprays, jets, or bubbling water technology. The water is presented in its natural state, its order is restored as it enters each bath. It flows, out from walls, and trickles down surfaces of solid stone, it splashes upon surfaces of water, stone, and naked skin. The powerful water carves a path upon the floor, which flows into larger containers made of stone. The water is made for the rediscovery of the ritual of a primitive, and primordial experience, it is made and ordered to intensify the qualities of stone, and light.

Heavy, squeezed, blocks of black granite, this is the canvas for light. The stone was made in relation to the question, and investigation of the order of it. The stone, laying layer upon layer, is static, it is made through the detail of its nature. The stereotomic mass is cut and dressed for the tectonic meeting of floor to wall, wall to arch, and wall to ceiling. The stone is thought of in this way, it was thought of from the beginning as the container for water. The stone is made to receive weight, it is made into carved out spaces of texture, and light that receive water, steam, color, noise, and reflection. The stone is dressed appropriately to fix the painting of light, it is dressed in rough cut, flamed, and honed finishes for the casting of light and shadow, and for the need of touch by naked skin. The stone is stone, and it shall endure.

This is the story of water and stone. In the story, the light is the pen that writes its chapters on the building.
The Beginnings:

From upon the mountain one can feel the brisk wind coming from the north in winter. With a cover of snow the place becomes silent, and crisp. The summer wind sweeps in from the southeast, and the sun melts away the snow letting the meadow grasses grow. The place changes, and smells of spring air, and of river rapids churning up the pristine quality of the New River water.

The building is ordered around the encompassing path of the sun, but more precisely, it is ordered around the path from sunrise to sunset on the winter solstice. The rising sun of the winter solstice pierces the spine of the building, the communal hall, which is parallel with the spine’s long axis. The setting sun of the winter solstice rests through the opening in the bath’s short axis.
Stone enjoys pressure, and weight, it feels comfortable under the heaviness of itself, and what it carries. The stone is of the world of Ruskin, a place crafted by the stone mason, a world of mass and shadow. The concrete is made into parts and pieces, an assembly of tilt-up and site cast concrete. It is a world of assembled pieces that mediate the stone’s touch. The concrete is about surface, and machine, it lives in honor of the mode of modernity. The formal order for the bath is the stone, heavy, and crafted, supporting the tectonics of constructed concrete.
In the order of the building, the plan is the generator but it is through section that we perceive architecture. We are given access to the plan through the thought of the ruin. Taken from this book are the sketches, models, and sections, they are the bath, and place of life. We will be taken through the bath by the drawing, it gives up secrets of its making, power, light, darkness, heaviness, and joy. We can see the people move about the bath enjoying the water, and light. The plan is the ruin of drawings. Like a ruin, the plan reveals the geometry, and order of the building. It places, on record, the thickness of its walls, and the making of place, steps, and stone floors. With each drawn line the plan is made. Layer after layer, the floor, the steps, and their stones, the seats and their stones, and the walls and their arches and stones are made.

The rooms are revealed through their mass, the beauty of the mass as a room is its power to have a place carved out of stone. Carving away to make a place gives glory to the wall, then the room, and ultimately the building. In the main pool mass is carved again, and again, it is carved away to be columns that come and touch the floor. The private pools have been made by the less generous carving out of the room. The order of those pools are made through the mass of their walls.
The project evolved to the sectional quality of the bath. The question “what can a roof and ceiling become?” was explored in section. The section as a drawing tool allowed the expression for the main themes of the bath to be explored. The concrete lids and their direct connection to the stone was studied through the section. The lids informed the study of space and light, and then questions arose.

What was the nature of the light in relation to the space, and what was the nature of space related to the pools, and to the floor? The concrete lids were designed in accordance with the room that it covered. Each lid allowed for the sun’s light to pass through. Shaft light lids were for the main events for the bath. The lid is a modern equivalent to the vault for the relation to stone arches in the pools.

The pools are the place of water and relaxation, central to the notion that man can experience the power of place. The pool reflects the vaulted roof, and is made by the floor submerging into warm mineral water, while the roof above moves towards the sky, elevating man’s senses to a greater good. The greater good is the summum bonum, it is the sensus communis that Emmanuel Kant expressed in his treatises of judgment, “the sensus communis is the aesthetic value that is enabled in all human life, the common sense.”
In this sectional study, the community hall, the main ordering element of the bath, was studied in relation to light and space. Light enters the communal hall through a filtered lid. The filter allows for the hall to be illuminated with light, and is a room for the public. As one exits the pools, the floor steps up along with the hall’s concrete lid. The hall lid pokes its head above the pool lids, enlarging the spatial height and structuring the sectional hierarchy for the bath. The communal hall lid was one of the first studies of tectonic connection, and qualities of roof to wall.

An important finding was when the concrete became a true lid, slipped onto the stone, and encapsulated the space. The stone gives the concrete places to rest, it is the mass that is carved, and shaped to make places where, upon the stone, the concrete sits.
A Thermal Bath for Eggleston, Virginia
The changing room light is different from the communal hall, and pool light. The changing room is the place of darkness with slits of light to mark place, and shafts of light to mark the beginning and ending of the line of the room. The changing room is a private place where one can remove their cloth facade. Within secure walls, a dark, private, and warm mood of blue shadows and yellow light, induce a feeling of security and archaic simplicity. A simplicity needed to reduce the body and increase the soul. The sensuality of changing is the removing of the cloth facade, and exposing the soft spirit of the heart, and soul.
South Bath Section

A Thermal Bath for Eggleston, Virginia
The section of the bath answered a question of the roof articulation. It answered, through the demand for light and space, that there must be an order appropriate to each space. The quality of the vaults in the bath complemented the order of space. The main bath, used by everyone coming to it, is the common bath, the bath for the public. The vaults honor the pools of water, and the surface of the water becomes the pool floor.

It is the water’s floor that reflects light, image, surface, and sound. Through the experience of these moments, the water’s surface becomes powerful. The vaults recognize this power and raise up to honor it. In the garden hall the roof is inarticulate concerning the sense of depth. The ceiling is flat and the response of the room is to the outside garden. In hierarchical terms, the garden hall pays homage to the vaulted rooms, and baths.

This became the order for the baths, it is consistent throughout and the pools of water are glorified by the expansion of the space. The order of dry rooms are made through the intimate nature of the ceiling plane responding to a function.
A Thermal Bath for Eggleston, Virginia

North Bath Section viewing Eggleston Cliffs
What is the power of light? Is it the light itself? Is it the silence of moving texture? Is it the darkness? Louis Kahn noted that, “the room never knew how good it was until it had a slice of the sun.” In terms of the goodness of light Plato records that light is the “memory of God.” What is missing in these profound statements? It is the darkness.

A great pleasure for man is for him to walk from the darkness into the light, to feel the warmth upon his or her brow. The light is powerful, it is light that melts away the shadow, it is the piercing knife that cuts the canvas of the morning darkness. On the other hand the missing element, in these statements, which cause them to be in grave error, is the human. We are made of light, men, women, and children are spent light, pure and white. It is our nature to walk in the light, we must talk in the light, and this is our desire. To talk in the light is to talk of truth, for it is light that reveals. Deception is of the shadow, for darkness hides the revelation of what the light makes. The light that shines from within comes out of the eyes which lead to the soul.

The soul of the building is pure water, the men, women, and children enjoying the bath are spent light, they are the ones for which the stone is made.

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6. “What Will Be Has Always Been” Louis Kahn
A Thermal Bath for Eggleston, Virginia
A refinement is made with the concrete lids in relation to light. Concerning detail A, and the north side of the concrete lid, which meets the communal hall lid, opens up to the north light admitting diffused light. The light is appropriate to the north side of the baths; the northern side receives subdued light with openings to the Eggleston limestone cliffs. The northern baths are private, and intimate, pools for one, two, or three, where the tactile nature takes over the senses, with water spilling out from within walls of stone.

The revised monitors, next to the communal hall lid, tells the bather, through the experience of light, that there is a threshold, and a change of pace. The south monitor acts as the same type of informer, the south emits different light, different in color and intensity, which is a part of the type of light in the southern pools. The southern pools are for the public, open and bright, and with light warming the naked skin of the bathers. The light pours in from around columns of stone, and they make a place to experience the warmth and texture of the water and light.
A Thermal Bath for Eggleston, Virginia

Changing Room Section and South Elevation
Arches are the fabric of the woven room. Although separated by rooms the arches contain an order unique to themselves, but they also share an order that is contained within the whole bath.

The springline of the arch is important, it tells the mason that, at a certain point in the layer of the whole building, every arch begins. When the arches are born, and made, the springline becomes the blood that gives the family of arches their life.

The building, from the beginning was thought of as stone, but was it being drawn as stone? No. The stone was drawn as brick masonry, the stone had to be manifest, and made. The stone arch is the figure of the building, and the wall is the ground for the figure. There is a difference in the nature of masonry materials. The brick is broken by the mason, and he or she fits the brick to corners or special conditions. The stone is cut and delicately laid. The power of it is that while being cut it cannot be broken in spirit. It remains a solid, self-serving, independent containment but suppresses itself by helping support a whole. In a sense, the will of the stone is broken, but the spirit remains.
A Thermal Bath for Eggleston, Virginia

Nude Baths and Communal Hall looking Northwest
The rejuvenation of man through the bath.

From being cleansed by water, to the walk of life, light guides and leads, to and from times of darkness. Human senses are massaged by light with its scale, intensity, reflection, diffusion, and color.

The water is the connection between stone and body. It softens the skin, and dilutes the senses by its warmth, color, smell, and texture.

The stone, a smooth, yet hardened object, cradles the body in the rejuvenation of man. The stone is made, remade, and remade again to fit the profile for naked skin, which is the ultimate goal for the thermal bath.
Longitudinal Section through Communal Hall

A Thermal Bath for Eggleston, Virginia
The Communal Hall is ordered by the line of water that is cut into the floor. It structures the beginning of the floor as the entry pool (far left). The drinking stone is the second part in the tripartite order of the hall, it is the place where everyone can enjoy the water at one point, and it connects the secular changing rooms to the sacred pools. The Morning Pool, closest left, is the third, and final structuring point in the hall for the public, the end of the water’s journey.

The contemplators of light.

What value can be given to thinkers? The thought of man as a part of light provokes us to contemplate the ideas of aesthetics by trying to make sense out of a star that gives its life to the universe. The sun unifies all things by the power of its light, it unifies the cycle of the earth’s growth and death, the seasons, and our time of day. This is why we contemplate the light, to feel and see the cycle of life that the sun gives, and to know that we are a part of it.

The Communal Hall is ordered by the line of water that is cut into the floor. It structures the beginning of the floor as the entry pool (far left). The drinking stone is the second part in the tripartite order of the hall, it is the place where everyone can enjoy the water at one point, and it connects the secular changing rooms to the sacred pools. The Morning Pool, closest left, is the third, and final structuring point in the hall for the public, the end of the water’s journey.
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The Bath of Light - 100 degrees F
As the sun sets on the pool of light, the wall, as seen in the sketches, reaches out to grab the light. It grabs it and releases it into the pool, making a trace of texture, and surface upon the split-faced stone.

The southwestern Virginia setting sun is an event of beauty. To have a slice of the evening, orange sun illuminate the wall of stone may remind us that a gracious, fiery star lights our world. It is the bright and powerful star which dissolves the darkness. It takes 13 minutes for the light of the sun to reach our earth, traveling at 186,000 miles per second, it seems only fair to give it a voice and to let it sing.

The ending of the light’s journey is the beginning of it in architecture. It illuminates the darkened corners, and gives humanity courage to face another day.
1 - Entry, cleansing pool, waiting areas, and check-in
2 - Male and Female changing rooms
3 - Communal hall
4 - Garden hall
5 - Garden
6 - Mechanical hall
7 - Male and Female nude baths - 100 degrees
8 - Single lounge bath - 97 degrees
9 - Triple lounge bath - 97 degrees
10 - Dry lounge and resting area
11 - Northern exterior bath and lounging
12 - Physiotherapy bath - 97 degrees
13 - Dark bath - 105 degrees
14 - Sitting bath - 100 degrees
15 - Axis bath - 115 degrees
16 - Morning bath - 65 degrees
17 - Bath of light - 100 degrees
18 - Communal bath - 90 degrees
19 - Southern exterior bath and lounging
“All my fresh springs shall be in thee.”
- Psalm 87

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BIBLIOGRAPHY


<table>
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