Bath House:
Corporeal Consciousness & the Permeability of Space

by

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σε αγάπη.

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images

background
Ewing, The Body, p.49 4

ear
Ewing, The Body, p.48 4

woman dancing
Muybridge, Human Figure in Motion, p.149 12

detail of conceptual model for the bath house
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The economic structure of our society requires that people work long hours, leading to increasingly stressful lives with few outlets for the rejuvenation of the mind and body. As a society we have focused on acquisition and competition. Our material possessions have take precedence over our identities. We are disconnected from our bodies and minds, and on the occasion where the spirit is willing there is no outlet. Within the urban environment places that offer tranquility, rest and relaxation are limited. This thesis explores architecture as a means of allowing the user to both physically and mentally enter the realms of relaxation, contemplation, and rejuvenation. My intention is to create a series of spaces where the experience promotes an understanding of the body's relationship to the mind, environment and others in that environment. I have chosen a bath house to exemplify this.

Historically, the bath house has offered a ritual that fulfills the needs of the body, mind and spirit. In many countries, bath houses continue to offer social interaction and relaxation. However, placing a bath house in the United States inherently contains many issues besides the experiences specifically designed for rejuvenation. It engages the image of the body and that of a culture that exists in our society today.

In our puritanical culture the body is considered taboo, it must be covered up and hidden. The body is not viewed as a part of nature, but rather, it is sexualized, popularized by the media. The bath house is steeped in rich social history in many other countries, but here, the history of the bath house began as a way to mentally and physically cleanse the poor in the late 19th and early 20th century; and more recently, during the 1970's until 1985, considered by some the playground for homosexual promiscuity before the Aids epidemic. For many the image of the bath house remains decadent and disreputable.
map, p11
Sanborn Map, New York City
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Abstract

New York City
Row Houses, Two

Dense Urban Fabric

Water

Work, Work, Work

Light

Lower East Side

Screens

25' x 200' long

Comfort

Abstract
**Site & Program**

The site is New York City's Lower East Side, specifically 258 10th Street and 417 9th Street. Together these addresses make up a lot that is 25' x 200'. This particular location has the potential to serve different classes and cultures. Presently, a Turkish and Russian bath house exists at 258 10th Street. However, it remains dense and dark, like its surroundings.

Inserting a bath house into a densely populated urban environment allows it to become an easily accessible part of the community, with entrances on both sides of the block. The new bath house is a public facility, maintained and operated by a private foundation. There is a small fee for the use of the facilities, but no membership is necessary.

The program consists of a bath house and a cafe. The cafe is the 10th Street entry. The bath house offers a more direct entrance from 9th Street, which leads directly to the entrance lobby, in the center of the building. Once inside, the user encounters changing rooms, bathrooms, and showers, flanked by vertical circulation. After changing and showering, small bridges lead to the other programmatic elements. The hot plunge pool is a communal hot pool and is a counterpart to the gathering space of the cafe high above the lap pool which spans the entire block, just below street level. Finally, the steam bath, next to the roof garden, provides an interior space on the roof.
image

poster, p17
Williams, p105

front door of 10th Street bath (above)
BATHS FOR EVERYBODY
ALGASKILL ST.
5C
FOR COMFORT, FOR HEALTH, FOR CLEANLINESS
78 WOOD ST.
5C
images

concept sketch, p 19

view from 10th Street of the cafe and reading room, showing light effects (noontime), final model, p 21
Corporeal consciousness is to be aware of one's body and mind simultaneously. Permeability of space is the creation of varying degrees of privacy through the use of screens and distance. Together, these concepts define the architecture of the bath house.

The site is 25' wide x 200' long x 55' high. A 20' easement in the center of the lot has been assumed allowing light to penetrate the bearing walls. The height of the walls has been determined by the surrounding buildings to allow for maximum light. The 55' high walls are polished reinforced concrete and support the structure above. Columns rest on the walls to raise the 2' deep steel beams 6' above the walls for sunlight. The lap pool creates the ground plane of the bath house. The programmatic elements are hung from the beams above. Steel tensile members descend from the beams and hold the floors 1' from the walls. Light, tentative connections to the bearing walls provide stability. The building elements are floating above the water floor.

Ideally, to avail oneself of the complete experience of a bath house means than one experiences the physicality of the structure in conjunction with the overwhelming sensory input: varying states of water, light, sound and other people. At its most simple, water is physical through touch, smell, taste, sound and reflection. Upon further contemplation it implies purification, spirituality and regeneration. The changing states of water play a significant role in the bath house. From the cool temperature of a lap pool, where the clarity in the air matches that of one's mind, to the hot vapor of the steam bath where the impurities of both the body and soul are expunged, water becomes the constant that carries the individual from cleansliness to sanity. The act of entering a bath house is more than just the desire to clean oneself. It becomes a time set aside for relaxation. The intention is to let go of everyday pressures and realize that the body and mind must be nurtured in order to survive the daily routine.

The primary experience of a rowhouse is dense and dark; this design creates a light transparent space in the city, a refuge. This concept is seemingly at odds with the creation of privacy and comfort. Comfort is the prime concern in the bath house. There is vulnerability in being naked. Being at ease with oneself and others can be created by screening, materials, and position.
section through hot plunge pool and massage rooms (left)

9th Street elevation showing ramp entrance. The facade is a polished concrete panel which continues the edge with clear glass behind. (right)

cross sections, elevations & model
10th Street elevation. Again, a concrete panel hangs to continue the plane of the street facades. View into the cafe and pool. (above)
view of cafe and reading room from 10th street (right)
section through cafe and reading room (left)
Roman bath at Plombiers, 1553, woodcut, p.26
Croutier, p.84.

Floating bath house, NYC (above)
Williams, p.19.
images

view of bath house entry bridge from cafe, final model, p31.
Entering from 10th street, the floor of the cafe, 9' above street level is polished concrete to offer solid footing as a transition from street to bath house and public to private. It is suspended 14' above the pool, allowing views down to the swimmers. This is a more public entry than 9th Street.

The cafe is not only a physical threshold, but a mental one. If the assumption is that there are those who would be unwilling to enter a bath house, the cafe provides a more familiar experience in order to make a person more comfortable with the environment of a bath house. Here the bath house entrance lobby can be seen through a screen by the light emanating from the center of the building and the shadows of bath house patrons climbing the stairs.

The reading room hovers 24' over the cafe. The wall facing 10th street is opaque and large signalling a private space behind, the floor is made of frosted glass panels which allows soft light and shadows cast by the sky light above to be seen from the cafe.

The bath house entrance is beyond the large glass panel, a steel grate bridge connects it to the cafe. The material of the floor changes from concrete to a steel screen, changing the sound of footsteps, allowing light to filter to the pool and creating a threshold to the bath house receiving level.
conceptual model view from 10th Street, this model was an early indication of the use of a suspended structure where the space was read by vertical divisions -screens to judge distance with varying degrees of transparency until the very private totally opaque cube in the center.

plans, section, model
model, sketch

view of reading room, late afternoon (left)
view of reading room, early afternoon (above)
sketch of cafe and reading room (right)
detail of reading room frosted glass floor and glass panel defining the bath house(above)

view of cafe and reading room at midday, the frosted glass floor of the reading room casts soft light, the skylights at the roof plane illuminate the pool(right)
*images*

man diving (above)
Muybridge, p31

Ruusuvuori Sauna, p37
Viheyuuri
image

view of bath house receiving level from 9th Street, p.41.
The entrance from 9th Street is much more direct. This goes directly to the bath house receiving level. Here, the facade is a layer which one passes under, indicating the beginning of an entry that brings the city into the bath house as the ramp is an outside space. The bather travels up along the wall on a reinforced concrete ramp, until the center of the building is reached. Along the ramp and from the sidewalk there are views into the pool area.

The pool is the ground of the bath house, setting the stage for reflections and sound to echo throughout the building, bringing an awareness of the entire building and inhabitants while animating the space. The swimmers are exposed to most of the building through sound and views. However, from the sidewalk, the stairs form a barrier to the view of the swimmer. Reflections, shadows and the floors of the cafe and the receiving level provide comfort for faint of heart.

The bath house receiving level is flooded with light from the 20' wide x 62' high glass windows that interrupt the bearing walls. Its floor is steel grating, like the bridges, allowing light to filter down to the pool. The bather receives slippers and a towel before moving up the stairs to the changing rooms.

The journey up the stairs to the bathroom/shower core extends towards the cafe over the lap pool. The railings are wood, it is warmer than steel. The wooden treads feel more solid than the steel grating. As one walks up the stairs the body exerts itself to climb while stepping on a different surface than the bridges. The sound changes. The railing remains constant from the stairs to the bridge, connecting the two at the scale of the body - the hand.

**Bath Entrance & Lap Pool**
conceptual mode (above)

view of entry ramp from 9th Street (right)

early sketch of bath house entry level looking towards 9th Street (inset, opposite page)

plan, section & model
model, sketch

sketch of pool with bath house receiving level above, looking toward 9th Street (above)
detail of ramp to entry and pool (center)
reflections and shadows: view of lap pool from 9th Street showing toward building center, (left)
light and reflections: view of lap pool showing space under bath house receiving level at the center of the building, taken from 10th street (above)

layers of screening allow light to filter down to the lap pool. detail of elevator and bridges (right)
Roman de Girart de Nevers et de la belle Euriant, above, Crouetier, p89 3

a contemplative bather, p47
Grilli, Levy, p29 7
image

view showing bathroom, changing room and shower core, p43.
The bathroom, changing room and shower core offers layers of privacy. The bathroom is an open space where the toilets are separate rooms. It is unique as it is the only programmatic element which allows complete awareness or total privacy. It is the measured center of the building. There are views through to the cafe and out over the receiving level, above and below. The sinks are hung off the structure with exposed plumbing and there is a small seating area.

Above the bathroom are the changing rooms. The entrance to the changing rooms is a shared threshold where the sexes join and then separate to their own rooms on each side of a common wall. The showers are above the changing rooms. The floor of the showers is 4’ from the bearing wall to allow light down to the changing rooms, which in turn emanates down to the bathroom through a frosted glass floor.

The showers are individual rooms and very private. The stairs to the shower become smaller as the bather climbs from the changing room level to the two shower levels. Built by opaque glass, the shower walls reach up beyond the concrete walls to allow the light from outside to illuminate each one.

After showering, the bather then moves along bridges and the vertical access (either elevator or stair) to reach his or her destination.
sketch showing detail of wood railing hung from tensile members and the tentative connection of I-beams to bearing walls.

plans, section, sketch, model
reflections: detail of glass panel next to vertical circulation (above)
model
view of center of building from 9th Street showing layers of privacy: showers are most private with two layers of screening, opaque glass for reflection and the changing room screen which extends to link the two elements, the bathroom is the most open with views in two directions.
images

The Sacred Spring Reconstructed, above
Croutier, p119

women bathing, p57, large
Grilli, Levy, p149

steam bather, p57, inset
Grilli, Levy, p29
image

view from 9th Street entry up toward underside of hot pool, p61.
The massage rooms, hot plunge pool and steam bath are all designed to provide different environments. There are three massage rooms. The bather experiences one of the most private situations during a massage. Each room has a separate 2'-6" wide bridge that connects it to the more public 4' access of the bath house. The rooms are located below the hot plunge which casts a shadow by its size and compresses the space above by it's form. This creates a calmer environment. The wood becomes the primary material of the floor and walls to offer a warmer, more familiar experience.

The hot plunge is the most communal element in the bath house. The access to the hot plunge employs frosted glass walls for privacy and to indicate an arriving bather. The floor of the access threshold is glass block to illuminate the bridge below. Located just below the roof plane, the communal nature of the hot plunge requires more height than the roof allows. A tensile roof structure extends beyond the roof plane to allow light to infuse the steam creating a voluminous space.

The steam bath is perched 3' above the roof surface and can be reached by the interior stair that flanks the bath and shower core. The steam bath is more solitary that the hot plunge. It is smaller in size to control the temperature of the steam. Heavy opaque walls form the enclosure and steps for seating climb up to rise with the steam and heat. Light is specifically channeled through skylights to create a controlled environment.

Upon exiting the steam bath, the bather has the choice to rest in the sitting area at the top of the stair or continue to the roof deck, outside. The roof deck and garden is also accessible by the elevator core. The roof offers views of the city in every direction. The trees screen the bathers from the sun and give additional privacy.
roof plan

view of roof top (above)

side view of conceptual model, p53 (inset) this model was the starting point of ideas that were later worked out in the design.

plans, section, model
model
view of massage rooms and hot plunge, p64 (far left)
view of entry to hot plunge from 9th Street side, p64 (center)
view of steam bath entry from stairs p64 (upper right)
hot plunge bath: tensile roof structure, p64 (bottom right)
detail from conceptual model; transparency, privacy, steam (below)
view of hot plunge from second level with glass block access contrasting the dark heavy volume of the plunge.(right)
This thesis has been the beginning of an exploration into understanding how I think about architecture. How to create a space that responds completely to the inhabitant, combining structure, materials and nature to support a conceptual idea. So that the building encompasses the present influences of society including images and perceptions, spatial and psychological. I have used this exploration to gain a better understanding of what architecture is and all it encompasses.
josephine baker, Colomina²
Bloomer, Kent & Charles Moore 1
Body, Memory & Architecture

Colomina, Beatriz 2
Sexuality & Space

Croutier, Alev Lytle 3
Taking the Waters: Spirit, Art, Sensuality

Ewing, William, A. 4
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Gerhard, Wm. Paul 5
Modern Baths and Bath Houses
John Wiley and Sons, New York, 1908.

Giedion, Siegfried 6
Mechanization Takes Command

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Hobsbawm, Eric and Ranger, Terence 9
The Invention of Tradition

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References*

*All text and images by author unless otherwise noted.
Merceret, Honor
Our Plumbing, Ourselves: A Public Bath House

Muybridge, Eadward
The Human Figure in Motion
(figures in the section drawings are also credited to this author).

Rakitansky, Marc
“Identity and the Discourse of Politics in Contemporary Architecture”
Assemblage, Vol. 27, pp9-18, 1995

Sennett, Richard
Flesh And Stone: The body and the city in Western Civilization
WW Norton, New York 1994

Sennett, Richard
“Plate Glass” and “New York Reflections”
Rariton, V.10, summer 90, pp1-23

Vihreäniemi, Hiuari Johannes
Sauna: The Finnish Bath
Otava, Finland, 1960.

Williams, Marilyn Thornton
Washing “The Great Unwashed” Public Baths in Urban America, 1840-1920
Ohio State University Press, Ohio, 1991

Wright, Lawrence
Clean and Decent, the Fascinating History of the Bathroom and The Water Closet

Yegul, Fikret
“The Thermal-Mineral Complex at Baiae”
image

10th Street Bath House, p73.