Re-Presenting Memory

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ABSTRACT

My architectural thesis began with a desire to investigate the relationship between old and new in architecture.

Each city has a history of its own, with old structures and new structures that are in constant dialogue, perhaps directly next to or within one another. The questions that arise from this dialogue captivated me to investigate what my own architectural response would be in such a context. I looked to the architectural joint at various scales, from the parti at the scale of the city, to the point where your hand makes contact with the building. The study of the detail provided an opportunity to heighten the architectural experience and capture a moment that would show the true nature of time.

I searched my architectural imagination for answers (and more questions) through the scope of a proposed renovation and addition to an existing duplex structure located in the Le Droit Park neighborhood in NW Washington, DC. The program is a residence, studio, and gallery for a professional potter.

Sketch of threshold condition, Querini Stampalia Gallery
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The selection of the site was the most important part. The thesis was to be a response to and direct result of the chosen site. I looked to the city to give me a place to address my questions and search for answers. Scouring the historic neighborhoods of Washington, DC, I stumbled into Le Droit Park. The neighborhood was full of late Victorian era homes with steeply pitched roofs and ornate wood and brick work. The intricacy of the detailing in these historic homes kept me exploring the neighborhood. As I explored, I came upon a very peculiar house. The image to the left is a picture taken in 1978, of what appears to be half of a house. The house exists today on the site in almost the same condition. I was immediately taken aback, and I knew from that very moment that this was going to be the site of my thesis project. I then set out to find all the information I possibly could about this house.
While pursuing my research, I learned many things about the house that would be my site and its neighborhood. The house had once belonged to Mary Church Terrel, a prominent black female in the DC area from the early 20th century. The structure had received a historic designation in the 1980’s because of its previous owner.

The structure itself had an interesting history. Many of the homes in the Le Droit Park neighborhood were constructed in the 1880’s and 1890’s. It was one of the first neighborhoods to cross Florida Avenue, the historic North West border of Washington, DC in the L’Enfant plan. This house was constructed in 1894. The home was built as a duplex, with a fire wall separation at the center of the gable roof, making two homes appear as one. In the 1940’s, one side was so badly damaged in a fire that it had to be torn down, leaving the other half intact.

The building intrigued me from the moment I saw it. The duplex was built to look like a single family home, but it was actually split in two at the center. This resulted in an interesting situation when one half remained. The structure looked incomplete, it lacked its ‘other half,’ but logistically it existed a complete home.
As I researched the history of the site and the house, I began exploring the theme of the twin.

The immediate response upon seeing the house is that something is missing. It lives as a single twin. It is missing the other half, the complement - or completion. Structurally it can exist on its own, but architecturally it feels strange.

I began to delve into the study of the history of human twins. There is often an air of peculiarity that surrounds identical twins. When in the presence of twins, one sees how alike they can be, and at the same time how different they actually are. Twins have been portrayed in history as denoting both union and separation, joining and parting. They can be described as having a “tight but troubled alliance” (Lash, 6). Twins are not perfect balances (i.e. yin and yang), and they are not polar opposites. They are an in-between, a trick of near-symmetrization. They are a “special case of duality in its mode of self contradiction, a non-resolving duad” (Lash, 13). The image on the right shows a set of twins as photographed by Diane Arbus in 1967. This photo is part of a series, focused on the lives of people on the fringe, some might even use the work ‘freak.’ The inclusion of a set of seemingly normal twin girls in this series may seem strange, but human twins have always had a sense of strangeness about them, the same way that a likeness of oneself is seen as strange. The idea of individuality seems challenged within the relationship of the twin.

Architectural twinning has a similar relationship. Sometimes, twinning in architecture can be as simple as axial symmetry. Classical architecture is built upon the beauty inherent in symmetry, whether axial or radial. Other times you can see peculiarities within architectural twins. Le Droit Park has a hand full of architectural twins (duplexes)
and each of them have their own strangeness. As people move in and out, you begin to see slight changes in the appearance of the houses. In the image below, a porch has become a wrap around that swallowed the bay window, whereas the other twin still has its porch awning and bay window as two separate pieces.

Another means of twinning is through the mirror. Creating your own twin is as easy as looking into a mirror, or in the case of Narcissus, a pool of calm water. The image you see is a twin of yourself that mimics your movements and expressions. The same idea can be seen in Carlo Scarpa’s Querini Stampalia Gallery (image on left). The water from the Venetian canal is allowed to enter the building, and when it covers the floor of one of the gallery spaces, we see a reflection on the water. The shallow water allows the floor to still be seen, and now there is a dialogue between floor, wall, and ceiling; the old and the new, a palimpsestic composition is created that layers these elements on a temporary canvas. But in the true sense of the twin (especially in the case of human beings) this reflection is a falsification, for it is only creating a likeness in reverse. In order to see a true twin of oneself, two mirrors attached at a perfect 90 degree angle would be required. This would create a perfect likeness in the true way that one is perceived by others.

The complexity in the relationship between twins became a lens through which to evolve my thesis question with more focus on the site.

What should the ‘other half’ be, and how can it be an opposite and a compliment?
I turned to my drafting board and began to draw.

Looking to learn everything I could about the existing site conditions, and without access to as built drawings, I counted bricks and drew the face of the existing building. That north elevation led to the side and back elevations, which allowed me to construct a floor plan, and with a bit of architectural *metis*, I was able to reason the construction details and determine the existing floor elevations. I absorbed the existing site conditions through my pencil and parallel bar.

I began with a series of three drawings to learn as much as I could about the plan, section, and elevation of the existing structure. Each drawing was not a documentation, but rather an investigation, a way for me to walk the site with my pencil. In order to be able to use the existing structure as part of my thesis, I had to know it inside and out.
Once I had a basic understanding of the site and building condition, I had to get into more detail. The site dictated that the my architectural intervention’s north elevation would be one of the most important design decisions over the course of the thesis, so I started there. By increasing the scale to $1/2'' = 1'0''$ I allowed myself to start to inhabit the existing building. I drew every brick as if I were constructing the building, carefully and intentionally.
LISTENING TO THE SITE
the architect, alchemist, and potter

As I spent months counting and drawing bricks, I began to ponder the last big piece of the thesis puzzle, the program. What program would allow this thesis to be fully explored, and allow me to search deeper within my architectural imagination? The program I had imagined before discovering the site was one that involved a live/work combination for some sort of artisan. Someone that moves through the site intimately and intentionally, using all parts of the site and program.

In order to find the program, I had to listen to the site. I had to hear what it was trying to tell me. A program that was of the site, instead of placed on the site, began to reveal itself to me.

The rich history of the site led me to the craft of the potter.
Approaching architecture as an alchemical process pushed me forward and drove me into the beginnings of my own design process.

The alchemists of the middle ages were infamous for their scientific endeavor of attempting to transform metals into gold. But the true goal of the alchemist was to reach a point at which they could obtain the philosophers stone, the key to immortality and infinite knowledge. In order to achieve this feat, a rigorous and ambiguously exact process had to be undertaken. The process started with a *prima materia*, collected by the alchemist and cleansed, to be used as the base for the chemical experiment. Upon collection of this material, whatever it may be, the alchemist was to cleanse it, rid it of impurities and make it usable for the experiment. An elixir was then prepared, to be combined with this material. A cryptic method of description was used in alchemical texts, as to not reveal the exact nature of these ingredients, such as “dry water that does not wet the skin” or “a fire burning with no flames” (de Rola, 10). When the elixir had been prepared, it was to be combined with the *prima materia*, placed into a sealed vessel, and heated at a constant temperature for long periods of time. These two elements would fuse into one, creating a perfect union. The resultant material then works it way through multiple stages of fermentation, a process of chemical changes. The end result of this time consuming and exact process was supposed to be the philosophers stone.

With the alchemical process in the back of my mind, the similarities between the process of the potter and the history of the site began to reveal themselves as I absorbed the half house through my pencil.

The potter is a craft that is as old as history itself. Since the time of ancient civilizations, man has taken clay from the earth around him and shaped it into pottery. I found the process of the potter to have
many parallels to that of the alchemist.

The potter first prepares the clay, the medium in which they work. The clay is worked with the potters hand, removing impurities such as air, and ensuring a pliable homogenous \textit{prima materia}. The potter then begins to shape the material. The clay is stretched, loosened, made more pliable and forgiving, yet still able to hold its shape. Once the desired shape is reached, the clay is allowed to dry until it is stiff to the touch but still able to be worked. If a piece was thrown on the wheel, this is the stage in which it is trimmed, removing some of the impurities that resulted from the first shaping of the clay. Then the bisque fire, which removes all moisture from the piece, and gives it the form of terra-cotta. Once it has gone through this first firing, the piece can be glazed and then go in for the glaze firing. The glaze is a thin coating of clay with various elements that react to the heat to produce beautiful, vivid colors and textures. The piece is now completed.

The architect of this house, 120 years ago, began to prepare his work. He worked it, through many iterations on his drawing board, into its final form. He sculpted the building with his mind, and later with the hands of others. The same way that a potter must allow his piece to go through stages of finishing, the building lived for 50 years like this. And the same way that fire breathes permanence and rigidity into a piece of sculpted clay, the fire on the site gave a new life to the half it left behind. It gave the remaining half permanence, by leaving it as a relic, or a memory, of a whole that used to be.

When the similarities showed themselves to me, I couldn’t turn away. I saw what the program had to be according to the site, and I saw the importance of fire as an element and an anchor.

Fire led to permanence.
While I was listening to the site to learn its programmatic desires, I was also listening for its architectural desires. In no way did I see the site as a *tabula rosa*, in fact it was quite the opposite. It is the missing piece of the site that heightens the awareness and experience of the remaining structure. I had to approach this architectural question by examining what my stance would be on the history of the site. Should I create a form that recreates what used to be on the site, or should I impose my own will on the site?

Federica Goffi writes in her essay *Carlo Scarpa and the Eternal Canvas of Time* that “to restore implies a false inversion of time.” The notion of historical restoration is a falsification of the reality of the time in which work is done. Architecture is something that lives in the realm of the time in which it is constructed, so if there are historical aspects to the work, they can be heightened and given a contrast through the juxtaposition of old and new, and that new union is what can clearly compose one’s sense of time, allowing the observer to delineate between historical and contemporary.

While the documentation drawings were underway, I had already been formulating thoughts about the existing site conditions, and thinking about the architectural parti. Through the medium of collage, I put some of these ideas on paper, and immediately found myself drawn to the void. The missing half is what gives the existing building its character. If there was a way to heighten one’s sense of what was missing, inform the observer about the history of the site, and tell the story of the project, that would be a powerful element in the overall architectural design.
With a program and *parti* in mind, I dove into the process that would eventually lead me to my architectural interventions. My architecture developed through constant shifts in drawing type and scale, searching from the macro of the city/neighborhood to the micro of the detail.

The plan, section, and elevation drawings became the tools through which I tested ideas. Attempting to move fluidly through them became a challenge, but it also sparked new thoughts and revelations.

As I walked across the plan with my compass, or constructed a facade from the ground up with my pencil, my architectural imagination led me through the material experience of the work, and allowed my ideas to develop contextually.
The void became the design parti that challenged every design decision that was made from that point on in the process. The idea was to organize the new architectural intervention(s) around a courtyard that would be excavated -2'8" from grade (the basement level of the existing structure, and therefore that of the missing twin). The removal of the earth would reveal the old foundation walls of the missing twin (assumed to be buried, although not completely intact).

This void in the earth and revealing of the walls that supported the building that used to be on my site would inform the observer as to the history of the site and the relationship of the two halves, while heightening the sense of singularity that is experienced. My own architectural intervention would interact with this courtyard in such a way that preserves its monumentality and openness, while following a contrasting method of craft/construction. In order to create a didactic system with the existing structure, I chose to investigate a beam/column construction method for my new intervention(s).

The program was conceived of in three cohesive pieces. A residence, a studio, and a gallery. The residence was brought to the front (north) of the site, to interact with the residential context and scale of the neighborhood, and the studio was buried into the back (south) of the site, with the courtyard between them and the existing structure (which would serve as the gallery). This organizational parti was pushed and pulled, but held true through the design process of the residence, studio, and gallery spaces.
Due to the small site and small program, the sectional organization of the project had to be clear and functional. As I thought about the programmatic elements and their live/work interactions, I tried to think of how to organize them. The integration of the existing structure into my design was a very important part of the thesis for me. And to allow that contrast between old and new to be realized, I wanted to integrate it into every piece of the program. Giving each of the three programmatic elements a place within the existing structure allowed them to interact it, as well as each other.

Sectionally, the basement of the existing building would house the potters studio, with an addition that wraps around the back of the site. The first floor and second floor would be the space for the gallery, allowing it to be attached to the studio for easy access between the two programs. The residence would then take the attic level of the existing building, as well as the addition on the north end (street side) of the site.
The decision to place the residence at the north end of the site on the street immediately obligated that architectural intervention to have a relationship to its context, both that of the neighborhood, and more importantly, that direct context of the existing twin.

One of the most crucial design decisions of the thesis was the development of the street elevation. How does one gracefully develop a language that simultaneously speaks with the past and looks to the future, especially in the case of this site? Time and memory, two recurring themes came once again to the forefront of the design process. The new residence was taking the place of the missing twin, and therefore had to have a special relationship with the facade of the existing structure.

The residence went through many iterations, and I was constantly challenging myself to improve the design and functionality.
The heightening of the history of the site was high priority when developing the plan for the residence. The residence had to have a relationship with the existing structure and the structure previously in its place. But, in order for the courtyard to have its desired impact, it needed to be kept open to show the full footprint of the old building.

I treated the residence much like a Corbusian project. I chose to lift the house off the ground plane through the use of columns, and only place a small foyer and stair that embrace you as you enter on the ground floor (occupying the space of the previously existing entry porch). The rest of the residence would hover over the courtyard, supported by a column grid and a concrete core. The column grid freed up the space below to be experienced as one entity, and it freed the plan of the upper floors of the residence from the existing conditions of the site.
The development of the elevation started as a response to the horizontal brick projections on the face of the existing building. These projections marked datums that defined the floor locations and window sill heights on the exterior of the building. Some of these projections were specific to the north elevation (ornamental elements), while some of them carried around the entire house, striking horizontal lines across the structure that broke it up into readable pieces.

Pulling those datums that defined the window sill heights across the page, I began to define the levels of the new building. In response to the projection on the face of the existing building, this datum represented a reveal on the face of the new building, produced by the use of a steel channel to create a shadow line and a material contrast.

The same way that the existing building facade is made of a modular unit (the brick), the facade of the new building was seen to be modular. Using a larger module (4’ x 8’ marine grade plywood) on the new building would allow the two structures to be based on the modular unit, but the plywood facade of the new building reads as a skin, contrasting the brick facade of the old building which reveals itself as a structural wall.

This first development of the north elevation led to material and architectural choices that drove the project into new depths, and allowed the architectural investigation to continue deeper.
The residence became a composition with two focal points: hearth and stair. The arrangement and relationship of these two elements evolved as the design moved forward. The challenge of working with a small floor plan was the efficiency that was necessary to be successful.

The stair and hearth lived on opposite sides of the residence. The stair on the west side, and the hearth on the east. These two elements would both be concrete, and they had a desire to be connected. In order to give the residence an anchor (structurally and visually) I began an investigation into creating one concrete core that connected stair and hearth. This was advantageous as it gave the beam and column system a definitive ending point, and created a structural duality.
In parallel with the larger scale design decisions, I was working at the micro scale, developing details that would allow the residence to be a cohesive work of architecture at every scale of experience.

The development of the beam/column system started early in the process. The assembly consisted of a 4” diameter steel section column, with twinned 2” x 10” wooden beams. These beams were the same size as those used in the existing structure. The beam column connection detail evolved over the course of the thesis into a bolted connection that used two transfer pieces to shift the weight from the beams to the columns. This detail was used in both the residence and the studio. A full scale mock up was created to show the detail of the connection.

The point at which the two structural systems met was especially rich in detail opportunity. In order to prevent racking, the concrete core is used to brace the wooden beams. A steel connector plate would be cast into the concrete and allow for attachment to the twin beams.
Both structural systems were treated with different enclosure systems and detail. The beam and column system had a traditional framed wall enclosure with the plywood rain-screen on the exterior and punched openings. This provided a relationship with the residential context in the neighborhood of load-bearing masonry structures. The concrete core had floor to ceiling glazing with horizontal wooden slats. This system was used on the west and south facades to filter the summer sun.
When determining the programmatic stacking, the logical placement for the studio was the basement. But the studio required more space than just that in the basement of the existing structure, so I decided to place an addition on the south side of the site to house more studio program.

The studio addition was first conceived of as a colonnade. Lining the south end of the site, creating a long linear space that met the south end of the existing building. This addition would be the place where the work of the potter would be finished, the place for glazing and firing.

The height of the studio addition was kept low to allow light to infilter the gallery space and the courtyard. I imagined the roof of the studio addition to be a deck that could be used by the gallery space for gatherings and receptions.
Think of the detail at the back.

Joint

glass glass blocks
memory relationship
hot new technology Maison de Vare

put on sod face! (filter light)
The kiln became a cast concrete monolith, a focal point of the studio addition. Much like the residence, the studio addition became an interplay between two building systems. As the kiln became the anchor for the colonnade, the joint between the two systems had to be addressed.

The kiln merged with the concrete retaining wall on the south side of the site. As the wall moved east, it grew and became an element that created an ending for the colonnade. The concrete turned and wrapped around the south east corner of the existing building, creating an entry for the studio, and then turned back and created a ramp to allow for the ascension from grade to the studio level.
The south elevation of the studio became a rhythmic in-fill based on these two structural systems. I chose to use glass block as the primary material on the south wall because of its translucent qualities. It allows ambient light to filter through to the working space. At the point where the beams project out of the facade, I chose to create a reveal. By taking the 2” width of the beams and projecting it down the facade with a 2” x 8” wood mullion, I created a 4” wide reveal on each column grid line. In-filling the reveal with glass created a pattern of opaque and translucent on the facade that spoke with the structural system.
From the beginning of the design process, I knew that moving into the details would be the only way to truly explore the depth of the thesis question. That now famous phrase “God is in the details,” uttered by Mies van der Rohe, sits in the back of every architect’s mind. Looking to the details to understand the true essence of my design ideology was the only way to completely address the thesis. Marco Frascari, in his essay *The Tell-The-Tale Detail*, writes that “the art of detailing is really the joining of materials elements, components, and building parts in a functional and aesthetic manner.” So much of how old and new interact can be experienced in these details. The level of respect and regard for the old, and the caliber of craft with attention to the direct connection of the two. How are they inter-twinned and how do they reveal their true nature?

The detail was always considered, from early on in the process, I was thinking about the moments in the project where I could delve into the details, and highlight the moments when the old and new interacted directly. Looking back, there were three big moments in the project where old and new met, and where my own architecture was shaped.
The courtyard was conceived as the central space of the project. It was the first design decision that informed every pencil stroke that followed. The development of its architectural and formal qualities always returned to the theme of memory.

The courtyard was thought of as the place where the inhabitant would come to the realization that the void represents what used to be. Revealing the foundation walls of the missing twin and excavating the interior of the footprint to -2′8″ created the courtyard space. The thresholds and procession of entry became vital aspects, as those experiences had to be heightened in order to convey the memory of the missing twin.

The floor of the courtyard became another important detail to be addressed. Again, thinking of the memory of the missing twin, the floor of the courtyard was to recall the same pattern as the floor system of the old building (2″ x 10″ wooden beams placed at 16″ on center). Since I decided my new structural system would be beam and column, it allowed my interventions to inhabit any space they desired above the courtyard, but when the columns came into the courtyard, they had to fall in line with the 16″ grid, the memory of the first inhabitant.
in place when the old foundation wall is ready, pieces of the wall will be placed around the well to re-cast the well. Poles will be drilled into the old well to gradually lower the anchor to 35 ft.
Fire played an important role in the history of the site, and it plays an important role in the potters studio. The location of fire (old and new) throughout the plan became significant. This spot in the courtyard is the old location of the kitchen fireplace. At this moment in the courtyard, I chose to give new life to the hearth by creating a fire pit in its place, allowing it to be used for wood fire burning, as well as serve as a gathering place on a cool autumn night.

There are two moments in the courtyard where my new imposed grid falls directly on an existing foundation wall. The method for dealing with this circumstance became creating an inhabitable space, where one could experience the structure of the new intervention and its relationship to the old foundation wall. I chose to remove the foundation wall at these points and cast a concrete footing for the columns, but the footing was to be gracious enough to create a place to sit and look out over the rest of the courtyard.

The floor of the courtyard follows the structural system of the missing twin. 2” wide bronze rods are placed at 16” on center to represent the 2” x 10” wood joists, and 4” x 12” terra cotta tiles are laid in between to create a material contrast. With the passage of time, the patina of the bronze would start to stain the terra cotta tile, allowing the rigid visual lines of the bronze rods to blur into the edges of the tile, creating a more subtle pattern.

The thresholds of the courtyard turned into crucial moments, where it was necessary to delineate the passage into the space of the old house. There are two moments where the foundation wall opens up to allow passage. At both of these moments, the removal of the wall is bordered by concrete ‘jambs,’ which hold the remaining wall in place, and the threshold is flush laid brick, the same brick that was removed to create the opening.
The stair began development when the sectional parti was decided early on in the process. The role of the stair was to be the connection between the studio and the gallery space housed within the existing structure. It was a uniting force, and was always thought of as a new intervention within an existing context.

Early on, the stair was placed outboard, attached to the existing structure on the exterior of the fire wall, as to give the inhabitant the experience of moving through that wall in order to move up or down. This was the moment when the inhabitant could experience the entire site, the old and new that occupies the land and their relationship.

After months of struggling with the stair structure and enclosure, the stair was brought entirely into the existing structure. Taking advantage of the section, I began to investigate placing the stair in the south room of the existing structure. This move allowed the stair to work from a functional stand point, because this room had access to the bottom three levels of the existing structure which had to be programmatically tied together. But the real advantage of this move was that it allowed the stair to become an entity that occupied an entire room, thus making it more generous and evolving its architectural qualities.
The stair would be constructed as a series of platforms supported by columns. The platforms would then be connected by prefabricated stair segments that would be welded to the platforms on site. The platforms and the stairs would be constructed using 1” x 8” steel C-channels and have steel plate treads.

As the stair moves up from the first level to the second level, it begins to make its presence as an intervention known. The stair rotates 30 degrees and breaks through the fire wall. This is the moment when the inhabitant gets to experience the presence of the fire wall. The weight of the wall is felt through the exposed brick and perceived thickness of the opening. The inhabitant can stand within the wall, and look through the inserted window into the courtyard.

As the stair moves to the second floor, it bulges out of the two windows on the first level. The windows in the opening of the brick wall have to make room for the corners of the landing. When the second floor is reached, there is a platform that continues out to the small window on the south wall. The view is looking back to the city, down into the heart of Washington DC.
The try were departed on my trip (shock?) to Europe. A friend went out of sight, and in a stage next out to be round again upon my return.

It was quite late that night and all of my possessions can be packed up. It fit neatly into a small 5' x 10' room.

Tibby - Eastern to Penhhielle - August 24
- 17 Days
- Still to do for Penhhielle:
  - STAIRS
  - Elevation
  - Entry section of entrance
  - Column detail of wall
  - Column detail thing detail

Bridge
- Kiln (how do I hold this mark)
An important decision early on in the process was to give each piece of the program a space within the existing structure. This decision led to the creation of these moments where old and new meet directly. The stair was housed entirely within the existing structure, but as a new intervention. With the bridge, it had the role of acting as threshold. It was the moment where the residence crossed from new structure to old structure.

It exists as a synapse within the project, a tertiary element that unites new construction with existing structure, but acts within its own function as a primary element.

The bridge had to break through the existing fire wall in order to serve its function. Structurally, this would be done by making use of a pinch beam. The principal being that two C-channels would be bolted together on either side of the wall, pinching the load bearing wall between them. Then, the desired opening can be created under the beam, allowing the transfer of load through the beam to the masonry along the side of the opening.


IMAGE CREDITS

All images and photos are original works produced by the author except:


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