DWELLING WITHIN THE MATERIAL CITY

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What does it mean to truly dwell within a city marked by the cycles of political turnover? How does one carve out for himself a unique sense of belonging in a city with such a grand history?

Martin Heidegger suggests that in building “nests” for ourselves, we begin to build our lives. We build our own stories into the traditions and myths of a place. This thesis proposes four unique stories, or four dwelling typologies, stitched together by a common alley site. Each dwelling typology finds its primary expression in one of the Four Classical Elements – Earth, Water, Air, and Fire. The four are intended to be read as distinct artifacts within the urban fabric of Washington, D.C., yet also as siblings of the same architectural family.

The four dwelling typologies include (1) a studio for an artist, (2) a residence above a small business, (3) loft apartments, and (4) a boutique hotel. Each occupies an infill site along the District of Columbia’s historic Blagden Alley.
DEDICATION

For J.P. Hwang,
who has shown me
how the poetry of Architecture
is discovered through drawing.

For Jessica,
whose unwavering patience and
encouragement have enabled me
to finish this endeavor.
“We attain to dwelling, so it seems, only by means of building. To build really is to dwell.”

Martin Heidegger, 
*Poetry, Language, Thought*

“To build (bauen) is to join different materials into a whole, corresponding to a different purpose. This definition, encompassing a building in both its spiritual and material aspects, clearly demonstrates that purposiveness is the fundamental principle of all building.”

Karl Friedrich Schinkel 
*The Principle of Art in Architecture*

**C O N T E N T S**

Two Schools 01  Material / Space  
Dwelling 04  
Sitework 06  Existential Digging  
Empedocles 12  The Four Elements  
Blagden Alley 14  Selecting the Site  
Recipe 15  Material Combinations  
Duration of Stay 18  Material Legacies/Programmatic Implications  

Brick / Earth 22  Striations of Time  
Concrete / Water 34  Changing Matter  
Metal / Fire 42  Social Alchemy  
Plywood / Air 47  Skin that Breathes  
Bibliography 55
The academic discourse on the definition of Architecture is paramount to an aspiring architecture student's education. Inevitably, the discussion includes the distinctions between construction, development and Architecture (with a capital “A”), the folly of architectural Styles, the relevance of historical precedents, and the tired “Chicken or the Egg” debate which asks whether or not Function precedes Form. But as I reflect on my own formal architectural education, I have observed between the two universities I attended a fundamental pedagogical difference that cuts to the core of the conversation regarding Architecture. The two opposing camps can be identified as Space and Matter.

My entire undergraduate education was overshadowed by the idea of the sublimity of Space, a positive, expansive, dynamic force, pregnant with potential. Put simply, Architecture is about architecture, more about the Space it creates or inhabits. The institution’s position reveals a devotion to the tenants of Modernism and a fascination with the Ferrisian Void. The curriculum celebrated the Universal and the General, the Rational and Precise, the clarity of the Diagram. Abstraction informs progress. To “see” is to understand. To create Architecture is to shape or direct Space.

My graduate experience, however, has been viewed through a markedly different lens in which space is subordinate to the Material and the Phenomenological. Architecture is an artefact subject to the forces of gravity, culture and history. The architect holds the Elements and their tectonic assemblage with reverence. He finds meaning in his environment when all of his senses are employed in concert. The material has weight, and texture, and a distinct smell. These physical properties find their way into the architect’s drawings. The process may be messy, but it proves valuable. This approach has refocused my attention to the peculiar and the eccentric.

We should never forget, however, that these two theoretical positions occupy two sides of the same coin. In many ways, the inherent tension between the material and the spatial was the launching pad for this thesis. Beneath the surface of the entire project is an idea of “material-space,” the notion that the quality of a given space is directly influenced by the craftsmanship of the materials that shape it, the belief that our urban environments should be developed with attention to both tangible and the immaterial. And this attitude is expressed with poignant clarity in the plan of Rome drawn by Giambattista Nolli. The codependency of the spatial and the material is immediately apparent in the balanced composition of figures and ground in which the black forms frame the places of urban life.
"Man dwells when he can orientate himself within and identify himself with an environment, or, in short, when he experiences the environment as meaningful. Dwelling therefore implies something more than shelter. It implies that spaces where life occurs are places, in the true sense of the word. A place is a space which has a distinct character. Spaces receive their being from location and not from space."

Christian Norberg-Schulz, *Genius Loci: Towards a Phenomenology of Architecture*

I began this thesis journey with only the faint shadow of an idea, a single word that captured my imagination: “Dwelling.” One word, two parts of speech. The duality of its grammatical classification amused me, so I allowed the word to inhabit the recesses of my mind. As I reflected on the implications of the two parts of speech, both the verb and the noun conveyed to me a deep awareness of time.

The verb “dwelling,” although in the present tense, seemed to imply a history of its subject. The person who is dwelling has explored, has discovered, and now, has settled. Do you see it? The present tense of the verb reveals the history of the journey to this point. It suggests that the person who dwells continues to experience life as being rich and full. Dwelling also projects a sense of steadfastness. A person who truly dwells is a person who has found peace. Thus dwelling becomes a deeply internalized sense of purpose and meaning, a way of life. To dwell is “to abide, to reside, to remain.”

Similarly, the noun “dwelling” simultaneously represents the legacies of former residents, the routines of its current inhabitants, and the dreams and aspirations of future dwellers. In some instances the dwelling owes its creation to its occupants’ own handiwork. In other circumstances, what may have been a hastily constructed worker’s housing tenement, has now, under the tender care of its owners, been elevated to the high status of “dwelling.” For still others, the “dwelling” remains merely an oneiric vision of a desired future.

I walked the streets of Washington, D.C., measuring the width of Victorian rowhouses with my stride, scanning the repetitive punched windows in precast concrete facades for signs of individuality, imagining the stories of those whose lives unfolded behind the walls, though mostly questioning what it means to dwell.
To construct a dwelling on the site is to make a mark on the land, to carve one’s presence into the face of the earth, to declare, “I am here.” The dwelling is an affirmation of a person’s existence, the container of his most mundane and also most intimate activities. The dwelling is a safe that guards precious memories. When a person vacates a dwelling, the edifice remains as a testament to the cultural, climatic, socioeconomic, and material conditions present during the stay of the former inhabitant. Over time, the traces of personal histories are revealed like watermarks on the surface of a thin sheet of parchment.

Throughout this thesis, I imagined the site as a geological excavation. The site, in its present state, represents only the top layer of a deep cross section of geological strata. To the geologist, each layer of earth reveals a unique combination of conditions present during a specific period of time. To the architect, the artefacts of a chosen locale provide clues to the evolving history of the site.

I began to dig.
Locating the four dwelling typologies within Blagden Alley.
“The city, however, does not tell its past, but contains it like the lines of a hand, written in the corners of the streets, the gratings of the windows, the balusters of the steps, the antennae of the lightning rods, the poles of the flags, every segment marked in turn with scratches, indentations, scrolls.”

Italo Calvino,

Invisible Cities
“The business of Architecture is to establish emotional relationships by means of raw materials. Architecture goes beyond utilitarian needs. Architecture is a plastic thing. The spirit of order, a unity of intention. The sense of relationship; architecture deals with quantities. Passion can create drama out of inert stone.”

Le Corbusier
Towards an Architecture

The Greek philosopher Empedocles is credited with introducing the theory of the Four Classical Elements - Fire, Water, Earth and Air. These four elements, which he called “roots,” form the basic building blocks for matter throughout the entire universe. Each element represents a unique pairing of warm, cool, moist and dry attributes. A simple creations diagram, which corresponds to the cardinal directions, illustrates the relationship of the Four Elements to one another. Elements with diametrically opposing attributes occupy opposite positions on the compass: Water (cool/moist) and Fire (warm/dry), anchor the North-South Axis respectively, while Air (warm/moist) and Earth (cool/dry) abide along the East-West axis. Over the course of thousands of years, philosophers have refined and expanded the theory of the Four Elements to include relationships to mythical Greek gods, personality traits, the four seasons and four times of day.

Interestingly, Empedocles does not consider the Elements a stagnant classification system for ordering the universe. Rather, his theory of the Elements reveals a boiling cauldron of unstable forces interacting and combining with each other to form new hybrid mutations. Thus, the ratios and proportions of the elements yield an entire spectrum of possible combinations.

Yet these elemental reactions are not ungoverned in their interaction. Empedocles teaches that one element may not be combined with its opposing element without first being combined with a mitigating element. For example, if Water and Fire are combined, the result is a cancelation of the properties of each element. The Fire ceases to burn, and the Water ceases to be a liquid. A mitigating element, Air in this case, allows for the creation of steam.

For this thesis, I delighted in the straight-forward logic of the Four Elements. The rules established by Empedocles influenced the selection of the material palettes and the possible combinations of these materials.
During one of my city walks, I serendipitously stumbled on the historical site of Blagden Alley in the Northwest quadrant of Washington, D.C. From the outset, I had intended to design four dwelling typologies that could be inserted into various sites throughout the city. My intentions, however, were challenged during the early stages of my research with the critique that Architecture should respond to a unique and specific site. As I considered the argument, I immersed myself in the persuasive *Genius Loci: Towards a Phenomenology of Architecture* by Christian Norberg-Schulz who advances the idea of a “Spirit of Place.”

With my discovery of Blagden Alley, I found a single block bisected by a cruciform-shaped alley. At the entrance to each appendage of the alley sits a vacant lot. In these vacant lots I saw an opportunity to propose four infill projects. As each lot faced a different cardinal direction, I would have to address a wide array of different urban and environmental conditions. I also realized that the alley presented an opportunity to address the alley and streets with different attitudes. What Blagden Alley offered was a chance to explore the issues of dwelling within an urban condition at a concentrated, hyper-urban scale, to propose a method for developing the city while reacting specifically to the conditions of Washington, D.C., to enrich the urban fabric, to increase density of a given site through appropriately-scaled, modern insertions, and to exploit and celebrate materials in such a way as to yield unique, yet contextually sensitive architectural responses to a single block and also the city at large.

Coincidentally, the cruciform plan of the alley reminded me of the Cardo and Decumanus essential to the planning of Roman cities. The primary North-South axis with the adjacent public agora provided the infrastructure for commerce to flourish, and the secondary East-West axis supported artistic endeavors. This thesis proposes the redevelopment of the block which contains Blagden Alley through a mixed-use, mixed-density approach.
“In the search for the authentic over the image, the actual materials and systems of assembly, the process of construction, become the aesthetic. I want to make objects which express their cause, buildings which are perceptual processes. I like to think of construction as growth. Not an idealized form, but the actual performing of the work made precious. I think less about architecture as art, and visual, than architecture as cooking, and haptic. I make buildings by the gathering and assembly of ingredients. The plan is the recipe.”

Stanley Saitowitz

The four dwellings are akin to four recipes. The ingredients shall remain constant, yet the relationships between the ingredients will inevitably change. I am interested in the exploration of these relationships and the pursuit of the different results each could yield. Of course, the techniques for the preparation of the four “dishes” will vary drastically from site to site. While one is poured into a stout mold, another hangs, shimmering from a delicate armature. The patient precision of the mason juxtaposes the whimsy of undulating ribbons.
“Duration, a fluid, flowing time, is intertwined with an experience of being where past, present, and future merge. If one extreme of time is the experiential time of individual being, the other extreme is the abstract, anonymous, measured time of science. As we strike a balance between these dynamic extremes, we are enmeshed in changing paradigms.”

Steven Holl
Paralax

I moved to Washington, D.C. in the summer of 2008. Within six months of my arrival, I witnessed the transient nature of this city firsthand as a new presidential administration took office. On a global scale, one political party replaced another as is customary in the cyclical world of politics. On the local (even personal) scale, thousands of political staffers were immediately without jobs. Friends I had just made announced their plans for departure. Apartment tenants and homeowners alike scrambled to find new accommodations for housing. In what seemed like an instant, an entire portion of the population vanished from the city.

And new faces arrived, filling the rooms and spaces vacated by their political counterparts. They too will commit to a finite length of time in the city, ranging anywhere from a couple of months to eight years or more if they are lucky. But Washington, D.C. does not have a monopoly on this condition of transience. In fact, the ebb and flow of people in the city is part of the story of the Metropolis. The arrival and departure of millions of bodies over the course of a city’s lifetime provides the city’s pulse. The city and its infrastructure must be able to support this continual flux if the city is to survive, and the buildings comprising the urban fabric are left with this necessary burden.
The materials employed by the builders of the city endure various life spans of their own. Some are chosen to satisfy an immediate and temporary need, whereas others are esteemed for their durability and longevity. In the authoritative text *Alley Life in Washington*, Henry Borchert specifically examines Blagden Alley as a case study and describes four distinct housing prototypes that he observed on the site. The first, the frame house, provides a more durable, longer-lasting structure. The second prototype, the brick row house, enjoys the greatest legacy of the four prototypes in Washington, D.C. The last prototype is comprised of multipurpose buildings that have been converted to serve several functions. These are newer, but hearty with plaster and lath over brick or frame construction. They provided steady shelter and protection from the elements as well as improved sound and thermal insulation.

As I thought about the ever-changing nature of the city, the length of a man’s life, the legacies of building materials, and the typological observations of Henry Borchert, I envisioned a series of parallels between the material and the programmatic, the elemental and the phenomenological. Each dwelling would pair one of four materials with a unique program. To this complex system of ideas, I ascribed the term “Duration of Stay.”

With the teachings of Empedocles at the forefront of my mind, and the photographs of the existing context before my eyes, I settled on Brick, Concrete, Metal and Plywood as the material quartet for the four dwellings. I then established four incremental program types along a spectrum of occupational durations from the most stable to the most temporary. The following summary describes the rationale behind the resulting, corresponding pairings.

At one extreme, an artist inhabits the Brick dwelling which includes gallery, studio and private living spaces. Brick’s durability and influence on residential architecture is unmatched in Washington, D.C., as is evident by the continued success of the brick rowhouse. For the artist, the duration of stay constitutes a period longer than even his own lifetime as his legacy and his influence are preserved through his work long after he has passed on.

For the Concrete dwelling, a live/work scenario is proposed. A shop (specifically, a bicycle shop) occupies the ground level, fronting both the street and the alley. The two upper floors are dedicated to the living spaces for the shopkeeper and his family. This model alludes to the plaster-covered multipurpose buildings of Borchert’s text. In the urban narrative, the resident shopkeeper, doubly vested in the success of the surrounding community, provides a sense of stability and safety to the neighborhood.

The Metal dwelling, pairs the typology of apartment housing with the steel-frame structure. The relative speed of construction and the ease of disassembly imbue the steel-framed building with flexibility not possible in its brick and concrete predecessors. Following the rationale I had already established, the association of the construction method’s inherent flexibility with the rapid turnover of apartment tenants seemed logical. Along the length of the building, a vibrant café opens to the alley. The alley is animated by the clinking of silverware and glasses, the hum of the wait staff, the aromas of food wafting into the street, patrons sipping coffee while thumbing through a newspaper and fragments of conversations among passers-by.

The most temporary duration of stay scenario combines plywood with the program of a hotel to create a piece of urban furniture. A chair’s purpose is not to provide a permanent resting place, but rather, a brief respite. Similarly, a hotel offers guests a comfortable stay for a few nights, a fleeting glimpse into the life of city dwelling. The finely crafted hotel hovers above the street. A bar and the hotel lobby occupy the ground floor, invigorating the entry to Blagden Alley late into the night.
“The rock is indeed hard beneath, but still disposed in thin courses of these cloven shales, so finely laid that they look in places more like a heap of crushed autumn leaves than a rock; and the first sensation is one of unmitigated surprise, as if the mountain were upheld by miracle; but surprise becomes more intelligent reverence for the great Builder, when we find, in the middle of the mass of these dead leaves, a course of living rock, of quartz as white as the snow that encircles it, and harder than a bed of steel. It is only one of a thousand iron bands that knit the strength of the mighty mountains.”

John Ruskin, Stones of Venice
Preliminary Massing Diagram of Brick Studio
Preliminary Sketch for the Brick Studio

Floor Plan, First Floor
1 Entry
2 Gallery
3 Studio
4 Garden
5 Kitchen
6 Dining
7 Living
8 Library
9 Bedroom
10 Terrace

Floor Plan, Second Floor

Floor Plan, Third Floor
“Architecture is the wall between the inside and the outside.”

Robert Venturi
“Natural materials – stone, brick and wood – allow our vision to penetrate their surfaces and enable us to become convinced of the veracity of matter. Natural materials express their age and history, as well as the story of their origins and their history of human use.”

Juhani Pallasmaa, The Eyes of the Skin
“There is talk of houses made in a mould by pouring in liquid concrete from above, completed in one day as you would fill a bottle.”

“Reinforced concrete has brought about a revolution in the aesthetics of construction. By suppressing the roof and replacing it by terraces, reinforced concrete is leading us to a new aesthetic of the plain, hitherto unknown. These set-backs and recessions are quite possible and will, in the future, lead to a play of half-lights and of heavy shade with the accent running not from top to bottom, but horizontally from left to right.”

Le Corbusier
Towards an Architecture

The cool, moist properties of Water manifest materially through Concrete. Similar to water, in its liquid state, concrete, is formless and takes the shape of its mold. As water freezes, it changes from its liquid state to its solid state in the form of ice. When concrete sets, a material that was poured with ease just days before is transformed into a solid with extraordinary compressive strength. The formwork is peeled back to reveal the monolith hidden beneath. The relationship between the forming material and the concrete therefore takes on an elevated importance. Traces of the joints and ties of the formwork embedded in the surface of the cooling mass preserving the memory of the remarkable transformation of matter.

Oversized voids are subtracted from a solid, cubic mass to frame connections between street, alley, and interior spaces. A secondary expression of slipping panels is established by the shifted placement of plywood formwork. In some instances, the plywood has been retained as a gesture to the casting process. The plywood is exploited as both mold and finish. Even the brick paving surface of the alley changes states, folding up to become a wall, delineating the continuation of public space between two concrete masses.
“Therefore, it was the discovery of fire that originally gave rise to the coming together of men to the deliberate assembly, and to social intercourse.”

Vitruvius
The Ten Books of Architecture

“In recent decades, a new architectural imagery has emerged, which employs reflection, gradations of transparency, overlay and juxtaposition to create a sense of spatial thickness, as well as subtle and changing sensations of movement and light. This new sensibility promotes an architecture that can turn the relative immateriality and weightlessness of recent technological construction into a positive experience of space, place and meaning.”

Juhani Pallasmaa
The Eyes of the Skin
“My house is diaphanous, but it is not of glass. It is more of the nature of vapor. Its walls contract and expand as I desire. At times, I draw them close about me like protective armor... But at others, I let the walls of my house blossom in their own space, which is infinitely extensible.”

Georges Spyridaki
Mort Lactide

“At once I had a mental image of a house-sized block of timber, a dense volume made of the biological substance of wood, horizontally layered and precisely hollowed out. A house like this would change its shape, would swell and contract, expand and decrease in height, a phenomenon that was an integral part of the design.”

Peter Zumthor
Thinking Architecture

The element Air, not surprisingly, is the most difficult of the Four Classical Elements to define. To speak of the attributes of Air, one must speak in oblique allusions. Comprised of warm and moist qualities, Air is likened to breath or the act of breathing. Air is like a fleeting, ethereal vapor. As it represents the virtue of creative aspiration and personifies the human soul, Air relates to the gossamer substance of dreams, inhabiting the celestial skies. Air allows both the sonorous resonance and the sacred silence of space. In air we find movement and stillness, turbulence and serenity.

Hovering above the street on the easternmost site, the hotel typology greets the warm rays and the moist dew of dawn. The operable plywood skin invites ventilation and light throughout the day. In the center of the hotel, air shapes the atrium and flows out to a mezzanine terrace.

As a result of the transient nature of the hotel typology, guests enter a world in which they simultaneously dream about an imagined life within the city and reflect on the oniric images of their permanent dwelling.
During my exploration of the peripheral streets surrounding Blagden Alley, I observed contrasting conditions along 9th Street. On the East side of the street sits the behemoth Walter E. Washington Convention Center. Despite its efforts to address the scale of the Mt. Vernon Square Historic District, the convention center sits clumsily atop three entire city blocks. To its credit, a generous amount of transparency adjoins the sidewalk at the pedestrian scale, providing a smattering of shops, bakeries and pubs.

On the opposite side of 9th Street, the transparency that once opened to the street has essentially disappeared. Instead of the storefronts, windows and doors that once connected the public life of 9th Street to the private life behind the street wall, crudely inserted plywood sheets fill the existing openings of former Victorian structures for several blocks. The resulting aesthetic of the random plywood patchwork creates an ominous boundary between the buildings and the street.

My initial response, (which I am convinced would be typical) to the neglected side of the street was one of both pity and disgust. Yet, in the midst of the perceived ugliness of the existing environment, I caught a glimpse of inspiration. I could design an infill project clad in high quality plywood panels. Rather than censuring the history of the site, regardless of the brevity of that history, I could celebrate the material history of the site and improve the pedestrian experience along the west side of 9th Street. The project would be immediately contextually appropriate, but as the neglected properties were redeveloped, the project would stand as a reminder to the history of the site.

In the United States, we typically think of laminated wood as suitable for sheathing or as a substrate, or even as a structural member like a glulam. I am intrigued by the idea of laminated wood as a cladding material and as a finishing material. The qualities that render plywood successful as a substrate or for sheathing, namely its standard panel sizes, its improved engineered strength, and its durability are equally valuable for cladding and finishing. I seek to exploit the thinness of wood veneer as a kind of skin and a device for enclosure.