THE WALL AS MOMENT AND PLACE:
CASE STUDIES ON THE SIGNIFICANCE OF THE WALL

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ABSTRACT

The Wall as Moment and Place: Case Studies on the Wall's Significance. "The Mending Wall," a poem written by Robert Frost in 1914, can be seen as metaphorically two opposing points of view held between neighbors. On one hand, there is Frost's simple allusion to the physical completion and restoration of a stone wall that bounds two properties. Yet the poem expands to also suggest that differences in ideologies is the real reason for a separating wall or boundary. The two neighbors walk along each side with a wall between. Frost's use of the word between has two interpretations. One implies a physical separation or boundary, while his other interpretation symbolizes a binary relationship or a dialog of ideas, thoughts, connections, or human experiences. Yet the condition suggested by Frost's wall can vary from fully opaque to translucent, transparent, or an open frame straddling both sides but permitting views between. The wall in Frost's poem suggests both a physical boundary and a metaphysical relationship that impacts the reader's understanding of place and position. As this inquiry implies, the physical characteristics of a wall can vary from solidity and structural mass, a thin and translucent skin separating two sides, a transparent barrier that allows for a visual connection, or to an open frame that only implies a physical separation.

What does, and what can, a wall achieve between two spaces? In architectural thinking, walls are not only physical elements, but they are also collocated with certain experiences, memories, and meanings. The wall can also be perceived as a symbol which requires the constant rethinking of its relevance in relation to its surroundings. This investigation explores what a wall is and how walls transform from being mere boundaries that contain and compartmentalize space into something full of human experience and meaning. As Frost suggests the perennial task of mending the wall is one of a physical rebuilding and one of a remembering of the continued relationship between two neighbors. The moment at the wall provides a temporal connection, otherwise understood as an open boundary of discovery, between the two sides. Frost's iconic adage, "Good fences make good neighbors," is about sustaining relationships. This very idea implies, in an oxymoronic manner, the appropriate design and maintenance of walls. Through descriptive prose and inquiry into specific case studies, this investigation studies how walls manifest into relationships that are at once physical and then emotional. Walls are a medium of gradient symbols that not only divide differences, but also forms meaningful connections between materials and humans.
MENDING WALL

Something there is that doesn't love a wall,
That sends the frozen-ground-swell under it,
And spills the upper boulders in the sun,
And makes gaps even two can pass abreast.
The work of hunters is another thing:
I have come after them and made repair
Where they have left not one stone on a stone,
But they would have the rabbit out of hiding,
To please the yelping dogs. The gaps I mean,
No one has seen them made or heard them made,
But at spring mending-time we find them there.
I let my neighbor know beyond the hill;
And on a day we meet to walk the line
And set the wall between us once again.
We keep the wall between us as we go.
To each the boulders that have fallen to each.
And some are loaves and some so nearly balls
We have to use a spell to make them balance:
'Stay where you are until our backs are turned!'
We wear our fingers rough with handling them.
Oh, just another kind of out-door game,
One on a side. It comes to little more:
There where it is we do not need the wall:

He is all pine and I am apple orchard.
My apple trees will never get across
And eat the cones under his pines, I tell him.
He only says, 'Good fences make good neighbors'.
Spring is the mischief in me, and I wonder
If I could put a notion in his head:
'Why do they make good neighbors? Isn't it
Where there are cows?
But here there are no cows.
Before I built a wall I'd ask to know
What I was walling in or walling out,
And to whom I was like to give offense.
Something there is that doesn't love a wall,
That wants it down.' I could say 'Elves' to him,
But it's not elves exactly, and I'd rather
He said it for himself. I see him there
Bringing a stone grasped firmly by the top
In each hand, like an old-stone savage armed.
He moves in darkness as it seems to me~
Not of woods only and the shade of trees.
He will not go behind his father's saying,
And he likes having thought of it so well.
He says again, "Good fences make good neighbors."¹

¹ Frost, Robert (1914) The Mending Wall.
1. PREFACE/INTRODUCTION

Brick upon brick, name upon name (Image 1.1 and image 1.2), both walls have repetitive elements. Both form a boundary and both bring meaning to a particular moment. One was built for the utilitarian purpose of separating streams of rail and vehicular movement within the city. The other serves society as a memorial for those who served their country during a time in history when passions divided the nation. Each has significance, each has specificity and each has a relevance of a particular place. One is a recognizable destination to an entire nation, while the other is largely forgotten and ignored by its local citizenry. While each of these designs are specific to place and program, they share similar purposes: to define a moment and signify place.

The utilitarian wall at Pittsburgh Union Station's rail concourse defines the entry to the downtown proper. The means of transportation is by train. The walls purpose is not to provide an interior space but to define a place of entry. While the wall is located above the street scape and sidewalk, it is present within the urban fabric of the city. Physical access to the wall is limited to sight and potentially sound. We may hear the trains as
they approach the city but both touch and sight is not an option. The physical element is a slight curve similar in plan to the adjacent street. Openings are functional to allow the passage of air and light. The design of the wall is typical, simple and unadorned. Ornamentation is limited to the inherent beauty of the materials. The material is brick in a known running bond pattern. The coping is cast stone. The wall is common. The wall is entry, passage and place combined.

The Vietnam Veterans Memorial Wall (Image 1.3) is located within a larger context. The wall defines a pedestrian path. The path is historic and populated. It is approached from both ends. The Wall is a destination itself. People congregate at this particular wall. Some know a name, others respect those who died in service to our nation. Most, if not all, touch the wall. The physical characteristics of the wall are again simple. We see one material: black granite. The simplicity of the wall is its most powerful attribute. The wall lacks architectural ornament or obvious details except of the names etched into its surface. One might consider these names to be ornament but they define the purpose of the wall. The permanent and public display of these 58,000 plus names, ordered by the time each died, is the basic expression for the wall. In plan the wall is an
obtuse isosceles triangle cut into the ground, symmetrical and sloping downwards. The highest point of the wall, and the furthest point above grade at the pedestrian path, is located at its center. That center signifies the height of the historical moments when the most number of soldiers died. The height of the wall diminishes from that high point to almost nothing at its two vertices, or its beginning and its end. This is relevant in regards to the confrontation the wall symbolizes. The wall defines not only a moment but also a country. We walk. We touch. We contemplate and we remember. The wall is entry, passage and the wall is place.

Place is a central factor to both walls. What then is place? The topic of place should be basic and essential for any theory regarding architecture. The relevance of architecture begins with a notion of human interaction and a defined space. According to Vitruvius, we built to protect a fire and make a place for gathering. We built to protect people from others and the inclemency of nature. The results of these interactions made the development of cultures place-bound. Place is highly particularized and specific regarding the fact the all places are unique and distinct from all others. Spaces can exist in thought, or cyberspace, or music, or theory, or stories, but place always as a spatio-temporal dimension to it. Place, as typically defined, can be a physical or a particular position in space, it can also be a location within a social group or society. Theorists have debated the relevance of these varying meanings. Lewis Mumford, in City in History, discusses the relationship between urban place and human interaction.²

The significance of these writings and studies concludes that the theory and definition of place is not limited to a physical space. Place results from a human interaction with buildings, streets, walls, or natural elements. These peopled interactions happen over time and therefore place takes on a temporal and historic dimension. Yi-Fu Tuan, a respected cultural geographer, requires the interaction of people in his definition of place (Image 1.4). Tuan contends that the meaning of place is not limited to the physical but also includes an emotional or human element.\(^4\)

Again we ask "What is place?" A place, defined architecturally, requires a physical presence. Kevin Lynch defined elements that comprise the cultural interpretation, or legible expression, of the physical forms that populate urban places. These can be classified into five types of elements:

Paths, Edges, Districts, Nodes and Landmarks.\(^5\)

Paths provide delineation for movement. Edges differentiate boundaries. Districts are coherent areas within a more extensive context. Nodes are strategic places of gathering, and Landmarks provide a reference point and spatial orientation. Lynch states that:

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“A distinctive and legible environment not only offers security but also heightens the potential depth and intensity of human experience.”

Lynch theorized that a successful place appeals to human experience and the individual in a specialized way. That he termed "legibility". It can be said that Mumford, Tuan and Lynch all included human interaction with architectural elements as necessary to any definition or understanding of place (Image 1.5). The definition of place is the interaction between people in a locus of physical elements. To summarize, Tuan defines place as a unique ensemble of traits that includes a spatial relationship that serves to structure the socioeconomic activities of humans. This coordination between people and architectural elements as definitive of place is not limited to the theories, writings and teachings of Mumford, Tuan and Lynch. Urban activist Jane Jacobs agrees that humans are essential to the success of place. Jacobs argued that modernist planning and urban renewal limits the inclusion and number of human interactions in cities (Image 1.6). Urban redevelopment, predicated on the principles of zoning, planned for separation uses, separation of activity, and separation of the upper, middle and lower classes of society. This

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approach limits the opportunity for mixed use of groups, inhabitants and activities. The observations of Jacobs, which are similar to that of Lynch, are based on the need for communal occurrences within an urban fabric. These observations, commonly referred to by Jacobs as “Eyes on the Street,” witnessed various activities and a multiple of socio-economic classes of people. The observation resulted in the advocation of four conditions that provided for a successful place. The conditions are: mixed use, permeability, condition of buildings and density. With this the ideal place provides opportunity for various thoughts, accessible means, and opportunity for gathering. Successful places include activities; place is never static.

Image 1.7 Seagram Building

Image 1.6 South Street, Philadelphia, Pa.

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When discussing successful urban places, there is one building and plaza that must be included in the discussion: The Seagram’s Building in New York City on Park Avenue (Image 1.7). The building and design provided relief in an existing urban fabric. Mies van der Rohe sited the building in an atypical location. Typical approach of place was questioned. The iconic location provided a potential opportunity for an urban place. The entrance facade is located far from the street edge and typical building façade location as defined by local ordinances, zoning regulations and contextual expected setbacks. The plaza has been successful since the completion of construction. The combination of the four conditions as defined by Jacobs are present in this particular place. The question becomes “Why”?

William H Whyte, an employee of the New York City Planning Commission, noticed the immediate and sustained success of the Seagram’s Plaza. Again, it became a question of “Why?” Whyte began a study on the success of this particular place. Research was documented over a sixteen-year period. The inquiry was called The Secret Life Project. Research included peak hour usage, type of users, locations of congregants, and the documentation of seating patterns. The results of these four items were used to provide information and an understanding of why this space provided what people desired. The results demonstrated
that peak usage was during the lunch hour. The type of users was mixed, however, it has been documented that there was a larger percentage of females to males in this particular place. Whyte attributed this to a feeling of safety and comfort. His inquiry documented that congregations of people tend to be adjacent to the corners of the plaza or along physically defined edges. Seating became another opportunity for occupied place. The plaza design included various locations of planters and site walls. These provided the opportunity for seating.

Physical elements of seating were not limited to planter and site walls. Steps, that define the edge of the plaza, also provide an opportunity for seating (Image 1.8). The popularity of seating on these steps at times limit the access to the plaza. Place and the places within that given space are defined as diverse and sequential interactions in a given physical setting.

Whyte observation was not limited to socialization and human interaction but also included edges, boundaries and the built environment. The facade of the Seagram’s Building provided one edge (Image 1.9). The others are defined by adjacent walls and adjacent building facades. The built environment provided the opportunity for success;

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but a successful place includes the social involvement of people, groups or society. While a definition of space can be elusive, only people can experience place. It is with the interaction of people, and the diversity of conditions that intermingle to conjure a positive and successful place. Place is about the relationship between boundary and activity. Walls provide boundaries. The utilitarian wall and the memorial wall both include a moment of interaction. Context gives both their relevance. Between a wall and a place, we define our lives.

1.1 Distinction of Place

The edge of the lake as it meets land, the boundary created by a forest as it meets the open field, or the vertical face of a rock escarpment separating one geographic condition from another. These edges, boundaries or vertical elements allow for a visual, tactile and physical distinction to be made between one moment and another and one place and another. The instances or moments I list above are all located within a natural setting, and are not a result of the interaction of human hands or intelligence. What then is the significance of nature and place? In nature, these moments I describe allow for a sense of categorical order to appear and for genius loci to reveal and express a sense of place within us. Genius Loci is defined as the pervading spirit of a place and the tutelary deity of a place. Place is a resultant of of our interaction with our surroundings, our idea of the relevance of a particular place and our conscience

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9 http://www.merriam-webster.com/dictionary/genius%20loci
For any place to exist distinctly, it must be able to be differentiated from all other places. Nature, with its geological and biological churnings, provides a means to define place. These distinguishing features are not based on a culture or human intention. Nature conjures forth the most honest of places. I mean honesty in the sense that nature's capacity for climactic and geological differentiation and for speciation in living things, is truthful and uninhibited by the influences of human intelligence or aesthetic drives. A person can peer into a forest, stroll along the shoreline, or stand beside a sheer stone cliff face and be awed at nature's infinite variation (Image 1.1.1).

The capacity for nature to define space through the use of solid mass, the translucency of forested

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leaves or the openness of the formed edge of a lake when water meets the line of the sky or edge of a forest. This defines the gradient of spaces allowable between two elements in nature (Image 1.1.2). In nature we have the opportunity for place. Place can be defined as an area used for a specific purpose. The significance of place at these moments is about an interaction between an individual and a defined space.

1.2 The Solidity of the Line

Each moment can be defined by an interaction between nature and an individual. The interaction might be as complex as walking along the edge of a violent, windswept and storm-ridden lakeshore, or as simple as sitting with ones back against a cliff face. We talk of the limitlessness of the shoreline and the leaf-dappled laciness of the sundrenched forest, but each aesthetic condition is created by experiencing boundaries and moments creating a sense of place. Despite the relentless undulation of tides, our senses may never notice the variation within a place over an undefined period of time; but a forest fire, a drought that lowers the lakeshore, or an avalanche can provide the means for drastic changes. The characteristics of rock, its solidity, mass, strength and physical presence can limit its ability to change, but mountains erode and ridges wear over time.

Mass and massiveness can form a potent physical edge and a visual barrier. With rock there is an inherent strength of material, as well as a symbolic understanding of its characteristics (Image 1.2.1). The symbolic nature of the rock is expressed in the Bible. It is written in the Gospel of Matthew that Jesus had stated:

“And I say also to you, that you are Peter, and on this rock I will build my Church; and the gates of hell will not prevail against it” (Matt. 16:18).  

Image 1.2.1 Rock Enclosure Mill Creek, Mill Creek Park

The resultant action by Peter and the Disciples symbolizes the strength of a faith and provides a foundation of a religious belief. Solidity of place is established. The relevance of the rock/solidity is not limited to Christianity. Plymouth Rock, Rock of Gibraltar, Stonehenge and Rosetta stone all symbolize something formidable, lasting, and unwaveringly solid. Symbolism includes a new beginning, a state of invincibility and a reference to the permanence of cultural expression and language. This symbolic relevance is part of stone’s inherent qualities of strength, mass and weight; including the

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12 The Gospel according to Matthew, King James Version Matthew 16:19
fact that it is formed of the earth and comprises the certainty we have about the very ground we stand upon.

1.3 The Line Beyond

To define space one must provide an edge. Walls of mass or solid boundaries are just one of the means to define the edge between places. Moments of translucency also can contribute to place. Transparency can provide a direct relationship between two spaces. Our senses allow for us to experience translucency. We can sense the space beyond because of the ability to see through another element or another series of elements. We can see a meadow through an orchard. We can feel the warmth of the each adjacent space. Translucency of the moment provides that opportunity. We witness a view of something beyond. It may not be as direct as the view of the open sky, but elements of place are established by these adjacencies. We have not only a definition but also a reference for defining something else. Definition implies difference. It is not only about one space or one moment but multiple spaces and multiple moments. Transparency in nature is always changing. We can see through the leaves until they fall

Image 1.3.1 My Back Yard
(Image 1.3.1, Image 1.3.2 and Image 1.3.3). With that, translucency may be based on the time of year or a specific location. We visit a waterfall to see nature. We see solidity beyond the water. Translucency occurs between the water, the transmission of light and solidity of the physical space beyond. Images may be present; however, the physical definition may be blurred. The amount of water varies as well as the amount of translucency.

Translucency is about the interaction between two spaces. This interaction includes the passage of light, sound or other elements that are relative between two moments. This interaction between spaces and the elements occupying those spaces, provides translucency with its full expression. 1 Corinthians 13:12 states;

"For now we see through a glass, darkly; but then face to face: now I know in part; but then shall I know even as also I am known."\(^{13}\)

\(^{13}\) 1 Corinthians, The King James Version 1 Corinthians 13:12
In my estimation, I believe this Biblical quote refers to a capacity of translucency that differs from the clarity of transparency in that only a partial view is given: as much is revealed as is obscured.

1.4 A Line of Adjacencies

The opportunities associated with this interaction between two places are endless within a natural setting. Opportunities associated with nature also includes energy. Places in nature are entwined systematically through metabolic exchanges like weather or our own activities thus allowing a natural flow of energy. Edges do exist in nature and similar to a skins exfoliation of removal and regrowth are typically shifting and uncertain. The solidity established by mass and the awareness of differing spaces as experienced with translucency establish and define and edge or a boundary. Each has a physical element; each we can touch. Most architects tend to consider walls or boundaries a physical element. To touch is to know. We can feel the texture of the stone, the mist of the water, or lines a defined by a series of trees. A wall defines place. Most would consider a room with four walls the simplest of these places. That being four physical elements. Yet, we can view a room without a physical edge (Image 1.4.1). We see the sky in a controlled view as it forms a definitive edge grounded at the horizon. In this moment edges are provided not by that wall, but by adjacencies. There is a depth associated with this. The view is not modified by other elements. We see the sky's dome. This can be understood as a thickened hazy surface. Transparency or lack of
material allows this. American artist James Turrell experimented with light and space as a medium. His work is not about materiality but about definition of space. Calvin Tomkins states:

“His work is not about light, or a record of light; it is light – the physical presence of light made manifest in sensory form.”

Turrell utilizes an open frame to accentuate the sky as surface (Image 1.4.2). Turrell provides an edge between the frame and the medium, or the sky. It is a single line. The line has no thickness. It is a horizon. He states:

“I make spaces that apprehend light for our perception, and in some ways gather it, or seem to hold it…my work is more about your seeing than it is about my seeing, although it is a product of my seeing.”

14 http://jamesturrell.com/about/introduction 03/17/15
15 http://jamesturrell.com/about/introduction/ 03/17/15
The thoughtful approach is not about the specifics of materials but about the relevance of the viewer. The work is about our perception of place. I recall walking out of a friend's house in Central Ohio. The space was a room of four walls. The house facade was a wall of solidity, the rows of corn were walls of translucency to each side and the sky beyond was the fourth wall in this simple room. Four walls defined this space.

Image 1.4.2 James Turrell
Each had purpose and relevance. One provides shelter, another an opportunity and the final a vision beyond. Transparency is about the ability to define without impeding what precedes the wall.
1.5 Opportunities of a Line

The definition of a wall is not limited to physical mass. It can have qualities of solidity, translucency, transparency or may be open. It may not be defined by one specific element. These moments are present in our natural surroundings. We see the sky as wall or water as wall. It is this opportunity that defines space. Opportunity or purpose becomes relevant to any understanding of place-making. As previously stated place is defined as a physical environment and an area that is used for a particular purpose. Theory reinforces that definition. Theorists have often discussed the beginnings of place. We built to maintain a fire, to protect us from the elements or to simply be in one’s company. Each has purpose. From these beginnings basic principles of existence were cultivated. Nature also was a part of these beginnings. A site in Western Pennsylvania, a large rock-shelter, provided the needed protection from the elements. The place is Meadowcroft Rockshelter Enclosure and is owned by the Historical Society of Western Pennsylvania (Image 1.5.1). It afforded the means for a people to gather. The site is located along a creek. The rock provides a defensible edge and its overall shape performs like a roof (Image 1.5.2). Sitting under the Rock one looks south. This allowed for the low sun to be present in colder months and shaded protection from the high sun in warmer weather. The site is located on a farm.

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In the mid 1950's Albert Miller, the owner, continued to see activity under his rock enclosure. Disturbance of soils by animals presented artifacts of previous users. The significance of what was witnessed next to this wall of stone provided an opportunity for further exploration. It took 20 years to find a person with the vision and enough knowledge to study this particular place for evidence of human occupation. Dr. James Adovasio, an archeologist from the University of Pittsburgh, visited the site and proceeded to undertake the investigation. This investigation documented use of the site for over 16,000 years. This natural space afforded use and therefore became a place identifiably human. Protection from the elements was provided by nature. The Meadowcroft Rockshelter was not designed or constructed by a culture. It resulted from nature. This significance of this particular site was that it provided a continuously occupied place for the first peoples in this region. Prior to this archeological
discovery it was thought that indigenous culture did not extend into this region of the world as early as was once thought. Today many visitors have the opportunity to view the wall as well as the place it edges (Image 1.5.3). A shelter was constructed recently to protect, preserve and maintain this site.17 The architect of the enclosure was Pfaffmann + Associates of Pittsburgh, Pennsylvania. At Meadowcroft Rockshelter Enclosure nature provided a framework for the acquisition of place fit for humans. A wall, and in this particular case, a roof of stone, provided opportunities for human activity. Nature provided a spatial interaction between wall and place. Place is about a humanizing experience derived from the spaces provided by nature. The rock provided protection from the elements. This protection resulted in the habitation and continual use of the space to gather. With place we have moments that form memories; and our actions between wall and place leave physical evidence of those moments.

Image 1.5.3 Rockshelter

1.6 The physical presence of the line

The physical elements of a wall are direct. The mass of a wall encloses space. A wall has thickness, height and a particular length. A wall has surface and in most cases can be touched. Texture is present (Image 1.6.1). Texture is about a surfaces physical characteristics, an overlapping rhythm or a relative proportion of similar elements. Texture is specific to material. This may delineate one wall from another or one moment from another. Each can provide an additional characteristic of a wall. This aids in defining the physical element. These various forms of texture provide the means for solidity, translucency and transparency.

They are also the means that define an open frame.

Material and texture are only one characteristic of a wall. Placement provides a defined line in the Mending Wall. “We meet to walk the line.” Walls may not be that direct in plan. A wall may be a line, a curve or a complex shape. Walls also may not be a continuous form but a series of similar elements. These are specific to each individual moment. What is common amongst all forms and overall approaches of a wall is to define. What is the walls purpose? Why is the wall relevant in regards to its placement? Purpose adds to the complexity of a wall. A wall is not just about its physical properties, materials, or design.

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It is also about its relationship with the user. Purpose and relationship becomes relevant. The Meadowcroft Rockshelter Enclosure is about protection from the elements. One aspect of the mending wall is about the definition of place in regards to time. Another aspect is about the ideal meaning of boundary. The most relevant aspect of that particular writing is about the relationships between two neighbors. "Good fences make good neighbors." Each is about relationships. Place is about both the physical space established by walls or boundaries as well as the experience of the inhabitants.

1.7 The Element of the Line

A wall is but one element of architecture. Others include roofs, structure, and something that can condition the space, or temper the air. Gottfried Semper defined the elements as being a hearth, a roof, an enclosure and a mound. The elements are based on an understanding of the culture of a people. It was about "craft", or the ability of a people to plan, make or execute. It is how a people live. They built in the traditions of their culture (Image 1.7.1). This is important since Semper is articulate in his presentation on the anthropological origins of architectonic elements. He focuses on craft and the skilled ways by which the elements are made as evidence of their origin.

19 Frost, Robert (1914) *The Mending Wall.*
He dismisses an "idealized" or "absolute" origin to architectural form. So to Semper the woven wall is element, action and craft. Its origins are not derived from reason but instead are made materially. This is his area of concentration. It was an interest to investigate this relationship. Ultimately, Architecture can only be about experience. Only the elements with which we create a building can provide an opportunity for experience. The dynamic formed between person, wall and place is never stagnant and always an active experiential exchange. We do not just appear in a space or stand by wall. Each action can be a moment experienced at any wall. In The Five Senses A Philosophy of Mingled Bodies written by Michel Serres, he discusses touch as central to an understanding of the relationship of person to space or soul to environment. Serres states

"The philosopher holds forth about sensation, yet he inhabits it already, dwelling in a kind of sensation, a part of his house as the pupil is part of his eye."22

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Our senses play a vital role in place. We will discuss touch but it is not limited to that one sense. As a result of touch, skin can provide relevance to a particular place or moment. We touch the corner of the East Wing to the National Gallery to feel the crispness of the stone corner detail. We feel a window to have a better sense of the temperature outside. We rub an object for good luck, or we follow the depression in a slab created by those who walked before us. The moments of touch are both personal and cultural. To further understand touch Louis Kahn also discusses this sense. To Kahn touching was central to the procreation of the species. Touch provides a physical connection between wall and place. We feel something beyond the physical aspect of the wall. We sense its intentional presence within space. While space is the lack of an object or material, place is about memory, interaction, history and a future. We understand the relevance of involvement and appreciate the moment as defined by the lines of separation. Between wall and place we touch.

2.0 BETWEEN WALL AND PLACE

2.1 Spatial Adjacencies

Between is about relationships. The relationship may be physical or emotional. “The wall is between us” or “a bond is developing between two neighbors.” The choice by
Robert Frost with the use of this word defines just one major theme within The Mending Wall.

I let my neighbor know the hill;
And on a day we meet to walk the line
And set the wall *between* us again.
We keep the wall *between* us as we go.\(^{24}\)

Simply stated "between" is about spatial adjacencies, an emotional engagement or a result of an action involving communication.\(^{25}\) Some may read the "Mending Wall" and relate this writing to a boundary or a line. Others see the relevance of this wall as a means for two neighbors to communicate. And still others see the writing in a broader sense. The date of this writing is 1914. Turmoil is abundant throughout areas of the world. Boundaries were in question. Place was undefined. Therefore: it may be about the understanding of the moment between wall and the resultant place. Each of these understandings as well as others are present within the poem. The wall is presented as a physical boundary, a means for interaction (Phenomenology), a principle ideal (Semiology), and a rethinking (Deconstruction) of why we maintain boundaries. The physical condition of the wall allows for various views of the adjoining land. The missing stones provide glimpses to the other place. Each neighbor understands the actions occurring on each side. Boundary is defined by the understanding of this action.

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\(^{24}\) Frost, Robert (1914) *The Mending Wall*.
Therefore, between wall and place, relationships are defined. Each may have a different set of ideas but relationship is still present. With relationships between the two neighbors an understanding of the other side of the wall will be maintained. To mend the wall can aid in maintaining what is already present. We set, we keep and we mend.

2.2 The Wall: Conscience and Experience

The awareness of our surroundings through our senses is perception. We interact with place. The physical object of a building can be considered a painting or a stagnant object. It is an abstract element. Within this element are layers. Layers of materials provide a potential reference to a particular material or desired fashion. Layers can reference history, moments or events. They can also hide unpleasant moments or memories. Perception is about awareness of one’s environment. A home has been considered as an extension of oneself. A home’s essence is not limited to the senses but includes objects, history, time and other “life” experiences (image 2.2.1). Perception of place includes an underlying foundation of basic freedom, the inclusion of ones thoughts and memory and
ideals as established by traditions. It is about a personal first hand point-of-view. This is the basic understanding of phenomenology. Phenomenology is the study of structures with regards to an experience and one’s conscience. Edmund Husserl, Martin Heidegger, Maurice Merleau-Ponty, and Jean-Paul Sartre were pioneers in development of phenomenology. The movement, while taken in various directions maintained the basic definition of place based on personal experiences. We experience place from our memory, our senses, our traditions and our emotions.

Similar to the physical layers of materials are the layers of perception, experience and memory. Aldous Huxley, and English writer, wrote

“There are things known and there are things unknown and in between are the doors of perception.”

Between becomes relevant again. Between two neighbors lie a fence or a boundary. Between wall and place includes memory, awareness and an interweaving of our senses. The doors of perception are similar to the wall in a need of mending. Each includes a firsthand experience. Each references time. Time being of the past, present or future. Place as established by phenomenology includes various layers of both the known and the unknown. With place, we live and we dwell. Dwell is about permanence of place. With dwell we have opportunity for a layered memory. Dwell also provides an

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understanding of time. Dwell is an Old English word meaning to hinder. Its meaning was modified through extension to its current definition of to live or stay as a permanent resident; to reside and to live or continue in a given condition or state. The interesting connection between dwell and its origin of hinder is a simple understanding of progress. Dwell is to provide the element of protection and familiarity. It hinders the constant question of place. Homes provide that sense of protection, of place and of establishment. The Mending Wall also provides that sense of protection, place and memory. Between wall and place we have an interaction of moments. We dwell in place.

2.3 Symbolism of the Element

We have discussed the boundary of space as established by an element or a wall. Each element has an understanding of its relevance in regards to its place. These walls provide a function. That can be as simple as spatial definition or as complex as a separation that maintains good relationships. Both are present in The Mending Wall. Why are we mending? Mending is a form of building. Despite it being about replacement, it is also an act of construction. This act of building is always new despite its continuity with previous actions. We mend the wall to continue the function of separation. Why separate when functions on both sides do not require a wall? We maintain the wall as a result of an understanding between wall and place. In this case

the wall acts as a symbol or a sign of change. Thus the complexity of function arises as a result of cultural codes. Architecture of function is not limited to the physical nature of the element but also the symbolic understanding of its purpose. To further understand the distinction, Umberto Eco, an Italian semiotician, theorized on the distinction between function and symbolism, or signs in architecture. With this Eco professed that architecture includes both a literal function of place as well as a symbolic presence of a culture or a moment.\textsuperscript{30}

Symbolism of place allows one to identify an experience. He or she first migrates to an unknown region. On their travels they see an opening in a rock. They inhabit the protected space and continued to exist in this manner. Openings establish a place to gather. The function of place was to protect and inhabit with others. The openings became recognizable. These first people would see an opening or a cave, or in the case of Meadowcroft a rock-enclosure, and acknowledge that as a place to dwell. Tradition provided that understanding. Those who saw the similar place knew the relevance of its function but had no need or desire to dwell. The opening has become a symbol of protection, gathering or a home.\textsuperscript{31} Again, dwell is an Old English word meaning to hinder whose meaning was modified over time to a revised definition of a place to live.\textsuperscript{32} As an architect we provide a service. We design spaces based on program and function. As individuals we dwell and inhabit. The most understood place


\textsuperscript{31} Eco, Umberto. \textit{Function and Sign: The Semiotics of Architecture.} P 175.

is a home. Homes, like individuals, are specific to those who dwell. A house provides space. With a home we have purpose. A home is a memory of place. It is about past moments and future gatherings. We remember those moments. A home can be a recognizable scent at a parents house, or the warmth of their fireplace at a holiday, or the simple sound of the every day. A home is perceived not by one moment, one image or one sound but by the interplay or blending of all moments, all images and all sounds. Semiologist have an underlying code or principle in the development of signs or symbols. Eco discusses the beginning of architecture as presented by theorists. This includes the idea of protection. One would protect the fire to maintain heat and light. A cave also would provide protection from rain and wind. The cave had a function. The views of additional caves and the eventual habitation of similar spaces provided a memory of place. One would see an entrance to a cave or an image of one and recognize the relevance of that particular place. The code, or rules, generated by the function became an iconic representation of a place of protection and warmth. The actual openings or images symbolized the idea of protection, warmth and shelter. Symbolism in architecture is not based on a behavioral trait or the emotional attachment to a building. Symbolism or signs are based on a set of rules or codes within a specific context or culture. Eco states

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"It is characterized only on the basis of codified meaning that in a given cultural context is attributed to the sign vehicle."\(^{35}\)

Eco theorizes that architectural design is not limited to the primary or denoted function, but also includes a secondary, or a connotative nature. Denotation is about a place's particular use or function, while connotative architecture is about the ideological understanding of place.\(^{36}\)

The direction of architecture as presented by Carlo Scarpa also includes a dual relationship between function and meaning. Scarpa stated

"I would like some critic to discover in my works certain intentions I've always had. I mean an immense desire to belong inside a tradition, but without having capitals and columns, because you just can't do them anymore."\(^{37}\)

One of the key words in the passage is tradition. Tradition is the passing down of traits, or elements that are a part of a larger moment or a larger composition.\(^{38}\) Tradition is about the symbolic understanding of these events, traits or moments. The column is both a detail as well as a larger part of the organization of a building. The column capital type references a particular class. Specificity of place becomes relevant to

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which column capital is used in which location within a building or a buildings façade.

Scarpa's interpretation of the detail is specific to place, similar to the column capital. Tradition again dictates location. This intention or detail occurred when I visited the Brion Cemetery designed by Scarpa. One can ascend the steps at The Brion Cemetery in San Vito d'Altivole near Treviso, Italy (Image 2.3.1). The detail provides a sound similar to a drum. The pitch at each step is at a higher level. Sound becomes a symbolic element. The change in pitch can represent a higher place. The primary function of the stair is to provide a means to get from one level to another. The connotative nature of the same action is a symbol of the purpose for this particular place. The function is transcended from travel to ascension through sound. It is about the ascension of the family members from the material earth to an eternal life. The playful use of sound based on this particular detail symbolizes the relevance of the after-life. Sound alters our experience of place. "Architecture is the thoughtful making
of space” Kahn's words resonate in the discussion of denotative and connotative approach to the development of place.

**2.4 An Element in Question**

Elements of architecture, steps of sound, boundaries of symbolic place or the ideal understanding of a cave of protection, all reference a rethinking of a common tradition. Tradition again provides another opportunity. The idea of a rethinking is based in the understanding of deconstruction. That being said, deconstruction is a rethinking of the basic principles, values and direction that is typical to the humanities. Deconstruction is not a physical exercise in the dismantling of a constructed element. It is about the understanding and questioning of the basic principles of design.\(^{39}\) In the following passage, Jacques Derrida, a French philosopher, defines deconstruction:

> De-construction ... analyses and compares conceptual pairs which are currently accepted as self-evident and natural, as if they had not been institutionalized at some precise moment, as if they had no history. Because of being taken for granted they restrict thinking.\(^{40}\)

The openness of thought allows the process to investigate a future thinking. The ideals of deconstruction are not a style or a period. It can be as simple as a rethinking or an

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inquiry. This rethinking or inquiry is based on tradition and an understanding of history (Image 2.4.1). Some will see this as an attempt to distinguish what one thinks is not a positive solution or approach. The ideals of the profession are questioned and investigated. It is a challenge of the known that may result in a different approach. The Cathedral of Saint Mary of the Flower (Cattedrale di Santa Maria del Fiore) provided an opportunity to rethink. The question was one of how. How do we build a dome of this magnitude? Filippo Brunelleschi design and constructed the dome. The resultant dome was based in the basic understood principles of tension and compression. The implementation and direction of the design rethought the typical details. The resultant architecture changed a skyline, a city and a culture. The investigation results in potentially a rethinking of a detail, a building program or the simple element of a wall. The process of a rethinking allows for another expression of place. A rethinking can be a thoughtful opportunity to honor the establishment.

In Discourse of Method Descartes discusses departure from the establishment. It is his attempt to not rework the known but to create an original unified philosophical agenda.

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The approach of Descartes is about process. The discussion includes the development of a city. A planned community based on one thought at one particular moment can result in a place of reason. Cities of layers, those of overlapping moments, result in moments of chance. We experience moments of chance within an ancient and medieval city. Via dei Giubbonari in Rome is a street of memory. People have walked the street since ancient times. Purpose was present on Via dei Giubbonari. At one time it was known as a center. The shape of the street is not straight and planned. It curves and provides moments of varying views. Differing facades are present (Image 2.4.2). There is not a defining image. It is not of one moment in planned history but it is of all moments. We see layers of facades
Moments of reason allow for one to rethink or to ignore the tendencies of the past. Chance and reason are defining words. With reason one has the opportunity to rethink. Reason allows for an inquiry into the known and the unknown. To Descartes, chance happens at the hands of many. With that reasoning places of chance most likely have no definitive plan or direction. The result of the thoughts of Descartes is an evaluation of the traditions that have been codified. If is about approach. These approaches are not definable but are dependent upon the individual’s ideals. One can always question. We question the reason for a fence or a border. We understand the relevance of these elements. Neighbors maintain relationships by questions and answers. We mend to maintain. We question a code or an approach to move forward. Relevance of place must question and rethink. With place we have reason.

2.5 The Experience of the Wall: Between Moment and Place

Between a wall and place we have experience and understanding. This is aided by the physical, the experience, by acceptance of tradition, by memory and by a forward

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thinking (Image 2.5.1). We as architects understand the relevance of the physical. We build to provide space for human occupation. We dwell and inhabit space. We provide for an opportunity of place. Architecture as stated by theorists aided in the sheltering and accommodation of people. This resulted in the form and expression of a culture. The wall is but one element in this development.

3.0 SOLIDITY

3.1 A Defining Memory

Space is defined physically through the use of architectural elements. Characteristics of these elements can be set along a perceptual continuum ranging from solid to translucent, transparent or an open frame. Solidity provides a physical and visual separation or boundary to a particular place (Image 3.1.1). The wall of stone at Meadowcroft Rockshelter Enclosure (Image 1.5.2) provides that definition of boundary through the use of a solid element. The separation of place is also seen in the “Mending Wall”. This wall is not only physical but also emotional. A wall with two

Image 3.1.1 Separation from City by Solidity
sides creates a difference between its adjacent places. The specific difference a wall forms between its two sides composes place for different experiences and other diverse thoughts. The relevance of the rock wall at Meadowcroft provides an experience of safety, warmth and protection. This is safety from others, warmth provided from the southern exposure of the sun and protection from the weather. The term “Rock” is also a term of solidity. “Plymouth Rock”, “Upon this Rock, I will build my Church” (Matthew 16:18), and Hammurabi’s Law all pertain to the ideals of solidity of place. One provides the foundations of a faith. Plymouth Rock provides a definitive understanding of mass in opposition to the treacherous and uncertain ocean movement. Hammurabi’s Law provided a direction for a culture. Each use of solidity has specific meanings for a particular ideal or belief. Each medium is of the earth. Earth is the medium of artist Michael Heizer. He states:

“I think earth is the material with the most potential because it is the original source material.”

His works, in particular Double Negative, is of the earth (Image 3.1.2). This work of art is an example of Earthwork. This

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44 Bourdon, David (1985) “Art...He Makes the Earth Move”, Vogue P. 75.
movement of the late sixties and early seventies celebrated that source material. The art is a series of two straight trenches. Each is approximately thirty feet wide and fifty feet deep. The length is one thousand five hundred feet long. Removal of two hundred forty thousand tons of dessert sandstone were displaced for this installation. As a result, the art is specific to its location. The art is also specific to its time. Heizer requested that the installation is not modified and protected from natural elements. To him, art of place will return to its source. It will be of the earth again. Double Negative was donated to The Museum of Contemporary Art be Virginia Dwan.\textsuperscript{45} Double Negative (1967-1970) is located in Morman Mesa, Nevada. Being of place, the installation can be viewed at every moment of every day of every year.\textsuperscript{46} For him, sheer, mass and immobility work against the commoditization or his art. But the other qualities associated with solidity become manifest in his work: mass, weight, opacity and immobility. Heizer work is atypical and about solidity and mass.

These allusions to solidity provide strength for a new venture, a foundation for a set of beliefs and an understanding for communications. Today this idea of solidity and its relevance towards a better understanding of culture and place can be experienced in the works of Louis Kahn. In particular, Franklin D. Roosevelt Four Freedoms Park provides a wall of solidity to define a place of reflection. The approach of honesty of form and material is commonly seen in the works of Kahn. Contemporaries of Kahn also understand this direct approach. Mario Botta at the Church in Mogno-Fusio,

\textsuperscript{46} www.moca.org/visit/double-negative
provided a wall of solidity. Each of the elements are of stone, and provide an additional reference to memory. The characteristics of solidity include a reference to permanence, a potential place of protection and an immutable consistency in overall form. The use of the material is but one way to express solidity and the detailing of the wall aids in the expression of solidness within a particular place. In these particular instances, stone only enhances the overall experience of freedom from all.

The definition of freedom is not limited to the physical act of liberation but can also include the absence of necessity, the quality of being open in ones thoughts and actions and the boldness of a conceptual idea or expression. It is with this understanding of the various meanings of freedom that Franklin Delano Roosevelt spoke about in his State of the Union Address to Congress on January 6, 1941. While this inaugural address had both positive and negative reactions, this observation is not a political discussion but a discussion on solidity of wall and place development. The address has become known as the Four Freedoms Speech (Image 3.1.3). The essential four freedoms are as follows:

- The first is freedom of speech and expression - everywhere in the world.
- The second is freedom of every person to worship God in his own way - everywhere in the world.

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• The third is freedom from want – which, translated into world terms, means economic understandings, which will secure to every nation a healthy peacetime life for its inhabitants – everywhere in the world.

• The fourth is freedom from fear – which, translated into world terms, means a worldwide reduction of armaments to such a point and in such a thorough fashion that no nation will be in a position to commit an act of physical aggression against any neighbor – anywhere in the world.\footnote{\url{http://www.fdrlibrary.marist.edu/pdfs/fftext.pdf} 11/24/2013.}

The inspiring words of freedom, legacy, thoughts and the accomplishments of the late president provided a reason to reflect. Franklin D. Roosevelt Four Freedoms Park provided a place for reflection. It was proposed by New York City mayor John Lindsay in the late 1960's to rethink urban plan and urban place on Welfare Island. The term...
used in various cities throughout the country to repurpose a community was urban renewal. The program, or idea, for Welfare Island was to build a thriving residential community. With this the New York Times efforts championed the renaming of Welfare Island to Roosevelt Island. This repurposing of place provided a location for a memorial dedicated to the ideals of the late president. John Lindsay at that time stated "It has long seemed to us that an ideal place for a memorial to FDR would be on Welfare Island, which...could be easily renamed in his honor... It would face the sea he loved, the Atlantic he bridged, the Europe he helped to save, and the United Nations he inspired." 49

The realization of the construction of Four Freedoms was not completed until 2012. The architect awarded the commission was Louis Kahn (1901-1974). To understand the selection of this particular architect one must consider the portfolio of work and the overall theoretical approach of Kahn. His portfolio of work includes libraries, museums, as well as public work projects. His work also includes the development of place based on boundaries and edges. In this particular place, a room in a garden, we have walls of boundaries. The physical boundaries include trees as walls, site grading as walls, an open frame and stone mass as walls (Image 3.1.4).

Each reinforces a room within a garden and each provides differing moments within approach, passage and eventual place. The built work of Kahn is based on the understanding of elements and place. Kahn has credited President Roosevelt with the means to support his family through the commissions of the New Deal programs. Concerning the theoretical approach of Kahn, his writings include the discussion of truth, beauty, thoughtfulness and soul. His architecture utilizes the meanings of truth and beauty. Thoughtfulness was a major theme for Kahn. Kahn felt that thoughtfulness in his designs as well as his approach to life could have a positive effect on the experiences of humans. Both men, President Roosevelt and Louis Kahn, had the desire to enrich the lives of all people - everywhere in the world.

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3.2 A Room Defined

Again Louis Kahn stated, “Architecture is the thoughtful making of space.” His approach and thoughtfulness can be experienced in the view of the horizon of the Pacific Ocean at the Salk Institute (1965) in La Jolla, California. We see beyond to a world free of polio. The approach of thoughtfulness is also seen in the relationship between the width of the brick piers and the expression of detail, construction method and structure at Phillips Exeter Academy Library (1971) exterior elevations in Exeter, New Hampshire (Image 3.2.1). The floor loads are supported by columns located within the building footprint thus the façade does not support the overall building loads. Both though relate to one another in the overall structural grid and building system.

Image 3.2.1 Phillips Exeter Academy Library
organization. The façade design and expression of structure was direct. It is the understanding of masonry bearing that allows the piers in the elevations to diminish in size. With masonry bearing the thickness and mass of the wall can be resized in both width and mass as the capacity of the building is reduced. This reduction of capacity occurs at each floor level. Thus size of the piers diminish in width.\(^{52}\) Another example of thoughtful design is the parti, or conceptual design, of a room and a garden at Four Freedoms (2012) (image 3.2.2).

The idea of a memorial was developed by William J. Vanden Heuvel a former ambassador to the U.N. Kahn was selected as the architect and a foundation was established to raise the appropriate amount to construct the memorial.\(^{53}\) The effort to raise funding for construction was maintained throughout by the Franklin and Eleanor Roosevelt Institute.\(^{54}\) Kahn completed design and documentation prior to his

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untimely death. It is noted when he passed away at Pennsylvania Station that he had a set of completed designs for the memorial. Mitchell Giurgola Architects completed the design and documentation based on the intent of Kahn. In 2005 an Exhibit at Cooper Union provided additional recognition for the relevance of a memorial based on Kahn’s design. In this particular project, the room and a garden was a starting point and a place to begin. To Kahn, the room was the first element of architecture. Provide a space and build to suit its purpose.

“The room is the beginning of architecture. It is the place of the mind.”

A room of freedom is not limited to a specific notion. A room meant for a defined moment does not limit purpose or experience of the occupant. A room without a specific purpose provides a place of limitless possibilities. For Kahn, the Four Freedoms, as an elemental room and garden, are thoughtful spaces. The garden is a planned grouping or cultivation of plants and other items found in nature. When we live between walls we endow those walls with our memories, experiences and conscious perceptions. Walls form the edges of our encounters with phenomenological experiences (Image 3.2.3). The phenomenology is understood through an encounter with walls. These thoughts resonate with Kahn’s thoughts on architecture. Kahn begins with the room, since the room substantiates our mind, making a place for the mind to encounter the world. So for Kahn, it is about the built environment as something

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indivisible from thought. We cannot think without encountering the space of the room. Kahn's beginnings are quite individual. Various other theorists and architects have also commented on the beginnings of architecture. Marcus Vitruvius Pollio, an architect, author and engineer, from the first century B.C. was the author of De Architectura. De Architecture is a treatise on Architecture and is referred to as The Ten Books on Architecture. Vitruvius theory on architecture begins with the development of a civilized community from those living alone in nature to those living together in a civilized community. Vitruvius discusses natural occurrences and the effect on the inhabitants. The natural occurrence referenced was a fire. Eventually they managed flames and contained the fire. The resultant action was a controllable conditioned temperature or warmth. The comfort of warmth for the “Men of Old” becomes a reason to gather. This gathering resulted in the development of language, customs, social interaction and shelter. Vitruvius and Kahn have differing theories on the beginning of architecture and resultant place. Vitruvius theorized that the beginning of architecture was a place to gather with

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the central focus being fire or warmth. This gathering together provided the first room. Kahn envisioned the beginnings of architecture as an encounter between the mind and place.

You in the room with its dimensions, its structure, its light respond to its character, its spiritual aura, recognizing that whatever the human purposes and makes becomes life.58

Kahn speaks of the physical boundary of place. Walls provide a boundary for human purpose. Experience of place results from the interaction between the physical built environment and the thoughts and experiences of the inhabitants of a space. With Vitruvius, place was not a physical built room but a room built of the people. The gathering of many provided the physical boundary and a communal wall of flesh. Each had physical elements. One wall of boundary and the other boundary of a people (Image 3.2.4). The start of architecture has been discussed. Each include one common theme. That theme is a gathering of people and the resultant development of a culture. Four Freedoms is a place

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for gathering in memory: a place to be free together. The walls as elements define a place to gather. The ideas of truth, honesty and freedom resulted from that gathering of people and the associated development of a civilized union. The words spoken by Franklin D. Roosevelt on the rights of humans, similar to those of the newly formed unions provide the justification for a thoughtful architecture; a place for minds to gather.

3.3 Details of Solidity

The architecture is about edges and adjacencies. The plan is longitudinal and symmetrical along a central axis. The longitudinal form of the garden is triangular in shape following the natural shoreline of Roosevelt Island (Image 3.3.1). The forced perspective in the garden enhances the relevance of the room and the views beyond. The entrance to the memorial is through a garden composed of a manicured lawn edged by trees. These edges are defined by a doubled allée of little leaf linden trees or a wall of trees forming two avenues with a lawn between (Image 3.3.2). The edge between the garden and the room is defined by a bust of Franklin Roosevelt set within a mass of granite (Image 3.3.3). The opposite wall located at the end of the longitudinal plan is left without a physical edge or
The element of boundary is an open frame. The openness of the plan provides a view to The United Nations and the Manhattan skyline beyond. The longitudinal walls of the exterior room are also granite, similar to the entrance element. Thirty-six-ton granite blocks align the southeastern and northwestern edges to provide boundary between the room and the adjacent shoreline. Kahn details the individual stones composing the wall each adjacent block. The exposed edges of the stone are left in their natural state. The absence of a finish on the stone is a typical approach of Kahn. The natural or inherent beauty is expressed by the physical actuality of material and not modified by human interference. Throughout his other works oils were used to preserve some woods, steel was left unpainted and concrete forms were detailed to express the methods of construction. The

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stone in its natural state aided in the solidity of the wall by allowing the mass to be not about a finish but about scale, inherent beauty and boundary.

The reveals provide a definition of the edges. This approach is typical in buildings designed by Kahn. He provided a moment between two materials, two walls and two building elements. The relevance of these moments allows for the individual expression of the material within a larger context. The larger context at Four Freedoms is the edges of the room as provided by a series of individual granite blocks. The separation or reveal of the stone material also occurs between the large block and the ground plane (Image 3.3.4 and Image 3.3.6). The reveal allows you to experience the mass of the wall. It transforms the wall from a granite surface into a mass of great weight. In a world where we are used to surface treatments and wafer thin finishes, it is surprising
for us to encounter such profound solidity. This detail articulates the solidity of the material in relation to the room and the garden. The rock does not rest on a plinth, but grows from the earth. This method of separation both accentuates the solidity of the stone and define the edges of the room. The architect considered this moment of a particular expression of the reveal to be ornamentation. At Four Freedoms ornamentation is limited. Ornamentation is the spoken words of freedom and the details of the reveal (Image 3.3.5). Ornamentation is not applied. Eugene-Emmanuel Viollet-le-Duc (1814-1879) was an architect and theorist. His architectural theory was based on the principles of the ideal form of particular materials. He also theorized that form should be based on the method of manufacturing or construction. We see this approach in the physical realization of Four Freedoms Memorial. Ornamentation is a result of the method of construction. The reveal accentuated the solidity of the form. Kahn wrote the following about the works of Carlo Scarpa.

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‘Beauty’
the first sense
Art
the first word
then Wonder
Then the inner realization of ‘Form’
The sense of the wholeness of inseparable elements.
Design consults Nature
to give presence to the elements
A work of art makes manifest the wholeness of the ‘Form’
a symphony of the selected shapes of the elements.
In the elements
the joint inspires ornament, its celebration.
The detail is the adoration of Nature.⁶³

Respect of nature is the detail. The space between solid elements in a design forms a joint and Kahn sees this as the opportunity for ornamentation to emerge. The case of Four Freedoms, the one-inch space between the stones become its ornament and brings form to qualitative character of the wall

Image 3.3.6 Reveal at Base

⁶³ http://www.phaidon.com/agenda/architecture/articles/2013/october/18/carlo-scarpa-by-louis-kahn/
telling the full tale of its massive solidity. This wall is about its solid nature. It provides boundary and definition of form for the room within a garden. Kahn's attention to detail allows the reveal to be present in mass, yet still maintains the inherent nature of the solid form. This wall of solidity is comprised of many parts, yet the resultant form acts as a whole. The composition of solid and void allows the wall to provide the sense of enclosure, yet references a free place beyond. To appreciate the freedom to the west, one has been given the opportunity to view the culture beyond. Upon entrance to the room, the reveal is a detail in a solid form as seen as a series of shadows, but further appreciation of the wall allows one the ability to see beyond. The massiveness of the walls as they enclose Kahn's "room of freedom" define a space and in a sense "free" the space for action (Image 3.3.7). Also the solidity and gravity of those stone walls protect that freedom in both a direct and metaphorical way. However, the opening that allows a view to the UN is critical. That open frame is of profound importance. Had
Kahn enclosed the space on all four sides the resultant space would have felt imprisoning. Instead the space is expansive due to the open frame and its view to the freedom of the city, opportunities of a free nation and a free world (Image 3.2.2, Image 3.3.8 and Image 3.3.9). This wall of solidity is about just that, a relationship between wall and place.

*Image 3.3.9 Four Freedoms Open Frame*

**3.4 Solidity of Memory**

An element of solidity is also present at San Giovanni Battista, The Church at Mogno-Fusio. Solidity there is both the object of destruction as well as the foundation for a beginning. A catastrophic occurrence of mass destruction destroyed a place of gathering and a place of memory. An avalanche in the mountains above the Village of Mogno leveled the seventeenth century place of worship to an unrecognized pile of
rubble. The result of that event allowed for an inquiry into the relevance of its purpose and meaning. The congregation was small and the question was critical to the culture and well-being of the village. It was not a question of whether to build or not to build, but a question of how to mend. Similar to “The Mending Wall”, the purpose of the mend was about relationships. A relationship between a present and a past, a person and a belief, a built element and nature and an event to a community. Mario Botta was selected as the architect to design the new worship space. To Botta, the new architecture should communicate memory of the past, the strength of a people and the presence of a culture. Botta stated,

“I felt that the church must be placed against the moment through its own gravity. It must possess a weight sufficient to resist the banalization of the moment, a density sufficient to absorb the atavic nature of its rebuilding. It must appeal to this weight in its struggle against the mountain. I felt, initially, that to express effectively this concept requires the use of one material.”

The material chosen was stone of the mountain beyond. The intention was that the materials of the new building would only be that specific known stone. This included opening, structure, walls and roof or all elements of the architecture. The structure built is a simple ellipse. This continuous wall, a wall with no beginning and no end, was placed against the backdrop of the mountain on an unadorned piazza. An ellipse

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provided reference between man and nature (Image 3.4.1). One center for nature and one for those who inhabit. The top of the wall was terminated on an angle. The resultant form of the termination was a circle. The transformation from circle to ellipse is similar to the action, derived in reverse, from gaining ellipses from concentric sections. This transformation of two central points of the ellipse into a single center of a circle for a roof represents the cohesive relationship between a people and their natural surroundings.

The roof structure is supported by stone. Angled arches provide structural support for the roof as well as the interior definition of the place of worship. I refer to these as angled arches since these two structural components are not shoring the walls but instead serving as a support for the roof structure. They carry gravity loads from the

*Image 3.4.1 The Plan, The Church at Mongo-Fusio, San Giovanni Battista*
glazed roof. I believe that the split is aesthetic. It marks the center with light and defines the flow of rainwater that cascades down over the entrance. The element of the roof was designed as an opening to the sky above (Image 3.4.2). The construction of the roof is relative to the present. It is built of its time and for its time. This is similar to the roofs of Medieval and Renaissance churches. Filippo Brunelleschi at Santa Maria del Fiore designed and constructed the expansive dome to complete the roof form. The methodology of construction was specific to that time in history. The dome is based in history. Brunelleschi studied The Baptistery and Pantheon. This study included both proportions and detail. This allowed him to understand the relevance and structural capacity of an arch and a dome. The new dome was not of that detailing or of that particular time. A double shell dome was built. This dome was built of a series panels.

*Image 3.4.2 Opening to the Sky, The Roof*
Each defined by an upright rib. The ribs are reinforced and horizontally subdivided between ribs. This horizontal subdivision allowed the double shells to be reinforced as the dome was constructed. The roof for the Church at Mogno-Fusio was detailed to float above the solid walls. The roof was glass. The walls edge was always present. The View of the mountain is also present within the worship space. It was mentioned that the solidity of the walls was reminiscent of previous worship space and therefore the new building. With the view of the wall and the mountain the glass roof maintains this memory (Image 3.4.3).

Image 3.4.3 Wall and Mountain

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3.5 Specifics of Solidity

Solidity of the wall is present in both instances. The walls of solidity as designed by Kahn and Botta provide both an edge and an enclosure. Each is based on a specific place and a historic memory. The specifics of each are relative to one moment. Each relevance is defined by solidity. The strength of both walls are based on adjacencies and relationships. These relationships are between the mass and the city beyond or the continuous wall to the mountain. Each provides an opportunity to remember, to reflect and for permanence to resonate. Solidity offers a sense of certainty to the person who experiences the aesthetic qualities inherent in the wall. Upon one’s initial experience, solidity is evident. The strength of these places is its ability to look beyond. Relationships of place are about just that. Its ability to experience the present, the past and the future.

3.6 Relationships of Solidity

Solidity in its most basic of form is perceived as mass. Stone is something we associate with solidity. Thus the spaces as defined provides the user the opportunity to understand the physical boundaries as provided by the wall. There is a physical edge, a beginning, a between and an end. Solidity can provide a defining moment between wall and place. The linear walls at Four Freedoms and the continuous wall at The Church at Mogno-Fusio allows one to think and reflect. Each space has purpose. Reason becomes relevant within place. The question becomes why? Why solidity of
form? Why the reveal? Why this particular stone? Why is a wall linear or continuous? Why? Franklin Delano Roosevelt Four Freedoms Park is a memorial. The memorial was designed as a simple room in a garden with a purpose to remember. The site is a place of reflection. We reflect on the basic principles of freedom. This particular place is defined by a stone wall. Simple, unadorned, limited in its interaction with other materials and left in a natural finish. The stone provides the warmth of a natural undisturbed material and a texture to touch. The approach of the design is linear. The walls of place are based on the angle of the shore. Each defines parallel sides of a simple room. The continuous walls of solidity are a series of elements. The elements are separated from one another. Touch is not present between materials. Individuality of each piece is present. We see and experience each edge. The dimension of the reveal is small and allows those who visit the room to experience the pieces as a whole. With the limited reveal the multiple of pieces act as one element (Image 3.6.1). With the scale of the space, continuity of the boundary is achieved. The strength of the wall is not about either of these two relationships but about both. Continuity is about the whole wall. Solidity is about wholeness. The first view of the wall is one of mass. The reveals appear as simple lines of construction. Experience of approach is a constant change. We walk towards the wall. As we approach the wall we notice this is not a construction joint but has a dimension. The line is not limited to the face or surface but is an actual separation. The element is a reveal or a void. It occupies space. The shadows define the wall. We see the reveal but the limited width controls the view. Solidity is still maintained. Relationship between wall and experience allows this. The significance of
the reveal becomes more relevant as one concentrates on its purpose. That purpose is to provide an opportunity to experience the beyond. Kahn’s design of thoughtfulness is about experience and relationships. Relationships aided in the experience of place. The linear approach or a continuous wall of solidity each has relevance in relation to this memorial.

As previously stated a reveal is provided between two stone elements as well the moment the stone meets the plaza. We see the stone grow from the earth. The detail
of separation is the ornamentation. The reveal provides views of a free world. The
details tell the story. The walls of solidity, the mass, the stone material and the detail of
growth instill within those who experience the place the understanding of freedom.
With each the fundamental principles of solidity were questioned. To experience Four
 Freedoms, one can see the thought process. How can a wall of stone or a wall of
solidity maintain a view of freedom? How can one see beyond? Windows or punched
openings would have provided a multiple of views. Kahn was direct in his design. It
was simple, provide a view within a wall of solidity and maintain its form. He achieved
this through the use of a simple reveal. This wall of solidity allowed for a moment
between the wall and the view beyond. The placement of the stone and its relationship
to the others maintained solidity. Edges were aligned. One face is not proud of the
other. The dimension of the reveal was limited enough to both provide a view and to
maintain a continuous wall. The rethinking included the accentuation of this limited view
with the polished surface. Provide a view and compliment it with reflection.

3.7 Continuity of the Wall

The wall for the Church at Mogno-Fusio is seen as a cylindrical form. Edges for the wall
is provided at the base and the roof. In plan the wall has no beginning or no end. The
element is set on a plinth. This wall sits adjacent to the mountain. The form is simple,
elegant and complimentary to its location. The mountain is vast and large. It is always
present. The continuous wall is limited in size and height. The wall is refined and
formed. The shape is one that is constructed. The stones were set in place by hands. The details of the reveals as expressed by Kahn were not present in the approach of Botta. Stone coursing was not interrupted. Solidity of the wall and the mountain beyond are forever present. Relevance of this place is about context. The refined nature of the church co-exists with the natural form of the mountain. The stone is the same. The church was built from the rocks of the site. One sees each element together. In some views the forms merge. In others the continuous wall is proud of the form beyond. The distance between the two is mitigated by touch. We touch the wall and we touch the mount beyond. It is the singularity of material that provides this connection. To touch is to see. We feel the rock. We see the mountain. Details of each wall provide a further understanding of place and context. The relationships between stones at Four Freedoms provides an additional connection. The details allow one to view the city and to see the free world beyond. The simple act of polishing the interior face between two stone elements allows one to see a direct image as well as a reflected image (Image 3.6.2). With The Church at Mogno-Fusio the story is simple unadorned and seen in its wall. That is the simple selection of the stone from the mountain. The same stone that destroyed the memories of a village provided the material make-up of the wall. When one sees the wall the village is present. This particular wall can only occur in this particular moment. It was thought to be the only material and a symbol of those who worshipped before us. Botta maintained the story of the past with the simple gesture of a material. Botta states:
"I hope and anticipate that in the year 2000 - when all built work will be consigned to ephemerality and more and more open to consumption - there will be in this church a form of resistance, a force in the opposite direction, aspiring to be for an eternity."\textsuperscript{67}

This is a powerful statement about the architecture of today. A charge of insignificance and ephemeral meaning. But it also gives action and intent to solidity as a formal resistance of continued presence of stability and certainty. Solidity has semiotic content that is worth exploring. And in the words of Botta “it has the potential to be deconstructive and challenge the dominant paradigm of our times.”

At Mongo, a similar question arises. How can a wall of mass bridge a town to a mountain?

Botta also separated forms. Botta also specified stone. The investigation for Botta was in relationships. How to remember the past? The top of the wall was chamfered. The roof was limited. A simple glass structure provided protection. One can always see the mountain. It was about view and relationships. Rethink an edge to maintain a relationship.

3.8 Solidity of the Moment

Reason became critical in the material selection and detailing of both walls. Each approach is relevant to each particular place. The material symbolizes strength of a nation and a belief. The adjacencies as detailed between stone and stone, stone and ground and stone and mountain reinforce this notion. The stone walls at Four Freedoms is separated from the constructed. A reveal is provided between wall and place. The stone is of the earth. Its solidity is not dependent upon other materials or devices. It can stand alone and is free from the needed. Mongo is set on a plinth. One can see the strength of the stone based and the relevance of the mountain beyond. The village can see the continuous wall and the mountain at one time. The stone material is that of the mount. It is the same material the villagers climbed on as a child, walked on with friends or gathered pieces to contain a fire. It is the same material that destroyed the previous church. Culture was established at the mount. The moments of experience are enhanced by reason. Solidity provides a place. A place to gather, think or just be. The room is the place of the mind. The words spoken by President Roosevelt were meant to enrich the rights and lives of people everywhere in the world. With these rights comes human desire of feelings and emotions. Feelings of history or a moment are present at each wall. Solidity allows moments between wall and place.
4.0 TRANSLUCENCY OF PLACE

4.1 Neighbor to Neighbor

Upon entering a particular place, certain elements, objects or placements can aid in its overall experience. A wall or a series of walls, typically define physical boundaries.\(^\text{68}\) The walls of stone associated with Four Freedoms provide a boundary based on solidity of form, texture and relationship to site and context. Solidity obstructs adjacent views and prevents the passage of light. The quality of mass, or massiveness, is a relationship between that and those experiencing place. Solidity is an elemental characteristic of a wall. However boundaries are not only defined by solidity or mass but can also be expressed by a row of columns, a change in level\(^\text{69}\) or a disheveled wall in need of mending.\(^\text{70}\) Robert Frost in "The Mending Wall" describes a damaged wall that provides a physical edge and a visual delineation between two neighbors. This particular wall, whether mended or left in the state of disrepair, still defines place for both neighbors and constitutes a place unto itself. The characteristics of the Mending Wall is not specific. The current state of the wall may have elements of solidity transparency or translucency.


\(^{70}\) Frost, Robert (1914) *The Mending Wall*. 
With the varying of elements, the experience of each person within a space may not be the same. It is about the encounter of the experience. Artist Ann Veronica Janssens work is based on the ideas of experience. Her medium is not physical but is sensory. Her use of light, color and sound enhances the overall experience and perception of the space, or in this instance the art. The art may be a room of colored mist and fog-like in its appearance. It may also be a simple room. The art in the room is sound. Janssens understands the relevance of solidity, translucency and transparency by modifying the physical. In some visits there are variable blurs. The art can disorientate each individuals experience, therefore the visitor becomes an integral medium of the art installation.  

Again, we talk about one’s experience and understanding of place. It is about the moment of the visit.

The importance of the poem is not on the architecture but on the moment between two neighbors. ”The Mending Wall” is about references and relationships. A disheveled wall may provide moments of total visual connection, a reference of light or the murmurs of sounds from the space beyond. The relationship as discussed is of stone to course of stones, wall to earth, wall to the horizon and neighbor to neighbor.

4.2 Translucency: Neither Solid nor Void

A wall's opacity versus translucency can provide an understanding of the place beyond the variability of a wall in relationship to the overall experience of place. An application of translucency is seen in architecture through the use of stained glass. The passage of light and a potential glimpse of moving objects may be transmissible through a wall's skin but translucency and our overall experience of place is not limited to one human sense. It is a multiple of senses that we experience translucency. The visual connection of the passage of light, the ability to hear noises and the potential warmth of the sun all provide a referenced frame to the adjacent space beyond. The results of being neither solid nor void allows the wall to be itself. Translucent walls can become a point of reference, a focal point, the termination of an axis or a transmittance of qualities between two spaces. Through design, the translucent wall can be a situation in a larger element or an element unto itself.

The senses have a vital role in the understanding and appreciation of place. Michel Serres philosophy of the senses is not limited to one or two, but includes all the senses. In The Five Senses, he defines the relationship between sense and place. For example, the ear is also the Amphitheatre. At the Greek Theater of Epidaurus Serres experience of place is a direct result of the sense of sound. The music in the instance was not that of a symphony but the noise of the people within a defined space, the interaction with one another and the overall physical nature of a congregation. We

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attend a symphony to listen. This approach to the senses is about function and a resultant place. Perception and experience results from the blending together of all the senses. To clarify, perception can be defined as “the ability to see, hear or become aware of something through the senses” and “the state of being in the process or becoming aware of something in such a way.” Similar to the work of Ann Veronica Janssens, one’s sense cannot be separated from the others in relation to perception. At some time, there is a moment of synthesis or unification of all the senses. The totality of the senses is the experience. This totality can be complementary or in chaos, being neither solid nor void, the perception is about both sides of the wall.

We discussed touch and the experience of place. Again to Kahn touching was central to the procreation of the species. Kahn felt that there was direct correlated between touching and seeing. Touching is within your body and not limited to other factors such as light is to vision. For that reason Kahn has stated “To see was only to touch more accurately.” From site came beauty without reservation or criticism, harmony and eventually the arts. The sense of touch is experienced by the warmth of the sun, as present in a wall of translucency and transparency or the dampness of the mass in walls of solidity. We touch the solidity of the stone and we can be touched by the inclusion of light and warmth in a wall of translucency.

4.3 Translucency of the Moment

The senses play a large role in the experience and perception of an element of translucency. One particular approach to translucency is through the use of stained glass (Image 4.3.1). Stained glass as an element in architecture can be seen in various building types. These include religious, residential and retail buildings. Translucency and its relationship to place can be seen in the stained glass window of St. Christine Church in Youngstown, Ohio. Youngstown experienced a population growth into its southwest neighborhoods and adjacent suburban communities in Post-World War II. The Dioceses of Youngstown realized the need for an additional Parish and eventual grade school in that general vicinity. On March 19, 1953 Saint Christine Parish was established by Bishop Emmet Walsh. Father Gordon G. Gutman was appointed the founding pastor for the new parish. The land was donated by Mr. Fred Shutrump and upon his request the Parish was named Saint Christine in memory of the patron saint of his mother. Opening mass for the Parish was held in the Pioneer Pavilion in Mill Creek Park. Design, planning and construction began promptly for the new school and associated parish buildings. The first building
was dedicated on November 13, 1955. Mass was celebrated within the newly built school gymnasium. The master-plan for the Community of Saint Christine included four buildings. These were a church, a school, a rectory and a convent. With a continued growth, the parish constructed a permanent church on the same site. Design and planning for the Community of Saint Christine was during the time of the reform. The Ecumenical council studied church doctrine and practice. This particular reform and modifications in church doctrine was the Second Vatican Council and commonly referred to as Vatican II. Saint Christine Church incorporated many of the liturgical reforms being established in the Second Vatican Council. Leonard Friedman was the architect. Bishop Emmet Walsh dedicated the new building on November 1, 1964. Translucency is apparent upon entering the sacred space at Saint Christine. The church has not one, but three walls of translucency. Each of the three walls are situations in a larger element. This wall of translucency is a wall, art and identity. Each portrays a significant moment and principle belief of Catholicism. These images reinforce the basic understanding of this particular

Image 4.3.2 Birth of Christ

75 www.stchristine.org/history.htm
faith. The moments include the birth of Jesus Christ (Image 4.3.2), the Resurrection of Jesus Christ (Image 4.3.3) and the Pentecost (Image 4.3.4). Like the stones of Four Freedoms Memorial, the stained glass at this location was built for the purpose of remembrance and respect. Remembrance of a particular moment, and respect of an idea, belief or direction. Translucency enhances the moment by an additional layer of color and light.

To experience this translucency to its fullest, one should enter St. Christine's Church mid-afternoon with limited or no artificial light. The sun provides all that is needed. The illumination of various colors of glass by the natural light reflects off of the unadorned interior finishes. This wall of translucency provides light, a sense of warmth and the addition of color throughout the larger space. This saturation of color and variation of brightness are also present in the individual pieces of the stain glass wall. Value is the lightness or darkness of color and intensity is the force or saturation of a color. The values of blues, purples and golds provide a field for the intensity of the limited red glass pieces.
physical characteristic of the glass also varies. Other than the red glass, the wall is a combination of various colors of thin floated plate glass. The red glass is proud of the other pieces of glass. The physical characteristic of this glass is three dimensional with a crystalline cut. The field of color in the walls is primarily shades of blues and occasional pieces of other colors in similar values. In the wall of the Pentecost, the field acts as the sky or horizon. The figures of the apostles are in front of the sky. This particular window also includes a diagonal band of purple, yellow and red tones. These tones are symbolic to the Holy Spirit. The relationship established is between wall of the spirit and the sky beyond. It is then the red, a color of dignity that is not specific to one place, but is located throughout this particular element. As a result of translucency of material, these colors reflect off the natural materials of the walls and the floors of both the sanctuary and altar. Like the works of Kahn, the interior materials of this church was left in a natural state. Beauty was inherent and color was limited. Thus, the distinction of the reflection allows all three major colors to be present within the larger context.
4.4 Color and Composition

Viollet-Le-Duc article “Vitrail” attempts to establish the basic principles behind the design and construction of medieval stain glass. Historians and artists continued to accept the theories of Viollet-Le-Duc. His authority on the subject matter has been only questioned in the last half the twentieth century. In “Vitrail” Viollet-Le-Duc wrote “En effet, la juxtaposition du rouge et du bleu est perilleuse; elle est un veritable dissonance, et c’est avec beaucoup d’adresse que les peintres Verries des XIIE siecles s’en sont servis.”

This is about harmony of colors. At the time of the development of his theories, the reflections of similar red pieces were lost within the larger field of the neighboring blue glass reflection. The relationship between the colors red and blue is in dissonance with one another. The thirteenth century painter, Verries understood with great skill how to handle these adjacencies. Based on case studies of the artist as well as Chartes, and Bourges, Viollet-Le-Duc established two principles to provide a

Image 4.4.1 Red Glass of Dignity

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harmonious relationship between the two colors. First, provide a separation through the use of another color. The strongest of these is a lack of color, or white. In addition to white, black also allows for the separation of color (Image 4.4.1). Second, lessen the value of blue through the use of an overlying hatch. Through the use of primary colors blue, red, and yellow, Viollet-Le-Duc included the use of these in areas of greater size or importance, and all other colors as secondary to the overall intention of the glass design. These principles are based on the art of stained glass in the twelfth century. Windows of the thirteenth century were composed of a majority of blues with additional red pieces; the translucency of each color was not compromised by the juxtaposed colors. The vividness of color is based on intensity and value. The colored glass and dimensional mass limit view. The material characteristics of passage floods associated places defined by walls of translucency.

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The value and intensity of color at Saint Christine allows for the vividness of each color to be present within the church proper. The principle separation of color is also present in the designs at Saint Christine. The stained glass is not entirely composed of glass. The walls are faceted and include a composition of glass and mortar. Faceted glass is a particular approach in stain glass window design. This technique includes the placement of glass, typically colored glass, in the desired design and location. Mortar or a combination of mortar and epoxy are poured between the glass pieces (Image 4.3.5). The composite of materials then acts as whole (Image 4.4.1). The question is whether this can be considered an opening in a larger wall or as a continuation of the wall in another material. Gottfried Semper theorizes that the initial purpose of a wall was to provide a separation of space. The technique of construction was derived from society and culture. Wicker and tapestries were initially used to separate one space from another. The composite fabric was known. The practice of weaving was typical. The fabric provided separation. The construction of the wall was not one solid material but a composition of parts. The sum of these parts act as a whole. The resultant divider was one product. Variation in color and material provided additional stimulation. The art of the weave was ornamentation. The aesthetic of the space was aided by the artisan of the craft. The potential for color, texture and patterns were limitless. Ornamentation was established. To Semper, culture provided a direction for construction. A society understood the technique of weaving. The element of stained glass, is a woven wall

of an enclosure, similar to a textile. Ornamentation in the stained glass wall is the detail between glass and mortar. With each of these, the essence of construction is visible. Its tectonics is expressed. The percentage of glass versus mortar maintain the characteristic of translucency. Color and the basis of a faith is presented throughout the interiors (Image 4.4.3). The passage of light at this moment of the wall is present within that church as well as within the community.

4.5 Translucency on both sides

Translucency provides in this particular use an understanding of the purpose for this space. Stained glass and an enclosure provides a reference to the spaces beyond. The stained glass wall at St. Christine’s not only provides additional light but additional meaning and understanding of faith. A church is a place to gather and celebrate. The admission of light during the day is experienced from the inside during that time, and like a lantern, the passage of light is experienced from the outside during the night.
Each has a side and a purpose. The use of color and reflection enhances the experience. The intensity of the red against a field of blue, and the ability of that particular cut of class to be as present in the reflection as the red further strengthens the relevance of not only the color, but the construction. The design allows for each to be present as a singular element in a cohesive whole. The materials within the church, glass, stone and wood, have an inherent positive beauty. Claude Perrault’s “Ordonnace for the Five Kinds of Columns after the Method of the Ancients”, defines this as beauty that is not based on custom or society.\footnote{Perrault, Claude (1993) Ordonnance For The Five Kinds Of Columns After The Method Of The Ancients. The Getty Center for the History of Art and the Humanities. Santa Monica, California. Pp. 53-54.}

That beauty is with the innate nature of the glass and its relationship to other materials. Translucency allows one to experience beauty on both sides of the wall. The size of the windows luminous expression at night present itself to the neighbors of the southwest side of Youngstown and the surrounding suburbs. Therefore, its presence is not limited to those who enter, but also those who chose not to enter (Image 4.5.1). This particular use of

\hspace{100px} Image 4.5.1 Community to Community
transparency is about relationships. In “The Mending Wall”, the relationship established is between two neighbors. Each has a differing opinion about mending the broken wall. In regards to function, the wall is no longer relevant, but in regards to relationships, each spring brings another discussion between two people about meaning and life. It is about differing people and a common goal of understanding. The relationships established with this very particular moment of translucency is of person to wall, person to a particular group and person to a larger community.

4.6 Relationships of Translucency

The site is simple, a corner lot located on the western side of town. The building was built for a community. It is a place to gather, to worship and to profess. This is a church. With the initial view of the church one notices two major wall materials. One is brick; the other is stained glass. Brick provides the element of solidity and a defined boundary. There is a physicalness of this wall that defines the building onto the site as well as into the larger west side community. Within the walls of solidity are additional elements of faith based moments established by the principle beliefs of this church. The material
is faceted glass. The size of the faceted glass allows for this particular wall to be present from a distance. The glass is colored and thick. At these moments in the architecture, one can see light from within. Presence of activity is seen from the larger context. This is Saint Christine’s Church located in Youngstown, Ohio. Upon entrance to the church translucency is present. Stain glass, in particular the windows at St. Christine’s, fills the space with color and light. Its size and scale allows it always to be present. It is a wall of translucency. The particular window is that of the celebration of the descent of the Holy Spirit upon the Apostles, Pentecost. The image within the wall of translucency is direct and clear. The colorful faceted image of the Pentecost is seen throughout the worship space. The colors of the window, the blue field and accents of red and yellow, reflect from adjacent surfaces. It is a wall of color, light and meaning through translucency. The intensity of light and color increase as we approach the window. The experience of place changes with the added feeling of warmth. We feel the heat of the sun. The sun is present but not overpowering. With translucency we see the light and images reflected onto the other materials within

Image 4.6.2 Reflection
the church (Image 4.6.1 and Image 4.6.2). Placement of the window allows all to pass. The window is faceted. Most pieces are typically an inch thick. The red pieces are dimensional, block like and sculpted or chipped. The chipped faces of the block provide the opportunity for additional reflection. Reflections of red is seen throughout the main volume. With the reflection translucency is present for those who face the window as well as those who view this image is from another direction. That is the nature of translucency, we see the resultant effect throughout the architecture. The impact of this particular wall results in a relationship between those who inhabit the room. There is also an understanding of reason within the wall. The wall was built to portray a message, a beginning. Detail of the faceted red pieces play a role in its overall presence. We see bits of red.

What of its overall location? This too aids in the relevance of the wall. The plan of St. Christine’s Church is simple, a church in the round (Image 4.6.3). At the time it was a new direction. Prior to Vatican II church planning was based on a trans longitudinal cross. The cross form allowed for major isle facing the altar. The altar was typically located at the intersection between the two forms. We talk of the wall of Pentecost. We
talked about the three walls of translucency, each based on a basic belief. Again, the three walls are the Pentecost of the Holy Spirit, the birth of the Christ Child, and the Resurrection of the Son of God. Upon entrance the Resurrection is on the Right Hand, the birth is central and aligned with the altar, and Pentecost is on the left. This particular placement is about a rebirth. The Old Testament mentions the left Hand of God and darkness. With Pentecost, the darkness turns to light, to a new belief. The placement tells that basic principle of belief. The image could have been solid and a relief, a mosaic or a painting. With solidity one must face the wall to experience. The detail of translucency does not limit it to that one view. The reflected images are present in all directions. The wall of translucency reinforces the symbolism of each moment. The church was built at the same time as a rethinking within the faith. Vatican II was new. Priest faced the congregation and the congregation faced each other. The traditional longitudinal cross form of churches was not the direction of the architecture. This was the basic thought in liturgical architecture. The circle replaces the cross form. Here though, the basic structure of the circle was not totally accepted. Within the church in the round, we have the traditional cross form (Image 4.6.5). This is through the use of the translucent windows. The question of direction for the new parish was reinforced by history. It was not the choice to disregard the past, but to reinforce the future with reference to history. We had discussed the symbolism of the opening in a rock face the codified understand of place that was established within the cave. Where those inhabitants traveled the siting of another opening represented the overall safety and potential warmth of the cave. The same holds true with the stain glass. The
particular locations of the windows reference the traditional Latin or longitudinal cross form (image 4.6.4). We understand the purpose of the modern building and the relevance and symbolism of the walls of translucency. Codified understanding of place is provided.

Architecture is about the user. This wall was designed and built for a group of people with a set of simple beliefs. With the design of the worship space, the architect must understand program and client. It is not to accept the beliefs but to understand the direction and principle of Catholicism. The architecture is based on that. Just as we have seen in the mending wall, good fences make good neighbors. Those who do not follow the faith are good neighbors. We ask that those with a different set of beliefs accept others. That is what allows these
buildings to be a part of a larger whole. Translucency was used at this wall because of that. The light is shared and images can be seen.

4.7 Translucency in a Larger Context: The Relationship of Place

This sharing occurs not only from the inside, but also from the community as a whole. Saint Christine’s Church is located on a corner. The placement of the building is angled. The mass of the building is an unadorned brick. The color is simple and known, typical. The ornamentation is the large translucent walls. The colorful design of the translucent wall is present. The images of the windows are not as direct on the outside as they are within the space. Context of place is much larger. What is present from the outside community is the light from within. We see this in the evening. The windows glow. The angled location of the building allows for the shared light to grace the simple brick wall. The presence of place is solidified by this action. The action between wall and place is about both communities. Translucency occurs from within the Catholic Church as well as from the community as a whole. A wall of translucency is about relationships. The line of the wall is established. Each neighbor understands the relevance of the place beyond. The notion of action on both sides is present and accepted. Good fences make good neighbors.
5.0 TRANSPARENCY: DEFINING BOUNDARIES

5.1 A line of Boundary

Intention of the built element plays a key role in the relevance of a wall. It was the intention to provide a view at Four Freedoms, a memory of place at The Church at Mogno-Fusio, and a reflection of thought at Saint Christine Church. It is a physical boundary and a moment between two neighbors (Image 5.1.1). Reason became a question to the narrator. It was a question again of why. Why mend?

There where it is we do not need the wall:

He is all pine and I am an apple orchard.

My apple trees will never get across

And eat the cones under his pines, I tell him.

He only says, “Good fences make good neighbors.”

A fence is to enclose an area. It is a boundary and an edge. Each side has a purpose. Pine trees or an apple orchard are specific to its larger community. This was a time of world distress. Power of place, or imperialism, was a cause for conflict. With the lack of a good fence,

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81 Frost, Robert (1914) *The Mending Wall*. Ellsworth, Ohio
or a defining boundary, Nations overtook Nations. As a result, the boundaries were disputed. Good Fences are good relationships. Between two differing nations, or between two neighbors, an element such as a fence, a wall, or a visual separation provides boundary. Each neighbor understood just that. The relevance of the mended wall was a positive understanding of place between two neighbors. Each neighbor had a thought on what boundary is. The purpose of the wall is to provide that boundary. As an aspect of a wall, transparency is a quality that affords the dual characteristics of separation and connection through open communication.

5.2 A Transparent Approach

Walls of transparency have multiple approaches. It includes the openness to a view beyond. This open framework can be defined by walls of solidity, elements of nature, and other elements that define place. These are walls defined by relationships and are not based on a physical material or presence. Relationships also play a role in another opportunity for transparency. This approach of transparency can include elements of
solidity. Transparency is accomplished through composition. Colin Rowe and Robert Slutzky essay Transparency: Literal and Phenomenal discuss composition as well as the traditional definition. Transparency of composition can be seen in a wall or in a series of spaces defined by walls or other elements of architecture. The word depth is used to aid in this understanding of compositional or phenomenal transparency. This composition of elements is about spatial relationships and approach to place. The physical placement of walls allows for one to see beyond that particular moment. These elements may be walls of solidity, translucency or traditional transparency. Transparency is typically understood as the ability to see through as in a window or an opening. Relationships provided by transparency include various meanings. This opportunity allows one to view a space or understand the activities that occur beyond the wall or boundary. Transparency when achieved with glass allows for clarity of views but limits the movement of air and any potential thermal exchange. It also allows light to penetrate the associated spaces and provide views to both sides of the wall. We talked of the framing of space of James Turrell. His work is about the experience of the individual. It is about what we see at a specific moment. Artist Dan Graham, similar to Turrell, provides art that is spatial. His work is typically a polished glass pavilion. On most installations one can walk into a Graham installation. The refinement and polishing of glass allows for reflection. The artist utilizes that physical characteristic within his art. The experience is as much about the object as it is about the specific

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experience. What is specific to one person experiences of the installation is the reflection of images on the glass. One may see their own reflection, the reflection of others within the installation, the reflections of those outside of the installation or a combination of all.\textsuperscript{83} The art is an exploration of transparency. The realistic art and installations provides a radical purity that architecture seldom contains.

### 5.3 Transparency of the Open Frame

“Architecture is the thoughtful making of space.” Kahn’s words are once again relevant in the understanding between wall and place. The discussion on axis at Four Freedoms terminated in an opening to the horizon. The thought is of freedom beyond. Double Negative by Michael Heizer provided a framed opening in this art installation (Image 5.3.1). We have also mentioned the view of the

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{image531.png}
\caption{Double Negative Open Frame}
\end{figure}

between Wall and Place

Orsini 91

Horizon of the Pacific Ocean at the Salk Institute (1965) in La Jolla, California. Boundary in each place was provided by an element beyond our reach. The sky as wall or the ocean as wall are elements of enclosure provided at the room in a garden on Roosevelt Island and within the plaza at Salk. In both cases Kahn defined place through the use of approach and solidity. Upon entrance to both spaces a wall of transparency is apparent. We see beyond the trees into the room. We see beyond the room to the openness of the endless sea. Each boundary is outside of our physical reach. The beyond is the open frame. That frame is ocean and horizon. Both of these elements are vast and limitless. How then can the vastness be controlled? How is the space defined? What defines the walls of an open frame is the relationships to the other elements of place. In addition to the adjacent relationships of physical elements, Kahn used both materiality and color to further enhance the boundaries of an open frame. In both Four Freedoms and Salk the open frame is defined by adjacent walls of solidity (Image 5.3.2 and 5.3.3). The walls of solidity frame a field. The view is controlled. We see a moment of the vast. In both cases the open frame is the blueness of the sea. We see the color blue. Blue again is used as an element within a wall. Blue

Image 5.3.2 Open Frame @ Four Freedoms
is the open frame. The dissonance is reinforced by the colors associated with the walls of solidity. An ideal approach to the frame is the lack of color, or white. Kahn travertine, which seem to have a compelling sympathy of color, texture and, physical expression under sunlight . . . especially in the works of Louis Kahn where he pairs these stones of limited color and variation. It is documented that Kahn had a different concept of the court at Salk. The initial parti was to make a tree-filled space. It was only after a discussion and collaboration about the court with Mexican architect Luis Barragan that he decided to take a different approach and use the building to frame the sky (Image 5.3.3). Kenneth Frampton in Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century writes:

It is surely not without some transcultural significance that the Mexican architect Luis Barragan would play a decisive role in determining the final form of the space, deeming it to be a civic plaza rather than a garden court and thus suggesting that it should be left without any planting whatsoever...

[Barragan stated,] "I would not put a tree or blade of grass in this space. This should be a plaza of stone, not a garden." I [Kahn] looked at Dr. Salk and he at me and we both felt this was deeply right. Feeling our approval, he added joyously, "If you make this a plaza, you will gain a facade--a facade to the sky."84

The distinction defined the edges of the open frame. We see the relevance of the understanding of color and adjacencies as defined by Viollet-Le-Duc and Verries. The wall is strengthened through the principles of harmonious relationships by providing a distinction to strengthen its definition. Two colors refine the edge of the open frame. Those colors are white and blue. This is again about the beyond. Color and adjacencies define the wall. This wall is not physical. We cannot touch the wall but the wall is relevant in its overall definition of that particular place. A wall that will never be touched is definable. The idea of enclosure being an untouchable element can also be experienced in the Villas of Palladio. Villa Emo, Villa Barbaro and Villa Rotonda all
have a transparent wall that encloses space. Boundaries of the garden are defined but trees. The wall at the termination of each axis is the horizon. Palladio used a line defined by trees to define the open frame. The ideas of solidity, translucency and color are also elements of the vistas that terminate in an open frame. A room in a garden, similar to Four Freedoms, is present. Once again we discuss a room in a garden. At Four Freedoms Kahn provided a framed view of the city. The adjacent walls of solidity defined the openness of the wall. The walls that define these particular places are not physical walls. They are not walls of touch but yet still walls of enclosure. It is a boundary of transparency. The open frame is relevant.

5.4 A Shared Experience

Walls of transparency are not limited to one particular material, design or solidity. The ideas of a transparent wall are about opportunity of a shared experience. The experience can be as simple as a walk between good neighbors separated by a wall or the extensive layering of temples. The walls provide a level of depth. Phenomenal transparency provided a relationship between city and place. It is about composition. The wall of transparency at Four Freedoms has a similar approach. An axis is provided. We have an approach and we have an established defined boundary. We also have the ability to see beyond. Specifics of what are seen result from one’s location. The first assumption is that this is a wall of literal transparency. It is direct, approachable and
Between Wall and Place

regular in its organization. It is other elements of this particular wall that provide characteristics of phenomenal transparency. The parti is that of a room in a garden. Prior to the view there is a progression of spaces, one space dependent upon another. We walk through a garden surrounded by trees. A wall of solidity is the first definition of the room within a garden. We read the words spoken about freedom by FDR. The ornamentation are the words of Freedom. From there we start to see glimpses of the blueness of the sky. We walk the axis as provided by the solidity of the stone mass. We have moments of the city beyond as provided by a series of reveals. The view of the city is yet another layer or another moment of stratification. The size of the city contradicts the overall mass of the stone. Our journey continues to the view of the sea. The termination of the axis is at the end of the room opposite that of the words spoken. We now see the horizon, distant, untouchable, yet in the palm of our hands. We can

Image 5.3.4 Open Frame of a Palladio Villa
touch. The perception of depth is relative to the overall experience. It is a thoughtful approach, and a limitless boundary between a wall of transparency and a specific place.

The defined views beyond, the stone walls, a stained glass window or a series of temple fronts all define space. As we see, an element or a wall that defines a space is not limited to a solid element such as glass or stone. The space can be defined by a series, a depression, an overhead plane or even a shadow. Each can define space. I have written about the space between materials as an element itself; the void, or a reveal, the treatment of the areas between two pieces of colored glass, space between two layers, and the framed wall at the termination is about space. Any wall may be made of parts. For continuity of the element, the parts must be a collaborative whole. The very nature of a reveal is to provide separation or distinction between two elements. In the case of the solid wall the joint can be a reveal. Most of the time in a transparent wall the joint is a frame or a detailed element that holds the glazing in place. Similar to the joint in a transparent wall, stained glass uses a mortared joint or a leaded joint to provide a framework for the various glass pieces. Transparency can be provided by a material or be the lack of material, or space.

We put thirty spokes together and call it a wheel;

But it is on the space where there is nothing that utility of the wheel depends.

We turn clay to make vessels to make a vessel;

But it is on the space where there is nothing that the utility of the vessel depends.
We pierce doors and windows to make a house; and it is on these spaces where there is nothing that the utility of the house depends.

Therefore, just as we take advantage of what is, we should recognize the utility of what is not.85

The “Not” can still provide enclosure. Transparency is about the space and the material. Boundaries of transparency are provided by various elements. These are not limited to the lack of material, but can include the presence of materials. Boundaries define the space between two neighbors. It can be literal, or composed. Transparency can provide moments in the everyday.

5.5 Compositional Transparency

Colin Rowe and Robert Slutzky essay distinguishes two specific types of transparency. The two are literal and phenomenal. In the essay, Rowe defines the two approaches.

“Transparency may be an inherent quality of substance, as in a glass curtain wall; or it may be an inherent quality of organization. One can, for this reason, distinguish between a literal and a phenomenal transparency.”86

Here, Rowe and Slutzky defines literal transparency as that which results from the physical nature of a material. One does not question the intention of this element. It is

direct and specific. Literal transparency can be defined by the physical. This particular approach can be seen in clear glass walls, screens and other physical elements. Phenomenal transparency is suggested by relationships of space. Relationships here is about passage and shared elements. New Oxford American Dictionary defines transparency as that of a material or article “allowing light to pass through so that objects behind can be distinctly seen: transparent blue water or something that is easy to perceive or detect.”\footnote{http://www.merriam-webster.com/dictionary/texture 11/18/2014. New Oxford American Dictionary.} We again discuss light in its relevance to place. In walls of solidity we discussed a passage of light at the reveals, a shadow or a reflection. At Saint Christine Church reflection defines a moment within a person, a culture or a community. The passage of light enhances the overall element and moment of place. To further understand the passing of light, Gyorgy Kepes in Language of Vision, discusses the overlapping of objects with the ability to see through each object. This is the capacity to interpenetrate without optical destruction of each other.\footnote{Kepes, Gyorgy (2012) \textit{Language of Vision}. Literary Licensing, LLC. Whitefish Montana. P 77.} Edges and forms were defined, yet an opportunity to see through each object is provided. Compositional transparency was present.

\textbf{5.6 Transparency of Depth: Phenomenal Transparency}

In some moments compositional transparency is about perception. Kepes theory on the overlapping of objects, while maintaining its form, further solidifies this definition. What one may see, someone else may not or may have a different experience. It is about the
observation of depth. To further understand phenomenal transparency one can observe the characteristics of the avant-garde art movement of cubism. Typically, the overall approach and organization was not about one particular view from one particular context but about multiple viewpoints and multiple experiences. Depth and expression of depth are characteristic of this movement. Therefore, space, mass, time and volume are elements within the movement. To discuss the elements of cubism one must mention the influence of Paul Cezanne. These particular elements of place, time and volume are all captivated in his later impressionist paintings. The influence of the ideas presented in the works of Cezanne are evident in the foundation of the beginning of cubism. Works of influence include Mont Saint Victoria by Paul Cezanne and The Clarinet Player by Pablo Picasso and The Portuguese by Georges Braque. The elements of space, time and volume are rendered in various positions. Each has an overall organization. This can be orthogonal or oblique. Depth perception is achieved by the position of major and minor elements and in each example edges are defined. The particular elements intensity is specific. One element may have qualities of solidity, another of translucency or yet another of transparency. With this the definition and understanding of transparency by Gyorgy Kepes is understood. Compositional transparency is defined by both foreground and background and by what we see and what is beyond our view.

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Phenomenal transparency is the ability to see beyond. It is about the relationship between wall and place. Phenomenal Transparency is “an inherent quality of organization.”\(^90\) Within a particular moment we witness various physical elements. Each has a specific form. It is the relationship established between walls, elements, spaces or forms that provide transparency. Once again each element is defined and literal. Edges and boundaries are provided. Each has its own presence. It is the composition of the space that places one in the foreground and one in the background. The progression and intensity of walls and space provide transparency. At locations within a larger composition an element can be proud of those adjacent to it. At one moment emphasis can be on the location of a series of trees, an opening in wall or the termination of an axis. A layering of spaces occurs based on the moments provided by various locations and relationships of the physical elements of a building. Again depth perception is achieved by the position of major and minor elements. This is not of one view but of multiple views. The realization is dependent upon the location of those who inhabit the space. What can come into question are spatial dimensions. One may not realize the actual depth of a space. The location of an individual can influence the amount of transparency and the overall depth of space. Typically, the discussion on phenomenal transparency is about a shallow depth; however phenomenal transparency is not limited to a shallow physical dimension. Perception plays a vital role in the overall experience.

5.7 Transparency of a Solid Element

Research and the understanding of transparency, both literal and phenomenal, are present in the everyday. Transparency is not confined to a perceived opening. As stated, it is also about depth, shadow and a layering of elements. The influence of Andrea Palladio is also present in the discussion of phenomenal or compositional transparency. Palladio was asked to provide a visual connection between Venice and both Giudecca and the island of S. Giorgio. A pair of churches were to be built at locations that connected each to Venice. The plans as designed were typical of those built during the Renaissance. The interior is a series of major, (blue tone), and minor spaces (pink tone) (Image 5.7.1). These included a large nave, side chapels and a central dome. Il Redentore ("The Redeemer") is located on Giudecca. Palladio designed a civic Roman Temple for the façade (Image 5.7.2). Palladio’s approach for the facade was formal. Formalism is also present within the space. The approach was strengthened by the use and placement of the type or order of columns. Spaces here are designed as a series of relationships. The space as designed has varying views, a series of layers and changes in volume.
Phenomenal transparency is present within the church. The wall of view also relates to the interior approach. It too is about a series. The formalism in the facade results from the layering of several Roman Temple fronts. The facade is also based on major and minor design elements within the building. Each relates to an interior function. One is proud of the other. The foremost temple with a major order fronts the Nave. The minor element, layered behind, spans the entire width of the facade. This relates to the side chapels. Each is relevant to its interior function or purpose. Each have a presence within the overall composition of the wall. The wall is not fragmented. The perception of place is provided by the overall approach of depth and facade.

organization. We can sense the importance of the central bays of the building by the simple placement of the major Temple front. We do not need to enter to see the intent of the plan. Our senses allow this.

The temple front itself typically used on civic buildings provides the know understanding of the symbolic importance of the buildings. We see the temple and we understanding the importance of the building. This too occurs at Il Redentore. When we see a temple front we know the significance of the building (Image 5.7.3). The code, or rules, generated by the form became an iconic representation of a place of importance. Phenomenal transparency in this instance was a rethinking of the overall approach to design. It provided a direct
understanding of the interior space. The depth allows this. The intent was clear and direct. The boundary allows for a view and an understanding of relevant place.

Boundaries and edges are defined. Depth is provided and shadows are created. Within this layering of these two apparent temple compositions we have transparency. Transparency here is not about a view through to a space beyond but about a relationship of a series of parts to the overall whole. Here shadows and form provide phenomenal transparency. Literal as stated is direct such as in the glazing of the facade of the Bauhaus or in Jean Nouvel's pavilion to protect and honor Jane’s Carousel. Phenomenal is an understanding of what is beyond. The beyond may be based on solidity, or translucency or transparency. From Venice we see within the church. The layered wall is present. and the side isles. Each are present. Compositional transparency allows just that.

5.8 Literal Transparency

Walls of literal transparency are present in the everyday. Classic modernism and the Bauhaus movement solidified this. Walls of glass allow one to view the space beyond. We have the ability to see in or the opportunity to view out. In some cases, this transparency provides a further understanding of the intent or parti of a building. We see the support, the floors and the program or activity inside. From within we see the context of the specific location. This approach of transparency can be witnessed at the Bauhaus Building in Dessau. The architect was Walter Gropius. Gropius’s method of
attachment for this wall is based on a separation. The wall is not supported by a floor but is hung from above.\footnote{Bletter, Rosemarie Haag (1981) Journal Society of Architecture: The interpretation of the Glass Dream-Expressionist Architecture the History of the Crystal Metaphor. University of California Press. Oakland, California. Volume 40, No.1 March 1981. P 10.} The wall appears to be free from the main structure. It hangs. We see faces and moments within. It is direct and uninhibited. That is its purpose. Literal transparency is about a clear and open understanding of place leading between spaces. With that understanding activity on both sides are present. The wall is not one sided. The relevance of transparency is the concourse of experiences between a film of separation. We have seen the use of transparency through the design of glass objects and architecture. Architectural movements of expressionism played a vital role in the ideals of transformation and social change. Glass allowed for an expression of form, as well as its crystalline nature. The ideas of expression are strengthened by the ability of the material to pass light and the ability for those in its presence to see through.\footnote{Bletter, Rosemarie Haag (1981) Journal Society of Architecture: The interpretation of the Glass Dream-Expressionist Architecture the History of the Crystal Metaphor. University of California Press. Oakland, California. Volume 40, No.1 March 1981. P 10.}

The Glass house has been constantly refined from the translucent Bruno Taut crystalline glass house to the uninhibited glass house as designed by Mies van der Rohe. The principle nature of both houses was to allow the passage of light as well as the ability to understand the relevance of the associated place. Glass was selected as a result of its material qualities. The transformation of the architecture was a direct correlation between material fabrication and development. These qualities allowed for an architecture of openness. The glass pavilion has become iconic with this approach.
The transparent pavilion provided opportunity to view activity of the inhabitants. Activity in walls of transparency provides an opportunity for place. Aldo van Eyck at the Municipal Orphanage breaks the rhythm of the glass with a raised circular platform. That allowed for an exterior door (Image 5.8.1). With a glass door he maintains view and allows for access to the exterior. The platform provided potential human activity and opportunity for place. We are fortunate to view these activities through walls of transparency. A carousel so familiar in the recent past has been restored. This particular carousel was built in 1922 by the Philadelphia Toboggan Company. It was installed in Idora Park in Youngstown, Ohio. The carousel is a classic 3-row amusement ride with 48 wood carved horses and two chariots. Americana. The fortunate history includes the purchase in its entirety. It was purchased by David and Jane Walentas. The intention was simple and expected, a carousel in a park. David Walentas had developed a master-plan for Empire Fulton Ferry State Park. This is located in DUMBO at the foot of the Brooklyn Bridge (Image 5.8.2). Restoration was intensive and included the removal of multiple layers of paint. The meticulous removal revealed original color scheme and the intricate wood carvings. These were attributed to John Zalar and Frank Caretta. The restoration
and repainting was based on these findings. Each piece was then highly decorated with paints and jewels (Image 5.8.3 and Image 5.8.4). The restoration was not limited to the horses and carriages but included all elements of the structure. Lighting and mechanisms to rotate were updated to complement the new found memory. The restoration was complete and has been in use since September 16, 2011.

![Image 5.8.2 DUMBO](Image)

The attention to detail was not limited to the carousel itself. Jane and David Walentas commissioned Pritzker Prize winner Jean Nouvel to design a structure to house the carousel. The approach was simple. The approach was not vain. It became an architecture about the experience. The experience of both the user and the observer.
Both provide the opportunity to participate in the beauty of the carousel as well as the new memory of an American icon. The plan was a simple parti. The walls were transparent. A roof provided protection. The intention of the walls was to limit anything that would impeded the view. The material that allowed for the largest expanse of openness without the interruption of framing was an acrylic panel. Ten feet wide by twenty-seven feet tall panels were used. The walls in the north and the south sides provided entrance. The large panels were designed as an accordion door. The design allowed the transparent wall to open. The resultant transparency at that moment was one of an Image 5.8.3 Restored Carousel Horses
open frame. Edges that define that frame were the stacked panels, the roof plane and the floor plane.

Transparency was achieved. On the east west side, the walls of transparency were designed to remain in its place. It was critical to limit the use of elements that would disturb the views.

Panel to panel details provided closure without the aid of a mullion. Panel thickness allowed for a self-supporting wall assembly. A butt joint with sealant was provided (Image 5.8.5). The views were maintained. One can see the carousel from the park without a rhythm of vertical or horizontal framing members. A simple line between two joints are present.

The walls design provides the desired effect. Views were abundant. The technical opportunity of the wall was one of protection. The walls needed to provide
protection from the elements. The approach allowed for both. The building maintained the views as well as protected the art inside. Memories will continue. Elements of literal transparency have multiple functions, protection, enclosure and view. We are able to see the spinning horses.

The view of transparency transforms itself at night. The building at night has a curious effect: light from the inside hits motorized shades and forms a show of shadows (Image 5.8.6). The shades provide a view of translucency. Shadows provide the understanding of the interior function. We see the horses. We can witness the circular motion of the ride. We see the event. At Jane’s Carousel reasons for translucency was provided to protect and enable the users. The wall provides relevance of the function. That is its purpose.

*Image 5.8.6 Jane’s Carousel at Night*
5.9 Transparency of Memory

Typically, when one thinks of transparency it is through the use of a clear material. With that specified material the activities within are not obscure but in full view (Image 5.9.1). The parti of the architecture is simple. That parti is a room. The articulation of the walls allows people to see the carousel and do not impede the view of the activity.

Image 5.9.1 Jane's Carousel

The transparent wall is constructed of continuous acrylic panels. The detail between panels is limited. This is a simple joint similar to the line drawn by a pencil. The view is maintained. One can see the restoration of the horses and carriages. Restored detail is presented to those who ride and those who watch. It is as if the carousel is still
located in Idora Park. The minimal action of the design provides that perception.

Experience of place is based on the translucent approach to the wall. The wall is constructed to protect the art of the carousel. The past life of this particular ride was located outside in an amusement park. There was no boundary or wall to inhibit approach. When the wall is in the open position the wall is not present (Image 5.9.2).

With the detail of the simple approach of joining of the panels, the wall of protection is also not present in the closed position.

![Image 5.9.2 Transparency from Within to the Outside](image_url)

The carousel is open to the view and the park it lives in. One can simply walk onto the platform. That is an accepted and understood action. The new location and the desire
to protect the art needed to be added to the overall experience of the ride. The owner requested a line between the wall and the outside. The line that was provided maintained the ability to see. It did not impede one’s view. When one sees a carousel it is seen within a park, not located in a protected box. The known and accepted location is maintained. Codified meanings are maintained. The wall symbolizes the non-existence. We have protection and we have the openness of an amusement park. We look through the wall and we see the art. With this wall the ornamentation is not of the detail but of the object within. The program as presented to the architect was to enclose. The walls purpose is to enclose. The room is provided. The lack of detail is the strength of the approach. Mullions are not present. The limitedness of the detail provides an open approach. The thoughtfulness of the design is to not construct a line but to limit the reality of the actual wall. With the lack of ornament, the location in Dumbo provides a historic reference to the location in Idora Park. We do not see the wall but the object. The line between is respected.

6.0 RELATIONSHIPS OF EXPERIENCE

6.1 A Wall of Person Place and Culture

Relationship of place is evident in the discussion on the significance of a wall. How one interacts with the wall also provides various directions of thought. One’s perception of the element is based on various outside factors. These include culture, knowledge and experience. This may be an expression of human cultures and can transform natural spaces into places of relevance. Time allows the wall to be endowed with layers of
history and personal experiences. Thus the wall becomes factual and a part of a cultures history. The many layers of history and experience transforms the wall to a point that it is part of a larger and continuous cultural tradition worth preserving and mending. An example of this is the Western Wall of the Temple Mount in Jerusalem. The significance of the physical materiality of the wall validates the relevance of their faith. The wall has a material power and takes on the meanings of a culture and of a group of people. Culture provided a purpose for the wall. Knowledge allowed one to understand its relevance of place and experience provided a reason for the wall to be mended or built. The experience one has with a wall is not limited to one senses but also an understanding of the meaning of the wall in regards to design. Walls may have similar appearances but relationships of place provides their individuality. Each wall is unique unto itself. Relationships of place allows for this individuality. The design, compressed of thoughtful details, is based on relationships. Details have a duel role in understanding the meaning or story of a wall. They resolve through expression, perception and the production of the element. The design and in particular the relationships of materials provide an additional meaning. To further understand we will discuss the column and capital. Columns and capitals are details. The type and location of a column signify social standings of both culture and programmatic space. The detail of the materials relationship tells a story.94 Relationship of place is about experience and meaning. Thoughtful design includes both. With thought, we question.

We question not only the design but the basis of the action. The exploration based in the question is about the systematic and cultured order of a wall. The fundamental principles become an area of investigation. Thoughtful design is about the question. We think to move ahead.

Relationship of the senses, the story and the order of a wall are present within the "Mending Wall." The perception of boundaries is ever present even when the wall is failing. There is a story established by the notion of good neighbors. The wall provides the story based on the term between and the very nature of the production of the action to mend. Between neighbors there is a wall. Between neighbors there is perception of boundaries. Between wall and place there is a story.

6.2 Solidity to Open Frame: The Wall as the Origin of Place

And on a day we meet to walk the line

And set the wall between us once again...

"I see him there"

The line of the wall is established, yet the neighbor is in full view. The line provides an element of boundary. The nature of the wall allows for an undisturbed view. The assumption is that a material is not present, yet a wall is. We walk the line or we

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95  www.iep.utm.edu Internet Encyclopedia of Philosophy Deconstruction
96  Frost, Robert (1914) The Mending Wall.
approach the room. Each is about the physical element of a wall and the boundary of place it provides. When we discuss the room within a garden one assumes a physical boundary and an element of touch. We see the wall and we touch the wall. As we know, Kahn felt that touch was the first sense. With touch came sight. We touch and therefore we see. Elements of a room bounded by walls can be seen at numerous places. Kahn utilized elements of solidity at Four Freedoms. The fourth wall is present. Place is defined by all four boundaries. The termination of the room is a wall of color. It is the ocean and the horizon. We cannot touch yet it still defines place. The open frame allows for an undisturbed view. An open frame provides uninhibited transparency. The space beyond is only limited by the defining edges of adjacent walls. With Four Freedoms as well as Salk, Kahn allows one to see beyond the inhabited place. The architecture of the water or the horizon does not limit thoughts to a specific moment, such as freedom or a remedy to heal, but allows one to see beyond those specific ideals. Palladio use of the open frame did not limit a view of the owner’s lands but extended that idea of land beyond the realities of ownership. One can stand at the entrance to the villas and see the space as defined by a wall of trees. Perspective continues those elements to the blue of the horizon. These uses of the open frame do not limit thought but can allow one to think beyond the specific place. Within the elements of the open frame in the works of Kahn the adjacent walls provide the actual edges.

A room is a contained space. The room has walls. We see and we touch. The primary function of a wall within a room is to define. Its function is direct. That denotation is known. The connotation of the walls is that of the ideal element of place. The square element of blue defines the room within a garden. The line between is provided. The open frame has length, width and height. These are defined by the adjacent walls of solidity and the ground plane. The actions of the users see the wall. The line between is provided. Scarpa’s use of sound on a stair signified ascension. Kahn’s use of adjacencies defined the element. We see four corners we see a wall. The wall we see is not a physical element. Touch is not relevant. It is open and free of the physical nature of most walls. The line between is maintained.

We have seen the word thoughtful used in relationship to architecture. The reveal was a thoughtful detail. A room within a garden was a thoughtful direction. The thoughtfulness of approach is evident within the design of place. The relevance of a wall is also evident. Kahn’s very nature of thoughtful design allowed him to question what a wall can be. We have seen walls of solidity as defined by a simple reveal. The ornamentation of that wall is the lack of material. With an open frame, the thought of a defining physical line is in question.

There where it is we do not need the wall:

He is all pine and I am apple orchard.

My apple trees will never get across
And eat the cones under his pines, I tell him.

The need for the physical is not always required. When one discusses a room the idea is about the physical. A room is defined by walls. Walls have surface. Walls have a beginning and an end. With this particular wall Kahn questioned the physical nature of what a wall is. A wall is a boundary and a wall does enclose. At both Four Freedoms and the Salk Institute Kahn enclosed without a physical element. The open frame is evident in the architecture. The line is provided and the room is enclosed.

The definition of transparency is about distinction and the ability to see beyond. This is evident in open frames as well as elements composed of clear glass. Il Redentore provides a transparent design of the internal function of the worship space. Most would consider the facade as a wall of solidity. It is made of stone. The openings are limited. We see mass. We touch mass. The element of transparency is about the articulation of the facade and the program spaces within the church. Entrance and location aided in this approach. It is located on an island. The approach is from the water. We see the overall relevance of the building by its ornamentation. It is civic in its approach to the facade. The layered facade told the story of the church. The design is that of two temple fronts. The temple facade of the main space was proud of temple facade of the side isles. The column capitals relate to the importance of the space within. At the time of the design and construction this was a common and known approach. The importance of the interiors based on the transparent composition of the facade provided

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an understanding of the relevance of the interiors without the ability to see within. The transparency of the temples provided this experience. This particular wall allows one to predetermine the activity within. The experience of place was aided by the transparent approach of a solid element. The temple wall was a civic approach to design. The temple front was an iconic symbol of importance. At the time it had defined relevance to place. This significance is based on historical use of the temple form. Each temple had reason. The foremost temple was the main space. It was proud of the secondary temple. Its columns and capitals also signified its overall importance. The facade symbolized its placement within a larger community. The temples also provided compositional transparency of the interiors. Each is present. With this wall we see within. The use of the layered temple provided that. We see the nave and the isles within the articulation of the facade. The approach is one of question. How can we provide transparency with a solid mass? This particular wall of transparency is not an actual view but a view of the actual function of the building within. This line of transparency is solid. We can see within.

6.3 The Wall of Thoughtful Design

The element of a wall is not limited to these approaches. The idea of experience, symbolism and a rethinking occurs throughout architecture. The creation of meaningful places is enabled by thoughtful design. What defines place? Is it about the physical element and relationships of walls? Can place be based on a single element? Can a
simple wall define a moment? The discussion of rooms allows for the understanding of more than one wall. But place is not limited, nor it is defined by four walls. One does not question the relevance of place at the Vietnam Memorial. The bent wall is single, simple, elegant and respectful of its location within a larger context. Gatherings occur at this wall. The utilitarian wall at Pittsburgh Union Station's rail concourse defines the entry to the downtown proper. Its form and construction are simple. Its relevance is that of place. We see the wall, we understand arrival. Place is defined. With both, the Vietnam Memorial Wall and the wall at Pittsburgh’s Union Station, we have reason and purpose. That is evident. We see, we gather, and we think. That is the relevance of a relationship. Do we mend? Is the wall still needed? We mend to maintain. The wall of place may be as simple as a series of large stones or as complex as a vast ocean defined by a simple mass. Between is not about separation or division; between is about inclusion and connection. We do mend the wall. We maintain relationships. Good Fences make good neighbors.


Double Negative MOCA. www.moca.org/visit/double-negative


Frost, Robert. *The Mending Wall*. 1914


[http://archweb.cooper.edu/exhibitions/kahn/index.html](http://archweb.cooper.edu/exhibitions/kahn/index.html)


