Late 19th-early 20th century America was an era of confluence of science, philosophy and religion: a contemporary polemic that equated religion (belief based on faith) with science (knowledge based on empirical data of physical phenomena). Modernity in 20th century America would be shaped by a pervasive theosophical atmosphere that coupled science with religion to cause a reconsideration of mental/spiritual relationships and a redefinition of space/time concepts. Theosophy’s introduction of Eastern metaphysics to Western culture revealed possibilities of an inner self with respect to the outer being and opened the way to conceive of inner space, or interiority, and as a result interior space in buildings. To follow is a reconsideration of Wright’s work with respect to the theosophical and occult influences that guided his thinking. His contribution to today’s notion of architecture as a space of continuity will be demonstrated through case studies of his work beginning with the early Dana House (begun in 1899) to the Guggenheim Museum (completed after his death in 1959).

THE RED SQUARE

Frank Lloyd Wright (1867-1959) began his practice in 1893 after being fired for “moonlighting” near the end of his five year contract with Adler and Sullivan, one of the then-preeminent Chicago architecture firms. Originally hired to draw the delicate ornamental details of the Auditorium Building interior, another ornamental masterpiece Wright had detailed just debuted at the World’s Columbian Exposition. Louis Sullivan’s (1856-1924) polychromed, basilican Transportation Building with its Golden Doorway and red façade with frieze of angels was a shocking contrast to the pristine Beaux Arts exposition halls of the White City. For his own work, Wright’s future drawings would bear the mark of a red square circumscribing the limits of an encircled crossing (Figure 1).

With today’s eyes, a red square “logo” may seem appropriate for an architect, especially when considered with respect to architectural modernism. But to Wright, red together with the square bore a special significance; to him it was the shape and color of creation. In the 1938 edition of Architectural Forum dedicated to Wright,
the plant physiologist Timiriazev reveals its poetic meaning and suggests why the architect may have chosen this color: "The color red is invincible. It is the color not only of the blood—it is the color of creation. It is the only life-giving color in nature filling the sprouting plant with life and giving warmth to everything in creation."1

A closer look at Wright’s symbol reveals two distinct parts: a central cross and a circle inscribed within a square joined at the cardinal directions. This mark is related to the fundamental “Gothic Master Diagram” or circle of orientation,2 which through shadow casting was the first act of creation by the ancients when orienting a building plan on a site with respect to the sun.3

The logic of using the circle of orientation inscribed within a red square suggests that Wright’s initial logo meant divine creation. Theosophy’s founder Helena Petrovna Blavatsky (1831-1891) described the hidden meaning of this mystical diagram as:

The philosophical cross, the two lines running in opposite directions, the horizontal and the perpendicular, the height and breadth, which the geometrizing Deity divides at the intersecting point, and which forms the magical as well as the scientific quaternary, when it is inscribed within the perfect square, is the basis of the occultist.4

Theosophy was well-represented at the 1893 World’s Parliament of Religions, a significant gathering of religious dignitaries that concluded the 1893 World’s Columbian Exposition in Chicago.5 The conflation of science with religion that would later affect American modernity was succinctly stated by the Chicago philosopher-publisher Paul Carus in writing about the Parliament in Forum magazine: “Religion must be in perfect accord with science;... Science is divine and the truth of science is a revelation of God. Through science God speaks to us; by science he shows us the glory of his works; and in science he teaches us his will.”6 Taken as a whole, the Chicago World Fair was a technological and scientific marvel that would significantly influence American architecture, technological production and urban planning for the future.

Theosophy itself would come to influence not only American designers, but also European artists such as Theo van Doesburg, Piet Mondrian, Wassily Kandinsky, and Kazimir Malevich, among others.7 The coupling of science with religion, together with the introduction of Eastern metaphysics to Western culture at the Parliament, caused a reconsideration of mental/spiritual relationships and a redefinition of space/time concepts. As a result, possibilities of an inner self with respect to an outer being opened the way to conceive of inner space, or interiority. Theosophy used new scientific discoveries to support their philosophies, especially new concepts of space and time such as the fourth dimension and relativity, which together with contemporary technological advances promoted a popular fascination towards movement and inaugurated the modern conception of continuity in space. Architecture would become a space of interiority defined by light and continuity in space regulated by geometry as a (re)creation of cosmic order.

Wright would later abbreviate his signature to the simple red square.

**DESTRUCTION OF THE BOX**

In 1910, the Berlin publisher Ernst Wasmuth issued a magnificent 100-drawing folio of Wright’s executed buildings entitled *Ausgeführte Bauten und Entwürfe von Frank Lloyd Wright*. Wright was in love and the drawings expressed it.8 In love with Mamah Borthwick Cheney, the wife of one of his clients for whom he

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1 Timiriazev.

2 The fundamental “Gothic Master Diagram” or circle of orientation.

3 Through shadow casting.

4 Blavatsky.

5 The Parliament was significant.

6 Carus.

7 Theosophy.

8 The drawings expressed it.
had left his wife of twenty years Catherine Lee Tobin and six children to travel with to Europe in September 1909. They settled in the Villino Belvedere of Fiesole on a hill above Florence where Wright worked on the drawings while in constant communication with his assistants and office. The final edition of this monograph of lithographed plates was issued in 1,000 copies, 500 for sale in Europe and 500 for exportation to America. This document would later become known as the Wasmuth Portfolio. Wright wrote the introduction to this limited edition in June 1910, which was not republished until forty-one years later when it was re-titled “The Sovereignty of the Individual”. The Wasmuth Portfolio was reissued as a book the following year in a reduced size for popular distribution.

The portfolio and book along with the March 1908 issue of Architectural Record, which included eighty-seven drawings and photographs of Wright’s buildings, were widely circulated to the contemporary architects of Europe. According to his son Lloyd Wright, these publications were being used in European schools and universities for textbooks.9

In this author’s opinion, this retrospective of the first seventeen years of Wright’s independent professional work is one of the most important architectural publications of the 20th century because it set the direction for the modern conception of space. Introducing the notion of interiority in the Wasmuth essay, Wright wrote, “Until the student is taught to approach the beautiful from within, there will be no great living buildings which in the aggregate show the spirit of true architecture.”10 While this essay reached a select audience due to its limited production run, the images in both Wasmuth editions together with those from Architectural Record show an architecture guided by space and light: works whose interior spaces were equal to the exterior form and whose forms had been molded by the plan and its three-dimensional extension into space. Never had space been expressed in a plan the way Wright did in these drawings.

True to the logic of the red square, the Theosophist Blavatsky described divine creation as:

The Universe is worked and guided from within outwards. As above so it is below, as in heaven so on earth; and man—the microcosm and miniature copy of the macrocosm—is the living witness to this Universal Law and to the mode of its action. We see that every external motion, act, gesture, whether voluntary or mechanical, organic or mental, is produced and preceded by internal feeling or emotion, will or volition, and thought or mind.11

Blavatsky may as well have described the modern design process, or as Wright’s lieber meister Sullivan would have said, “form follows function”: the plan is shaped internally by functional requirements and is then extended outwards in three dimensions to mold the form of the space. Previously, buildings had been designed using precedent and formal relationships, such as proportion and geometry, but not necessarily with respect to specific functional requirements. Prior to the Wasmuth Portfolio, space was mentioned in architectural treatises primarily in terms of proportion, such as the space between columns or the void within a staircase. Interior space was not mentioned unless with respect to the atrium, an exterior space wrapped by a building.12

Like Blavatsky’s expanding universe, the projects in Wright’s Wasmuth Portfolio demonstrate architectural spaces that were guided from within outwards: in the three dimensional development of their spaces the initial square has been expanded outwards to go beyond its cubic confines at the corners to “destroy the box”.13
The Susan Lawrence Dana House was one of Wright’s earlier houses (figure 2). While it is dated 1899 in the Wasmuth Portfolio, it was not completed until late 1904, and is the only project he designed that incorporated an existing structure. Dana was a widow whose husband and father had died within months of each other in 1900; her mother later died in 1905 within a few months of occupying the house.14

As described in the Wasmuth Portfolio, the function of the house was to include a gallery that could accommodate the art collection of its owner and be used for entertaining extensively. Wright resolved this functional program by pulling the gallery away from the main house to maintain privacy in the home and connected it via a covered passage, the passage itself serving as a conservatory.15 To reach the gallery, guests could either enter the conservatory from the main reception hall via the front door or enter directly from the terrace outside.

At the heart of the house Wright retained the existing two-story Victorian structure and wrapped the new construction around it. Within the parlor with its pre-existing Italianate marble fireplace, the spirit of her late father could dwell in the only non-remodeled room filled with furniture and memorabilia from his original home. The adjacent reception room with its new fireplace served as the hearth and heart that formed the focus around which the whole house took order and shape. This Semperian strategy would set the precedent for Wright’s future houses.16

When the European reader regarded the Dana plan, the axial relationships of its space extending in three dimensions were vividly revealed to be unlike anything seen before. Rooms pinwheel from the heart of the house by extending horizontally and vertically in plan, suggesting the infinity of the x-y-z axes. The notion of infinite axial relations would later become the basis for the Dutch De Stijl movement. In reading these plans, the trained eye must have marveled with the realization that one could stand still and have the spatial continuity of the entire

Figure 2: Frank Lloyd Wright, Susan Lawrence Dana House, 1899 © 2011 Frank Lloyd Wright Foundation / Artists Rights Society (ARS), New York. Shaded areas show limits of original house.
house visually unfold. Anticipating the cubist tradition, one could be in the main reception hall and “simultaneously view” down the conservatory to the gallery, ahead to the dining room, to the side to the living room, and above to the bedrooms and beamed ceiling of the two-story dining room.

Impossible to adequately portray in a publication was the quality of light that filled the house. The exterior walls were almost screens due to the extensive fenestration. The windows were leaded glass with various shades of amber stained glass in a stylized geometric pattern inspired by the sumac plant. According to Wright, “I have used opalescent, opaque, white and gold in the geometrical groups of spots fixed in the clear glass... believing the clear emphasis of the primitive color interferes less with the function of the window and adds a higher architectural note to the effect of light itself.” The effect of light in the Dana House together with an interiority that demonstrated an expansive array of spatial relationships set the direction for a “new concept of architecture, by light and freedom of space.”

The Dana House was followed in the portfolio of drawings by the Darwin D. Martin House, dated 1904. Unconstrained by the limitations of designing around an existing structure, the exquisite plan of the Martin House demonstrates similar qualities of light and space in its axial relationships and building envelope, but takes them much farther. The x- and y-axes are so clear and precise they are as if cut by a knife, the primary crossing a shift at the heart(h) of the home. The barrier between inside and outside seems non-existent: the interior space extends upwards and dissolves into the landscape due to the profusely fenestrated semi-permeable exterior walls that allow the house to breathe.

The various interior spaces interpenetrate and oscillate within the picture plane, prefiguring two-dimensional non-objective modern art styles such as De Stijl and Suprematism. A module regulates the plan and punctuates the rhythm of movement throughout the space. The feeling of syncopated rhythm would not be expressed in a two-dimensional representation until Piet Mondrian’s *Broadway Boogie Woogie* nearly forty years later. The Dutch Mondrian had turned to Theosophy in 1909, which would later guide the simplicity of his linear/planar De Stijl geometric abstractions that were based on repeating the square.

Historically, the notion that interior space together with light equals architecture has always been a spiritual notion, typically characterized by religious not residential architecture. Yet, the quality of interiority that evolved from the Dana House would anticipate the 1905 Unity Temple (figure 3) for the Universalist pastor Dr. Johonnot. This was the first project where Wright recognized the significance of his design strategy; where he discovered that “the space within the building is the reality of that building... the new reality that is space instead of matter.” This was in striking contrast to the then-current Beaux Arts form-conscious focus on the materiality of architecture—the surface treatment of its mass and the style of its ornament. In “The Sovereignty of the Individual,” Wright spoke against Classical architecture at length in favor of a revival of “the organic character of form and treatment of the Gothic spirit” where architecture evolves from within outwards due to satisfying the inner necessity of form following function.

Wright’s organic architecture was about the quality of the space, not the appearance of its form, and was developed from a consideration of the nature of materials, structural necessity and functional use. This predilection for space over matter had been developed by Wright within the context of a late-19th century intellectual reaction against materialism—a worldview that grew out of the
positivistic trend in science to measure the tangible, physical forces of the material world in order to understand the universe. In contrast, the early-20th century became an era of space and time that looked to intangibles to understand the cosmos: \( n \)-dimensional geometries and theories of relativity.

According to Wright:

Unity Temple is where I thought I had it, this idea that the reality of a building no longer consisted in the walls and roof... You will find the sense of the great room coming through—space not walled in now but more or less free to appear. In Unity Temple you will find the walls actually disappearing; you will find the interior space opening to the outside and see the outside coming in.\(^{22}\)

Wright conceived of the interior as one “noble ROOM... and let the room shape the whole edifice, let the room inside be the architecture outside.”\(^{22}\) In the three dimensional development of the nave’s square plan, this noble room was expanded to become a cube and then projected outwards again as a four-dimensional hypercube (figure 4) to “destroy the box.” Wright was able to turn this building inside out by being true to the nature of materials and through using his structural intuition from two previous years of civil engineering study at the University of Wisconsin during 1885-87 followed by working with Frederick Baumann, the structural engineer at Adler and Sullivan.

The church was constructed of concrete, which was poured into wooden formwork. The economics of concrete lies in reusing the forms; the geometry of the square lends itself to four equal sides, its quaternary symmetry suggesting the least amount of formwork. Surprisingly to the non-engineer, economy of structure lies with the cantilever, which equilibrates the forces in a beam reducing its depth.

2. Matila Ghyka, Le Nombre d’Or, Tome I: Les Rythmes (France: Gallimard, 1931), 65–66. The construction of the circle of orientation was a procedure in agreement with religious importance that was used in the orientation of temples by the ancient Egyptians, Greeks, and Romans. Although not mentioned by Ghyka, the encircled crossing was a guarantee of the temple’s alignment with the cardinal directions and was used prior to the discovery of the magnetic compass. The temple would then be oriented and aligned with respect to the sun, not magnetic north. This procedure was also used, and still is today, in the construction of Hindu and Buddhist temples, among others, in India. See also Victor Magnien, “Initiation Holoclère,” Les Mystères d’Éléusis: leurs origines le rituel de leurs initiations (Paris: Payot, 1929), 164-183.


8. All the drawings were not actually in Wright’s own hand, he was assisted by his son Lloyd and his draftsman Taylor Woolley. In H. Allen Brooks, “Frank Lloyd Wright and the Wasmuth Drawings,” The Art Bulletin 48/2 (June 1966), 193-202, the author discusses the various assistants’ contributions to the drawings.


10. Frank Lloyd Wright, Studies and Executed Buildings by Frank Lloyd Wright (New York: Rizzoli, 1986 (originally published in 1910 as Ausegeführte Bauten und Entwürfe von Frank Lloyd Wright)), 14; introduction by Wright republished in 1951 as “Sovereignty of the Individual”.


In looking at the perspective drawing (figure 3), the central nave can be seen ascending from the body of the building with the temple’s side aisles projecting outwards, revealing a building with a glorious cube at its heart and a void at its corners. The reality of the temple is its interior space issuing as an “aura” or its cubic spirit within, the reality of which is interior space. To Wright, “Reality is spirit... reality is supergeometric, casting a spell or a ‘charm’ over any geometry, as such, in itself.”25 This occult quotation reveals Wright’s consideration of space as spirit, the matter or reality of architecture, and demonstrates the basic tenet and cardinal Theosophical doctrine of the primacy of spirit over matter. His view that the reality of space is supergeometric refers to the Theosophical “geometrizing Deity” who looks down from above during acts of divine creation.

The logical conclusion of the destruction of the box would eventually lead to a complete dissolution of the corners of the cube to “extend the vista”26 and bring the outdoors in.

CONTINUITY IN SPACE

During 1925 Wright’s work was published in seven consecutive 24-page issues of Wendingen, a Dutch architectural publication edited by the architect and dedicated Theosophist Hendricus Theodorous Wijdeveld. These seven Wrightnummers included nearly 200 photographs and drawings of 31 projects, seven of which had been previously published in the Wasmuth Portfolio. Each issue included an introductory essay by a significant author familiar with Wright’s work. Included were essays by Erich Mendelsohn and H. P. Berlage, two leading European architects who had personally visited America to experience Wright’s work.

Previously, Wijdeveld had published a special Wendingen edition of Wright’s work in 1921. El Lisitsky had designed the cover of this syncretic architectural journal and Dutch interest in Wright was at its zenith. This issue of the journal was enthusiastically collected because the magazine included several projects constructed since the Wasmuth editions.27 Already familiar with the infinite axes of Wright’s plans and the interpenetrating spaces of his interiors, readers must have been awed by the seemingly non-objective murals for his last great Chicago commission, the 1914 Midway Gardens.

The murals were designed by Wright making decorative sketches, which his son John later transferred to the endwalls of the tavern room.28 When finished, the Midway Garden murals appeared illuminated like the stained glass of his previous residences, except these compositions were additionally filled with movement and broke free of the frame penetrating beyond into another dimension. Originating in New York, the travelling Armory Show had opened in Chicago the previous year and included “Cubist” works that depicted movement through time by artists such as Francis Picabia, Pablo Picasso and Marcel Duchamp. Wright’s murals were immediately identified by Chicago commentators as “Cubist”.29

Work was slow for Wright in the 1930s during the Depression, which is when...
he conceived the idea to start an architecture school to support himself and his family at Taliesin, his home in Spring Green, Wisconsin. His red logo transformed into a double rectilinear spiral to represent the Taliesin Fellowship, inspired by a Native American rock carving Wright once saw. This interlocking petroglyph was a “symbol of friendship”, a handclasp. The characteristic spiral has a central referent or origin suggesting unity and its continuous form is an ancient symbol for eternity. According to most traditions, when the flat spiral is extruded into the third dimension, the world materializes and man spiritualizes along the same spiral: representing the breathing of the cosmos, described by Blavatsky as:

The appearance and disappearance of the Universe are pictured as an out-breathing and in-breathing of “the Great Breath,” which is eternal, and which, being Motion, is one of the three aspects of the Absolute—Abstract Space and Duration being the other two.

It was the summer of 1943 when Wright was summoned by Baroness Hilla von Rebay (1890-1967) to discuss the future Museum of Non-objective Painting, the forerunner of the present Solomon R. Guggenheim Museum (figure 5). Due to various economic and political reasons, the construction was not completed until after Wright’s death in 1959. While this is one of his last projects, this project holds true to the initial theories of architecture Wright presented in “The Sovereignty of the Individual”.

Rebay was an artist in her own regard and intimate with European art circles, including such artists as Hans Arp, Robert Delaunay, Vasily Kandinsky, Paul Klee, Franz Marc, and Marc Chagall, among others. It was her intent for the museum to be a “Temple of Non-objectivity”: “Non-objectivity will be the religion of the future... Non-objective paintings are prophets of spiritual life.” Rebay considered non-objective art to have a spiritual basis, to be conceived by divine inspiration directly from a higher consciousness, and to be informed by contemporary

Figure 5: Frank Lloyd Wright, Solomon R. Guggenheim Museum, drawing ca. 1943 © 2011 Frank Lloyd Wright Foundation / Artists Rights Society (ARS), New York.


14. Mark Heyman, Frank Lloyd Wright and Susan Lawrence Dana: From the Town and the Prairie Conference (Springfield, Illinois: Sangamon State University, April 1984).

15. Wright, Studies and Executed Buildings, 18.
16. Gottfried Semper, The Four Elements of Architecture and Other Writings (1834-1869) (New York: Cambridge University Press, 1989), 102. Semper was an influence on Chicago architects active after the fire of 1871. Later, Chicagoan John Wellborn Root was to translate Gottfried Semper’s “Development of Architectural Style” from the original German and publish it in Inland Architect in December 1889 and February 1890. Semper’s 1851 comparative study of architecture entitled “The Four Elements of Architecture” described his view of the origins of architecture as stemming from four elements: the roof, the enclosure and the mound, which were grouped around the hearth, “that sacred focus around which the whole took order and shape.”


24. Wright, Writings and Buildings, 82.

25. Wright, Writings and Buildings, 81.

26. Wright, In the Cause of Architecture, 199.


28. There were two similar murals, one each at the north and south ends of the tavern.


33. Baroness Hildegard Anna Augusta Elisabeth Rebay von Ehrenwiesen.

34. Lukach, Hilla Rebay, 96.

35. Lukach, Hilla Rebay, 186.

36. Lukach, Hilla Rebay, 185.


38. Wright, Studies and Executed Buildings, 14.


40. Financially, the museum was a failure. It was Rebay’s idea to build a “temple to creativity,” and it appears that it was never intended to be a commercial or profit-making enterprise. As a temple to creativity, like the Transportation Building of 1893, he may have hoped to have it clad in his color of creation. To this Rebay objected; her theosophical training would have suggested that the color red was of the lower chakras, the base color of the material world, far from spirituality and the divine.

41. The finished building is a creamy white spiral; the colors are neutral inside and out. It had been Wright’s original intent for the exterior to be surfaced in red marble; for the museum to be “a Creation that did not yet exist.” As a temple to creativity, like the Transportation Building of 1893, he may have hoped to have it clad in his color of creation. To this Rebay objected; her theosophical training would have suggested that the color red was of the lower chakras, the base color of the material world, far from spirituality and the divine.

42. Taking the structural lessons he learned from the cantilever and its potential for continuity, the museum is one continuous cantilevered spiral, only achievable due to the plasticity of reinforced concrete. According to Wright, “Here we are not building a cellular composition of compartments, but one where all is one great space on a single continuous floor... Here for the first time architecture appears plastic…” Like the breathing cosmos, the whole building is in motion and the spectator is in motion, too. Predicted by Wright in “The Sovereignty of the Individual,” the building itself is the ornament: “…in a structure conceived in the organic sense, the ornamentation is conceived in the very ground plan, and is of the very constitution of the structure.”

43. Wright lived and worked within an esoteric milieu that helped to shape a theosophic-inspired architectural theory to define the space of continuity in modern design. Wright’s organic architecture evolved from the inside out and placed primacy on the interiority of space, was shaped by natural light and the extension of view into the landscape, was grounded in the principle of continuity and structural plasticity to allow for the liberation of space, was true to the nature of materials and their inherent capacity to define architectural style, and was defined by the idea of integral ornament being the pattern of nature made visibly articulate and expressed as the inner rhythm of form. Symbolically, the red square can be seen as inventive act with ancient origins that represents the destruction of the box to create continuity in space.

ACKNOWLEDGEMENTS
I would like to thank Indira Berndtson of The FLLW Archives at Taliesin West, Kathryn Stine of the Frank Lloyd Wright Preservation Trust, Andrea Reithmayr of the University of Rochester Rare Books and Special Collections, and Ann Keith Kennedy of the Drexel University Media Arts and Design Library for their invaluable help in research.