

Wright at Fallingwater



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Wright the Assimilationist

“The greatest architect of the 20th century” was the title bestowed on Frank Lloyd Wright by Time magazine in 1938 after only a third of that century had past. It might have seemed hyperbole, but even today fifty years after his death, it is difficult to argue that anyone has had a greater global impact than Wright. Admittedly, Wright's ideas are dated now, but contemporary architects cannot offer a more compelling vision for architecture unless they address the breadth of scope that Wright attempted to address. It is difficult to get a grasp of Wright's career; his early almost exclusively residential work begs the question of its broader applicability, while the eclecticism of his later work defies categorization. The man famous for destroying the box refuses to be put in a box.

His most celebrated work, Fallingwater, is so different, particularly, so much less decorative, that it doesn't seem representative of his other work, but it is iconic Wright. Synthesis is one word used to describe the mental task of the architect: someone who must take many threads of ideas, practical, technical, and philosophical, and weave them together into one physical entity that embodies them all. Fallingwater demonstrates Wright's facility with this crucial task, and while part of Wright's motivation was to “beat the Internationalists at their own game” it is not a reversal of direction but the fusion of ideas he had

expressed earlier or in unbuilt projects from his lost years that he now found the opportunity to express for the first time (Toker 141, 161).

Wright is difficult to understand. He was a master self-promoter, but his own writings are more poetic than instructive, and could be illusive about his sources of inspiration. Also, Modernist doctrine very selectively interpreted Wright's work, and in many ways is still orthodoxy, and this confuses matters. Finally, Wright's personal life could provide enough material to sustain a soap opera; personal prejudice becomes difficult to separate for professional appraisal. However, four themes are particularly clear in Fallingwater. First, his family's involvement in the Unitarian church instilled beliefs derived from American Transcendentalism about man, his relationship to nature, and its significance as a source of artistic inspiration. Second, Wright was convinced that decentralization of American cities was the physical manifestation of American society, just as decentralization of power was essential to preservation of American democracy. Third, like art deco architects, Wright freely drew from diverse exotic motifs, most significantly from Italian, Japanese, and Native American vernacular architectures. Finally, Wright was a groundbreaking modernist. His contribution to modern architecture was the dissolution and reconstitution of space-defining elements of architecture, much as cubism was doing at the same time for painting. It is his ability to weave all these threads together into harmonious expression that makes Fallingwater such a tour-de-

force and proves Wright may just have been as good as he liked to tell everyone he was.

Wright the Transcendentalist

Frank Lloyd Wright was born in 1867, only two years after the end of the Civil War. His mother's family was Unitarian, including an uncle, Jenkin Lloyd Jones, who was influential in spreading the faith in the western United States (Wikipedia). His first architectural project, as a draftsman for Joseph Silsbee, was for a chapel for his family in Wisconsin in 1886. He would later be involved in projects such as the Hillside Home School for two of his aunts, and Unity Temple in Oak Park, that demonstrate his continued connection to both his family and the Unitarian church (Spirn 137). The conversion of Harvard Divinity from conservative Calvinism to liberal Unitarianism was closely tied to the emergence of American transcendentalism, which is considered the first American intellectual movement (Wikipedia). It is from transcendentalists like Emerson that Wright some of his ideas about humanism: particularly, the relationship between nature, man, and the arts. From Emerson, "Thus is Art, a nature passed through the alembic of man. Thus in art, does nature work through the will of a man filled with the beauty of her first works."

This is instructive for a contemporary audience seeking to understand some of Wright's interventions in the landscape. To Wright, nature was only the raw material for the artist, and could only achieve its fullest potential through

human intervention (DeLong 16). Today, we have greater scientific understanding of the complexity and interconnectedness of natural systems, and are struggling to cope with consequences of human activities such as global warming, and are thus much more skeptical of our effect on the environment. But this has only been a recent phenomenon. For most of human history nature has had the upper hand, and we had little choice but to live in awe of its power, over which we had little control (Toker 153). The industrial revolution changed all this. Now the damage industrialization wrought is clear, but in the 1930s major interventions such as the construction of the Hoover Dam were seen as symbolic of progress, and fostered a sense of optimism that man could resolve any difficulty through the application of technology (my assertion, would require further research to document).

At Fallingwater Wright uses industrial materials, steel painted his signature Cherokee red, glass, and most importantly, reinforced concrete, and with exceptionally little ornament for a Wright work. Arguably Wright could have used more sympathetic materials, such as wood, which he used extensively in his prairie houses, or such as he had proposed for his Lake Tahoe project in 1924 (Toker 157). The house's appropriation of the stream also makes it seem as though the stream is an industrial spillway, and Fallingwater a turbine house (Toker 155). Fallingwater perches on a cluster of boulders near the edge of Bear Run, but otherwise Wright left the site untouched (Toker 154). This was not the case with other projects by Wright, notably Taliesin East, where he spent

decades terracing hillsides, planting groves and gardens, damming streams to make lakes and waterfalls (Spirn 136). The use of industrial materials and industrial imagery would seem to heighten its contrast with the natural environment, but the effect is one of remarkable harmony. It seems that Wright sought to give expression to the similarity between the sublime effect of the power of nature, symbolized by the falls, and the power of industry, symbolized by the house. Recalling the view from Sullivan's office in Chicago he wrote, "The red glare of the Bessemer steel converters to the south of Chicago would thrill me as the pages of the Arabian Nights used to with a sense of thrill and romance" (Toker 158). He understood that the city of Pittsburgh was as important to the "genius loci" of the place as Bear Run (Toker 157). To Wright, the story of Fallingwater is the reconciliation of man, alienated in the industrial city, reconciling himself with nature.

Wright the Progressive

Wright was a vocal critic of American cities and predicted their dissolution in the near future (De Long 15). Though they share common roots, this is not quite the same thing as Jeffersonian agrarianism. Wright did not propose a return to an agrarian society or abandonment of industry. As he said "I do not believe in a 'back to the land' movement; I think any backward movement would be folly; but if, turning away from excess urbanization now we can go

forward with all that science has provided us...Broadacre City is the country itself come alive as a truly great city" (qtd. in March, 202).

Not coincidentally, Wright's Broadacre City was contemporary with the design of Fallingwater. E.J. Kaufmann, his client for Fallingwater, provided \$1000 to finance the construction of the model of Broadacre City for display at the Industrial Arts exposition at Rockefeller Center in April of 1935 (Toker 125). It later had a second showing at Kaufmann's Pittsburgh department store (Toker 103). Today, Broadacre City is seen as the progenitor of suburban sprawl that has characterized American urban development (need a critique of Broadacre City), but Wright was concerned about sprawl, writing to Sullivan about the developments then being built in Los Angeles: "The region has been cruelly exploited—and is so still" (qtd. in De Long 18). Wright saw Broadacre City was the physical manifestation of decentralization of power, that is, the physical manifestation of democracy. Such real estate speculation was caused by too much centralization of power in finance, thus was contrary to his aims (March 198). Other progressives of the era had similar ideas about the necessity of distributing power to recover the ideals of broad based democracy from a world dominated by corporate interests (March 201). Wright was simply attempting, as an architect, to apply these ideas to architecture.

Also interesting is the method of diffusion of these principles. Wright's home state of Wisconsin became one of the most progressive states in the

country by employing the "Wisconsin idea," that is implementing reforms whenever and wherever the opportunity presented itself, rather than as part of a master plan (March 201). Wright's approach to implementing Broadacre City was much the same. In this way, Broadacre City was the antithesis of a top-down implemented utopian future city, such as Corbursier's Villa Radieuse (March 204). Instead, for the rest of Wright's career, he implemented Broadacre City when and wherever the opportunity presented itself.

While a far cry from the palatial estates the Pittsburgh plutocrats were constructing nearby to pursue their fox hunting and polo (Toker 99), at a price of \$155,000, or about 2.4 million of today's dollars (Wikipedia), Fallingwater was far too expensive to be a prototypical house for the everyman. Still, the history of the site, and its relation to the city of Pittsburgh, illustrate some democratic trends that parallel the objectives of Broadacre City. The topography of Bear Run made it poor agricultural land, and so from a very early date, the land was exploited for industry. One of the first industries was glassmaking. For early settlers, whiskey was the most significant agricultural cash crop, a much more portable form of wealth than the corn from which it was distilled, but whiskey requires bottles, and bottles require silica and fuel for heating it. The wooded sandstone hills around Bear Run provide both. Later iron working gained prominence, and still the trees were in demand to fuel the furnaces until replaced by coke, processed from coal, also available in nearby hills. Finally, the abundant water falling through steep valleys provided power to early

factories. In the 1930s, there was still a hydroelectric power plant in nearby Ohiopyle and a water-powered sawmill. All this industrial activity brought the railroads (Toker 86-7).

The arrival of the railroads facilitated the first wave of a change to the region. In nearby industrial powerhouse Pittsburgh, gilded age aristocracy such as Carnegie, Mellon, and Frick began to recognize the area for its recreational possibilities. They began to establish private hunting and fishing reserves in the area, using the rail lines to commute from the city (Toker 89). These retreats were still a luxury accessible only to the extremely wealthy, but the advent of camps began to open such recreational opportunities to ordinary city dwellers. It is from just such a camp that E.J. Kaufmann acquired the land where Fallingwater now sits. A commercial camp had gone bankrupt, so he turned it into an enormously popular amenity for his employees, which was a trend amongst large companies at the time, other examples including S.C. Johnson and Heinz foods (Toker 92).

Ultimately, the great depression ended the site's use as a public amenity, possibly due to souring of relations between employees and management in an unprecedented strike in 1932 (Toker 95). This converted the land back to something of feudal fiefdom for Kaufmann, who by this time was interested enough in his slice of nature to spend considerable effort restoring it to health from its industrially-exploited state (Toker 98). A final evolution spurred the

construction of Fallingwater: the improvement of bridges, paving of roads, and construction of a new highway, the Pennsylvania Turnpike, meant that Kaufmann could drive to the country in a little more than an hour (Toker 97). This accessibility made Fallingwater a new typology: not a vacation home, but a weekend home, signifying its even greater accessibility (Toker 109). Kaufmann might have to toil in the industrially ravaged Pittsburgh during the week, but on the weekend, he could escape to nature (Toker 159).

All of this detailed history is presented to illustrate the importance of the relationship between Pittsburgh the industrial center, and Bear Run the natural refuge. Industry, starting with the railroads, and then the automobile, was making nature more accessible to more people, and this in turn fostered a tremendous increase in appreciation for the wilderness (Toker 159). It is exactly this same introduction of technology that was making the natural wonders of America accessible to the masses. For example, the Great Northern Railway built a line and the famous Old Faithful Inn, making Yellowstone accessible by rail in 1904, and Freelan Stanley of the Stanley Motor Carriage Company built the Stanley Hotel outside of Rocky Mountain National Park in 1909, opening that park up by means of the automobile (Wikipedia). Wright anticipated "Complete mobilization of the American people is...fast approaching." (De Long 46) This mobility would expose Americans to a new source of cultural identity derived from the nation's natural wonders, and was reflected in Wright's use of nature as the inspiration for an American architecture.

Wright the Eclectic

Another defining feature of Wright's architecture is his willingness to assimilate exotic motifs into his designs. There are three major sources of inspiration that can be seen in Fallingwater. There are elements from Italian, Japanese, and Native American vernacular architecture incorporated in the design of Fallingwater.

Italian vernacular architecture is a significant influence on Wright because Italy was the European country he resided in longest. In 1909 Wright abandoned his family in Oak Park, and eloped to Europe with Mamah Cheney, a client's wife, to escape the scandal that had destroyed his practice and take advantage of an offer by Ernst Wasmuth to publish a portfolio of his works (Wikipedia). He would spend all of 1910 in Florence (Toker 165). It is significant that Wright seemed much more interested in the vernacular architecture of Italy than the classical, renaissance, or baroque architecture that academic architects would typically have studied. He wrote "The true basis for any serious study of the art of architecture is in those indigenous structures, the more humble buildings everywhere, which are to architecture what folklore is to literature or folksongs are to music, and with which architects are seldom concerned...The traits of these structures are national, of the soil; and though often slight, their virtue is intimately interrelated with environment and with the habits of life of the people...No really Italian building seems ill at ease in Italy. All are happily

content with what ornament and color they carry, as naturally as the rocks and trees and garden slopes which are one with them" (qtd. in De Long 31). The vernacular architecture of Italy may ultimately have inspired a couple of elements in the design of Fallingwater. Franklin Toker argues that the nearly 40 foot tall masonry tower at the core of Fallingwater is in both form and function a Tuscan house tower (165). Also, he argues the bathrooms for E.J and Kaufmann Jr., which Wright cantilevered off the back wall of Fallingwater, was an idea he borrowed from older Italian buildings which used this simple expedient to add bathrooms to buildings built before the days of indoor plumbing (165-6). At Fallingwater, cantilevering the bathrooms allows Wright to bring daylight into dining room on the main floor through a clerestory on the north wall.

The second exotic influence on Wright's design was Japanese vernacular architecture. This too makes sense, because after Italy, Japan is the only other foreign country where Wright spent any length of time (Toker 165). Wright visited Japan first in 1905, again in 1913, and then for extended periods of time between 1917 and 1922, while he was deeply involved in the construction of the Imperial Hotel in Tokyo (De Long 33). The aspect of Japanese vernacular architecture that most affected Wright was its relationship with the landscape. He wrote in 1917 that Japanese buildings, "like the rocks and trees, grew in their places. Their gardens were idealized patterns of their landscapes" (qtd. in De Long 34). The fact that Japanese gardens sought to represent an idealized version of nature would have resonated with Wright's own sensibilities about the

relationship between man, nature, and art, as discussed previously. At Bear Run he had the sublime aspect of nature embodied in the falls that he had had to create artificially at Taliesin (Toker 154). Inserting the house over the falls ensures an indelible link to nature: the sound of rushing water. Wright described his Imperial Hotel as an “interpenetration of gardens,” (qtd. in De Long 35). Similarly Fallingwater may be seen as an interpenetration of interior and exterior space, with 2,885 square feet of interior space paired with a nearly equal 2,445 square feet of exterior terrace (Toker 150).

Finally, upon his return to the United States after his work on the Imperial Hotel, Wright attempted to establish himself in Los Angeles, California. His textile block houses mark the introduction of the third ‘exotic’ influence in Wright’s architecture, although in this case he is actually attempting to look closer to home for inspiration. From the pre-Columbian motifs of the textile block houses, he migrated to Pueblo architecture as source material for a genuinely American architecture (De Long 38). Toker mentions a letter from Wright to E.J. Kaufmann about a 300 mile drive he undertook to see “the Cliffdwellers” which Toker infers to mean the Cliff Palace at Mesa Verde, in Colorado (167). Not only is this a perfect example of the car connecting Americans to new sources of cultural identity, but it is also another possible source of inspiration for the 40 foot tall central tower of Fallingwater. There are also other elements of Fallingwater that Toker suggests are borrowed from Pueblo architecture, such as the expressive exterior staircase leading from E.J. Kaufmann’s bedroom up to Kaufmann Jr.’s

bedroom, and the round-edged, dun-colored parapets of the reinforced concrete terraces (166). Certainly if Wright had only intended them only in an industrial context, he could have left them hard-edged, as they were in early drawings (Toker 136).

Ultimately, after four projects fraught with difficulties, Wright abandoned his practice in California and returned to Taliesin (De Long 39). The textile block houses are seen by some as idiosyncratic, because they are so massive, and so elaborately decorative they seem entirely out of the character with modernism (Toker 18), particularly the emergent International Style, which was light, volumetric, and perhaps most importantly, devoid of applied ornament. However different the manifestation of his California houses was from that of his prairie houses, his goal was the same in both. His aspiration for his California houses was "...a distinctly genuine expression of California in terms of modern industry and American life..." (qtd. in De Long 18). This was the same aspiration he would pursue with Taliesin East and West and at Fallingwater, architecture appropriate to its place, as opposed to the universality and corresponding place anonymity of the International style.

Wright the Modernist

Wright was a preeminent modernist architect. His early work as presented in the Wasmuth Portfolios had been a sensation in Europe. J.J.P Oud described it: "Wright detaches the masses from the whole and rearranges their

composition. There is a direct relation here to the way the futurists have overcome rigidity in painting—which is by achieving the movement of planes. In this way, Wright has created a new ‘plastic’ architecture” (136). The European modernists were fascinated by aesthetic possibilities presented by this abstraction of architecture, and chose to gloss over any other content in Wright’s architecture—particularly his use of ornament.

Wright’s manipulation of space was carefully calculated for experiential effect. Elimination of the corners opens long views, either diagonally across the space, or parallel along a plane without a visual stop at a corner. The view from the entry of Fallingwater, for example, is draws the eye diagonally across the living room and out the glass doors leading out onto the western terrace (Levine 252). Another example is the tall band of windows running the height of the central tower: on the corner, Wright put two small casement windows together; these open out, eliminating the corner entirely (Toker 172). Where a window met the ashlar masonry, he cut a groove in the stonework and set the glass directly into this with caulk, the effect being, again, that there is no visual distinction between that portion of the wall that is outside and that which is inside (Hoesli 215). Manipulation of planes was not limited to walls: the recessed ceiling within the larger space of the living room to define a sub-region by the hearthside (Levine 252). Finally, perhaps the most significant aspect of “Wrightian” space is that it is never entirely resolved from any one perspective (Brooks 181). Mystery drives circulation through the space, so the experience is dynamic, and relative

to the observer. Contrast this with the “open” floor plan often confused with Wright’s concept of space, where everything is immediately perceived, or Classical axial, symmetrical space, which preferences a single fixed perspective.

While Wright preferred to use self-referential precedents to explain his sources of inspiration for Fallingwater, it is so much closer to orthodox modernism than what he had ever done before, or ever did afterwards, that it would be unrealistic to pretend the European modernists had no influence on him (Toker 171). Mies’s 1923 project for a brick country house, which was itself influenced by Wright’s earlier work published in the Wasmuth Portfolio, defined space by a series of floating planes. Fallingwater’s plan is very similar if slightly more conventional, since it accommodates programmatic demands, but walls are also more fragmented (Toker 172). Wright preferred to cite his own earlier Gale or Robie houses as the precedents for Fallingwater’s cantilevers and ribbon windows (Toker 171). However, the the structural system of reinforced concrete piers, the parti of interlocking trays of space, and the ribbon windows of Schindler’s Beach House present compelling similarities, as does Neutra’s Health House, with the additional similarity that it descends a steep site (Toker 175-6).

Wright may have viewed Fallingwater as repatriation of ideas that were originally his (Toker 169), but the semantics no longer seem significant now that their war of words is history. Wright’s vitriol towards the “Internationalists” at times seems deranged, especially when some of them were genuinely deferential

towards him (Toker 30). Wright's need to portray his work as entirely original and desire to use the other modernists as a foil greatly complicates scholarship in this area, but at Fallingwater, more so than in any other Wright work, he seem to have benefitted from the competition. This war of words is hard to understand today, but the threat presented by modernism was an existential one. Wright's work was not being ignored, or panned by critics: he had no work. Before being approached by E.J. Kaufmann, Wright was in the midst of the deepest drought of his professional career (Toker 14). In 1932 MoMA had issued him his certificate of professional death when they all but excluded him from their exhibition on the International Style (Toker 31). If not for the opportunity afforded him by Edgar Kaufmann, it is unlikely Wright would have enjoyed the renaissance that catapulted him into the most productive portion of his career, and gave us icons like the S.C. Johnson Wax Building, the Guggenheim Museum, or the Marin County Civic Center.

Fallingwater is a unique achievement in American architecture, even within the body of work of Frank Lloyd Wright. To understand why it remains such an important milestone of American architecture requires an understanding of how many diverse threads Wright was able to weave together into something unique and rich in meaning.

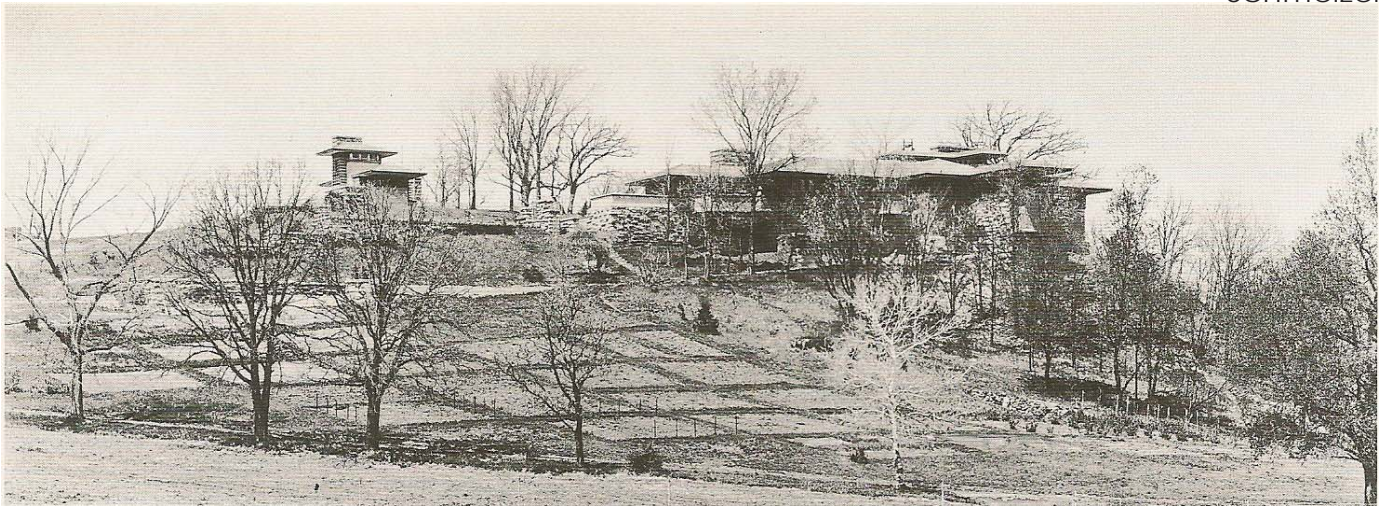
By the 1930's Wright had the idea that he could supply the direction for an American architecture, grounded in the concepts of individualism, democracy,

America's own indigenous architectural traditions, and the two things most representative of America—her natural wonders and industrial might. But he faced a problem. It was very nearly a thesis he never got to deliver. “Thieves” had misdirected the architectural discourse, and America was in danger of slipping back into her old pattern of “aping styles from abroad.” He served notice to his ideological foes “that I intend to be the greatest architect who ever lived” (qtd. in Toker 32). While that remains to be seen, admittedly Wright has set a very high bar for future generations of American architects.

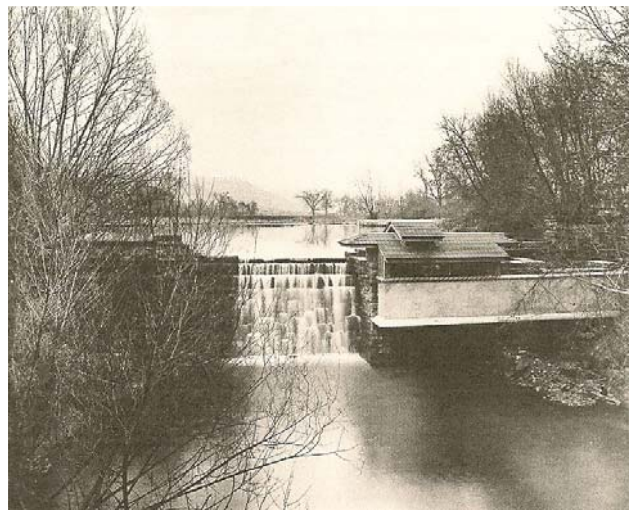
Wright's architecture is intensely complex. The experience of his work is often described as *spiritual* and this is not intended merely as flowery praise. Wright was intensely interested in the metaphysical content of architecture, and he packs an enormous amount of it into his work, which makes it difficult to decompress. From transcendentalism evolved the heroic idealism that defined architecture as “man's great sense of himself embodied in a world of his own making” (qtd. in De Long 16). From Jeffersonian democratic tradition, the idea that democracy was not a form of government, but a pattern of living that required a supportive architecture. From his travels, Wright gained a profound appreciation for vernacular architecture's symbiotic evolution, and resulting spiritual connection, to place. He also understood how people would experience space and could visualize this clearly enough to recreate it from scratch without reliance on any traditional conception of space. What he knew he likely gained from keen powers of observation and vast life experience,

because he was lacking in formal education. His work was nearly impossible to describe, even for the architect himself. It is empirical, and it is intuitive. Above all, it is never, ever formulaic. Precisely what made Wright's work so original and so rich also made it virtually unrepeatable. Ultimately this is the likely reason why the International Style would triumph over Wright's species of modernism. The International Style was above all formulaic and repeatable, as its dispersion around the world in the 1950s bears testament to.

But even as Wright's long career ended with his death in 1959, and orthodox modernism appeared to emerge triumphant, chinks began to appear in its ideological armor. The narrow focus of modernism that gave it its razor-edged rhetorical irresistibility starved it of the creative inspirational depth to sustain itself. Though Wright's architecture has proved inimitable, his humanistic critique of modernism foreshadowed the shortcomings that would later be its downfall, and are truly transcendental concerns architects still find themselves struggling with today. Thus his efforts are still informative today, a sentiment expressed with eloquence by Lewis Mumford: "His architecture is not in the current of the present regime any more than Walt Whitman's writings were in the current of the Gilded Age: hence his value is not that he has dominated the scene and made it over in his image, but that he has kept the way open for a type of architecture which can come into existence only in a much more humanized and socially adept generation than our own" (153).



A manicured hillside at Taliesin East (Spirn 157)



The dam and hydro-house at Taliesin East 1926 (Smith 227)

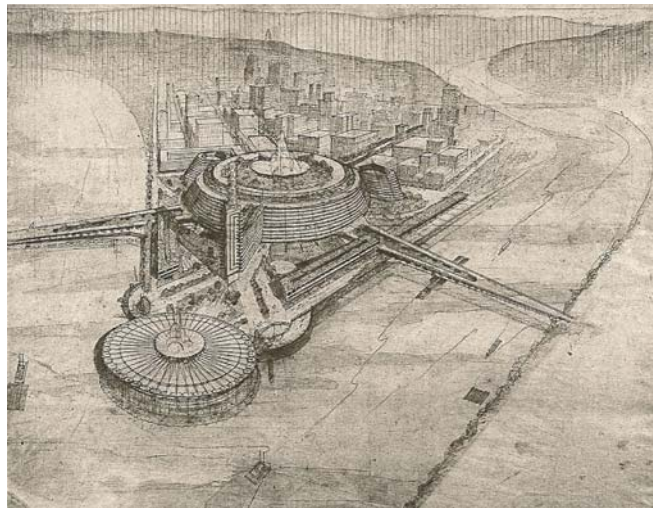


Lake Tahoe Summer Colony 1923 (Unbuilt Project) (De Long 51)

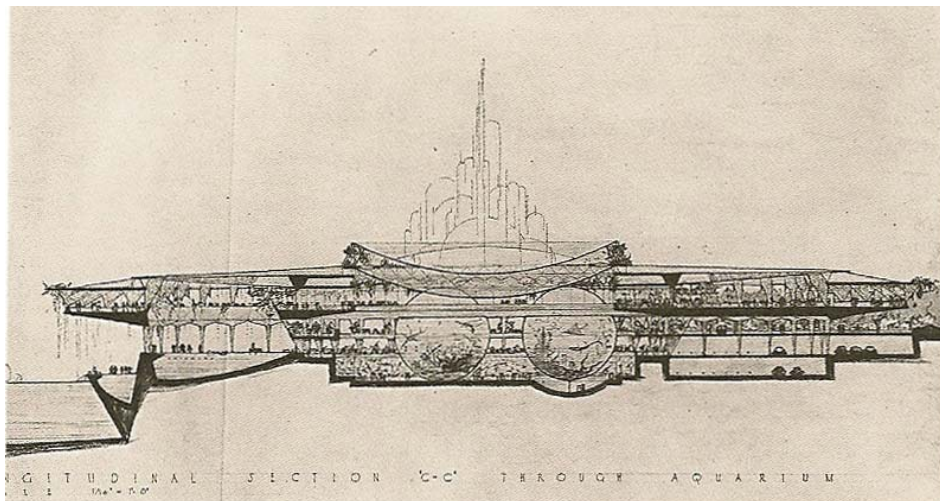


Left: Ono Falls--a Japanese print from Wright's collection (Toker 264)

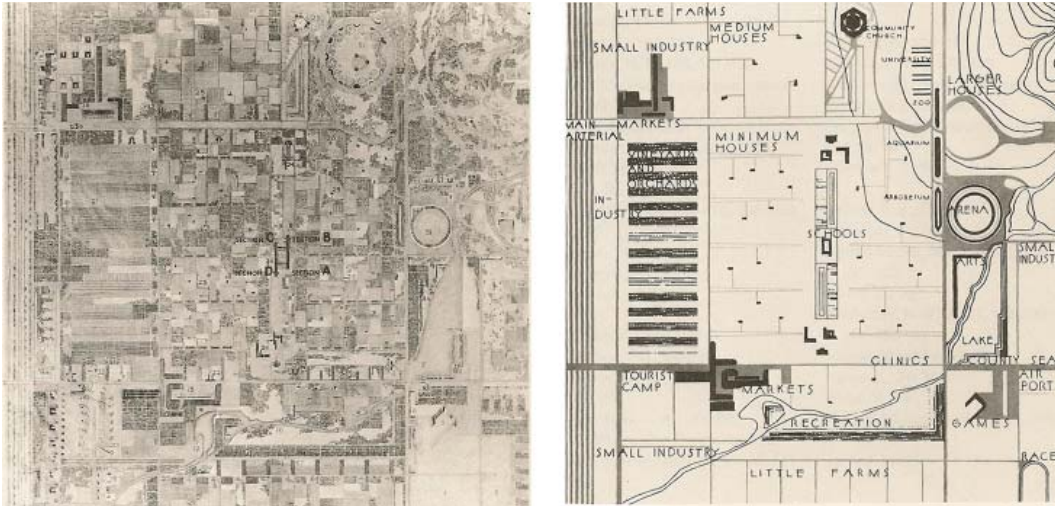
Right: A Bessemer converter in action (web)



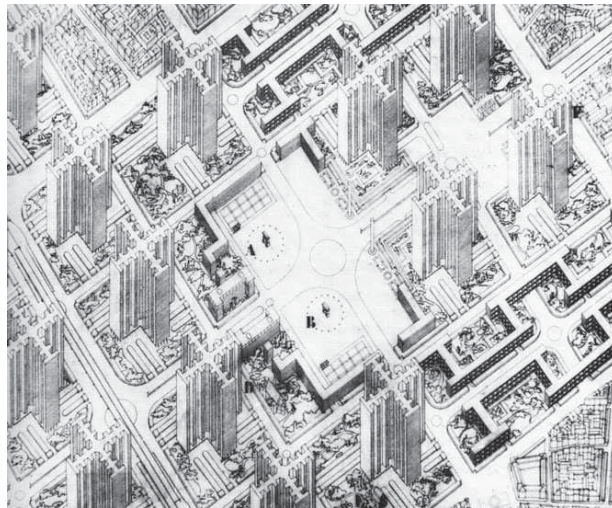
Wright's proposal for Pittsburgh Point Civic Center, 1947. This was the first commission E.J. Kaufmann dangled before Wright, but the scheme went unbuilt. (Smith 231)



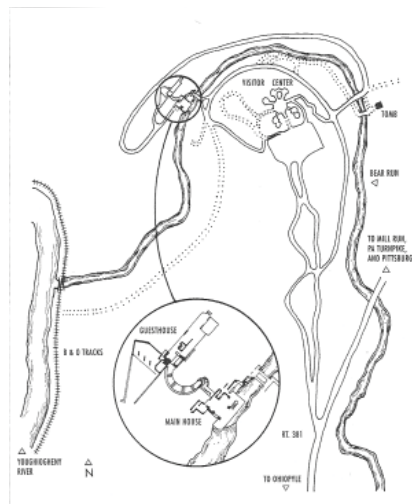
While Wright brought industrial themes to Bear Run, he proposed to bring natural ones back to Pittsburgh. In both the environment is the counterpoint to his architecture. (Smith 231)



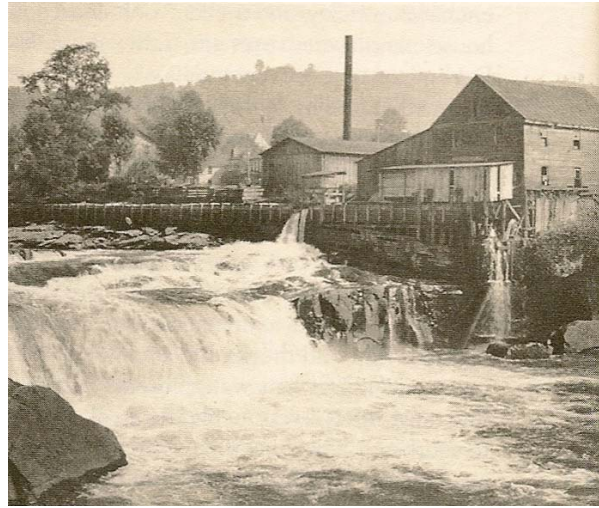
Broadacre City, 1934 (March 225)



Corbusier famously proposed leveling most of Paris to implement his master plan, the opposite of Wright's idea of diffusion of his Broadacre City. (web)



The circuitous approach to Fallingwater. (Toker 3)



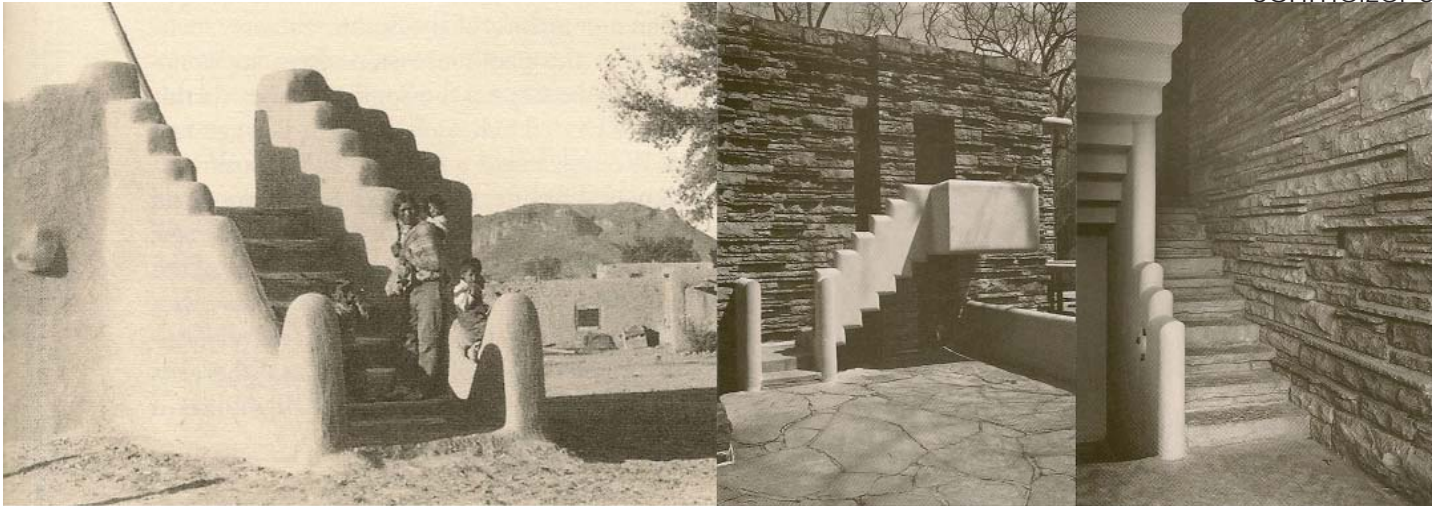
Industry in nearby Ohiopyle as Wright would have seen it in 1934. (Toker 156)



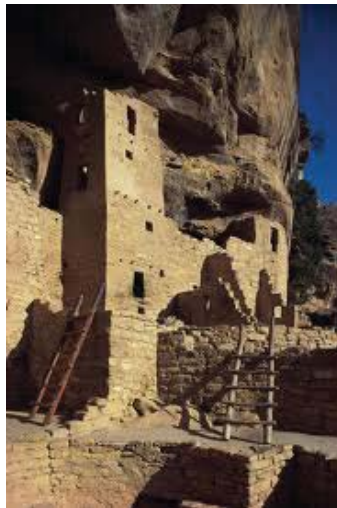
The railroad depot at Bear Run in the 1890s, with a rather sad, barren hillside in the background. (Toker 87)



Old Faithful Inn. Like Fallingwater, it represents the new opportunities presented to an increasingly mobile population to experience nature. (web)



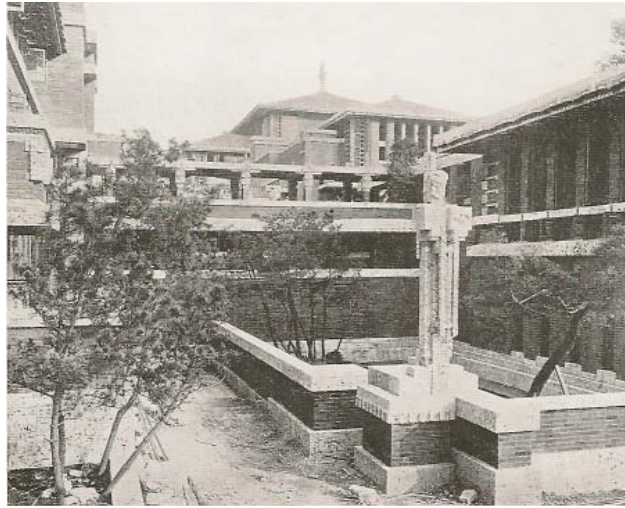
From the Left: Pueblo San Ildefonso, NM, and the stairs at Fallingwater. (Toker 135)



Cliff Palace, Mesa Verde National Park, CO (web)



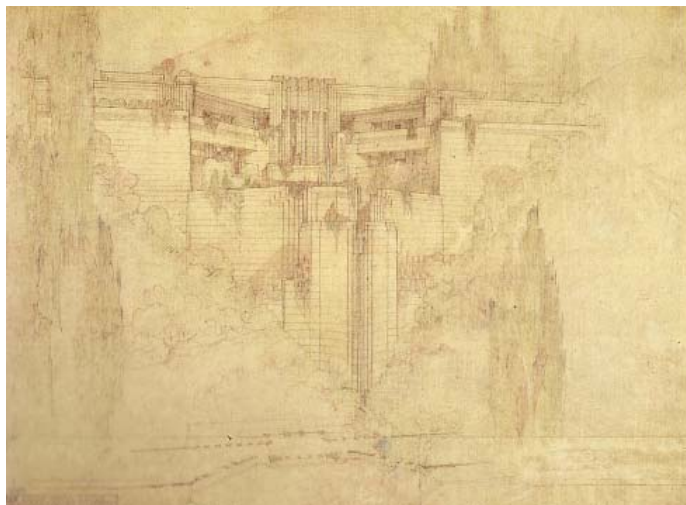
Note the sharp edges on the perspective drawing, which were changed to rounded. Also, how closely it matches the photograph by Hedrich from 1937. (Toker 264)



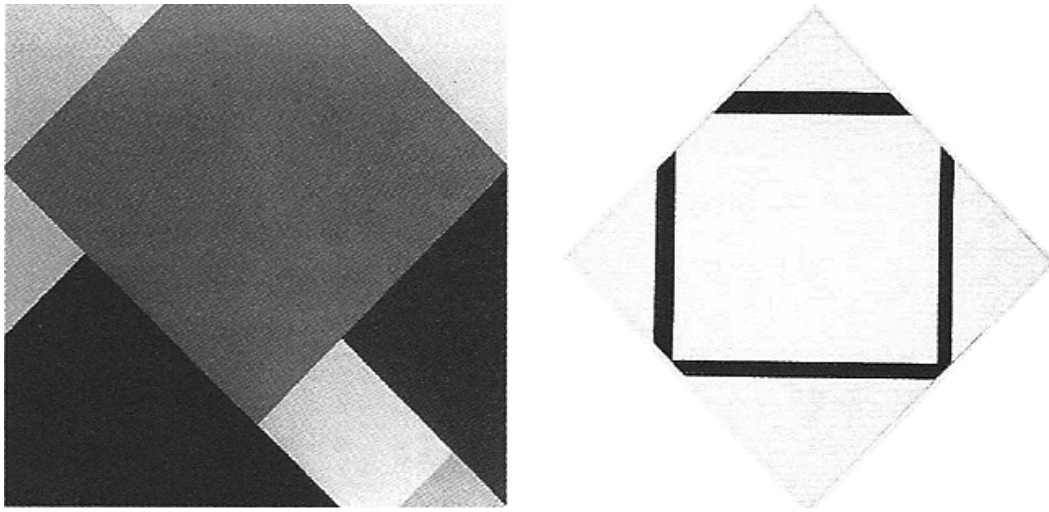
The Imperial Hotel, Tokyo, 1923. Wright claimed his aim was a free interpretation of the oriental spirit, with the aim of creating new forms that would accommodate the patterns of life that were inevitable to the Japanese people. (De Long 41)



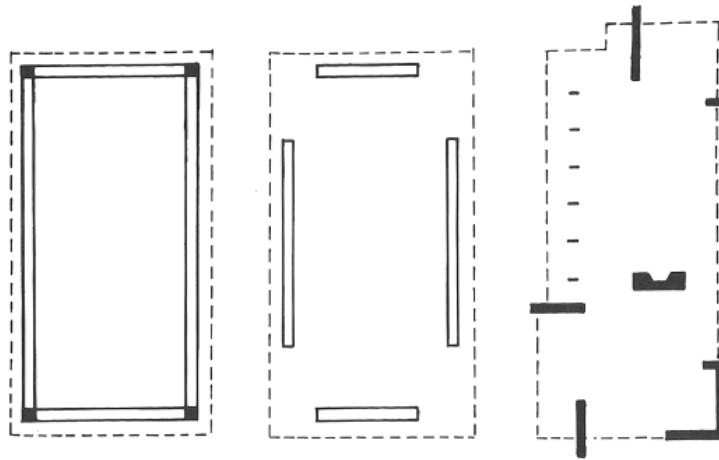
One of Wright's "textile block" houses: La Miniatura (Millard House) in Pasadena, CA, 1923. (De Long 41)



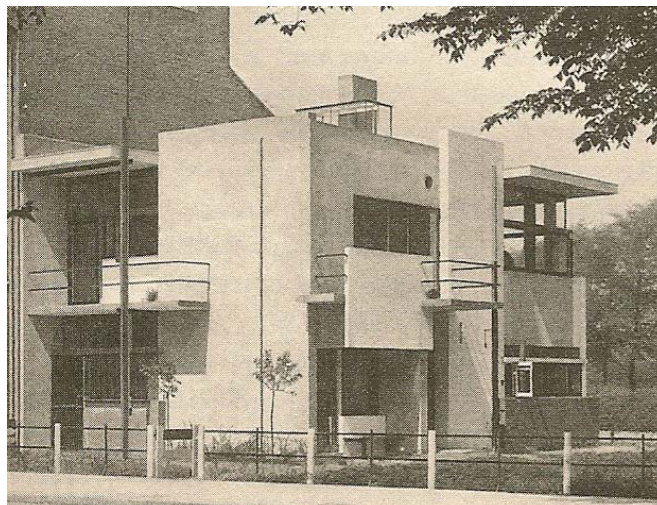
Doheny Ranch Project, House C, one of Wright's unrealized schemes for Los Angeles. Also incorporates a man-made waterfall. (De Long 27)



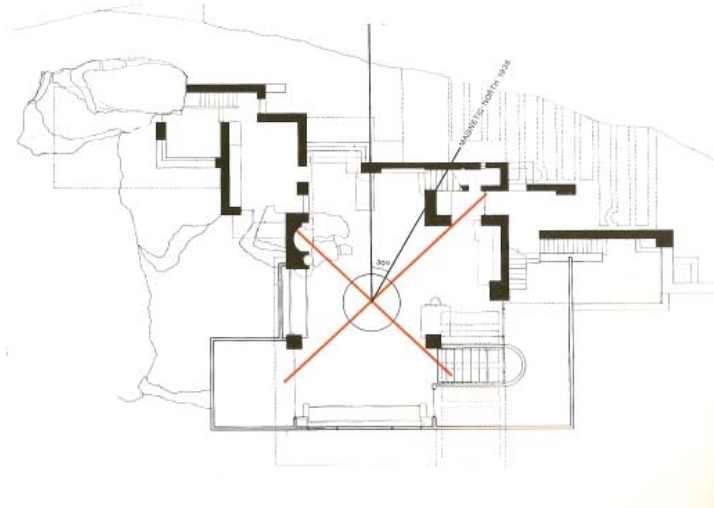
Examples of cubism. From the left: Painting I, Piet Mondrian, 1926 and Counter-Composition V, Theo van Doesburg, 1924 (Levine 247)



The destruction of the box: eliminating the corner transforms walls into free-floating planes. (Brooks 184)



Schroder House, Gerrit Rietveld, 1923. De Stijl was an example of the direction European modernists took Wright's ideas. (Toker 163)



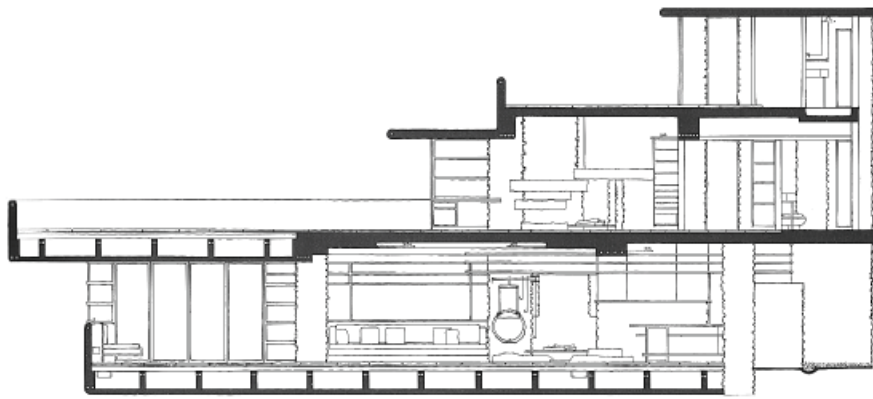
A diagram of the diagonal axes of Fallingwater: from the entry (earth) to the western terrace (air), and from the hearth (fire) to the stair down to the stream (water). (Kaufmann 178)



The casement windows on the tower open to dematerialize the corner. (Kaufmann 111)



Glass set directly into masonry creates the perception of continuous space. (Hoesli 215)



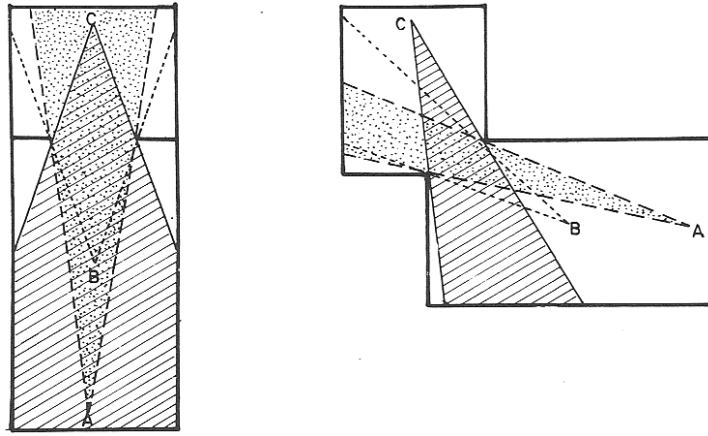
Section through Fallingwater showing the structure below the false floor, and the manipulation of the ceiling plane. (Kaufmann 109)



The "fire-water" axis, before all the furniture was in. (Kaufmann 61)



The view from the entry to the western terrace. (Brooks 219)



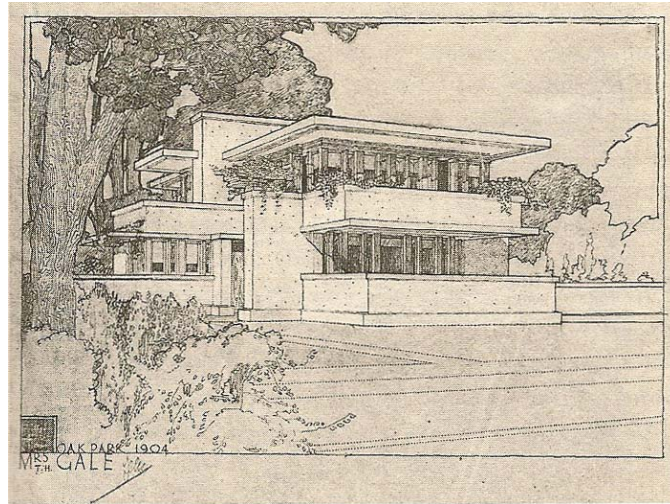
A diagram demonstrating how Wright achieved more dynamic space by limiting visibility. (Brooks 180)



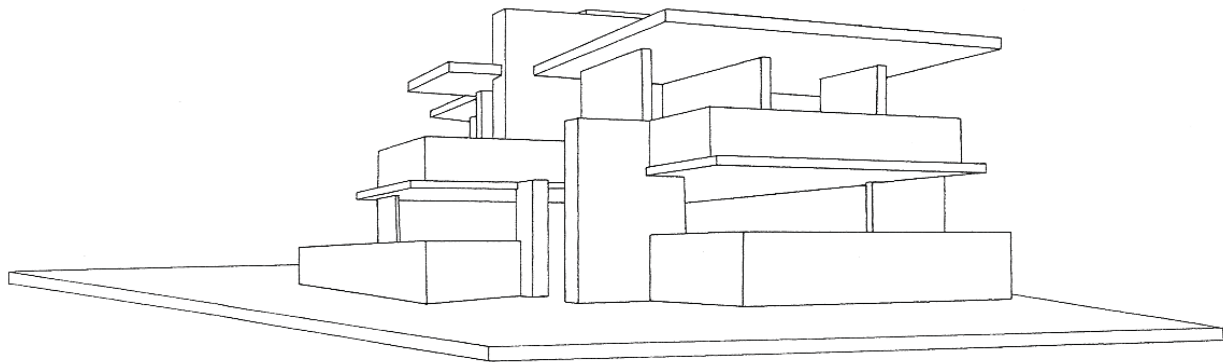
Contrast Wright's concept of "open space" with that of Mies's Farnsworth house. By comparison views in Fallingwater are much more tightly constrained. (web)



Now contrast a classical, symmetrical, axial composition: In this case, the most desirable vantage point has been ungraciously denied by Napoleon's sarcophagus. (author's photos)



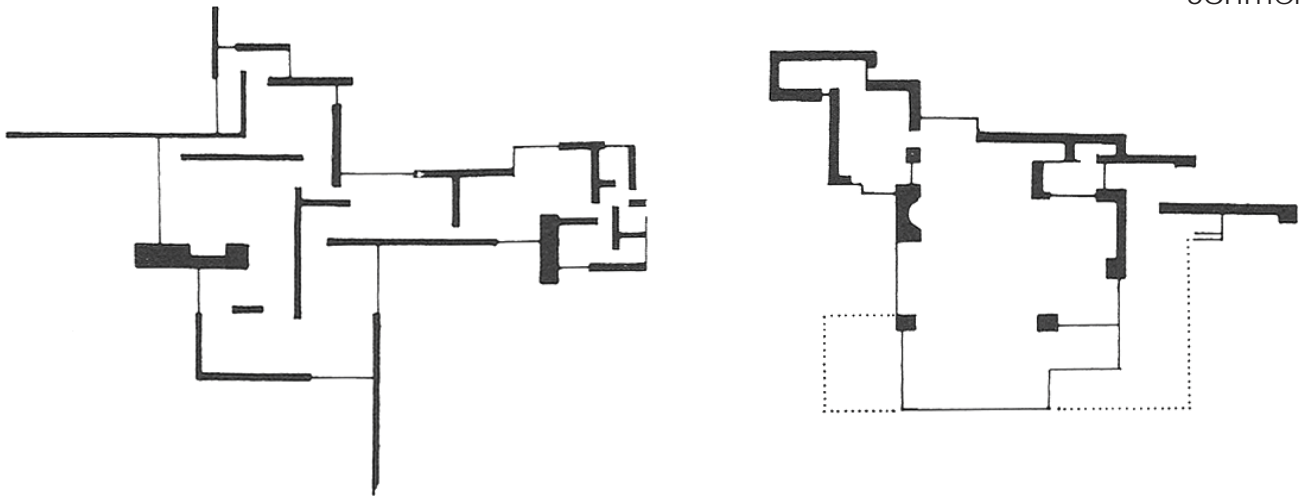
The Gale house, 1909, cited by Wright as the precedent for Fallingwater. (Toker 163)



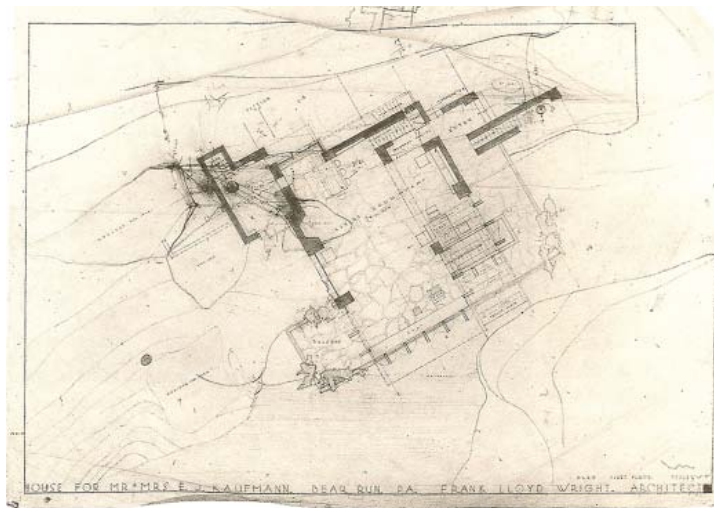
An abstraction of the Gale house more clearly demonstrating its relation to Fallingwater. (Hoesli 208)



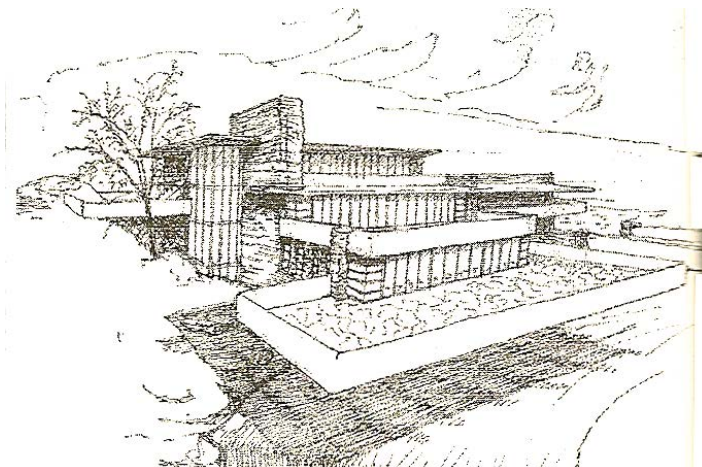
Schindler's Beach House (left) and Neutra's Health House (right) both bear similarity to Fallingwater. (De Long 51)



A plan comparison of Mies's Brick Country House (left) and Fallingwater (right). (Toker 173)



An early plan of Fallingwater. Note that the end of the stair down to the water is square, not round. (Levine 253)



An early version of Wright's design where the 2nd story balcony is pulled back, instead of projecting over, the 1st floor balcony. This version is so much less visually dynamic that without this change, Fallingwater might never have become famous. However, the additional load on the cantilevers nearly toppled Fallingwater. (Toker 184)

Works Cited

- Brooks, H. Allen. "Wright and the Destruction of the Box." 1979. *Writings on Wright: Selected Comment on Frank Lloyd Wright*. Ed. H. Allen Brooks. Cambridge, MA: The MIT Press, 1981. Print.
- De Long, David G. "Frank Lloyd Wright: Designs for an American Landscape, 1922-1932." *Frank Lloyd Wright: Designs for an American Landscape, 1922-1932*. Eds. David De Long, Anne Whiston Spirn, C. Ford Peatross, Robert L. Sweeney. New York: Harry N. Abrams, Inc., 1996. Print.
- Emerson, Ralph Waldo. "Beauty." *Nature*. <http://www.emersoncentral.com/beauty.htm> Web.
- Hoesli, Bernhard. "From the Prairie House to Fallingwater." *On and By Frank Lloyd Wright: A Primer of Architectural Principles*. Ed. Robert McCarter. New York: Phaidon Press Ltd., 2005. Print.
- Levine, Neil. "Frank Lloyd Wright's Diagonal Planning Revisited." 1982. *On and By Frank Lloyd Wright: A Primer of Architectural Principles*. Ed. Robert McCarter. New York: Phaidon Press Ltd., 2005. Print.
- March, Lionel. "An Architect in Search of Democracy: Broadacre City." 1970. *Writings on Wright: Selected Comment on Frank Lloyd Wright*. Ed. H. Allen Brooks. Cambridge, MA: The MIT Press, 1981. Print.
- Mumford, Lewis. "Frank Lloyd Wright and the New Pioneers." 1929. *Writings on Wright: Selected Comment on Frank Lloyd Wright*. Ed. H. Allen Brooks. Cambridge, MA: The MIT Press, 1981. Print.
- Oud, J.J.P. "Architectural Observations Concerning Wright and the Robie House." 1918. *Writings on Wright: Selected Comment on Frank Lloyd Wright*. Ed. H. Allen Brooks. Cambridge, MA: The MIT Press, 1981. Print.

Spirn, Anne Whiston. "Frank Lloyd Wright: Architect of Landscape." *Frank Lloyd Wright: Designs for an American Landscape, 1922-1932*. Eds. David De Long, Anne Whiston Spirn, C. Ford Peatross, Robert L. Sweeney. New York: Harry N. Abrams, Inc., 1996. Print.

Toker, Franklin. *Fallingwater Rising: Frank Lloyd Wright, E.J. Kaufmann, and America's Most Extraordinary House*. New York: Alfred A. Knopf, 2003. Print.

Images Only

Kaufmann, Edgar Jr. *Fallingwater: A Frank Lloyd Wright Country House*. New York: Abbeville Press, 1986. Print.

Smith, Kathryn. "A Beat of the Rhythmic Clock of Nature: Wright's Waterfall Buildings." 1986. *On and By Frank Lloyd Wright: A Primer of Architectural Principles*. Ed. Robert McCarter. New York: Phaidon Press Ltd., 2005. Print.