# Wright's Organic Architecture:

# From >Form Follows Function to >Form and Function are One

CESAR A. CRUZ

Form follows function is one of the most famous precepts of modern architecture. It symbolizes modern architecture's ascendancy and its decline - the former when Louis Sullivan wrote in 1896, »Form ever follows function [...] this is the law«, and the latter when Robert Venturi turned away from modern functionalism, writing in 1966, »We no longer argue over the primacy of form or function (which follows which?) «.1 Frank Lloyd Wright (1867-1959) was one of the many architects, critics, and theorists either of the Modern era or since who have weighed in on the issue. Late in his life, in a 1953 essay entitled The Language of Organic Architecture, Wright defended the idea that form follows function, not out of a debt to Louis Sullivan - his former employer and mentor, whom he called his Lieber Meister - but because of the idea's place within Wright's own architectural theories. In the same essay, Wright also called form follows function wa much abused slogan and the password for sterility.«2 By then he had touched upon the subject several times throughout an extensive writing career spanning over fifty years. Why would Wright both affirm and repudiate the idea that form follows function? Can he help us better understand the idea? Should the principle be affirmed, refined, or discarded?

The purpose of this paper is to reassess the modernist principle that form follows function by putting it in the context of Frank Lloyd Wright's organic architecture. Wright's writings and selected buildings show us two key areas in which Wright advanced Sullivan's original idea of spatial organization and modern architectural aesthetics. The first is a building's interior-exterior relationship and form, and the second is structural function and form. While these approaches may not resound as revolutionary today, Wright's methods were rich and uniquely new ways to relate a building's function with its form. In the first case, Wright's idea of the room itself or the within illustrates the importance of a single room or principal interior space in determining the architectural character throughout a building. In the second case, through the idea of continuity, Wright proposed that horizontal and vertical structural elements sculpturally merge with one another so that post-and-beam construction disappears. Through an appraisal of these two methods, we may begin to come to terms with one of architecture's most famous principles and we may reevaluate its validity today. Does form follow function? Sullivan provides the introductory answers to this question and Wright extends those answers into a fuller discussion.

## Form and function as part of a living arto

Sullivan first presented his arguments that form follows function in his 1896 essay *The Tall Office Building Artistically Considered.*<sup>3</sup> Sullivan's objective in the essay was to answer the question: How do you give form to something that has never existed before? He did not mean give form to a specific buil-

1 Sullivan 1979: 208; Venturi 1977: 19

2 Wright 1953: 322

3 The Tall Office Building Artistically Considered was first published in Lippincott's Magazine in 1896. See: Sullivan 1979: 202-213. It became well known as part of Sullivan's 1918 revision of his book Kindergarten Chats and Other Writings. The essay is the most often quoted reference in regards to Sullivan and form follows function. Other passages in the main text of the book provide additional insights into form follows function. See: Ibid.: 42-48

ding or an individual design project but to a functional building type – the modern high-rise office building (i.e., the skyscraper). Sullivan thought that social conditions had granted architecture a historic privilege, a task worthy of the architects who first built the Greek temples or Gothic cathedrals, and equal only to architecture as a *living art.*<sup>4</sup> What factors had come to bear in Sullivan's time upon the form of an office building? Sullivan's answer to this modern problem relied on what he believed to be a universal principle – form follows function.

Sullivan argued that form follows function is a matter of nature. Forms imbue each thing in nature with a part of its identity. We distinguish one thing from another through their forms – a human is distinguished from a tree, a tree from a bird, and so on.<sup>5</sup> But forms don't just help us to distinguish one living being from another, they also tell us something of how they live their lives. Sullivan explains, »Speaking generally, outward appearances resemble inner purposes.«<sup>6</sup> A bird flies, a fish swims, and a plant rises from and is rooted to the ground. As such, so is each of their forms. Likewise, Sullivan believed that buildings should naturally follow suit in that their forms follow their functions, regardless that buildings are not in themselves organic things. They do not grow as an animal or a plant does. They do not reproduce. Instead, they are made. No matter, Sullivan insisted,

»It is the prevailing law of all things organic, and inorganic, of all things physical and metaphysical, of all things human and all things superhuman, of all true manifestations of the head, of the heart, of the soul, that the life is recognizable in its expression, that form ever follows function. This is the law.«<sup>7</sup>

Thus, the declaration that form ever follows function asserts that all manner of expressions, all manner of beings, and all forms are predicated upon their function, their purpose, and their way of being. As Sullivan lays it out, for example, a tall office building's way of being is characterized in part by its spatial organization, which has been a model for many skyscrapers since his time – a prominent ground floor, multiple floors of offices, and a special-purpose top floor or floors (in Sullivan's scheme, a space for mechanical services).<sup>8</sup> But its organization is only a natural consequence of the building's practical concerns. Sullivan's notion of architecture as a *living art* and as *form follows function* insisted upon more. It insisted that those practical concerns were only a part of a functional-essential whole, "or a unit without a single dissenting line.« The full essence of a tall office building was characterized by its spatial organization and its height. The grid of offices in a tall office building easily spoke to its spatial organization. Its soaring height, if properly expressed, enlivened it. Its natural form emerged from both.

Wright accepted Sullivan's rationale with the certainty of scientific fact. He acknowledges, »Already it has been said – lieber meister declared it – and biology knows and shows us that *form follows function*.«¹0 Wright also felt, however, that the idea was detrimental if it was applied unthinkingly; such an approach reduces form follows function to *cant terms learned by rote and mere dogma*.¹¹ The solution to this dilemma lay in Wright's belief that Sullivan's ideas had merit but they also required further examination and development. Thinking back on his experiences in Sullivan's office, Wright thought that an individual could only influence architecture to a limited degree during a lifetime. An architect takes on what others have left subsequent generations.

CESAR A. CRUZ

- 4 Sullivan explains the magnitude of designing the modern high-rise office building, "The design of the tall office building takes its place with all other architectural types made when architecture, as has happened once in many years, was a living art. Witness the Greek temple, the Gothic cathedral, the medieval fortress." Sullivan 1979: 208
- **5** Sullivan writes, »All things in nature have a shape, that is to say, a form, an outward semblance, that tells us what they are, that distinguishes them from ourselves and from each other. Unfailingly in nature these shapes express the inner life, the native quality, of the animal, tree, bird, fish, that they present to us; they are so characteristic, so recognizable, that we say it is *natural* it should be so.« Ibid.: 207

6 Ibid.: 43

7 Ibid.: 208

8 Ibid.: 203-205

**9** Ibid: 206

- 10 Wright 1953: 296. It should be added that among the many reasons why Wright may have been partial to the idea of form follows function is that he was present at its very inception. Wright recalled the day that Sullivan, Wright's boss, showed him the first elevation drawings of the Wainwright Building: »There was the very first human expression of a tall steel office building as architecture. It was tall and consistently so a unit, where all before had been one cornice building on top of another cornice building «. See: Ibid.: 151
- 11 Warning against *unthinking* approaches to architecture, Wright maintained that organic architecture is not achieved by "speaking the fancied language of form and function cant terms learned by rote." Wright 1975: 122. Similarly, pushing Sullivan's ideas further through the realm of his own organic architecture, Wright wrote, "Forms follows function is mere dogma until you realize the higher truth that form and function are one." Wright 1954: 20

Wright may not have felt beholden in this way to many other architects, but he certainly felt that he was to Sullivan. This was specifically the case with Sullivan's knowledge of building materials and their application in architectural expression. Wright recalled,

CESAR A. CRUZ

»I began, in my fashion, to study the nature of materials. Life is short. Lieber Meister had not reached this study. All materials alike were to receive the impress of his imagination. I began to see brick as brick. I learned to see wood as wood and learned to see concrete or glass or metal each for itself and all as themselves. [...] Each different material required a different handling, and each different handling as well as the material itself had new possibilities of use peculiar to the nature of each. Appropriate designs for one material would not be at all appropriate for any other material.«<sup>12</sup>

12 Wright 1954: 23

In a similar way, Sullivan's principle that form follows function continued to evolve in Wright's mind and in his work. Over time, Wright rephrased the statement itself into a new definition that demanded reconsideration: *Form and function are one*. Wright explained,

»Not until we raise the dictum, now a dogma, to the realm of thought, and say: Form and function are one, have we stated the case for architecture.

That abstract saying Form and function are one is the center line of architecture, organic. It places us in line with nature and enables us sensibly to go to work. $\alpha^{13}$ 

**13** Wright 1953: 296

With these words, Wright acknowledged form follows function as a wider perspective on nature and a starting point for his own architectural theories. As such, the statement is a crucial bridge between Sullivan and Wright. Form follows function courses through Wright's organic architecture as form and function are one. As such, we must delve further upon Wright's ideas.

# Organic Architecture – nature and what flows from it

In order to understand Wright's organic architecture, a useful point of departure is to disentangle it, if only momentarily, from the word *organic*. Fittingly, a more amenable way to view organic architecture is to think of it as natural. To Wright, natural and organic were synonymous, interchangeable. That was clear enough, at least in Wright's mind. In his early writings, he consistently put matters of nature on equal grounds with his organic architecture. Many times in his career, though, he handled organic architecture and the *organic* in implied terms, as if their diverse meanings were understood between him and his audience. Perhaps in realizing this, in later writings Wright occasionally punctuated the relationship between organic architecture and nature, emphasizing that they are inseparable. With this in mind, we may consider several implications of the turnabout of words from *organic* to *natural*.

First, organic architecture is an extension of nature and its principles. This comprises a literal relation between a building and its environment so that a building should integrate itself with its site. Wright described it as such in 1908, »A building should appear to grow easily from its site and be shaped to harmonize with its surroundings.«<sup>14</sup> Roughly thirty years later, he put it

**14** Ibid.: 55

**15** Ibid.: 234

more romantically when he wrote, »Any building which is built should love the ground on which it stands.«<sup>15</sup> Wright's motivations for this are many – among them include boyhood summers working on a family farm, growing up in the Wisconsin countryside, and, as we have seen, notions of nature from Louis Sullivan. Wright always thought that we should live with some connection to nature – he said that it was more humane, that it was, in fact, in our nature.<sup>16</sup> In any case, Wright saw nature as the *out-of-doors* as a classroom, and he applied its lessons, both literal and abstract, to his architecture.<sup>17</sup>

A second implication of the relationship between organic architecture and nature involves principles derived from nature. Nature was itself a principle – something to be understood and integrated into an architect's work, but chief among these natural principles are organic simplicity and the idea of an entity. For Wright, organic simplicity was an object lesson and a goal in composition and form. Natural forms - a tree, a flower, a prairie, the woods and fields are beautiful because they are not contrived, random, or haphazard, nor are they encumbered by unnecessary, external embellishments. In the course of design, architects should follow suit without being simplistic or reductionist. They should aim to strike a balance, as Wright explains, »To know what to leave out and what to put in; just when and just how, ah, that is to have been educated in knowledge of simplicity.«18 Closely related to organic simplicity, the idea of entity refers to a building as an integrated whole of many factors, the integrated whole being a well-known notion of Wright's. But exactly what factors constitute what Wright termed »intrinsic« and entity as the »whole is to the part as the part is to the whole?» 19 An exhaustive list would indeed be exhausting and seemingly endless, since organic architecture insists on encompassing so many things.<sup>20</sup> Still, at different times Wright outlined those elements essential to a building as an entity. On several occasions he included the terrain, materials, structure, and purpose (the latter clearly related to function or use).<sup>21</sup> And alongside these elements was always form. This combination of elements along with form was telling. For Wright, the tangible or practical components - materials, structure, and purpose - were not mundane or a hindrance to expressive architecture. They were integral. They were the very forces that shaped the building. Thus, if the notion of entity implies unity and an integrated whole, then it is also expressed in the idea that form and function are one. The ideas are as related one with another as nature and the organic are interchangeable and synonymous.

Lastly in regards to nature, Wright also appropriated the meaning of nature in common usage and directed it to many elements of architecture. Returning to Wright's idea of the nature of materials will help to clarify the point. By using materials according to their nature, he meant as they are meant to be used or in accordance to their intended purpose. And by their intended purpose is to say in regards to a range of technical and aesthetic qualities: structure, ability to span, surfaces, standardized dimensions, etc. A material's intended purpose, however, does not limit Wright to conventional or unimaginative uses of materials. Wright experimented with and gave great consideration to the modern construction materials (i.e., steel, concrete, and glass) emerging into ever increasing use. His intent was to find and demonstrate each material's inherent characteristic.<sup>22</sup> So for Wright, for example, a cantilever was natural, since it demonstrated an intended purpose of reinforced concrete. »It can do remarkable things to liberate space«, he said.<sup>23</sup> One could not see the steel in tension embedded within the concrete, but one could see the result of its work. Such was Wright's reverence for nature that it served as his inspiration, his CESAR A. CRUZ

16 Wright 1975: 233; ld. 1953: 240

**17** Ibid. 1953: 321; ld. 1975: 53

18 Wright 1954: 42

19 Wright 1953: 12

20 Throughout Frank Lloyd Wright's long writing career, he described organic architecture many more times than he defined it. For Wright, organic architecture was an inexhaustible philosophy to be revealed over time in explaining different projects, architectural applications, and related theories. Stylistically, Wright wrote about organic architecture in lists of terms and principles, through narratives of his life and histories of his projects, and in informative lectures and essay about relevant architectural topics such as technology or urbanism. In fact, his organic architecture touched upon many subjects - site, form, plans, technology, materials, ornamentation, urbanism, politics (i.e., democracy), religion, his clients, and, seemingly, everything. To say that it touched upon these matters is to say that it considered, incorporated, or had an influence on all of them. It is also to say that explanations of organic architecture are dispersed in a vast number of published works covering many subjects and are consequently (or perhaps purposely) nebulous.

21 See: Ibid.: 12-20, 128, 223-224

22 Wright wrote over the nature of materials as extensively as any other subject. His most famous writings on this subject are part of *In the Cause of Architecture* essays from 1927 and 1928. See: Wright 1975: 177-210. In terms of a material's inherent characteristics, Wright wrote in one instance, "Architects must exercise well-trained imagination to see in each material, either natural or compounded plastics, their own inherent style. All materials may be beautiful, their beauty much or entirely depending upon how well they are used by the Architect." Wright 1954: 61

conceptual basis for design, and the cornerstone of his organic architecture. This reverence, and no doubt a reverence for Sullivan as well, led Wright to believe that form follows function and to make the principle his own in the idea that form and function are one. Furthermore, Wright's own thinking and experiences led him to these conclusions, too. His first move to these ends came in transforming the interior of the American home.

# Wright, the proom itself, and structural form and function

When Wright began to design residences in the 1890s, first as part of Sullivan's office and then in his own architecture practice, Wright believed that the American home was oppressive. »The thing was more a hive than a home«, Wright said, »just as modernistic houses are more boxes than houses.«24 Wright elaborated, "The interiors consisted of boxes beside boxes or inside boxes, called rooms. All boxes were inside a complicated outside boxing. Each domestic function was properly box to box.«25 This was unnatural, Wright thought, no way to house people or the human spirit. More and more in his residential floor plans he included less boxes - less doors, less walls, and, as Wright put it, »fewer window holes, though much greater window area«, allowing more natural light to illuminate indoor spaces unencumbered by boxes or unnecessary partitions.<sup>26</sup> This was the evolution of his ideas on the open floor plan. And as he gave due deference to the interiors of his residential designs, Wright attested that the radical looks of his exteriors were merely reflecting the radical changes going on in the inside.<sup>27</sup> These experiences led Wright to a realization: A room or principal interior space could act as a singular force directing the architecture throughout a building. Like the open floor plan that preceded it, Wright saw this as a revolutionary turn in architecture. He explains,

»The enclosed space itself might now be seen as the reality of the building. This sense of the *within* or the room itself, or the rooms themselves, I now saw as the great thing to be expressed as architecture. This sense of interior space made exterior as architecture transcended all that had gone before, made all the previous ideas only useful now as means to the realization of a far greater ideal.«<sup>28</sup>

This idea of *the room itself* or *the within* reinforces yet again the very essence of form follows function (i.e., inner purpose creating exterior expression) and the idea of entity. To design the room was to design the building – form (the building) and function (the room) were becoming one.

Wright's Unity Temple, completed in 1906 in the Chicago community of Oak Park, became an opportunity to showcase this *within* in particular and organic architecture at large (entity, from and function, etc.), but *the within* was fundamental to the project.<sup>29</sup> They key element of a simple yet imaginative building organization is the church's main auditorium. It is the *great* and *noble room* that dictated the architecture of Unity Temple.<sup>30</sup> The room adheres to organic architecture's dictate of simplicity. It is square in plan with a speaker's podium on one side (F1, F2, and F3). On the auditorium's main floor fronting the podium are a set of pews (F4). Two levels of balconies push straight back and on either side of the main floor pews. Squeezed in at the end of the balconies are the stairwells leading up to them, and pushed to the back of the balconies are the access aisles for the pews there. That is the basic extent of a

CESAR A. CRUZ

23 Ibid.: 56

**24** Wright 1954: 14

**25** Ibid.: 39

26 Ibid.: 40

**27** Ibid.: 39

28 Wright 1953: 195

29 Recalling his early thinking on organic architecture, form, function, and other factors, Wright wrote, »I felt sure, even then, that architecture which was really architecture proceeded from the ground and that somehow the terrain, the native industrial conditions, the nature of materials and the purpose of the building, must inevitably determine the form and character of any good building [...] The first building which I consciously built as an honest endeavor on my part to express this *new* idea of building was Unity Temple.« Ibid.: 223–224

**30** Wright relates the concept of the building and the importance of the main auditorium, "The first idea was to keep a noble room for worship in mind, and let that sense of the great room shape the whole edifice. Let the room inside be the architecture outside." Wright 1943: 154



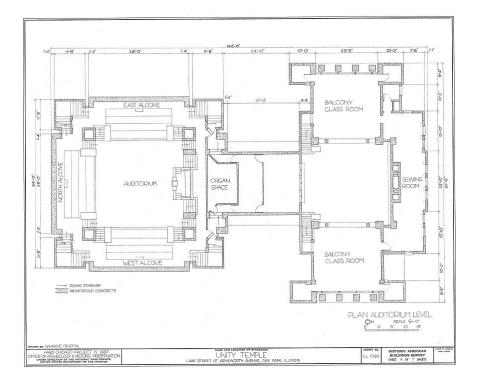
**F1** Unity Temple altar, the Historic American Building Survey (HABS)

room – measuring no more than 65' (less than 20 m) on each of its four sides – built for the sole purpose of church services.

CESAR A. CRUZ

The simple arrangement of the main auditorium itself would not be remarkable except for the elements that constitute the room's architecture, for how those elements tie the building together as an integrated whole, and for how the elements exert themselves to shape an exterior that assents to its interior, all of which exemplifying that form and function are one. To begin with, the square

F2 Unity Temple auditorium plan.



CLOSTER

CLOSTER

CLOSTER

CLASS ROOM

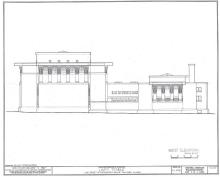
CLA

F3 Unity Temple ground floor plan.

motif is repeated throughout the room – in the auditorium and stairwell plans, the clerestory windows arrayed in groups of four above and behind the top balconies and on the wall behind the podium, a grid of skylights centered over the main auditorium floor, and the tracery that accentuates the exacting rectilinear arrangement of all building surfaces. Next, these elements project themselves from the interior to the exterior (F5 and F6). The balconies first extend to begin shaping the imposing grey mass that encloses the auditorium, with square cross-sectioned columns partitioning the clerestory windows, and equally imposing, thick overhangs overhead. The stairwells then contend for prominence as they break up the mass of the building at the corners, but finally concede to the greater standing of the forms shaped by the central space of the room and the balconies. The space that comprises the main auditorium floor then rises above the stairwells, clerestories, and overhangs, proclaiming itself guite literally the center of an eminent room. Then, furthering the idea of the building as an entity, Wright's chosen building material, concrete, physically binds the many elements of Unity Temple. It formed the enclosed space like a skin around the structure of the human skeleton – a favorite analogy of Wright's - not perfectly replicating the form of the skeletal system but mediating between the interior and the exterior. That is the essence of a building that develops from within outward. It is more akin to a true organism than anything previously in architecture.31 Indeed, a building that develops this way grows as if from a seed or an embryo, although in the case of a building its origin is its interior architectural space. The importance of the within as the object of his new focus is that it is the space to be lived in.<sup>32</sup> Thus, Wright asks us to invert our perspective on architecture from the external to the internal in order to design directly for human purpose.

Wright complemented his thinking and practice around *the room itself* or *the within* with similar advancements in structural form and function. A specific contrast with Sullivan will help to illustrate this point. Much of Sullivan's pioneering work in architecture relied on post-and-beam, steel frame structures. This is the case for the Wainwright Building, Sullivan's enduring example used to illustrate form follows function in *The Tall Office Building Artistically Considered*. In his studies of the nature of materials, Wright experimented with alternative techniques in building structures. One such alternative was what he called *continuity*. In structural continuity, horizontal and vertical structural elements sculpturally merge with one another so that post-and-beam construction disappears.<sup>33</sup> This extends the idea of entity even to individual walls and floors. Walls and floors become linked together instead of elements bearing and being borne upon one another. Upon first encountering the concept, it is difficult to imagine. Wright clarifies, "It is easy to see in the *folded plane*," which is to say, in his cantilevers.<sup>34</sup>





CESAR A. CRUZ



**F4** Unity Temple interior.

- **31** In 1914, in one of the rare instances where he specifically defines organic architecture, Wright directly links the idea of the within to organic architecture. He writes, »By organic architecture I mean an architecture that develops from within outward in harmony with the conditions of its being as distinguished from one that is applied from without.« Wright 1975: 122
- **32** As Wright was experimenting with open floor plans and ideas of *the within*, he likewise acknowledged the work of an ancient Japanese philosopher, Lao Tze, of whom Wright learned of from the Japanese ambassador to the U.S. Wright explained, "It was Lao Tze, five hundred years before Jesus, who, so far as I know, first declared that the reality of the building consisted not in four walls and the roof but inhered in the space within, the space to be lived in.« Wright 1953: 226

**33** Ibid.: 191-192

**34** Wright 1954: 19

**35** The ramp in the Guggenheim Museum is not the sole source of structural support. As a slab it is a horizontal structural element, albeit at a slight angle. The ramp also joins with vertical structural supports, called webs and side-walls,

**F5** Unity Temple auditorium exterior.

**F6** Unity Temple elevation.

In order to get at continuity, let's first consider the cantilever structures from Wright's Taliesin and Fallingwater. At Taliesin, Wright's rural home and studio, a long, slender, cantilevered balcony extends from one of the buildings out towards a valley in Spring Green, Wisconsin (F7). It is a remarkable example of the nature of materials – reinforced concrete at work – but it does not aim to be architecture as an entity or enclosed space. It is a distinct building element, whose width is just wide enough for two or three people to stand at the end of it, although several people are able to take in the views along its length at any one time. The cantilevered slabs at Fallingwater delineate architectural space on multiple levels - towards the creek and waterfalls below, towards the other cantilevered slabs above or below you, and as part of the extraordinary indoor/outdoor relationship of the house. The slabs successfully demonstrate continuity as the merging of horizontal and vertical elements (the slabs and the parapet walls) in a reinforced concrete cantilever. But the slabs do not in themselves attain the level of an entity. They are a part of the integrated whole of Fallingwater.

Wright's Guggenheim Museum in New York City is another case altogether. The Guggenheim's main gallery exceeds even Unity Temple in simplicity. Its main feature both inside and outside is a white spiral band that rises gracefully upward and outward, subtly shaping an inverted cone (F8). This band is the essence of continuity. At the most basic level, its success lies in the steel in tension inside the Guggenheim's reinforced concrete. The steel makes the walls and the floor one. More remarkably, since the walls and the floor are one, and the floor rises as a continuous, gently sloping ramp, there is essentially one floor, one exterior wall, and one interior wall. The ramp is the substance that creates the enclosed space (F9). It is also the exterior form, the circulation, the building envelope, and the exhibition space itself (the artworks are displayed in alcoves spaced at regular intervals along the ramp). It is continuity in structure, space, and form.<sup>35</sup> »Any building should be complete, including all within itself, Wright thought. Instead of many things, one thing.«<sup>36</sup>

#### Conclusion

The enduring legacy of form follows function has been that it is practical and only that, a mechanical approach in a creative profession. This study has aimed to readdress the subject and ask whether an idea of modern architecture, largely discarded today, may mean something other than what we originally thought. If form follows function infused Wright's many masterpieces, if it became a part of Wright's experimental toolbox, and if he insisted upon its validity through to the end of his career, the principle need not necessarily die a death with the end of modern architecture. Wright's organic architecture points to concepts that are intertwined with form follows function. His most direct contributions start with the idea that a truly humane architecture begins with the space to be lived in. Translated into the ideas of the room itself or the within, that space is the genesis of inner purpose dictating outward expression. The exterior does not mimic the interior. Instead, each carves out its own part within the character of the building. Other elements join with the function or purpose of the building to grow into an integrated whole or entity. Many bits make up the whole. The highest achievement is continuity - purpose, structure, space, and form are seamless to one another. Wright captured all of these in one thought - form and function are one.

CESAR A. CRUZ

perpendicular to the concentric walls and regularly spaced just inside the building perimeter. These *side-walls* also serve as partitions, exhibition surfaces, and as a means to reflect natural light. See: Wright 1995,: 246-247. The ramp and side-walls are nonetheless linked as reinforced concrete, structural-spatial elements.

**36** Wright 1954: 20



F7 Taliesin cantilever



F8 Solomon R. Guggenheim Museum



F9 Guggenheim Museum interior

Form can follow function as much as it can be an integral part of the best architecture of its time, as it was in Sullivan's and Wright's thinking and built works. It demands reconsideration.

CESAR A. CRUZ

## **Bibliography**

Sullivan, Louis Henri 1979: Kindergarten Chats and Other Writings. New York.

Venturi, Robert 1977: Complexity and Contradiction in Architecture. New York.

Wright, Frank Lloyd 1943: An Autobiography. New York.

Wright, Frank Lloyd 1953: The Future of Architecture. New York.

Wright, Frank Lloyd 1954: The Natural House. New York.

Wright, Frank Lloyd 1975: In the Cause of Architecture, Organic Architecture Looks at Modern Architecture, and Other Essays. In: Gutheim, Frederick (Ed.): In the Cause of Architecture: Essays by Frank Lloyd Wright for Architectural Record 1908–1952. New York.

Wright, Frank Lloyd 1995: The Solomon R. Guggenheim Museum. In: Pfeiffer, Bruce Brooks (Ed.): Frank Lloyd Wright Collected Writings Volume 5, 1949-1959. New York.

#### **Figures**

#### F1

Photograph by Philip Turner, June 1967. The Historical American Building Survey. http://www.loc.gov/pictures/item/il0318.photos.061740p/resource/

### F2

Drawing by Whayne Griffin, August 1967. The Historical American Building Survey. http://www.loc.gov/pictures/item/il0318.sheet.00004a/resource/

#### F3

Drawing by Whayne Griffin, August 1967. The Historical American Building Survey. http://www.loc.gov/pictures/resource/hhh.il0318.sheet.00005a/

#### F4

Photograph by Walter Smalling, Jr., October 1977. The Historical American Building Survey. http://www.loc.gov/pictures/item/il0318.color.571161c/resource/

#### F5

Photograph by Walter Smalling, Jr., October 1977. The Historical American Building Survey. http://www.loc.gov/pictures/item/il0318.color.571160c/resource/

#### F6

Drawing by Allan Steenhusen, August 1967. The Historical American Building Survey. http://www.loc.gov/pictures/item/il0318.sheet.00003a/resource/

#### **F7**

Photograph by Nicholas Iyadurai, June 10, 2004. http://www.flickr.com/photos/nichitecture/5851127355/in/set-72157628064832073

#### CESAR A. CRUZ

#### F8

Photograph by Richard Beech, January 19, 2011. http://www.flickr.com/photos/richbeech/5422247577/in/set-72157625991351334

#### F9

Photograph by Erik de Voss, September 12, 2010. http://www.flickr.com/photos/edevos/4993921750/

#### Cesar A. Cruz

Cesar Cruz has been a Ph.D. student at the University of Illinois at Urbana-Champaign since fall 2011. His principal research interest is the relationship between architecture and philosophy, specifically in regards to notions of dwelling, place, phenomenology, and the philosophy of Martin Heidegger.

Cesar obtained his M.Arch. degree from the University of New Mexico and his Bachelors of Industrial Engineering degree from the Georgia Institute of Technology.

Cesar's article *Wright's Organic Architecture: From ›Form Follows Function* to *›Form and Function are One* for *Wolkenkuckucksheim – Cloud-Cuckoo-Land – Vozdushnyi zamok* is his first professional publication.