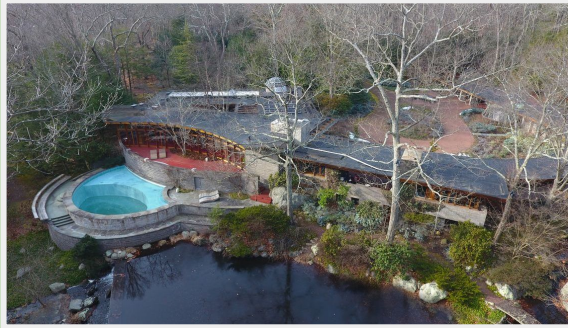


# Organic Architecture

Hayden Wendel



Frank Lloyd Wright / TIRRANNA / 1955 / Architecture / 01-31-20  
/ <https://franklloydwright.org/frank-lloyd-wrights-tiranna-sale/>



Frank Lloyd Wright / Fallingwater / 1964 / Architecture /  
01-31-20 / <https://franklloydwright.org/site/fallingwater/>



Renzo Piano / Jérôme Seydoux-Pathé Foundation / 1955 /  
Architecture / 01-31-20 /  
<https://divisare.com/projects/268939-rpbw-michel-denance-path-e-foundation>

Organic Architecture is something that is very interesting to me because of its efficiency and influence on the people experiencing the architecture. Using biomimicry and taking mechanisms seen in nature, artists like Frank Lloyd Wright and Renzo Piano, create works of art that feel extremely natural and utilize the environment efficiently. I want to explore more in depth how people feel when interacting with an organic building with lots of organic lines and structures as opposed to how people feel in architecture that uses more geometric lines and rigidity. I wanted to explore this feeling and affect on people using the lines and space utilization in the buildings. I want to take into account the integration into the environment around it with things such as light and its physical location.

# Cultural Context of *Fallingwater* and *TIRRANNA*



Frank Lloyd Wright / Fallingwater / 1964 / Architecture / 01-31-20 / <https://franklloydwright.org/site/fallingwater/>



Frank Lloyd Wright / TIRRANNA / 1955 / Architecture / 01-31-20 / <https://franklloydwright.org/frank-lloyd-wrights-tiranna-sale/>

The term “Organic Architecture” was coined by the architect Frank Lloyd Wright. Organic architecture is focused on the unity and balance between man made structures and natural environments. Blending interiors and exteriors and reflecting this idea in every element of the structure, you can unify a building with its environment. In integrating nature into a man made structure, you see organic shapes and framework seen in nature become present in the structures. Organic structures and organic architecture often create a sense of comfort and familiarity because of the building’s integration with nature, and in certain cases, the organic shape of the building. Nature often creates a grounded feeling in people and thus makes them feel much more comfortable with the building. You can see examples of these values and ideas of organic architecture, present in essentially all pieces by Frank Lloyd Wright. It’s especially predominant in *Fallingwater*, the integration of the building into the environment whilst not disturbing the waterfall that runs naturally underneath the building, is a perfect example of that belief system that organic architect’s use. Organic architecture is not only focused on creating unity between man made structures and nature, but utilizing nature in a way that is not destructive or unnatural. Frank Lloyd Wright created and cultivated what is known as a “solar hemicycle”. *TIRRANNA* by Frank Lloyd Wright, is what Wright called, a “solar hemicycle”. These buildings are semicircular in layout and face towards the sun to utilize the sun for heat and light. The buildings are constructed with tall glass windows and exposed concrete floors. This is done to let light into the structure, and absorb the heat given off by the sun and store it in the exposed concrete. The unity that is so prevalent in organic architecture is very present in his design for hemicycle buildings. *TIRRANNA* is just one example of how organic architecture can integrate a man made structure into a natural environment.

# Function & Purpose of *TIRRANNA*

The main purpose of *TIRRANNA* is to create a structure that is efficiently climate controlled by the environment it is in and the sunlight it comes into contact with. Every part of this house is designed to utilize natural energy in a certain way. The building features red concrete floors and several clerestory windows. The windows and concrete floors are integrated for the absorption of solar energy. That solar energy is stored in the concrete floors and used to heat the house during colder months. During colder months the sunlight beams through the clerestory windows but during the hot winter months, large overhangs provide shade on the opposite windows and building faces. The building also integrates nature with courtyards, an observatory, and a greenhouse. *Tirranna* means “running water” and the building sits over a pond and the Noroton river. You can visibly see how the nature affects the structure of the building and how the building is shaped around the pond it sits next to. No nature is disturbed and structures are built around existing trees and land formations. This embodies the culture of organic architecture and also makes you feel as if the structure you are in belongs in that environment



Frank Lloyd Wright / TIRRANNA / 1955 / Architecture / 01-31-20 / <https://franklloydwright.org/frank-lloyd-wrights-tirranna-sale/>



Frank Lloyd Wright / TIRRANNA / 1955 / Architecture / 01-31-20 / <https://franklloydwright.org/frank-lloyd-wrights-tirranna-sale/>

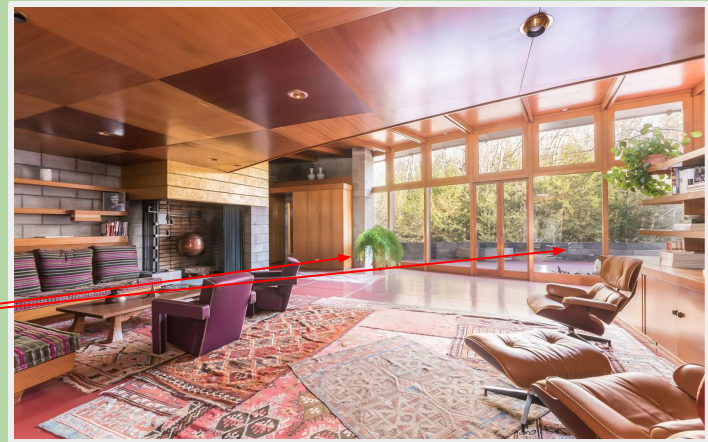
# Formal Elements of *TIRRANNA*



Frank Lloyd Wright / TIRRANNA / 1955 / Architecture / 01-31-20 / <https://franklloydwright.org/frank-lloyd-wrights-tirrana-sale/>

The predominant formal elements in organic architecture as well as *TIRRANNA* are line and unity. The building uses long expansive lines that spread through the structure to not only create a sense of rhythm throughout the building, but to help create the clerestory windows and overhangs that are crucial to the function of the building. The lines you see in interior of the building are often geometric and a bit rigid. However the structure contains a lot of circular elements and geometric line. This is especially visible in the layout of the building, the layout being a semicircular.

The overarching element that organic architecture embodies as a culture is unity. The entire structure is designed to integrate nature as well as feel as if it belongs to the environment. Wright does this by the integration of pre-existing trees and fauna to remain in the structure. Building the layout around the pond that is predominant in the environment as well as small details like trees and small land formations. The integration of nature in the structure creates unity between “outside” and “inside” as well as a sense of belonging or comfort. Nothing feels out of place and everything serves a purpose.



Frank Lloyd Wright / TIRRANNA / 1955 / Architecture / 01-31-20 / <https://franklloydwright.org/frank-lloyd-wrights-tirrana-sale/>

# Function & Purpose of *Fallingwater*

The way that *Fallingwater* is constructed was entirely meant to function as a natural addition to the Pennsylvania mountains. The building was constructed with the intent to integrate a structure into the wilderness and not disturb the waterfall and natural rock in the area. Wright embodied this purpose by constructing concrete “trays” onto the existing rock that make the building appear as if it is floating. The structure also utilizes lots of terraces mounted at an end on solid ground, protruding over the areas with less solid land formation, such as the waterfall. This is known as a Cantilevered terrace. This concept was put into place to make sure that no land or running water was disturbed when the house was being built over the waterfall. Wright also integrated the building with the environment by cultivating the flora to adapt with the building. He did this using trellises as overhangs for the various walkways between rooms in the structure. Wright also made sure to keep the building materials, and the natural materials constant. The floor of the main living area consists of exposed natural rock much like the pre-existing rock. This achieves the purpose of an integrated structure with no disturbance to the environment.



Frank Lloyd Wright / Fallingwater / 1964 / Architecture / 01-31-20 / <http://www.wright-house.com/frank-lloyd-wright/fallingwater-pictures/7x-stairs-house-to-waterfall.html>



Frank Lloyd Wright / Fallingwater / 1964 / Architecture / 01-31-20 / <http://www.wright-house.com/frank-lloyd-wright/fallingwater-pictures/c1-quest-house-plunge-pool.html>



Frank Lloyd Wright / Fallingwater / 1964 / Architecture / 01-31-20 / <http://www.wright-house.com/frank-lloyd-wright/fallingwater-pictures/c4-living-room-windows-fallingwater.html>

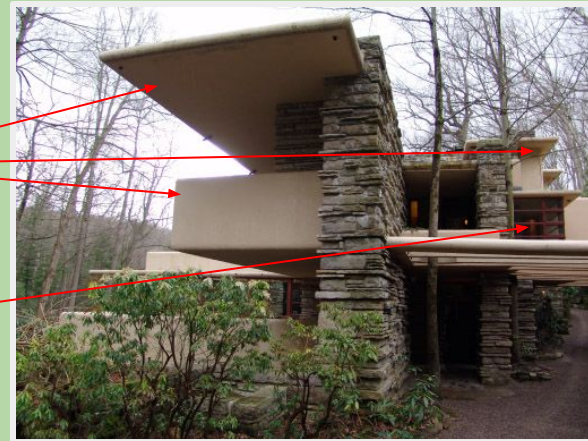
# Formal Elements of *Fallingwater*



Frank Lloyd Wright / Fallingwater / 1964 / Architecture / 01-31-20 / <http://www.wright-house.com/frank-lloyd-wright/fallingwater-pictures/19SE-fallingwater-elevat.html>

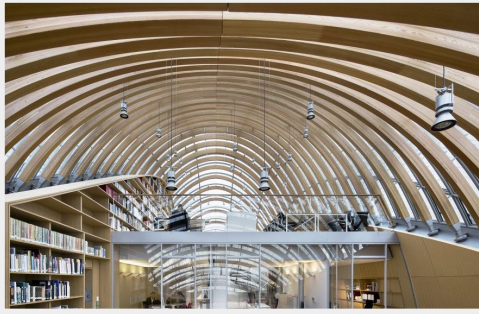
Wright used a lot of geometric line in *Fallingwater* due to his integration of Cantilevered terraces. The terraces create long geometric lines and elements to the structure due to them being mounted at one end and free standing at the other. His use of line appears in the windows as well. The majority of *Fallingwater* uses glass windows as walls and most rooms are separated and spread out to integrate the user with the environment. You can see the use of geometric line in the window walls and center support for the window walls. These lines vary in length, thickness, and placement.

Wright also establishes a heavy rhythm in the structure. He uses the repetition of geometric lines and cantilevered terraces to create a sense of rhythm throughout the entire structure. He uses repetition of building materials to create a unity between the structure and the environment. He uses more repetition in the line seen in the windows throughout the entire structure. Every window in the house is framed by the same assemblage of lines that are colored the same. This creates a rhythm throughout the building but also helps the use feel more comfortable with the vast expanse of the building.



Frank Lloyd Wright / Fallingwater / 1964 / Architecture / 01-31-20 / <http://www.wright-house.com/frank-lloyd-wright/fallingwater-pictures/7x-front-door-east-end.html>

# Cultural Context of *Fondation Jérôme Seydoux-Pathé*



Renzo Piano / Jérôme Seydoux-Pathé Foundation / 1955 / Architecture / 01-31-20 / [https://www.architectmagazine.com/technology/detail/fondation-jerome-seydox-pathé-headquarters\\_o](https://www.architectmagazine.com/technology/detail/fondation-jerome-seydox-pathé-headquarters_o)



Renzo Piano / Jérôme Seydoux-Pathé Foundation / 1955 / Architecture / 01-31-20 / [https://www.architectmagazine.com/technology/detail/fondation-jerome-seydox-pathé-headquarters\\_o](https://www.architectmagazine.com/technology/detail/fondation-jerome-seydox-pathé-headquarters_o)

The cultural influence of this building is very heavily derived from the culture of organic architecture. The ideas, mindset, and purpose are the same with this building as they are with *TIRRANNA* or *Fallingwater*. The integration with an environment, however, is slightly adapted. The environment that the *Fondation Jérôme Seydoux-Pathé* is placed in, is more modern, urbanized, and man made. The building is nestled between pre-existing architecture. The architecture that surrounds it is historic and very assimilated with the culture of Paris. The *Fondation Jérôme Seydoux-Pathé* is much more modern, but adapts with its environment. The building takes great inspiration and influence from an armadillo. That concave, interlocking shell design is quite prominent throughout the structure. An armadillo being an influence to this building links it directly to the culture of biomimicry. Biomimicry is taking a naturally found system, design, or structure, and utilizing it in a modern and man made design. You can see biomimicry in things like solar panels that follow the sun. Recognizing and efficient system in nature and utilizing it in a design is the main idea and culture of biomimicry. This resonates with organic architecture as well. Both cultures and concepts recognize that nature is extremely efficient, and that utilizing nature can make structures more efficient. The biomimicry utilized in the *Fondation Jérôme Seydoux-Pathé* impacts the surrounding buildings as well. The structure is influenced by multiple different cultures and movements. Organic architecture is seen in it's integration with a pre-existing environment. Biomimicry is seen with the structure's building materials and layout. The combination of the two create a very interesting structure that both integrates itself with its environment but also stands out. It utilizes natural processes to provide it, and its environment with resources previously unutilized. The structure is a pioneering example of both biomimicry and organic architecture.

# Function & Purpose of *Jérôme Seydoux-Pathé Foundation*

The function and purpose of the *Jérôme Seydoux-Pathé Foundation* is concerned on utilizing its environment and the natural sunlight it gets. The building is constructed in an area surrounded by other buildings. These buildings are quite tall and block almost all sunlight from getting into the space that the foundation occupies. The foundation was designed to reach higher than those buildings and gather the natural sunlight. The structure itself is very open and the top, higher levels are constructed primarily from glass. This gives the top levels a feeling of transparency, merging the building with its environment. The building uses perforated, aluminum tiles placed over the buildings surface to regulate the sunlight into the building as well as the temperature of the building. The perforated tiles are directly inspired by those of an armadillo and are not what you conventionally see on a building, much less a building in the heart of Paris. The building is only partially visible from the outside of the residential block but at night the structure emanates a soft glow. As well as the building, lots of natural park and greenhouse spaces utilize the sunlight and structure as an environment for growth.



Renzo Piano / Jérôme Seydoux-Pathé Foundation / 1955 /  
Architecture / 01-31-20 /  
<https://www.archdaily.com/550625/pathe-foundation-renzo-piano>



Renzo Piano / Jérôme Seydoux-Pathé Foundation / 1955 /  
Architecture / 01-31-20 /  
<https://www.archdaily.com/550625/pathe-foundation-renzo-piano>



Renzo Piano / Jérôme Seydoux-Pathé Foundation / 1955 /  
Architecture / 01-31-20 /  
<https://www.archdaily.com/550625/pathe-foundation-renzo-piano>



# Formal Elements of *Jérôme Seydoux-Pathé Foundation*



Renzo Piano / Jérôme Seydoux-Pathé Foundation / 1955 / Architecture / 01-31-20 / <https://www.archdaily.com/550625/pathé-foundation-renzo-piano>

Renzo Piano does use the formal elements of Organic Architecture very repeatedly throughout the design of the structure. This is apparent to anyone in or experiencing the structure. The biggest and most predominant formal element that Piano uses, is his use of line. His use of organic and arching lines are overwhelming in the building and are seen the most in the top level workspace in the building. The building itself is almost entirely an organic shape which makes a very natural and comfortable environment that is a heavy contrast to the historic french architecture that surrounds it.

The unity in the building is very consistent and harbors the organic feel of the building. The exterior of the building is unified and serves a purpose as well. The exterior of the building plays a big role in the overall texture of the building as well. The building has a smooth but scaled texture meant to mimic an armadillo. The structure has a flow and movement to it. This is highly due to the arching lines that make up the building. The building flows very well and it all feels as if it is part of one cohesive organic structure. All of these elements contribute to the structure being very comfortable and natural.



Renzo Piano / Jérôme Seydoux-Pathé Foundation / 1955 / Architecture / 01-31-20 / [https://www.architectmagazine.com/technology/detail/fondation-jerome-seydoux-pathé-headquarters\\_o](https://www.architectmagazine.com/technology/detail/fondation-jerome-seydoux-pathé-headquarters_o)

# Similarities of *TIRRANNA* and *Fallingwater*



Frank Lloyd Wright / Fallingwater / 1964 / Architecture / 01-31-20 / <https://franklloydwright.org/site/fallingwater/>



Frank Lloyd Wright / TIRRANNA / 1955 / Architecture / 01-31-20 / <https://franklloydwright.org/frank-lloyd-wrights-tirranna-sale/>

## Similarities in culture

- Both are structures of organic architectures
- Both structures are meant to integrate their environment
- Both follow the formal elements of organic architecture

## Similarities in purpose

- Both are meant to utilize certain aspects of the environment for heating, cooling, etc.
- Both were created to be environmentally friendly structures
- Both were created to be cost and energy efficient

## Similarities in formal elements

- Both use heavy geometric lines in the interior structure
- Both utilize lots of open space and unity between the structure and its environment
- Windows maintain the same design in both structures

# Similarities of *TIRRANNA* and *Pathé Foundation*



Frank Lloyd Wright / *TIRRANNA* / 1955 / Architecture / 01-31-20 / <https://franklloydwright.org/frank-loyd-wrights-tirranna-sale/>



Renzo Piano / Jérôme Seydoux-Pathé Foundation / 1955 / Architecture / 01-31-20 / <https://www.archdaily.com/550625/pathe-foundation-renzo-piano>

## Similarities in culture

- Both structures embody the formal elements of organic architecture
- Both were constructed to be placed in non-conventional environments
- Both maintain and value nature in the construction

## Similarities in purpose

- Both were created to use sunlight and store it as heat and natural lighting
- Both are formed around the natural and pre-existing environments

## Similarities in formal elements

- Both use organic line and form in the exterior and overall foundation of the buildings
- Both use unity with their environments
- Both structures exercise repetition in the facade

# Similarities of *Fallingwater* and *Pathé Foundation*



Frank Lloyd Wright / Fallingwater / 1964 / Architecture / 01-31-20 / <https://frankloydwright.org/site/fallingwater/>



Renzo Piano / Jérôme Seydoux-Pathé Foundation / 1955 / Architecture / 01-31-20 / <https://www.archdaily.com/550625/pathe-foundation-renzo-piano>

## Similarities in culture

- Both structures are derived from organic architecture
- Both were constructed to be placed in non-conventional environments
- Both were commissioned to be pioneering architecture

## Similarities in purpose

- Both structures were meant to conform to the environments they are in with little to no disturbance
- Both structures integrate lots of space for human interaction and immersion with the environment

## Similarities in formal elements

- Both structures use rhythm throughout
- *Fallingwater* maintains a rhythm of geometric line and cantilevered terraces
- The *Pathé Foundation* maintains a rhythm of organic form and aluminum panelling facade

# Differences of *TIRRANNA* and *Fallingwater*

## Differences in culture

- The environments are different for each building which alter the organic architecture culture
- The climate of both are different which changes the building style and culture

## Differences in purpose

- *Fallingwater* is meant to utilize the river for cooling
- *TIRRANNA* is meant to use sunlight for heating
- *TIRRANNA* was meant to be efficient in energy and that is not *Fallingwater*'s primary purpose

## Differences in formal elements

- The layout of *TIRRANNA* is more circular
- *Fallingwater* is more geometric in its foundation
- *TIRRANNA* takes up lots of ground space but *Fallingwater* was constructed more vertically



Frank Lloyd Wright / Fallingwater / 1964 / Architecture / 01-31-20 / <https://franklloydwright.org/site/fallingwater/>



Frank Lloyd Wright / TIRRANNA / 1955 / Architecture / 01-31-20 / <https://franklloydwright.org/frank-lloyd-wrights-tirranna-sale/>

# Differences of *TIRRANNA* and *Pathé Foundation*

## Differences in culture

- Renzo Piano's Italian heritage influence his building
- Renzo constructed between buildings
- Wright constructed between the natural elements of his environment

## Differences in purpose

- *TIRRANNA* is meant to create unity between the natural environment and the building
- *The Pathé Foundation* is meant to establish a functional building within pre-existing architecture

## Differences in formal elements

- *The Pathé Foundation* uses much more organic line and form than *TIRRANNA*
- *TIRRANNA* uses lots of semicircular form mixed with organic line



Frank Lloyd Wright / TIRRANNA / 1955 / Architecture / 01-31-20 / <https://franklloydwright.org/frank-loyd-wrights-tirranna-sale/>



Renzo Piano / Jérôme Seydoux-Pathé Foundation / 1955 / Architecture / 01-31-20 / <https://www.archdaily.com/550625/pathe-foundation-renzo-piano>

# Differences of *Fallingwater* and *Pathé Foundation*

## Differences in culture

- *Fallingwater* is directly influenced by the environment it is in to best utilize it
- *The Pathé Foundation* is very heavily influenced by French architecture and culture

## Differences in purpose

- *Fallingwater* creates unity between the unconventional environment of a waterfall and a man made structure
- *The Pathé Foundation* uses organic form to create a functional structure amidst prior architecture

## Differences in formal elements

- *Fallingwater* uses rhythm and geometric line to create unity
- *The Pathé Foundation* uses organic form and repetition in facade to create a functional structure



Frank Lloyd Wright / Fallingwater / 1964 / Architecture / 01-31-20 / <https://franklloydwright.org/site/fallingwater/>



Renzo Piano / Jérôme Seydoux-Pathé Foundation / 1955 / Architecture / 01-31-20 / <https://www.archdaily.com/550625/pathe-foundation-renzo-piano>

# Compare & Contrast *TIRRANNA* and Individual Work

## Similarities:

- Both *TIRRANNA* and my piece are built around natural environments
- Both placed in wooded environments with bodies of water
- Natural elements like trees are integrated into the design
- Both integrate lots of windows and open spaces



Frank Lloyd Wright / *TIRRANNA* / 1955 / Architecture / 01-31-20 / <https://franklloydwright.org/frank-loyd-wrights-tirranna-sale/>

## Differences:

- My piece features a skywalk connecting two separate buildings while *TIRRANNA* does not
- My piece is more uniform in dimensions
- *TIRRANNA* uses the environment as a tool for functional elements of the design



# Compare & Contrast *Fallingwater* and Individual Work

## Similarities:

- *Fallingwater* and my piece are both constructed over a flowing river
- Both modern in design
- Both pieces are constructed to include the river as a design element and do not disturb the pre-existing environment



Frank Lloyd Wright / Fallingwater / 1964 / Architecture / 01-31-20 / <https://franklloydwright.org/site/fallingwater/>

## Differences:

- My piece features a skywalk connecting two separate buildings while *Fallingwater* does not
- *Fallingwater* uses lots of overhangs and cantilevered floors
- My piece utilizes vertical space more heavily

# Compare & Contrast *Pathé Foundation* and Individual Work

## Similarities:

- Both pieces are designed around pre-existing environmental structures
- Both pieces take advantage of sunlight using lots of windows
- Both pieces utilize heavy repetition in design



Renzo Piano / Jérôme Seydoux-Pathé Foundation / 1955 / Architecture / 01-31-20 / <https://www.archdaily.com/550625/pathe-foundation-renzo-piano>

## Differences:

- My piece is designed for recreational use and the *Pathé Foundation* is a communal structure
- The *Pathé Foundation* is organic and mine is geometric
- My structure is designed around nature and the *Pathé Foundation* is designed around French housing

# Culture of *TIRRANNA*, *Fallingwater*, & Individual Work

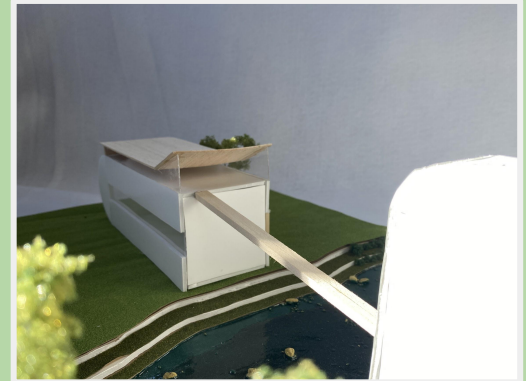
The culture of my piece is quite similar to *TIRRANNA* and *Fallingwater*. All three structures use principles and culture organic architecture and are designed around natural environments. The focus is heavily set towards harmony between a man made structure and a natural environment. My piece is slightly less devoted to these values. With more in depth design and interior architecture consideration, it could reach the level of unity that the other two pieces have achieved. Both *TIRRANNA* and *Fallingwater* use the natural environments as functional additions to their pieces. *TIRRANNA* uses a specific building shape and concrete flooring to provide natural heat in winter months and *Fallingwater* uses the flowing river underneath the structure to cool the house. My piece does not disturb the environment just as the others do not as well. My piece is the only one that features two separate buildings in its design. I chose to do this because I wanted the nature present, to feel integrated with the house. Having to cross a skywalk and enter that natural environment, or having an outdoor area surrounding a living tree are both integrations of the natural environment into the design.



Frank Lloyd Wright / TIRRANNA / 1955 / Architecture /  
01-31-20 /  
<https://franklloydwright.org/frank-lloyd-wrights-tirranna-sale/>



Frank Lloyd Wright / Fallingwater / 1964 / Architecture /  
01-31-20 / <https://franklloydwright.org/site/fallingwater/>



# Culture of *Pathé Foundation* and Individual Work

The culture of the *Pathé Foundation* and the culture of my piece are somewhat contrasting. The *Pathé Foundation* is a very organic, communal structure surrounded by historic, pre-existing french architecture and culture. My piece is a very isolated and remote residential building designed around a less complex natural environment. However, both the *Pathé Foundation* and my piece stand out from their surroundings. The *Pathé Foundation* building is a large, mirror covered, shiny organic structure place in a historic city in france. My building is a very tall, white, modern struct and stark in contrast to the green living environment around it, despite the integration. With more thought to the design my piece could begin to integrate more with the environment with elements such as vines or ivy, and also integrating more organic structures like the *Pathé Foundation*. On the other hand, the *Pathé Foundation* could begin to blend in to the surrounding structures with more geometric design elements. Although doing so would render the biomimicry design elements useless. My design could also being to utilize more of those elements with further integration of the culture of environmental architecture



Renzo Piano / Jérôme Seydoux-Pathé Foundation / 1955 / Architecture /  
01-31-20 /  
<https://divisare.com/projects/268939-rpbw-michel-denance-pathe-foundation>

