

Usonian: One Man's Solution to Economical Housing. AR210

From the moment man first set foot on earth, the need for housing or shelter has been a constant struggle. This struggle has gone through many different stages throughout history. It first started with the hardship of building, caused by a lack of knowledge and equipment, to the current problem of cost. With the discovery of new materials and the invention of new tools and equipment, building became easier, but the cost still remained high. Like architects before him, Frank Lloyd Wright also faced the issue of high costs in building throughout his career. During the 1930s and 40s, the American lifestyle was shifting, and because of the Great Depression, economical housing was in demand. This was a great challenge to Wright. To combat the issue of building cost in the later years of his career, Wright developed a tone down geometric version of his Prairie Style houses, called the Usonian Module. It was designed to meet the challenges of "life in the United States of North America" (Lind 104) for struggling families, but as time passed, it became much more than that. It became a model that would influence the designing of economical housing in the future.

The concept was part of a bigger design which Wright called Broadacre City. This was also Wright's first attempt at urban planning. He believed that the Usonian city would be suitable for people with big dreams, but limited finances. Although the Usonian Module was developed for middle to low income families, Wright did use his Usonian Module concept for bigger, more costly commissions. It was in some of the bigger commissions that one could see Wright's Prairie style influence on his Usonian homes. An example of this was the Zimmerman House, in which parts of the house such as the shape and roof design resembled the Robie House; however, because of their functional aspects and modular designs, bigger commissions like the Zimmerman House did not differ much when compared to their lower budget siblings.

The function of the Usonian Module was to provide Middle America and low-income families an affordable home without compromising beauty. Carla Lind, who is author and former executive director of the Frank Lloyd Wright Building Conservancy (EW.com), writes that these houses were also designed to respond to the shift in society (Carla Lind 104). An example of this shift was the reduction of servants in many American homes. As a result, Wright began designing houses without servants' quarters. Wright also designed the Usonian homes for the changing functions of American families, which were becoming more informal. Also, because of the reduction of servants, more burdens were placed on housewives. This created new needs and requirements for women in American homes. One requirement was better organized kitchens arranged for women. He answered these needs by designing modules with large to modest sized living areas, and centralized kitchens that would open up to dining areas at the center of the house, "which Wright called the workspace" (Lind 110), or as Dell Upton wrote, "Wright moved the kitchen to a location at the intersection of the public and private spaces, creating a command post" (Upton 43). Jackie Craven, a published writer who specializes in architecture, writes that another function of a Usonian home was the use of built-in conveniences, and space saving essentials such as furnishings and built-in pantries/cabinets (About.com). The pantries were also designed with folding doors that are used in modern houses. Wright also built dressers into the walls to save space.

During the Usonian period, homes were also designed with the function of maximizing different energies efficiently, and to reduce energy costs, such as heating, for homeowners. An example of this was the Cherokee red concrete floor with heated water pipes submerged in the floor that served as the foundation and heating system. Wright would often use this system instead of costly, insufficient, cast iron radiators. The warm water pipes caused heat to rise from the floor, which would warm the homeowners by keeping his or her feet warm during the winter. Along with the heated floors, he also placed large fireplaces at the center of the house. By doing this, it would influence the family to migrate around one area instead of being spread out around the house. Wright also used many large windows to allow heat from sunlight to warm the house. By using these three functions, it reduced the need for multiple heating devices or a fireplace in every room, which cost more to build and use.

Along with the functional goal of reducing energy costs, Wright designed his Usonian Module to reduce the cost of building. He attempted this by making parts of the construction process more efficient. He would use less expensive materials that were abundant and durable, such as brick and concrete. Wright would also use wood from Cypress trees on the outside walls, as on the Pope-Leighey House, because Cypress wood is naturally resistant to water and is very durable when exposed to the elements. Wright also attempted to reduce building costs by finding ways to decrease the need for skilled craftsman. Carla Lind writes that Wright would also have clients participate in the building process, as he did at the Lovness Studio in Stillwater, Minnesota (144). By having the clients participate, the labor costs would decrease, because it would lower the number of paid laborers at the build-site. Although most homeowners today would not consider the idea of being a member of the construction team, because of Wright's simple Usonian design, it was possible for a homeowner to participate.

The Usonian Module design was based on simple shapes, such as the square, rectangle, hexagon, triangle and semi-circle. In 1936, Frank Lloyd Wright built his first Usonian home in Wisconsin for Herbert Jacobs, which formed an L-shape by using two rectangular modules. Paul Sprague, a Professor Emeritus of Architecture of the University of Wisconsin writes, "The house was quite out of the ordinary for the period. Wright refused to follow the historic styles and insisted upon making it stylistically his own" (United States Department of the Interior, National Park Services which he described as organic architecture. The "final cost of the house was estimated to be about \$6,000 dollars" (United States Department of the Interior, National Park Services).

Wright also used the rectangular, L-shaped module for the Rosenbaum commission in 1939 for \$12,000 dollars, and Pope-Leighey commission in 1941 for an estimated \$7,000 dollars. All three of these houses have many similarities, such as low pitched roofs and small celestial windows on the street side of the house to provide privacy for the family. The inner courtyard side of each house had multiple large glass windows which open the house to surrounding nature. Wright believed that homeowners should enjoy the surrounding environment and should not be separated by an opaque door or wall. He also believed that the house and nature should be one.

As Wright's design style shifted to the Usonian Module, his use of decorative art-glass or stained glass decreased. Instead of using decorative art-glass -- which could be costly to design, make, and replace if broken -- Wright started using decorative wooden shutters with different designs

cut out on the exterior of some windows. He also used wooden coverings, which were like interior shutters with different designs cut out, over the celestial windows and ceiling lights. The decorative coverings would provide homeowners like the Popes, who had limited finances, a form of inexpensive art by using light and shade. Light would shine through the shapes or design cutout of the shutter and appear on the wall. The rest of the wall would be covered by shadow that was created by the rest of the covering. As the day progressed, the shapes that were created by light would change positions, allowing the house to become the canvas.

Along with the use of light, Wright used the interior walls to contribute to the artistic styling of the house. He would use a method called board-and-batten to construct his durable wooden walls. This was the preferred method for the interior and exterior walls for his smaller lower commissioned Usonian homes for multiple reasons. One reason was because it was structurally strong and reduced water leaks. Dell Upton, a Professor of Architectural History at the University of California, Berkeley, also noted that some panels were prefabricated with insulation between the inner and outer sheathing (Upton 42). Furthermore, panels made by Cypress wood would also need less maintenance, thus reducing the maintenance costs of the house. Another reason was it created long horizontal lines that would give an elongated appearance to each room, making each room appear more spacious.

The concept of Broadacre City was not Wright's only community planning design. Carla Lind writes that in 1947, Wright was commissioned to build several residential subdivisions in Kalamazoo, Michigan (Wright Style 143). It was here where Wright used a square Usonian Module design for the Brown House. To reduce the building costs, Wright used concrete in cast blocks, which was economical and vastly available during that time period. Wright also reduced energy costs by facing the bedrooms toward the southwest to use the sun's energy to warm the rooms. Like all of Wright's houses, the Brown House came with a lavish fireplace. However, because of the climate, Wright designed the Brown House with a larger opening for more firewood.

Wright did not just stop at rectangular and square shapes in his Usonian homes commissions. He also used the hexagon shape in a few of his bigger commissions, such as the 1936 Hanna House commission in Palo Alto, California, and the Auldbrass House in Yemassee, South Carolina. With the construction of these houses, Wright again was faced with the issue of cost. However, it was not because of materials and labor. It was because of his artistic demands and need to put his impression on the architecture; he would not bend or give on the artistry of his designs. This would often cost him large amounts of money, which he would absorb because the job would exceed the agreed amount.

Not all the houses that Wright designed in his Usonian period are of a complete Usonian design. An example of this is the Zimmerman House, which was one of Wright's larger commissions. The house was bigger in size and cost, and it was more extravagant when compared to other Usonian houses. This was because the owners spared no expense which could explain some features from Wright's Prairie Style homes, such as the roof. When compared to the Pope-Leighey House's flat roof, one finds that the Zimmerman House roof slopes, which was found more on Wright's Prairie Style designs. Carla Lind writes that the Zimmerman House is both Prairie and Usonian. She writes, "While considered a Usonian design because of its chronological

age and construction style, the Zimmerman house, built in Manchester, New Hampshire, in 1950, recalls Wright's earlier Prairie Style period as well. Its concept was economical, but the execution was more extravagant because of the selection of materials and the owner's demand for first-class craftsmanship" (Carla Lind 117).

Although building has become easier, the issue of cost remains. Many great architects have tried to conquer this issue. Frank Lloyd Wright was one of these great architects, and because of him, architects of the future have great ideas to build off. Wright tried many different things to make housing affordable, such as centralized fireplaces combined with heated floors, cutting the need of skilled craftsman, and using materials that were abundant and durable. However, not all of Wright's Usonian accomplished the goal of economical housing because they were completed over budget. In the end, the Usonian house did what it was designed to do; to meet the challenges and hardships of life in the United States. Wright's work will always be debated, admired, and be an influence on architecture for many years to come. In closing, Wright's Usonian homes show that beauty does not have to be compromised, such as with the Pope-Leighey House, even when economical housing is the goal.

Cited Sources

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