

# Marcel Breuer: drawings, prototypes and scale models

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## Abstract

In most of the commissions and competitions that Marcel Breuer undertook throughout his professional career, he used scale models as a means of representing his architectural proposals, preferring them over presentation drawings, which were common in professional practice in the United States. This preference for models may stem from his early work as a furniture professor and designer, where he needed to verify the feasibility of his designs by constructing full-scale prototypes. This paper analyzes these ideas based on the prototype of a single-family house built in the MoMA gardens in 1949. The primary source of documentation for this writing comes from the *Marcel Breuer Digital Archives* at Syracuse University.

## Keywords

Breuer; sketches, drawings, models, MoMA



Marcel Breuer with the model of the first phase, 1949. Photograph by Eileen Darby [Wiesenberger 2018].

## Introduction

Marcel Breuer began working sporadically as an architect in 1923, though he didn't open his professional studio in Berlin until 1928, after leaving his teaching duties at the Bauhaus. The political upheavals in Germany forced him to emigrate in 1935, first to England and two years later to America, where he was hired as a professor by Harvard University [Hyman 2001]. In the drawings preserved in the Breuer Digital Archives at Syracuse University, it is evident that Breuer was not a skilled draftsman, which is logical given the absence of a university education as an architect. Therefore, he usually delegated all graphic development of projects to his collaborators. However, in the ideation sketches done by his own hand, mostly small and quite untidy, one can appreciate his concern and skill in controlling the size and proportion of spaces from the beginning to align his proposals with the assigned budget. These ideas can be confirmed by analyzing his projects of single-family homes carried out in the immediate post-war period, a prelude to the significant commissions he would receive from the mid-1950s onwards. One such example is the House in the Museum Garden (1949) (fig. 1), one of his most well-known and studied works [Driller 2000; Fullaondo 2010].

As we know, the house was visited by more than 80,000 people, granting Breuer significant prestige on the East Coast. Additionally, the Museum of Modern Art published the first monograph of the architect, titled *Marcel Breuer: Architect and Designer* [Blake 1949b].



Fig. 1. Marcel Breuer, *The House in the Museum Garden*, 1949. Photograph by Ezra Stoller [Fullaondo 2010, p.161].

## A house in the museum sculpture garden

For years, the Trustees of the Museum of Modern Art had been concerned about the lack of interest generated by architecture exhibitions organized by the curators of this section of the museum. They were aware that photographs or plans of buildings didn't have enough appeal for non-architect visitors. Therefore, they included scale models in exhibitions to convey a more accurate idea of the qualities of modern architecture, as was done in the famous exhibition *The Modern Architecture Exhibition*, organized by Philip Johnson in 1932 [Montes, Alonso 2018].

Nevertheless, the models only allowed an external view, failing to showcase the richness of the interior spaces. Additionally, it was observed that visitors admired more the skill

with which these miniature architectures were constructed than the architecture they represented. This was not the case in furniture design exhibitions, where the audience could observe full-scale prototypes of furniture [Montes, Galván 2019]. Hence, the idea arose to include a full-scale prototype of a single-family house in the Museum's sculpture garden. This proposal was made in the major exhibition *Frank Lloyd Wright American Architect* organized by the Museum in 1940. In addition to displaying about twenty models created by Taliesin Fellowship students, the intention was to build a full-scale prototype of one of Wright's Usonian Houses in the Museum's gardens. The project was ultimately abandoned due to non-compliance with New York's urban planning regulations and the chaos that ensued in the exhibition when Wright imposed his wishes over John McArthur, the curator of the museum's architecture section [Montes, Peña 2022].

After the parenthesis of the war, Philip Johnson, once again the curator of the architecture section since 1946, took up the idea of designing and building a prototype of what could be a low-cost home for a middle-class family in one of the city's suburbs. The first choice was to select an architect, ruling out Frank Lloyd Wright from the start due to a negative experience with his participation in previous exhibitions, and Mies van der Rohe, whose work had been the focus of an exhibition in 1947. Marcel Breuer was the ideal person, as his recent projects of single-family homes, such as the Tompkins House, the Geller House, the Breuer House in New Canaan, or the Robinson House, still under construction, had garnered attention after being featured in specialized magazines. Additionally, Breuer's designed furniture could be incorporated into the home, enriching its interior spaces and providing a unified modern style between architecture and furniture [Hyman 2001, pp. 126-128]. In the Breuer Digital Archives, there is an Interim Report dated May 12, 1948, detailing the purpose of the exhibition, the choice of the architect, publications resulting from it, the budget, and the planned financing. An important aspect was that the home had to adapt to the life cycle of any American family, allowing for expansion over the years.

### **The Marcel Breuer Project**

We have a sketch by Breuer depicting one of the initial explorations of the house, providing ample clues about the design process. Breuer starts with a rectangular floor plan, organizing the program into three zones: the living area to the west, the kitchen and bathroom in the middle zone, and the two bedrooms to the south. The south and east facades are set back, achieving a more dynamic and appealing composition, as reflected in the elevation sketch. The most successful aspect is undoubtedly the butterfly roof, a solution Breuer had previously employed with success in the Geller, Robinson, and Scott houses (fig. 2). This design enhances the house's prominence both externally and in the spacious richness of its interiors [Wiesenberger 2018].

On the other hand, the low wall and wooden fence seemingly penetrating the dwelling, a technique also utilized in the Scott House, reinforce the sense of rootedness in the site while claiming ownership of the nearby outdoor spaces. Conversely, the expansion of the house with the new bedroom and a garage-like enclosure is not well resolved and lacks the necessary integration with the main volume. In the plans submitted to the Museum on June 17, 1948, we can see how Breuer has found the solution for the expansion (figs. 3, 4). By extending the upward roof, he manages to place the garage on the ground floor and above it, create a new bedroom for the parents, complete with a bathroom and a terrace open to the south. In this way, the other end of the house would be transformed into an area dedicated to the children [Fullaondo 2010 p. 159-173]. Comparing this plan with the ultimately constructed floor plan reveals some improvements in the layout and the placement of the doors leading to the garden (fig. 5). A perspective drawing from the outside, somewhat affected, shows us the appearance that his proposal would have (fig. 6). In a second, much more accomplished sketch, we can see how Breuer has incorporated an external staircase into the design to access the garden from the parents' terrace (fig. 7). It is worth noting that Breuer did not usually commission presentation drawings, as he preferred to use scale models created in his own studio. The first sketch probably served to showcase the design to

## The two scale models

A hand-drawn architectural sketch on a yellowed piece of paper. The main drawing is a top-down plan of a building complex. On the left is a rectangular building with several rooms, some containing furniture like beds and a desk. To its right is a larger, more complex structure with multiple rooms, including what appears to be a kitchen or dining area with a table and chairs. A compass rose is located to the right of the main building, showing North (N), South (S), East (E), and West (W). Below the main plan, there is a perspective drawing of a long, low building with a series of arches or a covered walkway. Various dimensions are written throughout the sketch: '28'-0" glass above door', '16'-0"', '20'-0"', '2'-0"', '2x8', '2x10', '12'-0"', '2'-3"', '9'-4"', '24'-0"', '66'-0"', '4'-0"', '8'-0"', '4'-0"', '11'-0"', '14'-0"', '16'-0"', '24'-0"', '24 x 66', '144', '144', '158 ft.', '132', '1452 sq ft', '1624 sq ft width', '46'.

The image contains two architectural drawings of a building, identified as the Easton House. The top drawing is a South elevation, showing a long, low profile with a series of windows and a small chimney. A large, stylized tree is sketched behind the building. The bottom drawing is an East elevation, showing a more complex structure with a central section featuring a large window and a chimney, flanked by lower wings. The drawings are rendered in a simple line-art style with some cross-hatching for shading.

SOUTH

EAST

3518



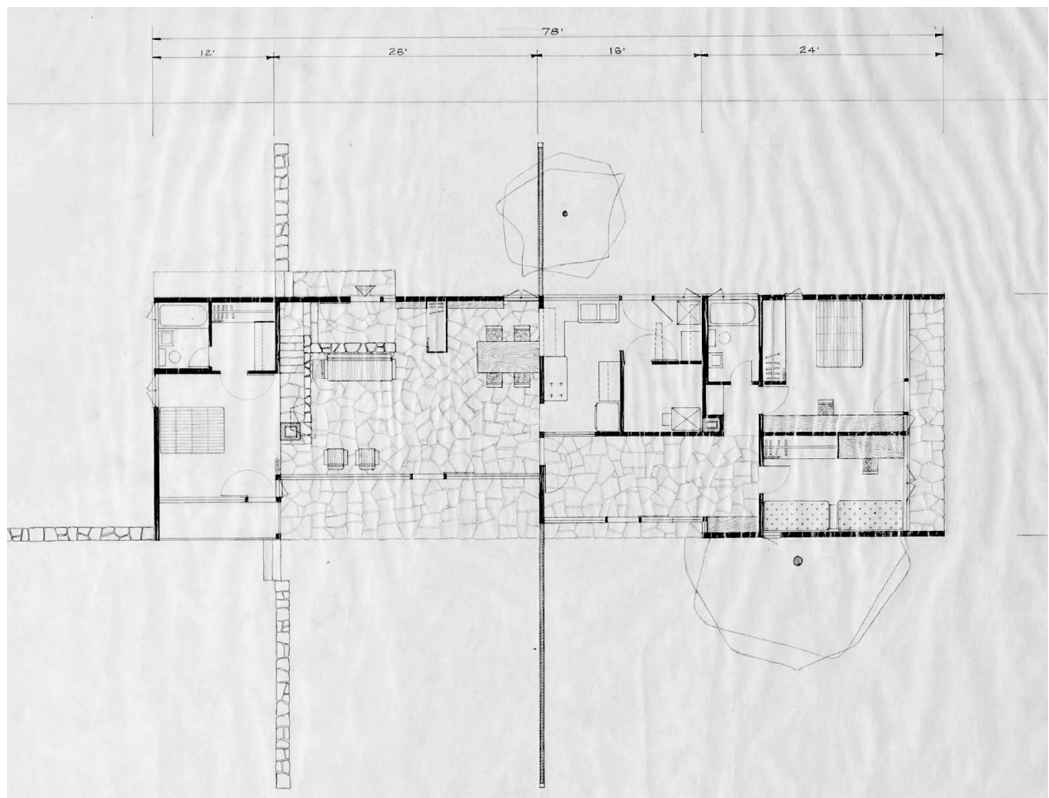


Fig. 4. Marcel Breuer;  
Preliminary upper plan,  
June 1948 [Breuer Digital  
Archives].

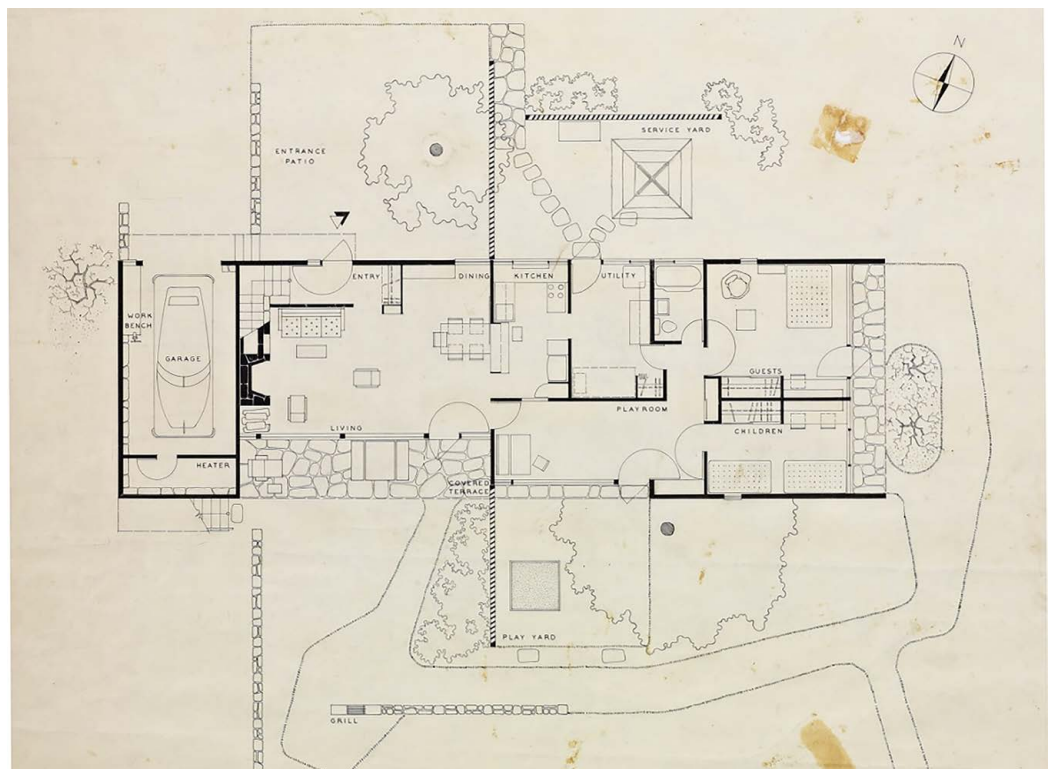


Fig. 5. Definitive ground  
plan of the House, 1948  
[Blake 1949a, p. 4].

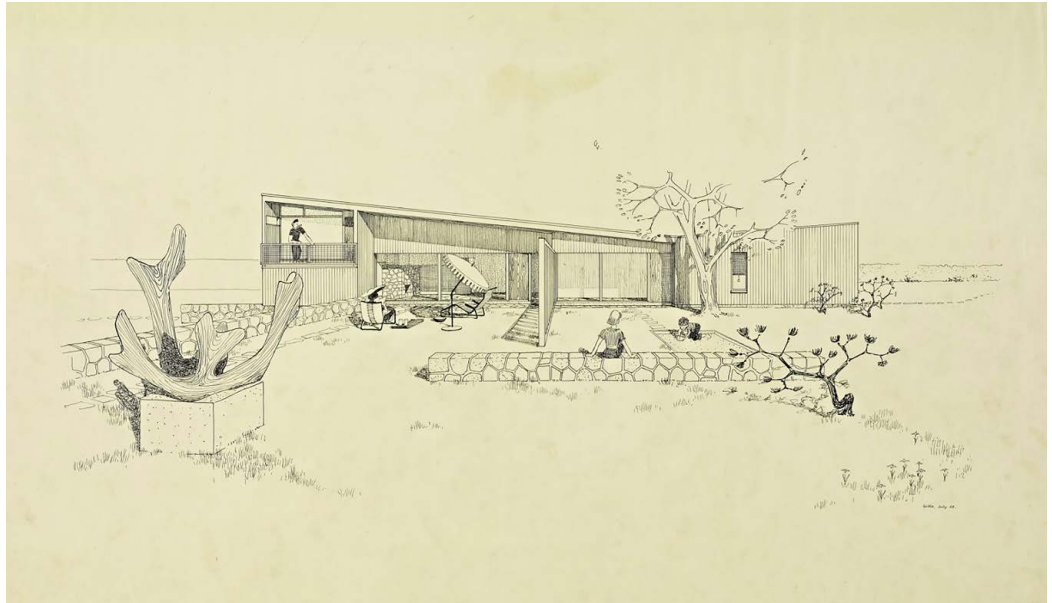


Fig. 6. Marcel Breuer;  
Perspective drawing, June  
1948 [Breuer Digital  
Archives].



Fig. 7. Dale C. Byrd,  
Perspective Drawing, 1949  
[Marcel Breuer Architects  
1949, p. 1].

Despite the high quality of the two models, there is no record of them being preserved. It is curious that Breuer had a model of the house built in the Museum Garden, considering that the house itself was already a prototype, serving as a life-sized model to showcase the building's qualities to visitors, both externally and internally. The creation of two models, each corresponding to a different phase of the project, could be explained by the existence of a pair of documents found in the archive. In January 1949, the production company *Kenco Film* sent Breuer a script for a short documentary about the house. The suggested title was *Blueprint: The Autobiography of a Modern House*, as the underlying idea was to have the house personified as the protagonist of the film. With its own voice-over, it would narrate the project process, from the architect's initial sketches to the construction details, emphasizing

the advantages of a modern building over more traditional single-family homes. However, the idea seemed too naive, and the commission was dismissed. At a certain point in the movie script, it is described how, based on the blueprints, the architect commissioned a scale model of the house so that the trustees of the Museum could carefully observe the appearance the building would have. Subsequently, Breuer should present the enlargement of the model (or the second model), while the voice-over continues to discuss the advantages of the new interior layout. The two models, unlike others produced in the studio, were crafted by a professional model maker; George Lydak, hence the level of detail and their high quality. Breuer was very pleased, as there is a letter from the architect in the *Breuer Archives* addressed to the model maker:

We reproduce some passages from it as an example of the interest Breuer always showed in this method of representation:

"Dear Mr. Lydak:

This letter is to express my appreciation and admiration for the model you have done for the "House in the Museum Garden" which I designed for the Museum of Modern Art, New York, and which is now in exhibition there. Your model of this house showing two variations is, as far as I see, a completely new and very interesting technique. Being made of metal it is, I believe, especially adaptable for models showing architectural details in their true form,

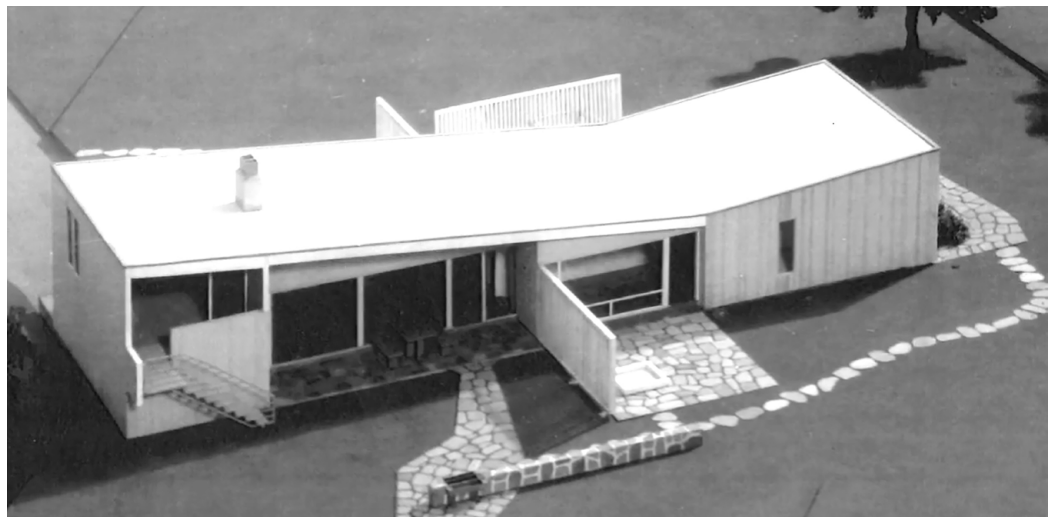


Fig. 8. Model of the House in the second phase. Photograph by Michael Miller [Fullaondo 2010, p.171]

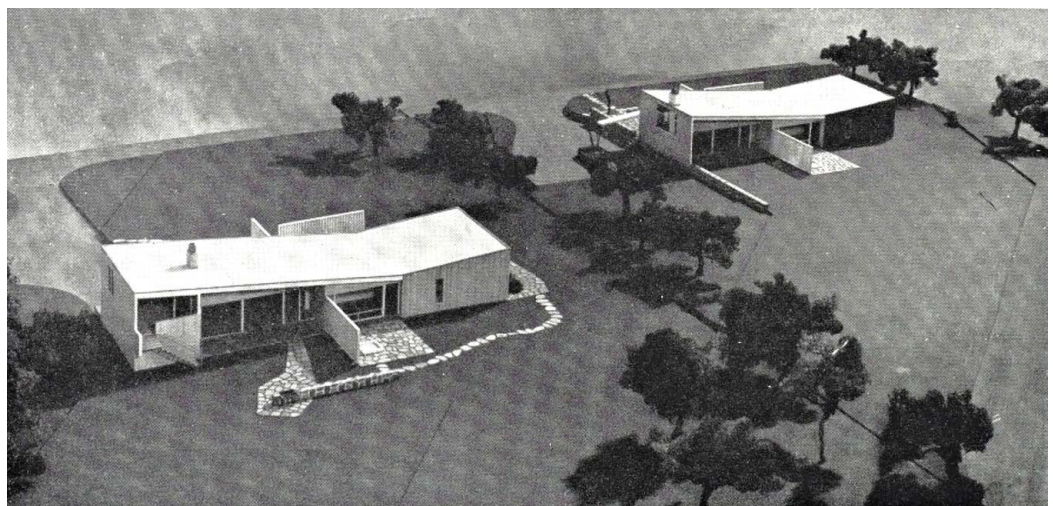


Fig. 8. The two scale models of the House at the MoMA. Photograph by Michael Miller [Fullaondo 2010, p.171].



at the same time it is sturdy and stands transportation and other stresses [...]. So far as the technical advantages of your model are concerned, I have to add that the finishes and the details you used seem to be perfect and above all criticism [...].”

## Conclusions

Marcel Breuer continued to use models as a representation system, although the high number of commissions and the complexity of his large projects led him to commission models from professionals outside his studio, such as Devon Dennett or George Lydakakis, the manufacturer of the two models for the Museum and other projects, such as the *Abraham & Straus* department store in Brooklyn (1951), or the Benedictine complex of *Saint John's Abbey and University in Minnesota* (1953). For the same reason, Breuer's studio also found it necessary to commission large contextual perspectives from other specialists, following the custom of major commissions in the United States. Finally, it is interesting to note how the persistence of scale models as a representation system is largely due to their versatility in assuming different functions: being part of an exhibition, showing the client the project's qualities from any perspective, illustrating an article in a book or in specialized magazine, defining a stage within the design process, etc.

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