

Women in Architecture

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The history of women's participation in architecture across the globe has been remarkably varied, and the nature of this participation has depended on time, place, and custom. Women have served as patrons, architects, engineers, managers, and muses; they have acted as key figures on the construction of buildings both large and small. Yet overall, women have experienced far less freedom to shape the built environment than have men. In accordance with various patriarchal social systems across the globe, women generally were impeded from acting as architects until the late nineteenth century. This absence is perhaps not surprising, yet what might be unexpected is the degree to which the field has continued to resist efforts to create parity.

Despite this resistance, women's involvement in forming the built environment has taken manifold forms, and elite women in positions of some political power exercised considerable influence on the architecture of their time. The eighteenth-dynasty Egyptian pharaoh Hatshepsut, for example, made innovative use of architecture to legitimize and stabilize her reign. She had ruled as queen alongside her husband, Thutmose II, until his death in c. 1479 BCE, after which she served as regent to her stepson, Thutmose III. But by 1473 BCE, she had assumed the authority and position of the pharaoh, and adopted kingly attributes, including the false beard, in her portraiture. She undertook an ambitious program of economic expansion, finding new economies with which Egypt could trade. She also began a correspondingly monumental program of building including roadways, sanctuaries, and temples. Her most monumental project was her mortuary temple complex at Deir el-Bahri (near Thebes) (Figure 3.2-4), undertaken with the architect Senenmut.



Figure 3.2-4

The terraced design abuts the cliffs behind it, and the complex is axially aligned with the Temple of Amun at Karnak, thus placing Hatshepsut in a powerful pharaonic lineage. The three ascending terraces are connected by ramps, and the decorative program narrativizes Hatshepsut's achievements as ruler, displaying the many products (including ivory, ebony, gold, and incense) that her expansion of trade had brought to her subjects. Hatshepsut's own effigy is repeated across the design in many different guises, reiterating her dominance to the viewer.

Similarly, Hadice Turhan Sultan, a Russian concubine born in 1627 who became the mother of the Ottoman sultan Mehmed IV, functioned for many years as the unofficial head of the Ottoman Empire. Under her reign, she continued a tradition already in place in which women, particularly queen mothers, were responsible for architectural patronage. Like others before her, she oversaw the construction of vast complexes containing mosques, schools, mausoleums, and markets. Her particular project, the Yeni Valide Mosque complex in Istanbul, was unusual in its dynamic and asymmetrical arrangement. However, she also expanded this tradition of female patronage by also emphasizing military architecture. Prior to her reign, fortifications had been considered a male consideration, but she commissioned two vast castles at the Dardanelles to guard against military incursions by the Venetians. Like Hatshepsut, Turhan Sultan used architecture as means to make her authority monumentally visible to her subjects.

Yet the history of women as primary architectural designers is one that is relatively short. Since the professionalization of architecture in many countries in the nineteenth century, women have fought to overturn existing limitations and to be equal actors in the making of space and place. The formalizing of architecture into a profession, with its attendant training and licensing processes, created both new possibilities and new impediments for women to act as primary designers of the built world. Two stories, both taking place in the United States around the turn of the twentieth century, help shed light on the obstacles women in the profession of architecture have confronted and challenged.

In 1890, Sophia Hayden became the first woman to graduate from the Massachusetts Institute of Technology with a degree in architecture. Despite having graduated with honors, she was unable to find work as an architect and instead took a job teaching mechanical drawing at a high school. However, her luck seemed to change when, in 1891, she entered a competition for the Women's Building to be constructed for the World's Columbian Exposition in Chicago. Her submission, based on her thesis project for an Italianate museum of fine arts, won the competition.

Hayden's winning design changed the course of her life, and at first, it seemed that her professional frustrations were behind her. In fact, she had only begun to face the obstacles of a profession unaccustomed to the presence of women and generally opposed to opening its ranks to their participation. The commission for the Women's Building was the most prominent competition open to women at the time, partly thanks to women from outside the field of architecture. Daniel Burnham, who was responsible for the master plan of the fairgrounds (Figure 16.3-14), had received consistent pressure from several prominent Chicago figures, including businesswoman and socialite Bertha Palmer, to include women in the planning of the fair. Palmer reassured the anxious Burnham that trained women architects could easily rise to the challenges of such a momentous project.



Figure 16.3-14

But Hayden quickly realized that these challenges were not merely architectural. She was paid \$1,000 for her work, while the male architects contributing buildings to the fair were paid \$10,000. Her design itself was subjected to seemingly endless modifications at the behest of Palmer and others. She found it difficult to work with fair officials, many of whom felt that it was inappropriate to be interacting professionally with a woman.

Yet nonetheless, the building was successfully completed. Reflecting the Beaux-Arts training she had received at MIT, Hayden's design emphasized regularity, symmetry, and devotion to classical ideals. Horizontal and white, dignified and reposeful, the building was anchored by flanking pavilions and a three-story central hall. Innovatively, Hayden focused on the possibilities of the roof, covering the grand hall with a glass ceiling to allow natural light to flood the interior and including a roof garden where visitors could enjoy refreshments. The building's façade was enlivened with arches, columns, and other classical ornament, drawing attention to the works of sculpture made by women displayed in the interior.

When the Women's Building was completed, it received both praise and critique. It was celebrated for its lightness, delicacy, and good taste, but criticized for its timidity and excessive gentleness alongside the muscular strength of the structures around it. In both directions, positive and negative, critics claimed that the design itself reflected the essentially effeminate nature of its architect. In the wake of this experience, Hayden became ill and was diagnosed with "nervous exhaustion." Trade magazines seized on her story to publish cautionary editorials warning that women's admission to the field of architecture would harm not only the field itself, but also the eager women who sought entry. In exasperation, Hayden permanently left the practice of architecture.

Despite its rather unhappy ending, Sophia Hayden's foray into architecture also inspired a few writers to observe that the problem lay with the field, not with the woman. These problems of exclusion and bias also inflect the next story, but with slightly different results. The design and construction of the Brooklyn Bridge has long been presented not only as a story of remarkable engineering prowess, but also as a dramatic family epic.



Brooklyn Bridge

It is well known that the bridge's designer, John Roebling, suffered a tragic accident on the site in 1869 when a ferry crushed his foot against a piling. He died several weeks later from tetanus. It is likewise well known that John's son Washington Roebling took over the role of chief engineer after his father's death, shepherding the gargantuan project to completion. Generally forgotten or diminished, however, is the crucial role played by Washington's wife, Emily Warren Roebling, in overseeing the construction of the bridge. The educated daughter of a New York State assemblyman, Emily Roebling studied the design of caissons—watertight retaining structures—while traveling with her husband through Europe. The principles of caisson foundation were crucial to the design of the Brooklyn Bridge as John Roebling had conceived it. Once sunk into the muddy earth under the river, these bottomless boxes could be filled with compressed air. Next, workers could enter the caissons through a shaft at the top to excavate the riverbed. The caissons would sink little by little through the sediment until they hit bedrock, at which point they would be filled with concrete to stabilize the bridge's foundation.

Unfortunately, while supervising work on the caissons in 1872, Washington became ill with decompression sickness ("the bends"), which left him partially paralyzed, blind, deaf, and mute. He never recovered, and his wife became his proxy, studying technical mathematics at his bedside, relaying instructions from him to the construction crew on-site, and negotiating contracts with City Hall. Contractors praised her knowledge of engineering and politicians credited her with the bridge's successful completion. In

Roebing's later years, she enrolled in New York University, eventually earning a certificate in business law from the Women's Law Class in 1899 (at the time, the university did not admit women to its law school). In 2018, *The New York Times* published a newly written obituary for Emily Warren Roebing along with those of other figures whose important contributions to history had been overlooked at the time of their deaths.

Many aspects of both Sophia Hayden's and Emily Roebing's stories are characteristic of the history of women's contribution to the built environment. Hayden found herself in a standoff with a profession and a society that viewed architecture as a fundamentally masculine enterprise. She was met with resistance and opposition on issues both large and small and felt consistently demeaned throughout the construction of the Women's Building. Roebing's circumstances were certainly unusual, but they nonetheless share common features with the experiences of other women in the field. For one thing, like many women in architecture, Roebing's ability to navigate the world of building was both expanded and limited by her connection to a significant man. In other words, she was "allowed" entrée to circles of power, both political and architectural, via her connection to Washington. But the cost of her admission was a strange invisibility, in which her work seemed to hide in plain sight as though it were merely auxiliary to that of her husband. Other figures whose work has experienced this paradoxical exposure and invisibility include Marion Mahony Griffin, Aino Aalto, Ray Eames, Anna Ter-Avetikian, Alison Smithson, and Lu Wenyu. For another, though Roebing's schooling was thorough for a woman of her time, her access to specialized higher education or professional training was extremely limited. As in any field, barriers to the institution of education came under increasing pressure throughout the twentieth century, which saw increasing numbers of female students in schools of architecture, engineering, urban planning, and historic preservation around the world.

Along with educational barriers, women have continued to pressure other longstanding exclusionary mechanisms within the field. Denise Scott Brown (who was born and educated in South Africa, and has lived and worked in the United States since 1958) identified these persistent cultural barriers as early as the 1970s, when she began speaking to groups of women about her work. Scott Brown, known for her contributions to architecture, theory, and planning, has built a career on an examination of how people experience spaces both bodily and visually. Architectural pleasure, in her work, derives from provocative juxtapositions: between high and low, familiar and unfamiliar, formal and vernacular (Figure 20.1-15). She has spent her long career investigating how everyday people make sense of space and how architects might learn from them. Married to and in a professional partnership with the architect Robert Venturi since the 1960s, Scott Brown has worked consistently to make others aware of cases of gender bias that are more difficult to quantify.



Figure 20.1-15

In 1975, Scott Brown wrote an essay titled “Room at the Top? Sexism and the Star System in Architecture.” Though she did not publish the essay until 1989, concerned that it might damage her career, it has now been widely read and is frequently cited in discussions of gender discrimination in architecture. In “Room at the Top?,” Scott Brown describes many instances of sexism that are still reported by women in the profession today. For example, she observes that challenges to the authority of architects who are woman often come from “inside,” as it were—from critics, from other architects, and from the construction industry. The “star system,” as she calls it (what today is commonly termed “starchitecture”) credits and rewards a single architectural hero-genius with the design of buildings. For Scott Brown and many others, this system therefore discounts not only women, but also the myriad other figures who participate in the making of architecture. It further keeps architecture’s emphasis on the construction of high-profile, spectacular, and iconic buildings at the expense of less flashy projects for infrastructure or public housing. An understanding of architecture’s real processes must therefore highlight the importance of collaboration and cooperation.

In fact, women are responsible for expanding the possibilities of cooperation beyond the traditional confines of architecture. Nigerian architect Olajumoke Adenowo, for example, has blurred the lines between architecture and entrepreneurship, using her prolific architectural output to generate new jobs in her home country, particularly for women. Yet despite the remarkable achievements of women practicing architecture, the profession has proven surprisingly resistant to change, even in the past few decades. In 1991, Robert Venturi alone was awarded the Pritzker Prize, architecture's most vaunted international award. At the time, both he and Scott Brown questioned the jury's decision to disregard Scott Brown's work on their shared projects, but they ultimately decided it would be best for the firm to accept the prize. Many critics felt that the same bias had occurred in 2012, when the Pritzker was awarded only to Chinese architect Wang Shu, rather than jointly with his wife and partner Lu Wenyu. In 2013, students at Harvard University's Graduate School of Design started a petition to award the Pritzker retroactively to Scott Brown. Though that specific goal was not realized, the controversies surrounding this highly visible award have helped train attention on the astonishing persistence of gender bias in architecture.

In short, energetic work has been undertaken by architects, historians, and critics to combat gender discrimination in the field, and these efforts are ongoing. In fact, discussions about women in architecture have simultaneously shed light on other overlooked or little-understood issues in the field of architectural production: structural inequalities that have led to an imbalance of race and class, as well as gender, within the practice of architecture; the expense and difficulty of architectural education; and finally, the complex nature of collaboration and creativity in architectural firms, in which the contributions of any single designer can be nearly impossible to identify and isolate. It seems likely that a more ample and inclusive recognition of the creative process behind the making of any feature of the built world will be a field-wide task in the coming years.

For Further Reading

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