Women became architects and engineers especially in the second part of the nineteenth century, after the industrial revolution and important changes in life and cultural aspect of the society. At the beginning, most of them chose this profession because of their particularly high social status, even working in the shadow of established architects. However, earlier we can find some rare cases of the architectural profession practiced by women that constitute cases of great excellence. Women involved in architecture belonged to noble or important families that allowed them to do architecture although generally, at the same time, they avoided publicize their works.

For example, Katherine Briçonnet (1494–1526) had great influence in designing her husband’s property, Château de Chenonceau, managing the construction work and taking important architectural decisions while her husband was away fighting in Italian wars. Named ‘Château des Dames’, the castle was successively embellished by Diane de Poitiers and Caterina de Medici. One century later, Plautilla Bricci (1616–1690) was the first woman to practice architecture and her reputation has clearly survived to the present day, although the full extent of her activities remains to be explored. In 1663 Bricci designed the Villa Benedetti (destroyed in 1849), near the Porta S. Pancrazio on the Janiculum Hill, for Elpidio Benedetti, agent to Cardinal Jules Mazarin in Rome. Benedetti was so pleased with the result that in 1677 he published a guidebook to the villa giving detailed descriptions and views of the building along with an account of the roles played by Plautilla and her brother, with whom it is said she collaborated. However, the building contracts and several preparatory drawings make it clear that it was, in fact, Plautilla who designed the building with little,
if any, creative input from Basilio. Benedetti was probably embarrassed to admit that his villa had been entirely designed by a woman.²

Yet Lady Elisabeth Mytton Wilbraham (1632–1705) set up an architectural office near Birmingham and eventually designed 400 buildings. As the historian John Fitzhugh Millar wrote, she might also have taught her most famous colleague, Christopher Wren, who rather abruptly took up architecture in the XVII century after a decade as an Oxford scientist.³ Even if she did not sign her drawings because her aristocratic milieu would have disapproved of a working woman, the library at Weston Park, in the village of Weston-under-Lizard, owns some tangible evidence of her interests - copious notes about building techniques and raw materials she signed in her 1663 volume of Palladio's writings. Given the situation of a woman acting as an architect during a period in history when that was socially unacceptable, it is still not clear the documentation of Wilbraham's authorship of any building, other than for her family.

The first women architects worked from about the second part of 1800 in America, either independently or as the wife of male architects. What drove these women to choose this profession and what aims and ideas of the new era did have had in common? To answer this question, it is necessary to investigate the events that led to the occasions in which women were able to express their creativity and skills in the field of architecture. At the time, it was mostly based on the intersection of the new bourgeois femininity coupled with the political and economic power relevant to the growth of the nation states.

In the mid-nineteenth century, the Woman's Building made its appearance at the world exhibitions, and up until the First World War it remained a significant component of these events. The world exhibitions provided a showplace to present and to celebrate the industrial production of the emerging nations - the locus of every kind of human activity,⁴ where any number of contemporary social or cultural concerns also found expression. The Women's Building represented gender difference - as did the emerging women's movements - at venues which championed display of industrial production. It represented clearly bourgeois femininity in a didactic form, even if it would repeatedly reinforce traditional female roles. Anyway, the Women's movements demanded that women occupy a more active role in the public sphere. Women's Buildings rendered this demand more visible and, step by step, the architecture of those pavilions also contributed to change the concept of what a woman should be, and to promote women's active participation in design and realisation of such.⁵

The first realisation for the Chicago Columbian Exposition in 1893, is significant. Because the managing board of the fair agreed to allow women to participate, a separate Board of Lady Managers that had authority over all the decisions regarding the Women's Pavilion was created. The competition was opened to trained architects, women only, and this pavilion was a promising first step that would set a precedent for women's involvement in later years.⁶ The winner, Sophia Hayden (1868–1953), was young and had just graduated. She submitted a design based on her thesis project for a fine arts museum in an Italian Renaissance style. Her design for the fair building included balconies and loggias and was perceived as 'light and gay', in the words of one of the judges, qualities deemed appropriate for a festive event. Paid the small sum of $ 1000 plus expenses, and compelled to reduce the scale of her details, Hayden was forced to make changes on short notice and with little time. Hayden spent two years completing working drawings, designing a building that was both positively and negatively reviewed by architectural journals for the same reason: it was made by a woman!⁷

In 1891 the architect, Jennie Louise Blanchard Bethune (1856–1913), wrote the article 'Women and Architecture' for the Inland Architect and News Record, in which she voiced her disgust at the competition and the pathetic remuneration offered, while male colleagues received up to ten times that amount for their expo buildings. In her words, it was an 'unfortunate precedent to establish just now, and it may take years to live down its effects'.⁸ Whatever problems there may have been, this was a far more substantial commitment to women than any fair had previously made and the building represented the display of women's achievements. The design process of Hayden's debut work was often interfered with by the supervision of Bertha Palmer, a powerful Chicago businesswoman, socialist and president of the Board of Lady Managers. During the initial planning phase, the Board, aligned with the organisers of the Exposition, developed the dimensions of the building represented the display of women's achievements. The design process of Hayden's debut work was often interfered with by the supervision of Bertha Palmer, a powerful Chicago businesswoman, socialist and president of the Board of Lady Managers. During the initial planning phase, the Board, aligned with the organisers of the Exposition, developed the dimensions of the


⁷ Allaback, The First American Women Architects.

plan and the idea of the structure with the Fair’s supervising architect, Daniel Burnham. For the first time women architects were discussed in a lively public forum and the two most accomplished colleagues, Louise Blanchard and Minerva Parker Nichols (1863–1949), contributed their views to major periodicals. In the summer of 1982 Hayden suffered a nervous breakdown, likely the result of the intense pressure she was under. Some used her illness as proof that women did not belong in architecture, while others, such as fellow architect Minerva Parker Nichols who also participated at the competition, came to her defence. For her design, Hayden was given a gold medal and an award for ‘delicacy of style, artistic taste, and geniality and elegance of the interior hall’. At the ceremony held in her honour in June 1893, Hayden was praised for creating ‘a lasting monument to her genius and a source of pride to women for all ages to come’. The following year she designed a building for the Women’s Club of America, but it was never completed. Burnham suggested she open an architectural firm in Chicago, instead she chose to retire from the field.

The Woman’s Building reflected the growing association of American bourgeois femininity with the patronage of the fine arts. As the American painter Anna Lea Merritt (1844–1930) observed, recent attempts to make separate exhibitions of women’s work were in opposition with the views of the artists concerned, who knew that it would lower their standard and risk the place they already occupied. What we so strongly desire is a place in the large field (...). The kind ladies who wish to distinguish us as women would unhappily work us harm. In any case, the Columbian Exposition set the precedent for a Women’s Building at the Cotton States and International Exposition held in Atlanta two years later, when the Women’s Department sponsored a national competition in search of a talented female designer. The request was for a building in the colonial design, ‘to harmonize and at the same time to be able to hold its own among the much larger buildings in its immediate vicinity’. In 1895, when she worked in the Pittsburgh architectural office of Thomas Boyd, Elise Mercur, architect, won the competition and a prize of $100. The building was the most expensive for its size at the fair and the only building to have a cornerstone laid. At time, it was noted that ‘she goes out herself to oversee the construction of the buildings she designs, inspecting the laying of foundations and personally directing the different workmen from the first stone laid to the last nail driven, thereby acquiring a practical knowledge not possessed by every male architect’. While Sarah Ward Conley (1859–1944) authored the one at the 1897 Tennessee Centennial in Nashville, Elise Mercur developed a two-story, multifunctional building modelled on a regional paradigm, the Southern antebellum plantation house.

Following the Chicago example, as a strategy to gender subsequent pavilions, female architects were encouraged to design them, and encountered all the difficulties related to the practice of this profession, and especially the recognition of women’s capacity to manage a project and the execution of a construction.

The Columbian Exposition also paved the way for women to begin designing structures of all types, such as Josephine Wright Chapman’s (1867–1943) design for the New England States Building which won the competition for the upcoming Pan-American Exposition in Buffalo in 1901.

Later, inside the Panama-Pacific International Exposition held in San Francisco in 1915, the YWCA Building, sponsored by the Young Women’s Christian Association at the insistence of local heiress Phoebe Hearst, was erected. The building’s exterior is designed by the architect Edward C. Champney of San Francisco (1874–1929), and the architect Julia Morgan (1872–1957) was asked to design the pavilion’s interior. It’s interesting that, in this case, function had overtaken meaning, as the building was created to serve women working and participating in the public sphere. Julia Morgan was the first woman to graduate from the Beaux-Arts in Paris and in 1904 had established a successful practice in San Francisco Bay Area. It must also be said that, at time, she was a seasoned professional having built extensively for both the Hearst family as well as for the YWCA.

In Europe, the process of the emancipation of women professional architects has had a longer incubation. Professional practice was still outside the norm for women in the nineteenth century. Around 1900, representative Women’s Buildings also appeared at European fairs. There were many occasions to talk about women at the Expositions, but there isn’t evidence of the involvement of women architects designers. For example, the Palais de la Femme, at the Exposition Universelle et Internationale de Paris in 1900, was a small pavilion praised for conveying a sense of the Parisenne. Under the supervision of Madame M. Pégard, it was executed in a charming Baroque style, a small model on a regional paradigm, the Southern antebellum plantation house.


masterwork of modern French architecture, decorated with tasteful latticework, flowers, artful stone basins and fountains, where the architect Emmanuel Pontremoli (1865–1956) understood how to embody the grace and the attraction of appealing femininity in stucco and stone.\textsuperscript{16}

In Britain, there were barriers to the presence of women in the professional field of architecture. The Institute of Architects, founded in 1834, was ‘undeniably, a male preserve’\textsuperscript{17} (…) For the emerging architectural profession, women in their ranks were quite simply unthink\textsuperscript{18}l. As the architects-members were to be ‘men of taste, men of science, men of honour’.\textsuperscript{17} The RIBA –Royal Institute of British Architects– did not admit women until 1898 although during the 19th and 20th century some women –mostly from a family architects– did practice as professionals outside the auspices of the RIBA. Women’s place in the profession was envisaged and inscribed by Robert Atkinson (1883–1952), head of the AA School in London in 1917: ‘(…) women would find a field for their abilities more particularly in decorative and domestic architecture rather than the planning of buildings 10 to 12 stories high’.\textsuperscript{18}

The first female-designed pavilions were constructed in 1914, at competing fairs in Germany. Margarethe Knupfelholz-Roesser (1886–1949) created a one-story building with stark unornamented facades, coloured in deep ochre tones for the Werkbund Exhibition in Cologne. Emille Winkelmann (1875–1951) designed the Haus der Frau for the 1914 Internationale Ausstellung für Buchgewerbe und Graphik – Bugra (International Exhibition for the Book Industry and Graphic Design) in Leipzig. She also arranged the twenty-five finely furnished exhibition rooms, each differing in size and decoration, into a long building clad in light grey with neo-baroque facades.\textsuperscript{19}

By the turn of the century, more and more women who were joining the pioneer generation of architects were finding that higher education gave them access to new opportunities. Now women without male relatives or friends in the profession could decide to become architects, even assuming they could pay for their education. There is evidence that more women architects were beginning to join others by the early twentieth century.\textsuperscript{20}

The Italian scenario of that historical period may reveal, in short, how women, who have had a profound impact on Modernist history, even while working on the periphery of the profession, changed the idea of living, working, learning, having fun.

In 1927 Mussolini uttered the sentence ‘Women should be passive. The woman must obey. She is naturally and not synthetic (…) my view of the role of women in the state is opposed to feminism. Naturally she does not have to be a slave, but if I gave her the right to vote, she would deride me. In our state she simply does not count’.\textsuperscript{21} In this political and social climate in which it was difficult to emerge in this profession, there are multitalented women who left a distinct impression on the Italian architectural scene with their own firm, involved in important fairs and other important works.

From 1920 to 1940, the exhibitions realised in Italy were an integral element of the processes and techniques of building consent, with a range of different themes, staged with the indispensable contribution of the artistic and architectural professions. The didactic function of these exhibitions and pavilions constituted a kind of campaign to promote a national lifestyle.

The IV Triennale of Monza in 1930 was an important occasion for the comparison of academic and rationalist architecture. Some enterprises, such as Edison and Rinascente, promoted the research of innovative housing solutions giving the opportunity for young Italian architects such as Emilio Lancia, Gio Ponti, and Gruppo 7, to build housing prototypes in the Villa Reale Park. The exposition of these prototypes was replicated in the V Triennale in Milan in 1933, and priveded significant input to the Modern House Show with more than 30 buildings, for social or private destination, and with different economic ranges.\textsuperscript{22} Among the participants, Luisa Lovarini (1895–1980), graduated from the Academy of Fine Arts in Bologna and employed by the Opera Nazionale Dopolavoro, the national institute providing assistance to workers, designed the Casa del Dopolavorista (After-Work House), a one-story house fully furnished.\textsuperscript{23} In Italy, it was the first important architectural contribution from a woman architect.

16 The building was located close to the Eiffel Tower. It housed an exhibition on women artists that had received prizes during the Fair. It also had a few theatres, a large entrance hall where visitors could come and rest, and a reading room; there was also a section dedicated to beauty products. See Paul Lindenburg. Paris en die Weltausstellung [Minden i. Westfalen: J. C. C. Bruns’ Verlag, 1900]; Anne St. Cere, “Der Frauenpalast auf der Pariser Ausstellung” in Georg Malkowsky (ed.) Die Pariser Weltausstellung in Wort und Bild (Berlin: Kriehoff & C. O. Verlag, 1900), 15–16, http://digi.ub.uni- heidelberg.de/diglit/malkowsky1900/0003?sid=6e96e714c9b3e60d27a2e598b237b6c (accessed June 12, 2017).

17 The first woman member was Ethel Mary Charles (1871–1962) and she was also the first woman architect in the profession. See Lyne Walker, “Golden Age or False Dawn? Women Architects in the Early 20th Century” in Content:content.historicengland.org.uk/content/docs/research/women-architects-early-20th-century.pdf (accessed June 12, 2017).

18 Walker, “Golden Age.”


20 Walker, “Golden Age.”


The house was published in *Edilizia Moderna,* with two illustrations: the building from the garden and the living room, showing the non-luxury house for the new middle-class, and the application of innovative materials, as linoleum, and a more appropriate organisation of the living space and modern facilities. The design of the house was extended to the outdoors as the garden was considered an important part of the house where ‘everyday life pulses and collaborates for the happiness of the family’, and its design was fundamental for the success of the whole project. The project was successful and it was described by Lidia Morelli as a little jewel of practicality, of good taste and low price.

A few years later, Maria Teresa Parpagliolo Shepard, born in Rome (1903–1974), approached architecture, gardening and landscape issues in an innovative way to. She was the first Italian woman landscape architect. After she had started her university studies in archaeology, she developed interest in garden design and botany. She started to educate herself, studying all the available garden literature and taking several study trips. In 1931 she went to England where she trained in the office of Percy Stephen Cane (1881–1976). She participated in international conferences of European landscape architects (Paris 1937, Berlin 1938), and contributed regular articles for specialist magazines such as *Domus, Il giardino fiorito, Landscape and Garden, Journal of the Institute of Landscape Architects.* In 1938, she joined the planning team for the Esposizione Universale in Rome (E42), and in 1940 became head of the exhibition’s Ufficio Parchi e Giardini. In 1946 Parpagliolo married Ronald Shephard, and moved to London starting to work on projects with Sylvia Crowe (1901–1997). From 1950, with Frank Clark (1902–1971) she designed for the Festival of Britain and the grounds of primary schools in the south of London. In 1954, the Società Generale Immobiliare commissioned her projects for private and public gardens, parks and open spaces.

Parpagliolo was first involved in urban planning schemes with Raffaele De Vico (1906–1969) and Piero Porcinai (1910–1986), and she was soon appointed head of the Planning Department for Parks and Gardens of the World Exhibition, E 42, site in the south of the city and planned by Mussolini to open in 1942.27

When she started to have an interest in landscape architecture there were no specialised schools on the topic so she developed as a self-taught landscape designer travelling mostly in Italy, England, France and Germany, to make contact with garden designers and view their projects, and participating in thematic exhibitions and conferences.28 Although she was hired for the job because of her excellent botanical knowledge and her ability to design planting plans and flower beds, Parpagliolo realised the new opportunities it offered for becoming involved in urban design and planning.

Serving the Fascist regime, she adhered to its political vision with her theoretical statements and design work for the exhibition E42. Yet she showed no regret and no lack of self-confidence when reflecting, in 1971, on her work within the male-dominated planning team: ‘It was such an enormous job that I learned the profession doing one job and teaching all architects to see the site in a different way.’29 In Parpagliolo’s idealist vision, the healthy landscape consisted of functional natural systems and integrated social communities, and it provided the cultural meanings to support human life. Landscape architecture was a work of synthesis.

The innovative idea of domestic gardens and parks was that of a natural landscape, where a beautiful and functional landscape becomes an aesthetic expression of practical land-use, looking to an innovative spatial qualities of the city.30

Parpagliolo not only designed gardens and open spaces in Italy, she also wrote a lot of articles for specialist magazines on planting and garden design, urban design and broader environmental issues.

She explained her idea of garden architecture, influencing the readers and professionals on this issue then underdeveloped in Italy, by highlighting the fact that the garden and the landscape are part of the same picture. For Parpagliolo, this was a central point in the cultural debate of the twentieth century.

From soft suggestions for a pretty familiar open space to detailed technical instructions (Figs. 1 and 2), the theoretical principles of Parpagliolo were focused not only on geometrical or natural shapes,31 but even on the issues of simplicity, balance and harmony between materials and plants. The practical examples of small gardens (Figs. 3 and 4), illustrate the close connection of the


28 Dümppelmann, “Maria Teresa Parpagliolo.”

29 Dümppelmann, “Maria Teresa Parpagliolo.”


Fig. 1. Drawing of Geometrical garden by Maria Teresa Parpagliolo, in "Giardino geometrico e giardino naturale". Published in Domus 11, no. 61 (January 1933), 40.

Fig. 2. Drawing of Natural garden by Maria Teresa Parpagliolo, in "Giardino geometrico e giardino naturale". Published in Domus 11, no. 61 (January 1933), 41.

Fig. 3. Drawing of Small garden by Maria Teresa Parpagliolo, in "Delle parti di un giardino". Published in Domus 11, no. 62 (February 1933), 90.

Fig. 4. Drawing of Small garden by Maria Teresa Parpagliolo, in "Il piccolo giardino". Published in Domus 11, no. 64 (April 1933), 209.
building with its open space, for which the surroundings area became the extension of the house itself, like a room to fit, ‘stanzas da stare’, with green furniture and objects (Fig. 5).

Pietro Porcinai established, that her research is developed through the knowledge of the European experiences on landscape. In August 1938, before she started to work on E42, she took part in the Second International Conference of Landscape Architects in Berlin, from where she returned enthusiastic about the German approach to the landscape. In particular, she described the German highways whose shapes were studied in detail by expert professionals, and she began to promote the use of local plants in landscape design, the so-called flora classica, in accordance with Fascist garden culture.

In 1938, when she started project gardens and parks for the E42 with Porcinai and De Vico, she had already gained good international experience and she was able to draw an image of the modern Italian garden taking into account the political idealism of the Fascist period.

The town planning scheme of the world exhibition of 1938 paid great attention to the setting up of green areas, under the supervision of Marcello Piacentini (1881–1960), Superintendent of the Architecture, and Gaetano Minnucci (1896–1980), Director of Services relating to the Architecture, Parks and Gardens. For this purpose, a special commission of architects and technical staff with a specific background in landscape architecture was established, and included Alfio Susini (1900–1985), Guido Roda (1892–1971) and Maria Teresa Parpagliolo, who became head of exhibition’s Planning Department for Parks and Gardens in 1940. During her work, Parpagliolo probably adjusted her ideas to the Fascist ideals of classical design, and this is clear in the project of a garden for the Exhibition of the Italian Garden. This turned out to be a collage of design elements found in different Italian renaissance and baroque garden resulting in unrelated garden rooms placed next to each other more or less at random. Even if the aim of the exhibition was to define an innovative landscape character, at the end the design of gardens was subordinated to the Fascist classical ideal of classicità. Owing to increasing financial difficulties in late 1939, most of the projects were never realised. In projecting the green belt — as avenues, roads and squares — harmonisation of the panorama and the sky of Rome was planned with, based upon the choice of resinous trees, Italian pines, as the national symbol. Some sketches, showing a formal design with trimmed hedges along avenues and parks, show the image of the exhibition, as it should be. The drawings technique of a lot of perspective views for the E42 exhibition can be attributed to Parpagliolo: roads and avenues are attractive with shady trees, adorned with channels of water or a series of fountains (Figs. 6 and 7).


33 Maria Teresa Parpagliolo, “Hannover, città nel verde: Un esempio di moderna urbanistica,” Le Vie del Mondo: Rivista mensile della CTI, 6, no. 3 (March 1938).


35 Dümpelmann, “Maria Teresa Parpagliolo.”

36 Dümpelmann, “Maria Teresa Parpagliolo.”
In the first part of her professional experience, Parpagliolo’s communication skills activated a break with tradition to experiment with new forms in garden design, parkways and community gardens. She also contributed as a pioneer to establish landscape architecture as a new specific discipline. Having considered women’s participation in architecture since the early twentieth century, it can be said that we have seen works mostly realised in exhibition occasions, and that were innovative both in the architectural and the social settings. Women architects, through their actions and their lives, contributed as pioneers to redefine professional identity and the boundaries of achievement in architecture. Even if their numbers were few, the works of pioneer women architects have had a profound and still unknown impact on modern history. The opportunities to emerge were limited for them, and their position in the architectural hierarchy was more often than not on the lower rungs of the professional ladder, but they strongly changed the idea of living, working, and learning, have fun, even if sometimes their works remained under the tradition of misattribution.