How one woman revolutionised Polish kitchens

Barbara Brukalska and her modern kitchen design in the late 1920s

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Abstract

Architects have historically played an important role in kitchen designs, including notable female architects like Margarete Schütte-Lihotzky, author of the 1926 Frankfurt Kitchen. Their solutions resulted not only from practical needs, but also from social and cultural changes at the time. This was also the case in Poland, although this is less widely recognized in Western architectural history. Barbara Brukalska, born in Brzeźce, Poland in 1899, was one of the first women to graduate from Warsaw University of Technology's Faculty of Architecture and became the first female professor there in 1948. She worked in partnership with her husband Stanisław and together they became one of the most notable duos in modern architecture before II World War. In one of the housing estates they designed, Barbara proposed a model of a functional kitchen. This research examines the impact of her kitchen design, based on a review of existing literature. The paper begins with an analysis of Polish social changes after the I World War and kitchens before Brukalska's contribution, followed by an outline of modern kitchens and ideas developed in North America and Germany. Then, Barbara Brukalska's ideas are outlined and qualitatively analysed in the context of her life. In conclusion, an assessment is made of the actual impact of her proposed solutions, which in the end did not meet her expectations within the Polish society.

Keywords: Barbara Brukalska, contemporary kitchen, modern, Polish design, female architect

Introduction

To simplify to some extent, a revolution in modern kitchens first occurred in 1926, when Margarete Schütte-Lihotzky created her kitchen design in the social housing in Römerstadt, Frankfurt, Germany. Under the guidance of Ernst May, Margarete proposed smaller and efficient kitchens in the new housing developments. Even though, as she later admitted, she never cooked much, her design of the "Frankfurt kitchen" is widely known to this day in the western culture as a great modernization.

Just one year after Margarete's design, Polish female architect Barbara Brukalska, introduced a completely new modern design of a kitchen for the project of housing "colonies" in Warsaw, named Contemporary Kitchen. Unfortunately, she was revealed as the only author after 40 years. The technology and possibilities were not as innovative in Poland, as in western countries at the time, however Barbara managed to propose an idea tailored to Polish capabilities and create a vision of the user as a modern woman. In 2018, this kitchen has been featured in the exhibition "Future will be different. Visions and practices of social modernization after 1918" at the "Zachęta" National Gallery of Art in Warsaw. It displayed the most important social and cultural ideas and designs of the interwar period[1]. Among them was also the topic of women, including a reproduction of Barbara's kitchen in a 1:1 scale model.

This research aims to analyse in depth Barbara's design while investigating the social and political history of her time. It also points to gender inequalities during the interwar period in Polish culture and architectural societies on Barbara's example. Finally, the impact of Barbara's design is then analysed in the context of Polish housing solutions after before and after the II World War in order to critically investigate the impact of her design.

This history thesis gathers primary sources from Polish online archive of the Digital Library of Warsaw University of Technology that contains mainly magazines with Barbara's own publications. Specifically, the manifesto "Contemporary Kitchen" published in the periodical *House Estate Flat*[2]. It gives an overview of the project's main ideas and goals. Furthermore, it is also the source of all the plans, sections, views of the design and presents pictures of a show model.

In relation to the secondary sources, all published in Polish, this research gathers information from an interview with Barbara published in the periodical *Contemporary Woman*, from 1928. This source provides an insight on her thoughts about the developing trend of interior design in Poland at the time[3]. Additionally, first chapter from the book *Creators. Women, who changed the Polish lifestyle* by journalists Julia Pańków and Lidia Pańków provides an inaugural biography of Barbara Brukalska[4]. This text helps to understand the bigger picture, her persona in the context of her early life, studies, practise with her husband and their most successful projects. Finally, the chapter "Barbara Brukalska: a subtle builder of planes and forms" by

[1] Unknown author, "Przyszłość będzie inna. Wizje i praktyki modernizacji społecznych po roku 1918.", Zachęta – Narodowa Galeria Sztuki, acessed April 13, 2023, https://zacheta.art.pl/pl/wystawy/przyszlosc-bedzie-inna.
[2] Barbara Brukalska, "Kuchnia współczesna" in *Dom Osiedle Mieszkanie*, no.1 (March 1929): 8-11, bcpw.bg.pw.edu.pl.
[3] Irena Jabłkowska, "Nowe drogi. Rozmowa z p. Barbarą Brukalską" in *Kobieta Współczesna*, no. 33 (August 1928): 14-16.
[4] Lidia Pańkow, "Architektka Życia" in *Kreatoki. Kobiety, które zmieniły polski styl życia*, ed. Barbara Czechowska (Warszawa: MUZA SA, 2018), 8-73.

researcher Marta Leśniakowska elaborates on the role of first female Polish architects finding themselves in a world of modern architecture defined mostly by men[5].

The findings are presented in three chapters. The first chapter contextualizes the background on social and political history of women in Poland during the interwar period. In relation to these factors, it explores typical Polish kitchens before Barbara's design in 1927 and establishes a connection with the first modern kitchen designed in Germany. Meanwhile, the second chapter focuses on Barbara and the design of the Contemporary Kitchen, contributing to understand Barbara's persona and investigates the circumstances of her idea. Afterward, the third chapter explores the real impact of Barbara's solution on the kitchen forms and functions. Finally, the history thesis concludes that although Barbara's design was exceptional and ahead of its time, it did not fully meet her expectations and likely did not directly influence kitchens in Poland.

[5] Marta Leśniakowska, "Barbara Brukalska: subtelna budownicza płaszczyzn i form" in *Architektki*, ed. Ewa Mańkowska-Grin (Kraków: EMG, 2016), 37-60.

1. Societal and architectural context of the modern change of kitchens in Poland

As the title of the book by journalists Anna Żarnowska and Andrzej Szwarc states, women's rights in the interwar Poland were equal, but the opportunities were unequal[6]. I World War caused almost an entire generation of men to disappear, which left most of the women without financial support and the pressure to provide for themselves and their families. Thus, a new generation with aspirations and expectations entered the labour market. They aimed at overcoming old prejudices shaped by patriarchal scenarios, including limiting the participation of women in architectural design[7].

In the newly created country in 1918, women in Poland got the right to vote and stand for election based on the electoral law from 1918[8]. In 1919, a commission was established in order to prepare a legal system for the Polish state based on the equality between men and women. Nonetheless, it was still not a ubiquitous fact. The access to education for women after the I World War was difficult as a result of limited number of female schools. After finishing mandatory public schools, not many girls were able to continue their studies in higher levels due to limited number of students accepted in schools. However, parents from wealthy families could afford sending their daughters to private schools. The Treaty of Versailles from 1919 obliged the state to equally pay for work of the same value, regardless of sex[9]. Ultimately, the differences in salaries were significant, women's weekly earnings being on average a half of men[10]. A married woman was able to serve the state only with her husband's consent and was still not appointed to judicial positions. According to the act of the citizenship of the Polish State from 1920[11], Polish women could lose their citizenship if they married a man from another country. At the same time, a man marrying a foreign woman did not lose his Polish citizenship, while his wife could acquire one. Meanwhile, under a new act from 1921 regarding a change in women's civil law, women were not legally obliged to obey their husbands[12]. They could take legal action, independent of their husbands' will and had the right to dispose of their own property. On the other hand, men still had the final say in the custody of their children. In 1929 under the discussion was also an introduction of a secular form of marriage and divorce. Ultimately, the project did not become Polish law until 1965, as a result of a strong opposition from the Catholic Church.[13]

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[6] Anna Żarnowska and Andrzej Szwarc, *Równe prawa i nierówne szanse: kobiety w Polsce międzywojennej* (Warszawa: DiG, 2000).
[7] Marta Leśniakowska, "Mieszkanie jest wszechświatem" interview by Monika Stelmach, *Dwutygodnik*, May, 2018, no.238. https://www.dwutygodnik.com/artykul/7820-mieszkanie-jest-wszechswiatem.html.
[8] Dekret o ordynacji wyborczej do Sejmu Ustawodawczego z dnia 28 listopada 1918 r. [Decree on the electoral law to the Legislative Parliament from November 28, 1918], (Dz.U. 1918 nr 18 poz. 46).
[9] Philander C. Knox, *Treaty of Versailles*, (Washington: 1919).
[10] Władysław Mierzecki, "Praca zarobkowa kobiet w środowisku robotniczym w Polsce międzywojennej", in *Równe prawa i nierówne szanse: kobiety w Polsce międzywojennej*, ed. Anna Żarnowska and Andrzej Szwarc (Warszawa: DiG, 2000) 109-133.
[11] Ustawa z dnia 20 stycznia 1920 r. o obywatelstwie Państwa Polskiego. [Act on the citizenship of the Polish State from January 20, 1920], (Dz.U. 1920 nr 7 poz. 44).
[12] Ustawa z dnia 1 lipca 1921 r. w przedmiocie zmiany niektórych przepisów obowiązującego w b. Królestwie Polskiem prawa cywilnego, dotyczących praw kobiet [Act on the amendment of certain provisions of the civil law in force in the former Kingdom of Poland concerning women's rights from 1 July 1921], (Dz.U. 1921 nr 64 poz. 397).
[13] Michał Pietrzak, "Sytuacja prawna kobiet w Drugiej Rzeczypospolitej", in *Równe prawa i nierówne szanse: kobiety w Polsce międzywojennej*, ed. Anna Żarnowska and Andrzej Szwarc (Warszawa: DiG, 2000) 77-91.

In 1931 23 million people in Poland (70% of the whole population) were living in villages, including almost 12 million women and girls. There were about 4.5 million households, each consisting of an average of 5 members. Due to the fact that many of them were rather small and poorly equipped, people had to look for work outside the farms. In terms of social status, the rural population was the bottom of the social stratification. Due to overpopulation in the 1930s, some of the daughters in small households were perceived as burden for the family. Unfortunately, the chance of finding employment was small, as the demand for work was much greater than the supply. Traditionally, men were the ones who took paid jobs, while women were mostly assigned to unpaid work for the household and on the farm. Women were burdened with more work, on an average of 500 hours more than men, with interruptions only for pregnancies[14]. This resulted in a shortened lifespan and a higher likelihood of diseases for women. Among many women from villages, however, there was a strong drive towards migration to cities looking for improvement of their social status. Nonetheless, they rarely succeeded due to the conservative social structure and economic crisis in Poland at the time. As a result, most of the young women from villages had to marry early and follow the patriarchal family structure to survive[15].

In this context, one might say that the design of the kitchen depended on the wealth, economic and political background of the owners or the trends prevailing at the time. However, it is difficult to create a coherent image of a Polish kitchen, as the majority of people were still living in the villages, where the access to modern technology was almost non-existing. Kitchens in Polish cities around the 1910s had most of the furniture separated from one another and built with immediate available resources (Figure 2). Sideboards, cabinets and chests for various utensils had different measurements, therefore kitchens could not be small rooms. People cooked and baked using coal, mostly on stoves, and in ovens, which required large storage spaces and endless restocking. Furthermore, the inhabitants of cities did not separate their rooms, thus their lives were happening in one large space. Depending on the time of the day, it was used for preparing meals, spending time with their families, running businesses, welcoming guests or even sleeping. However, upper class families in Poland could afford to have their kitchens separated from dining or living spaces in the house and had them run by the domestic workers. This was considered more functional and hygienic, but also a way to underline their social status. In these cases, female domestic workers had their beds installed in the kitchens. Because of that, these rooms could be placed in separate buildings or in the basements[16]. This caused kitchens to become not only dark and distant from the life of the family members, but also clearly separated of the living spaces from domestic workers.

[14] Jan Curzytek, *Organizacja pracy w gospodarstwach włościańskich. Na podstawie materiałów rachunkowych 5 gospodarstw z województw południowych*, (Warszawa: 1935).
[15] Włodzimierz Mędrzecki, "Kobieta w rodzinie i społeczności wiejskiej w Polsce w okresie międzywojennym", in *Równe prawa i nierówne szanse: kobiety w Polsce międzywojennej*, ed. Anna Żarnowska and Andrzej Szwarc (Warszawa: Dig 2000) 171-187.
[16] Alicja Galewska, "Od paleniska do kuchni otwartej na salon – historia pomieszczenia", Bryła, December 4, 2017, https://www.bryla.pl/bryla/7,154445,20826466,od-paleniska-do-kuchni-otwartej-na-salon-jak-zmieniala-sie.html?bo=1.

Figure 1. Pre-war kitchen middle/working class in urban context, 1920-1940, unknown author, Wrocław. Source: fotopolska.eu

Figure 2. A modestly furnished pre-war kitchen. Soure: Maria Ochrowicz – Monatowa, *Uniwersalna książka kucharska* [Universal cookbok], 1910.

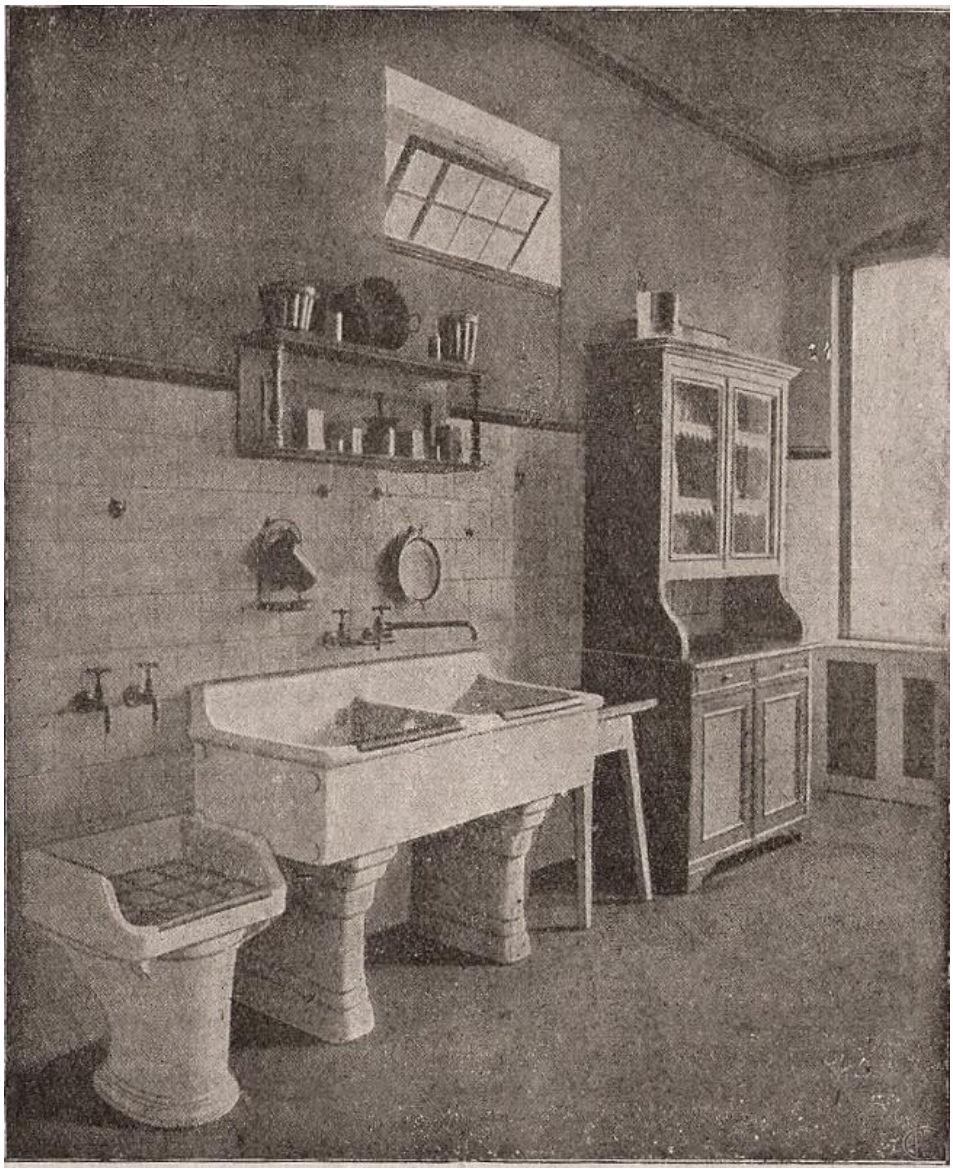

Figure 3. Exquisite pre-war kitchen furnishings. Source: Maria Ochrowicz – Monatowa *Uniwersalna książka kucharska* [Universal cookbok], 1910.

Already, in the 19th century, the North American educator and writer, Catherine Beecher, approached the reform of the kitchen space in a systematic and rational way. As a part of her research and observation, she analysed the workflow and sequence of activities performed by women in their households. Beecher was looking for the most functional solutions that would improve the performance of everyday activities. In the treaty she co-authored with her sister Harriet Beecher in 1869, titled *American Woman's* Home, they published one of the first layouts for an ergonomic kitchen with efficient storage spaces (Figure 4)[17].

[17] Charlotte Baden-Powell, *Architect's pocket book of kitchen design* (Abingdon-on-Thames: Routledge, 2005), 10.

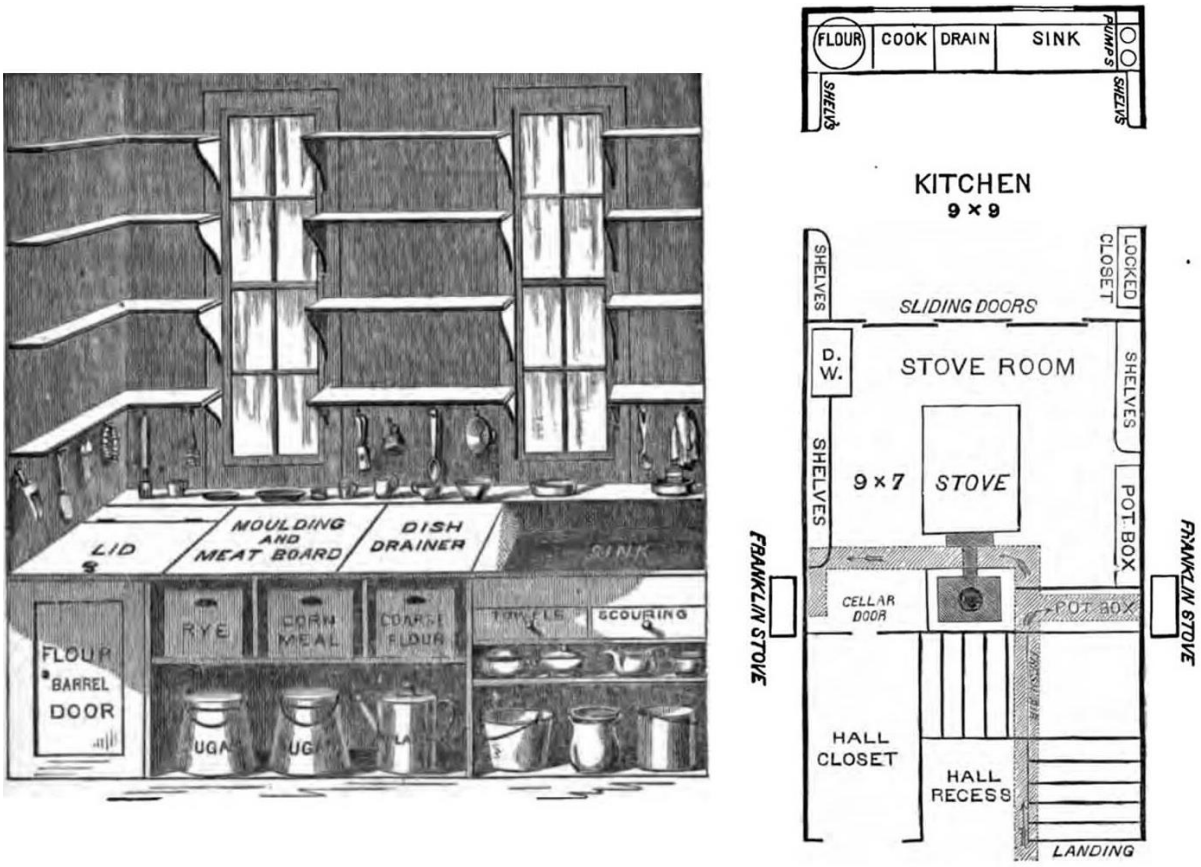

Figure 4. Drawings from the book by the Beecher sisters from 1860. They proposed a row of compact working surfaces placed at waist height along the wall, lit by windows. Source: https://upload.wikimedia.org/wikipedia/commons/c/c5/Beecher-stowe-Kitchen_Planing.jpg.

After the I World War, the industrial revolution initiated massive social changes, influencing the way of life, cities and architectural designs. The I World War required the development of technology, which also provided the base for innovations in housing and the development of modernism. Among many revolutionary designs from that time Frankfurt kitchen was definitely very influential. It was designed by the Austrian female architect - Margarete Schütte-Lihotzky in 1926. Margarete was born into a upper-class Viennese family, however, she already became interested in social and working-class housing during her studies. She saw it as the opportunity to improve the living conditions of the working class households. In the late 1920s she was appointed by Ernst May to create a kitchen design for the ambitious program called the "New Frankfurt", to provide affordable and efficient public housing throughout the city of Frankfurt as a response to the housing and economic crisis in Germany caused by the I World War. As a result, Margarete developed her design in order to fit all the necessary functions in the smallest possible space, which she based on the research of Erna Meyer and Frederick Winslow Taylor. In addition, the main objective was to create a universal model that would be replicated in different flats in affordable social housing. The kitchen measured 1,9 by 3,4 meters and included numerous cabinets, shelves, displays for storage and a system of drawers near the window. Even the smallest details have been thought through. A gas stove and a metal sink became standard equipment and a fold-out ironing board was installed on the wall near the window to save space. Although, as she said herself, she has never cooked much, she managed to create an innovative model with solutions that helped developing kitchens that we use today. She even measured the time and movements of the women performing tasks in kitchens in order

to create a design with ideal organization of work and provide maximum comfort during each activity[18].

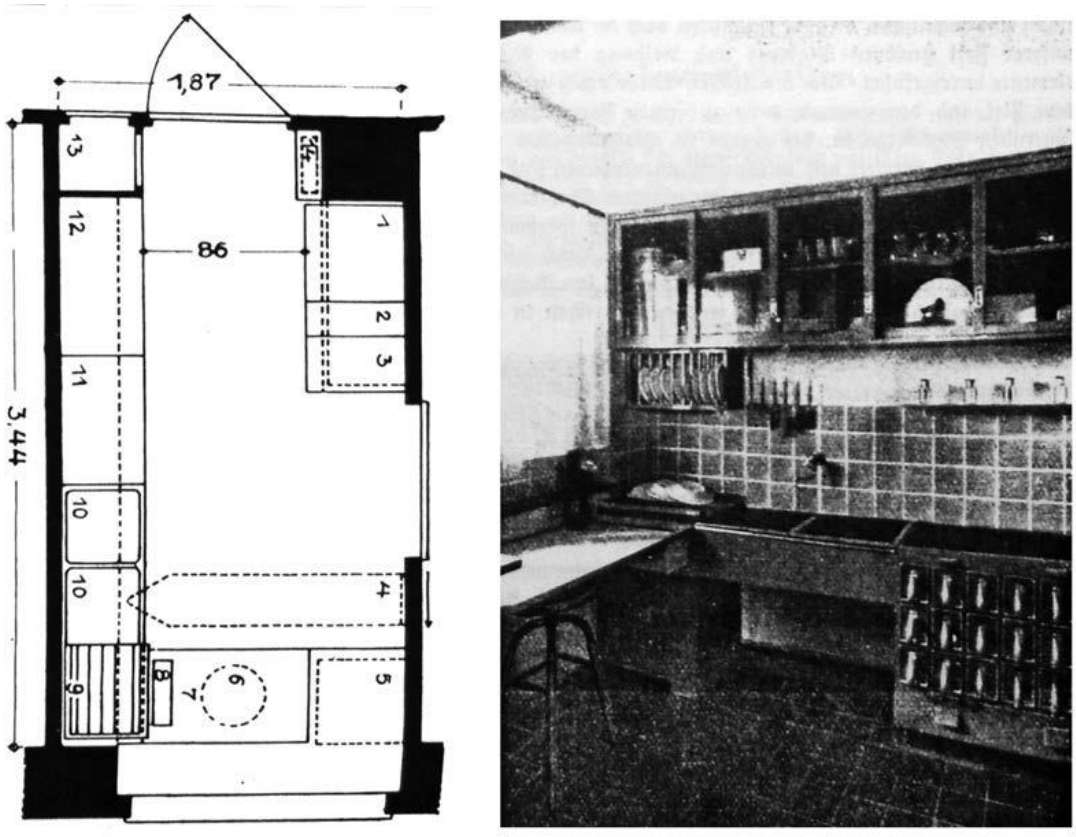

Figure 5. The Frankfurt kitchen plan with a photograph on the right. Source: Sara Brysh, "Reinterpreting Existenzminimum in Contemporary Affordable Housing Solutions", (TU Delft, 2019).

Meanwhile, efficiency in design was promoted after the I World War in Poland. Modernism and vast technological development progressing in western Europe were valuable references for Polish architects and designers. Nevertheless, Poland was still not as industrialized as other European countries like Germany. However, the Frankfurt kitchen was indeed a revolutionary design approach and certainly had an impact on the perspective of a kitchen in many countries all over the world, including Poland, which was later revealed by the author of Contemporary Kitchen in Poland.

[18] Juliet Kinchin and Aidan O'Connor, *Counter Space: Design and the Modern kitchen*, Exhibition catalogue (New York: Museum of Modern Art, 2011).

2. Barbara Brukalska and the context behind her vision of a Polish modern kitchen

Barbara Brukalska was born in Brzeźce, Poland, on 4th of December, 1899, as the third of five daughters, orphaned by their mother Stefania in early childhood. Her father, Wojciech, was a member of landed gentry and had an estate over river Pilica, where he provided for his family by asparagus cultivation and export to Saint Petersburg in Russia. Wojciech had graduated the Agricultural and Forestry Institute and supported the farmers working in his properties by locating them in brick housing with gardens. As a result, from young age, his daughters lived in a household in a progressive atmosphere. Furthermore, before her death in 1906, Stefania passed on to her daughters her passion for painting[19]. As part of the upper class, the Brukalskie [plural version of the surname] sisters were able to live in lodgings in Warsaw and attend prestigious female schools in the city.

Figure 6. Barbara in the middle, with the dog on her knees, with her sisters (other people are unknown) in their family's estate in Biejkowska Wola, photo from the book *Kreatorki. Kobiety, które zmieniły polski styl życia.* by Julia and Lidia Pańkow, 14.

Following her father, Barbara chose to study at the Agricultural and Forestry Institute. After graduating, she decided to continue her education by following architectural classes in the Faculty of Architecture in Warsaw University of Technology as a free listener. Then, in 1921, at 22 years of age, she became accepted as a student. It was a result of the statutory changes of the German authorities from 1915, which allowed the Faculty of Architecture to start admitting

[19] Lidia Pańkow, "Architektka Życia" in *Kreatoki. Kobiety, które zmieniły polski styl życia*, ed. Barbara Czechowska (Warszawa: MUZA SA, 2018), 15-17.

women. In 1922 Jadwiga Dobrzyńska graduated as the first woman from the Faculty of Architecture in Warsaw. Soon after, women not only became an important part of the Faculty's community, but also formed long-term friendships and professional partnerships[20]. As the researcher of the works of Brukalska and Polish modernism in architecture, Marta Leśniakowska, underlines - almost all of those women were wives or partners of male architects, creating "architectural marriages". Leśniakowska also states that for female architects working in partnership with a man was the only possibility to exceed the limits imposed by the system and culture towards them in the male-dominated architectural environment at the time[21]. Barbara also met her husband, Stanisław Brukalski, during her studies.

In the meantime, students and educators from the Faculty of Architecture in Warsaw were becoming more and more fascinated about the modernist movement and, especially, Le Corbusier. His revolutionary theses on spatial layouts of cities and the new concept of the house as a machine for living also influenced Barbara's student designs. In her graduation project, she seemed to paid homage to the Swiss architect, combining architectural solutions used in the L'esprit Noveau pavilion from 1925 and the Swiss Students Pavilion from 1930-1933[22]. Equally important for Polish architects and artists were Mondrian's work in De Stijl movement and Walter Gropius's work at the Bauhaus. Yet, Polish architects were aware that there was no simple way of copying solutions from Germany, France, Switzerland or the Netherlands. There was a need for Polish adapted designs, adequate to their industrial reality. As a result, architects and artists joined in 1924 in the group "Blok" to create their own Polish avant-garde art group. Then, in 1926, due to a conflict between the members, a group called "Praesens" emerged from "Blok". Barbara and her husband joined this association that emphasized collectivism instead of individualism and the belief in the role of the architect for shaping the social spaces. Barbara and Stanisław, as part of "Praesens", presented their achievements, published their projects and co-created periodicals such as *Dom. Osiedle. Mieszkanie.* [House. Estate. Flat.][23].

[20] Marta Leśniakowska, "Barbara Brukalska: subtelna budownicza płaszczyzn i form" in *Architektki*, ed. Ewa Mańkowska-Grin (Kraków: EMG, 2016), 40-41.
[21] M. Leśniakowska, "Barbara Brukalska: subtelna budownicza płaszczyzn i form", 41.
[22] M. Leśniakowska, "Barbara Brukalska: subtelna budownicza płaszczyzn i form", 40-41.
[23] L. Pańkow, "Architektka Życia", 28-31.

Figure 7. Barbara Brukalska and Stanisław Brukalski on the right with Stanisław's parents on the left, 1920s. Source: Julia and Lidia Pańków, *Kreatorki. Kobiety, które zmieniły polski styl życia*, 22.

Nonetheless, the task to translate the postulates of modernism into the post-war Polish reality was not easy. Warsaw, the capital of Poland, was less industrialized than other European capitals. After regaining independence, Polish authorities faced problems of poverty, illiteracy, low building standards, lack of sewage systems, outdated communication routes and inefficient tenancy law. However, Warsaw was experiencing rapid growth and needed new urban and architectural ideas. In response to the state of the capital in the 1920s, a comprehensive concept for urban development of Warsaw was underway. In the meantime, left-wing activists mostly from the Polish Socialist Party and illegal Communist Party of Poland created the Warsaw

Housing Cooperative in 1921. The Cooperative's statutes explained that the purpose was "(…) providing and leasing to its members cheap and healthy apartments build through collective self-help with the support of state and municipal institutions, meeting the cultural needs of the members by joint efforts"[24]. Żoliborz, a northern district of Warsaw, incorporated into the municipality in 1916, was the first area to target their theses. This happened, because the district was standing out amongst other quarters of the city due to its unique and consistent urban plan. It was almost completely empty because of its past military functions and perfect for new urban developing. With these ideas in mind, architects and urbanists Antoni Jawornicki and Tadeusz Tołwiński created the trapezoidal plan of a residential district without industrial functions, which was finally accepted by the authorities in 1925. This plan became an example of cooperation between different organizations of the interwar period. Besides the accurately distributed streets with wide pedestrian sidewalks and tram routes, the recognizable green squares surrounded by green belts in star-shaped compositions had become the pride of Żoliborz district (Figure 8).

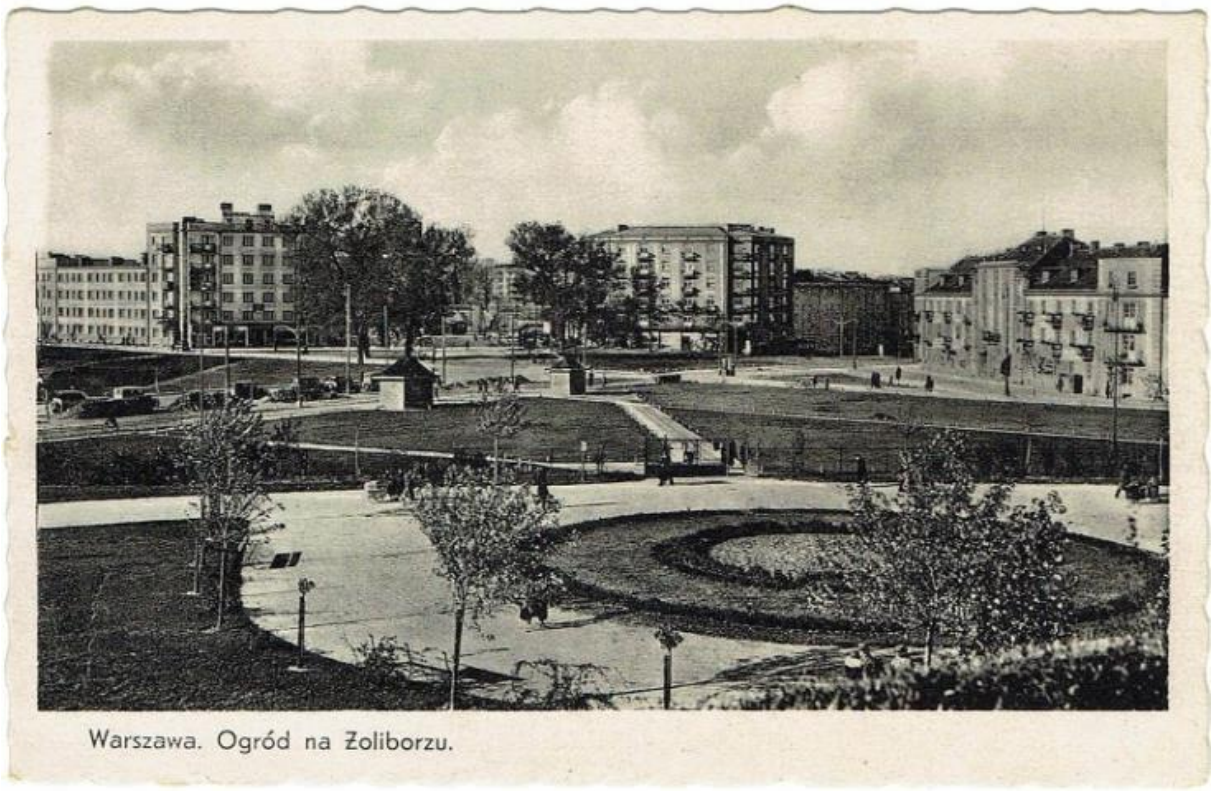

Figure 8. A postcard from the interwar years showing one of the biggest squares in Żoliborz – Wilson Square, in the early 1930s. Source: klubglobtroterawarszawa.files.wordpress.com.

First construction work of the housing estates, named "colonies", had already begun in 1925. Two years later, first tenants were able to move into buildings designed by Brunon Zborowski. He was also responsible for developing the "colonies" with numbers II, III, V and VI[25]. Barbara Brukalska and her husband were assigned to design the buildings with numbers IV, VII and IX

[24] "(…) dostarczanie i wydzierżawienie członkom tanich i zdrowych mieszkań budowanych drogą samopomocy zbiorowej" translated by the author from *Status WSM*, 1930, 3.
[25] "Colonies" were the names of the housing estate buildings planned by the Warsaw Housing Cooperative in the area of Wilson Square in Żoliborz district.

in the year 1925[26]. The "colonies" were their first professional design as a duo. Due to the unstable economic conditions of that time, funds of the Warsaw Housing Cooperative were narrow. However, this was not an issue for the Polish architects, who treated these limitations as a challenge to create an extremely efficient design.

Figure 9. Scan of a picture from a photo album. The picture shows a view to the west of Wilson's Square in Żoliborz, in the center - the "colonies" (the buildings on the bottom of the scan were designed by Barbara and Stanisław), 19560. Source: Edumnd Kupiecki, *Warszawa 1960*, page unknown.

The three buildings of the IV "colony" designed by Barbara and her husband were built from 1928 to 1934. The complex consisted of a total of 251 apartments. The facades were simple. All of the entrances were located in the inner courtyard. Barbara was able to use her knowledge gained in the times of studying at the Agricultural University and was responsible for designing the greenery. As a landscape architect, she proposed the idea of moving away from the historical concept of a small-town courtyard, in favour of a 'rationally' designed "zieleńce" [polish word for green area] for the community. In 1948, she published a book called *Social principles of designing housing estates*, where she elaborated on her design postulates and principles, based on her experiences with the development of the "colonies" [27] (Figure 10).

[26] L. Pańkow, "Architektka Życia", 41-44.
[27] Barbara Brukalska, *Zasady społeczne projektowania osiedli mieszkaniowych* (Warszawa: Wydawnictwo Ministerstwa Odbudowy, 1948).

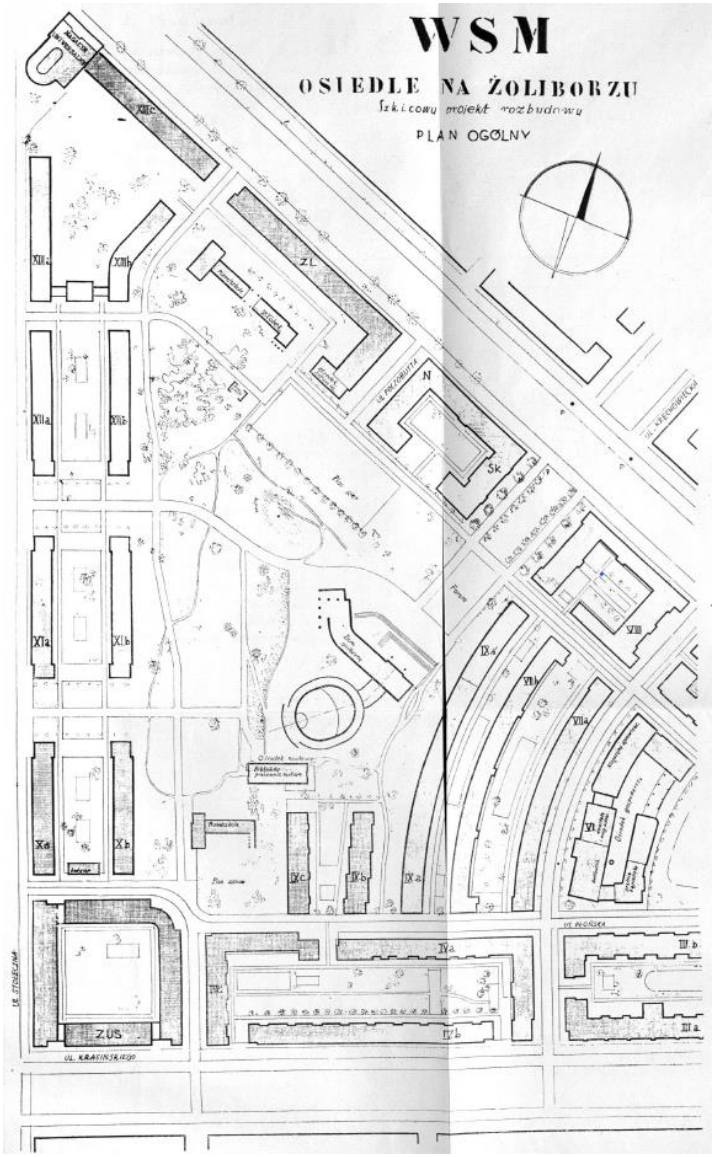

Figure 10. A sketch from Barbara's book of further development of the "colonies" estate in Żoliborz. The colonies on the south with numbers IV, VII and IX were designed by Barbara and Stanisław. Source: Barbara Brukalska, *Zasady społeczne projektowania osiedli mieszkaniowych*, addition to the page 133.

While designing the estates with her husband, Barbara developed a model of an ergonomic kitchen for one-, two- and three-room flats in building A of the IV "colony" estate. Regrettably, for the following four decades after presenting the design, authorship of the kitchen was attributed to both Barbara and Stanisław, or sometimes solely to Stanisław. It was occasionally mentioned that it was only Barbara's design. This was not something out of the ordinary, as Polish female architects working with their husbands were usually placed "in the background" or "next to" their husbands by the male-dominated architectural environment of the time[28].

In Barbara's manifesto, titled the "Contemporary Kitchen", she underlined the importance of moving away from the past, referring to the kitchen as a laboratory. She also campaigned for providing private spaces for domestic workers: "Let's take the maid's bed out of the kitchen,

[28] Marta Leśniakowska, "Modernistyka w kuchni" in *Konsteksty. Polska Sztuka Ludowa*, vol. 58, no.1-2 (2004), 225.

let's give her a room or even an alcove open to the kitchen, but let's give her own corner, relatively isolated. Now we can think of the kitchen not as a sub-living toilet, but as a laboratory"[29]. Moreover, she stated that the kitchen design should be based on the effectiveness and particular order of working and cooking. Everything was intentionally designed in order to remove unused and accidental. All the flats from the "colonies" were supposed to be cheap and available for working-class, which did not use domestic service. However, it is not clear why Barbara is mentioning the domestic worker's role in her manifesto. One might speculate that this was her way of trying to merge the working class and intelligentsia by attempting to create an universal design. This was also one of the reasons why Barbara decided to open the kitchen to the main room and create a "kuchnia mieszkalna" [living kitchen]. Additionally, the living room would have enough space to fit a big table with benches and chairs, even a space for a bed with the possibility of covering it with a curtain. It was a radical change in the perception of a kitchen and one of the main differences between Barbara's and Margarete Schütte-Lihotzky's design: the kitchen as a social space. Even though the Frankfurt kitchen had more advanced technology, it was still developed as a separate room.

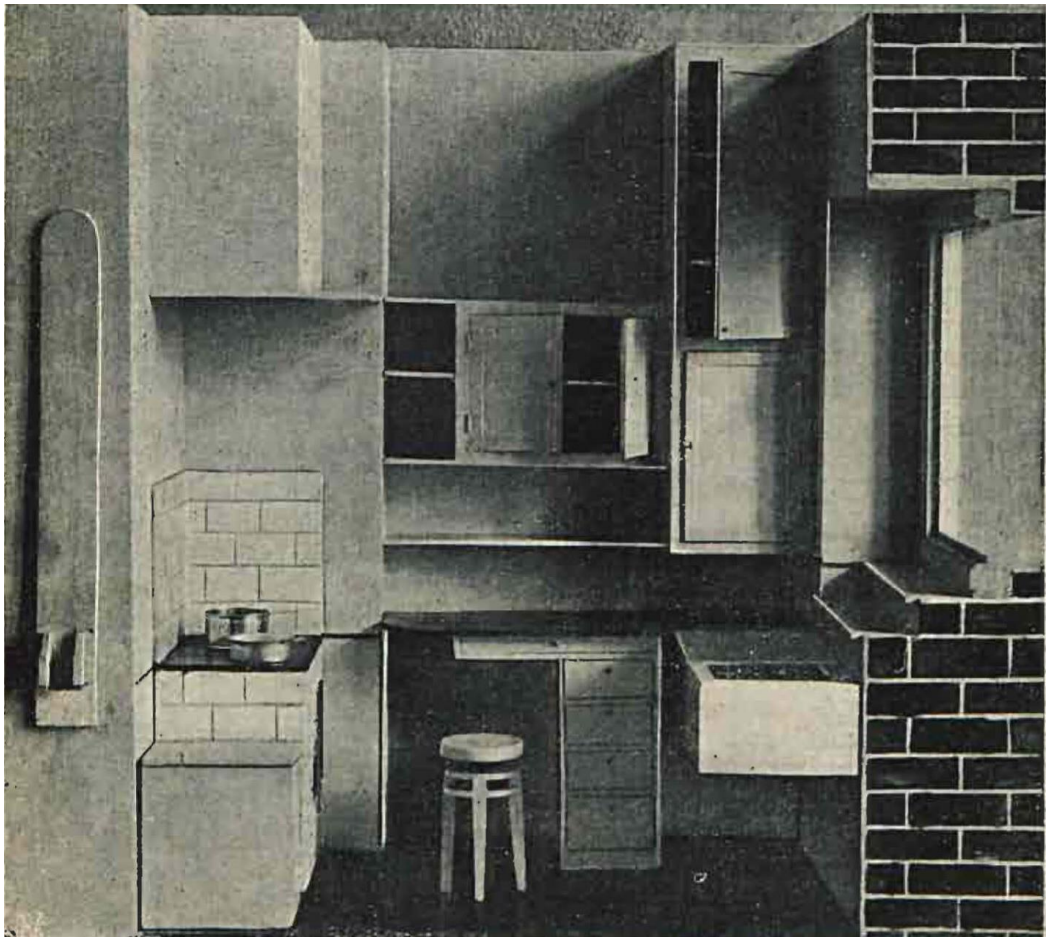

Figure 11. Picture of a model of the kitchen designed by Barbara for the IV "colony", 1929. Source: Barbara Brukalska, "Kuchnia współczesna", 10.

[29] "Wyrzućmy łóżko służącej z kuchni, dajmy jej pokoik lub choćby alkowę otwartą na kuchnię, ale dajmy jej własny kąt, względnie izolowany. Teraz możemy pomyśleć o kuchnie, nie jako o podrzędnej ubkacji mieszkalnej, ale jako laboratorium." translated by the author from "Kuchnia współczesna" by Barbara Brukalska, para. 4, p. 8.

The kitchen itself was situated next to a window. It was important for Barbara to provide the tenant with an already furnished kitchen, because "(…) no one would be able to fit their tables and cupboards, often so unreasonably designed, in this small space. Otherwise when the tenant does not have his own furniture, it is foreseeable that he will never put even a simple shelf to make use of the kitchen, of which every square meter is so precious"[30]. Indeed, the kitchen was minimal, having only 2.20 for 1.37 meters - a total of 3.01 m^2. Barbara explained that due to increasing construction costs, the size of the apartments had to be reduced, so the area of furniture and their functionality should be then maximized. Aesthetically, she combined Le Corbusier's fascination towards the house as a "machine" and Bauhaus's functionalism. With these influences in mind, Barbara designed the open shelves to store the exact amount of dishes for a 5 to 7 member family and ventilated storage spaces for the same number of people. The sink was located under the window to provide daylight, next to a table where the food products would be rinsed in water and prepared for the following cooking steps. Then, on the side, Barbara placed a coal-gas oven. She described in the manifesto that the Warsaw Housing Cooperative provided not only central heating, but also hot water. Because of that, there was no need to store huge amounts of coal in the apartments. Finally, Barbara concluded her piece stating that her design was just a first attempt to create a laboratory-kitchen and that only life could show what should be still improved. She also mentioned that all the modern models of kitchens in the United States and western Europe were excelled, but could not be duplicated in Poland due to the differences in technological possibilities and prices. Moreover, she stated that these countries were somehow able to create an order based on purpose for these daily activities. She underlined that Polish households and farms were not run methodically, nor consciously planned. Because of that she wanted to leave as much space as possible with not precisely defined purposes. Besides that, she aimed at avoiding any unnecessary surfaces for storing dirty dishes and cloths: "If there has to be disorder, let it at least be visible", she wrote[31]. She ended the manifesto stating that her design process was inspired by the models from Germany, United States and the advices from Irena Szmulakowska, the editor of *Organizacja Gospodarstwa Domowego* [The organization of a household][32].

[30] "(…) nikt nie zdołałby pomieścić na tej małej powierzchni swoich stołów i kredensów, często tak nieracjonalnie zaprojektowanych. W przeciwnym wypadku, gdy lokator nie ma swoich mebli, można przewidzieć, że nigdy się nie zdobędzie na przybicie nawet zwykłej półki, aby wykorzystać trochę kuchnię, której każdy metr kubiczny jest tak drogocenny" translated by the author from "Kuchnia współczesna" by Barbara Brukalska, para. 7, p. 8.

[31] "Jeżeli ma być nieporządek, niech będzie przynajmniej widoczny" translated by the author from "Kuchnia współczesna" by Barbara Brukalska, para. 3, p. 10.

[32] Barbara Brukalska, "Kuchnia współczesna", 1939, 8-11.

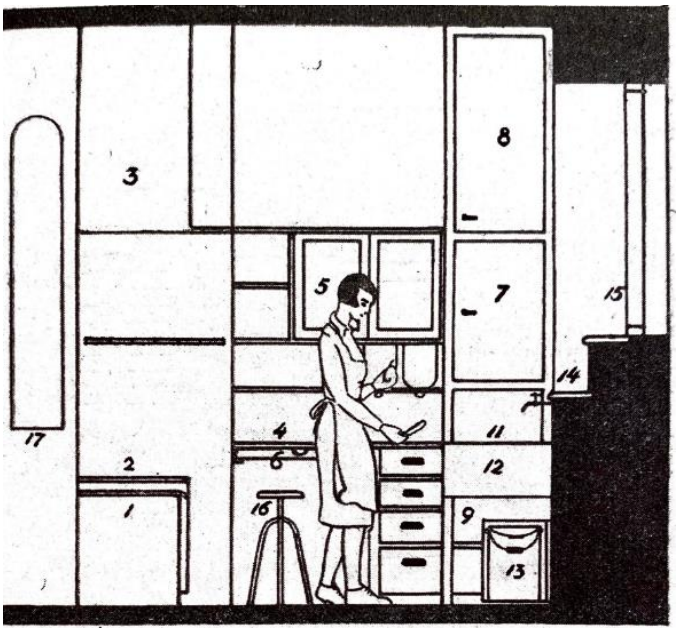

Figure 12. View of the kitchen. Source: Warsaw's Housing Cooperative Statute, 1930.


Figure 13. Barbara Brukalska in 1927. Source: family archive.

On the other hand, Barbara was also trying to create a space for the dynamically living women from working class and intelligentsia. Even on the view of the kitchen (Figure 12) she used herself as the role model for the modern woman, with her characteristic short hairstyle, flat shoes and sport-style dress. Barbara created this silhouette way before Le Corbusier proposed his Modulor in the year 1951.

In an interview from the periodical *Contemporary Woman* from 1928, Barbara concluded that "This [the kitchen] is a result of combining my professional interests with… farm interests. I know what role a properly arranged kitchen plays in a home, and I dream that all newly build apartments will finally have truly modern kitchen installations"[33]. Irena Jabłkowska, the author of the text, stated that Barbara was a representative of "kobiecość wojująca" [feminine fighting] in the interior architecture field, which was developing after the I World War in the Western Europe and United States. Barbara then mentioned that she agreed with the statement of her being a pioneer in this new profession, since architecture was her true vocation. In addition, she expressed her thoughts on interior architecture being a "perfect occupation" for women, mainly due to the fact that they have "more innate aesthetic needs than men"[34].

[33] "To jest rezultat połączenia moich zainteresowań zawodowych z… gospodarskimi. Wiem, jaką rolę odgrywa w domu odpowiednio urządzona kuchnia, marzę o tym, aby wszystkie nowowybudowane mieszkania posiadały nareszcznie prawdziwe nowoczesne instalacje kuchenne." translated by the author from "Nowe drogi. Rozmowa z p. Barbarą Brukalską" by Irena Jabłkowska in *Kobieta Współczesna*, August 1928, 16.
[34] "(…) kobiety w ogóle mają więcej wrodzonych potrzeb estetycznych niż mężczyźni." translated by the author from "Nowe drogi. Rozmowa z p. Barbarą Brukalską" by Irena Jabłkowska in *Kobieta Współczesna*, August 1928, 15.

3. Barbara Brukalska's kitchen design aftermaths

The idea to merge the working class with intelligentsia in the "colonies" estates was, to some extent, an attempt to "design" not only the buildings but the society itself. The architects provided a number of facilities, including integration and activity centres, aimed at bringing the two groups of tenants together. As a result, the residents' involvement in the community of the "colonies" provided a great example of social activity on a scale unprecedented until 1939. However, according to the contemporary critics of modernism, the architects' approach was not only motivated by a desire for social improvement, but also arrogance and a sense of superiority. The share of working-class families in the "colonies" did not reach the expected level. Inability of keeping the rent at the intended level resulted in an outflow of working-class families and a change of the tenancy structure towards mostly intelligentsia by 1937. There was a noticeable disconnect between "algorithms" developed by the designers and use of spaces by the inhabitants. Habits of the working-class families did not conform to the architects' expectations, which resulted in many of their proposals regarding organization of life in the "colonies" being ignored[35]. On the other hand, members of intelligentsia expected spaces for domestic workers in their apartments, which resulted in separation of the kitchen from the residential part, despite Barbara's intentions[36].

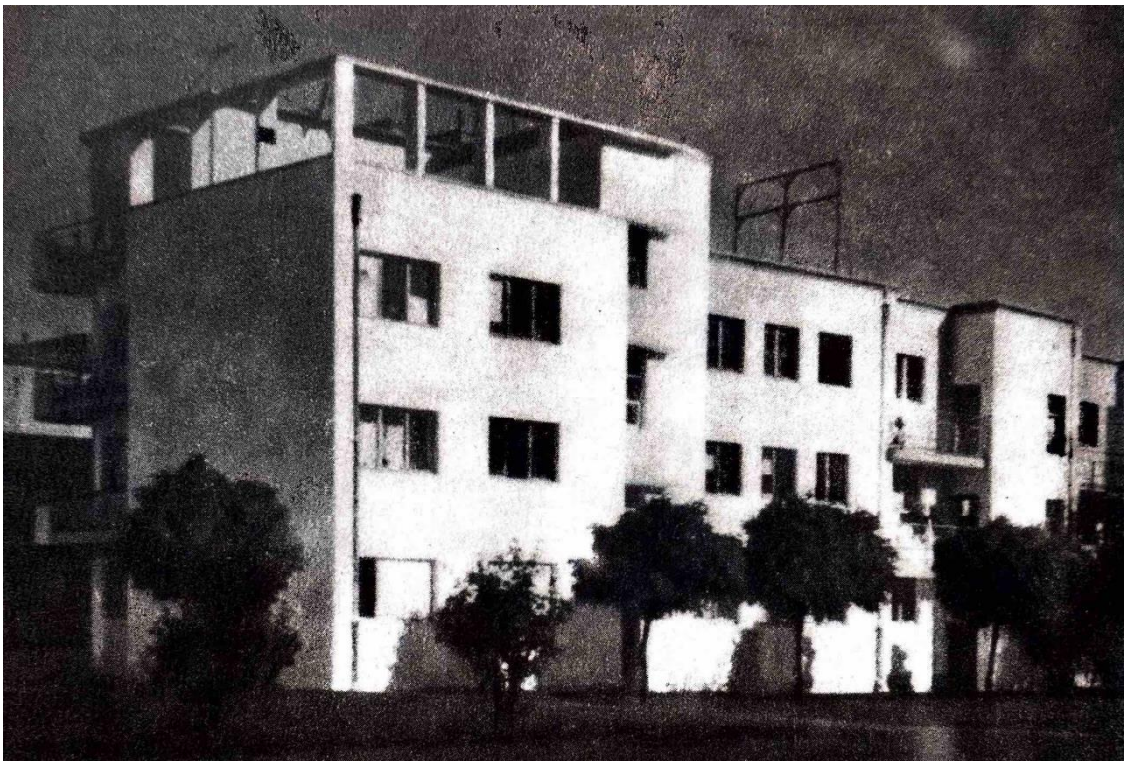

Figure 14. Fragment of the IV "colony" from the Krasiński street, year 1946. Source: Julia and Lidia Pańków, *Kreatorki. Kobiety które zmieniły polski styl życia,* 50 (from the collections of the National Library).

[35] L. Pańkow, "Architektka Życia", 56.
[36] Anna Cymer, "Kobiety w kuchni: architektki", Culture.pl, August 13, 2018, https://culture.pl/pl/artykul/kobiety-w-kuchni-architektki.

Between 1927 and 1929 Barbara and Stanisław designed and built their own house, in the same district as the "colonies". It was the first avant-garde residential building completed in Poland[37]. The facade and interiors were the perfect combination of Le Corbusier's and Piet Mondrian's style. The architects took their inspiration for the building's structure from the "Rietveld Schröderhuis" in Utrecht, built in 1924 by a Dutch architect - Gerrit Rietveld. A two-storey living room created the main space in the house, separated from the dining room by a curtain. The building was integrated by a central piece – the wooden staircase[38]. The house was intended by the designers as a certificate, that its creators belong to a new modern elite. Designed in the process of co-creation, the house manifested a view shared by both spouses: the fulfilment of a modernist dream of a new synthesis of arts in architecture[39]. In spite of Barbara's manifesto and the aspired universal design, she did not apply the rules to her family house. The kitchen was designed as a separate space from the living room, since the family was assisted by domestic workers. Moreover, Barbara and Stanisław did not mention anything about the kitchen itself in their own description of the house from 1930[40].

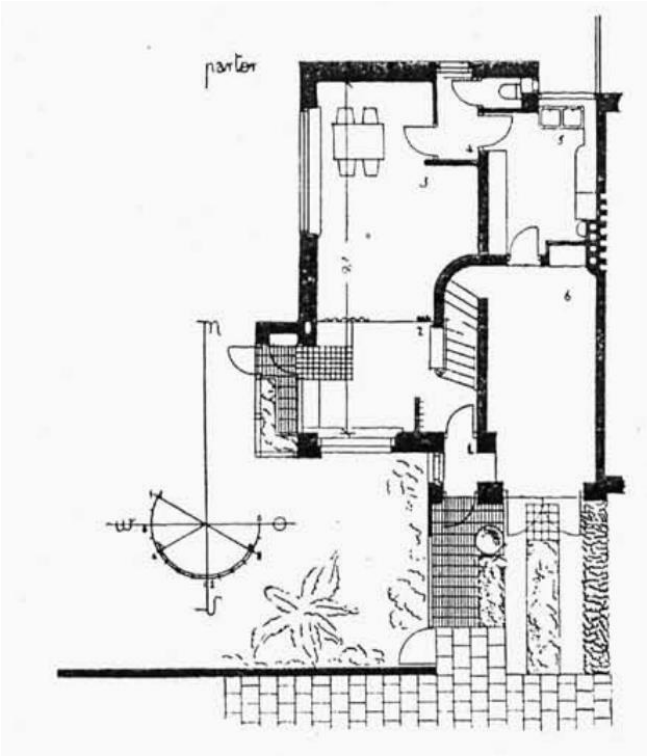

Figure 15. Ground floor plan of Barbara and Stanisław's house. Kitchen in the top right corner. Source: *Architektura i Budownictwo* [Architecture and Construction], 1939, n. 1, 9.

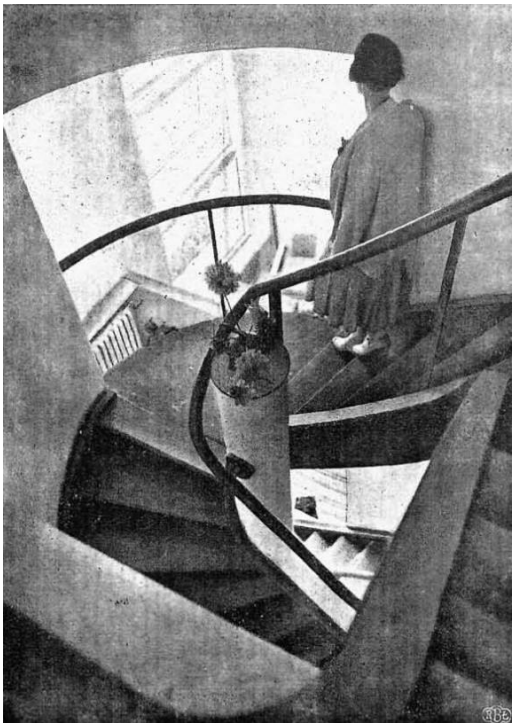

Figure 16. Barbara Brukalska on the unique staircase in her house in Żoliborz. Source: *Architektura i Budownictwo*, 1939, n. 1, 12.

During the II World War Barbara focused mostly on writing her book: *Social principles of designing housing estates*. Unfortunately, it turned out to be politically incorrect and contradictory to the beliefs espoused by socialist realism, introduced in Poland from 1944. The book was withdrawn from sale, and a ban was imposed on its further distribution. Barbara did not design much after the II World War. In 1948, she became the first female professor at the Warsaw University of Technology[41]. In the meantime, small kitchens became a standard, since

[37] M. Leśniakowska, "Barbara Brukalska: subtelna budownicza płaszczyzn i form", 45.
[38] L. Pańkow, "Architektka Życia", 33-37.
[39] M. Leśniakowska, "Barbara Brukalska: subtelna budownicza płaszczyzn i form", 46.
[40] M. Leśniakowska, "Modernistyka w kuchni", 224.
[41] M. Leśniakowska, "Barbara Brukalska: subtelna budownicza płaszczyzn i form", 58.

prefabricated apartments, similar to those drawn by the Polish functionalists before the war, also required rationalization and optimization of space. Contrary to Barbara's coherent vision, post-war kitchens were no longer equipped with tailor-made furniture. Halina Skibniewska, a Polish architect who designed prefabricated housing estates in the 1960s and 1970s, tried to follow the ideas of pre-war modernists. She was among the few who analysed families' needs, and tried to fulfil them within the constraints of the new prefabricated system. She designed for small, but flexible apartments with adjustable functional layouts. Halina also designed furniture for the apartments in "Sady Żoliborskie" estates (located in the same district of Warsaw as the "colonies"), most of which remained in prototype phase. The architect understood that rational design was essential for small kitchens to make sense. Halina underlined that limited usability of small kitchens was caused not only by the limited space, but by irrational arrangement of fixed appliances. Unfortunately, rational kitchen design was hardly achieved in the years of the People's Republic of Poland (1944-1989)[42].

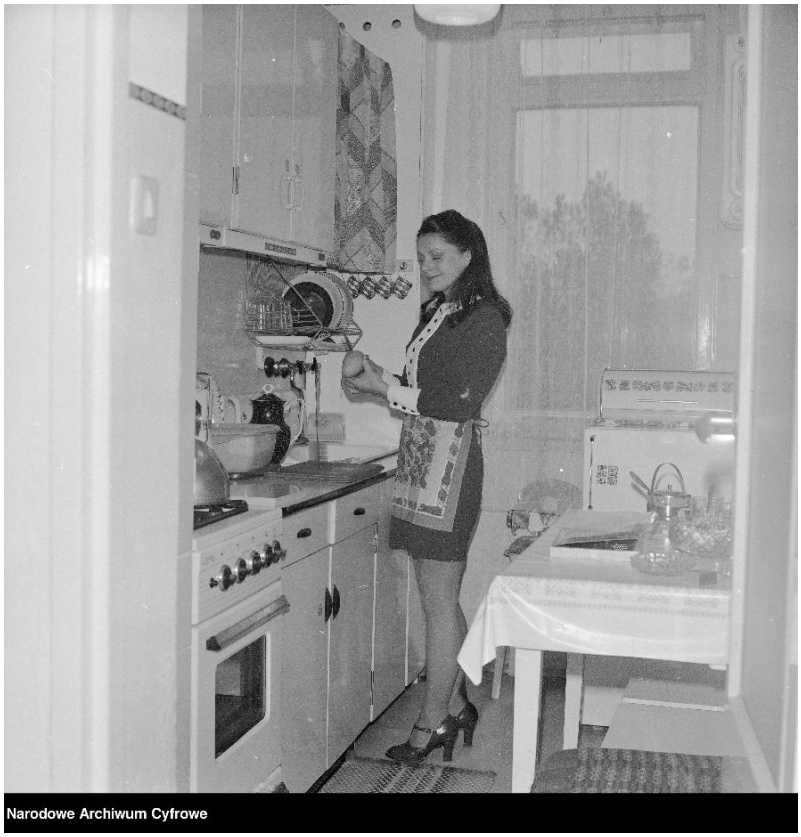

Figure 17. A woman in a kitchen from 1977. It remained as a small and separated room in the years of the socialist realism in Poland. Source: National Digital Archive, 1977.

Prior to 2018, building laws in Poland mandated that all studio apartments must have a separate kitchen area, which caused the standards from the times of the Polish People's Republic to last[43]. This was to ensure that the room was adequately ventilated and isolated from the rest of the living space. However, in 2018, a significant change was introduced in the Polish building

[42] Cymer, "Kobiety w kuchni: architektki".
[43] Rozporządzenie Ministra Infrastruktury z dnia 12 kwietnia 2002 r. w sprawie warunków technicznych, jakim powinny odpowiadać budynki i ich usytuowanie [Regulation of the Minister of Infrastructure from 12 April 2002 on technical conditions to be met by buildings and their location], (Dz.U. 2002, poz. 690).

regulations. New law allowed the possibility to connect kitchens with main living areas, as Barbara originally intended, provided they have access to daylight[44].

Barbara's kitchen design remained in the curricula of architectural and design institutes until the 1980s. The height of tabletops and hanging cabinets were based on Barbara's "typical figure" of a Polish woman[45]. Apart from this information, no other sources corroborating that Barbara's design was a direct inspiration for post-war kitchens have been identified. Nonetheless, the project has recently gained more popularity. In November 2013 the Museum of Modern Art in Warsaw organized workshops titled "Entrance from the kitchen", based on designs by Barbara Brukalska and Margarete Schütte-Lihotzky. The events took place in one of the "colonies" estates in Żoliborz. Moreover, in 2018, the National Gallery of Art in Warsaw "Zachęta" featured Barbara's kitchen design in an exhibition titled "Future will be different. Visions and practises of social modernization after 1918". It explored the ideas that emerged in the wake of political and social changes after Poland regained independence in 1918, and how they were reflected in art and culture[46]. Architecture and urban planning were most widely represented. A 1:1 scale model of Barbara's kitchen design was displayed (Figure 18) among her other works from the interwar period and the context of interior architecture from that time.

Figure 18. A 1:1 scale model of Barbara's kitchen design featured in the exhibition "Future will be different. Visions and practices of social modernization after 1918." in the National Gallery of Art in Warsaw "Zachęta", 2018. Source: archive of the National Gallery of Art in Warsaw.

[44] Nowelizacja rozporządzenia z dnia 8 grudnia 2017 r. roku Ministra Infrastruktury z dnia 12 kwietnia 2002 r. w sprawie warunków technicznych, jakim powinny odpowiadać budynki i ich usytuowanie [Amendment of the Regulation from November 14, 2017 of the Minister of Infrastructure from April 12, 2002 on the technical conditions to be met by buildings and their location], (Dz.U. 2017, poz. 2285).
[45] M. Leśniakowska, "Barbara Brukalska: subtelna budownicza płaszczyzn i form", 55.
[46] Unknown author, "Przyszłość będzie inna. Wizje i praktyki modernizacji społecznych po roku 1918."

The implementation of innovative and bold ideas of Barbara and Stanisław in the “colonies” did not fully meet their expectations. The Contemporary Kitchen was not adopted by the intelligentsia, which resulted with changes to the rational layout and separation from living spaces. Additionally, Barbara disregarded her own design principles, keeping the kitchen separate in her own home. It is difficult to connect Barbara’s kitchen design from 1927 directly to kitchens designed after the II World War, or kitchens nowadays, due to limited sources. It is possible that Barbara’s design principles were not considered, as the ideals of the socialist realism movement were not in line with those of pre-war modernists. However, Barbara’s Contemporary Kitchen has not been forgotten, as evidenced by the increased interest in her work in recent years.

Conclusions

I World War had caused the disappearance of many men, leaving women without financial support and pressuring them to provide for themselves and their families. Women in Poland gained the right to vote and stand for election in 1918, but equality was not widespread. Educational and professional possibilities were mostly available to men. As a result, many young women had to marry early and accept the patriarchal family structure. Meanwhile in Europe, the industrial revolution brought societal changes that influenced the way of life, cities, and architectural design. The Frankfurt kitchen, created by an Austrian female architect Margarete Schütte-Lihotzky in 1926, was among the key innovations of the interwar period. She developed the kitchen as a response to housing crisis in Germany, and designed it to fit all the necessary functions in the smallest possible space. At the same time, kitchens in Poland lacked specific forms. Upper-class families could afford separate kitchens ran by domestic workers, while majority of the population had to build them with limited resources and space.

Against the backdrop of Polish post-war reality Barbara Brukalska, a Polish female architect, developed a concept for a modern kitchen in 1927, inspired by Margarete Schütte-Lihotzky. The Contemporary Kitchen was supposed to serve as a comprehensive design for different social groups. Barbara's proposal was even more radical than Margarete's, as it considered the kitchen as a central and essential part of a home, which should be connected with the living area. Barbara managed to achieve all this despite the limited building and mechanical standards prevailing in Poland at the time.

On the one hand, Barbara was born into an upper-class family, with more educational and professional opportunities than most of women in Poland at that time. On the other hand, as part of an architectural duo with her husband, she was destined to be overlooked, and even to have her work attributed to Stanisław. Nevertheless, Barbara was one of the pioneers of modern architecture and interior design in Poland, which is supported by the analysed sources. Not only did she manage to create the first modern kitchen in Poland, but also contributed to urban and landscape planning of housing estates (having written *Social principles of designing housing estates*).

Barbara Brukalska's vision for the kitchen as an integrated and open part of a modern home was surely ahead of its time. However, the implementation of her design in the "colonies" was not entirely successful. Barbara and Stanisław's vision for a unified community of working-class and intelligentsia residents did not come to fruition. It also resulted in changes of the kitchen layouts, used by the tenants differently than originally intended. Surprisingly, Barbara did not follow her own manifesto when designing her family house, keeping the kitchen separate and using the help of domestic workers. This inconsistency can be interpreted as a sense of superiority over people for whom Barbara designed, which could have derived from her upper-class upbringing. Furthermore, modernist ideals did not resonate with socialist realism movement, dominant in Poland after II World War. This could also explain why direct connections between Barbara's design and kitchens after 1945 have not been identified. However, the recent resurgence of interest in her design indicates that it was indeed an innovative idea that will not be forgotten any time soon.

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