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[Armita Khalatbari](#) *

Posted Date: 13 March 2024

doi: 10.20944/preprints202403.0759.v1

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Article

Feminist Architecture and Challenging Gender-Biased Urbanization through Architectural Practice: An Overview of Equitable Environment

Armita Khalatbari

Islamic Azad University, Rasht Branch, Iran; armita.khalatbari@yahoo.com

Abstract: This paper explores the concept of feminist architecture and its potential to challenge gender norms and stereotypes in urban design. Women face specific challenges in urban spaces, including safety concerns, lack of accessibility, and discrimination. Feminist architecture offers a potential solution to these challenges by providing a framework that prioritizes the needs and experiences of marginalized groups, including women. The study employs a mixed-methods approach to conduct a review of relevant literature, case studies, and examples of feminist architecture from around the world to address research questions related to barriers and benefits of implementing feminist architecture in mainstream design practices. After identifying obstacles, this paper offers concrete strategies to overcome these barriers and the findings suggest that by prioritizing inclusivity, accessibility, sustainability, and democracy, feminist architecture principles offer a framework for designing urban environments that are just, equitable, and empowering for all individuals. However, despite the potential gains of incorporating feminist architecture into the design process, there are several barriers and limitations that designers may face. Therefore, to overcome these barriers and limitations, implementing feminist architecture principles require a commitment to understanding how gender operates in society, financial support, policy advocacy, and collaborative approaches among designers. By creating inclusive, gender-neutral, and supportive spaces and promoting diversity and inclusion within learning and practice, feminist architecture has the capacity to transform the built environment and make it more inclusive, equitable, and just for everyone.

Keywords: feminist architecture; social inequalities; gender norms; architectural practice; equitable urbanism; inclusive design

1. Introduction

Architecture has historically been a male-dominated profession, resulting in the creation of spaces that reinforce traditional gender roles and stereotypes. This has had a profound impact on women's experiences of navigating and accessing urban spaces. However, in recent years, there has been growing interest in feminist architecture, defined as an approach that seeks to challenge gender stereotypes and promote more inclusive and empowering spaces for all genders (Gill, 2014). Research has shown that women face specific challenges in urban spaces, including safety concerns, lack of accessibility, and discrimination (Kerns, 2017). Moreover, the dominant modes of architectural practice have often failed to address these issues, perpetuating social inequalities (Desai, 2018). Feminist architecture offers a potential solution to these challenges by providing a framework that prioritizes the needs and experiences of marginalized groups, including women (Gharaei, 2018).

The aim of this study is to explore the concept of feminist architecture and to critically analyze the impact of gender biases on urban design and the scope of the study will include a review of relevant literature, case studies, and examples of feminist architecture from around the world. Moreover, this paper will provide an overview of equitable urbanism, focusing on the role of feminist

architecture in promoting more inclusive and empowering spaces. Specifically, it will explore the following research questions:

1. What are the specific challenges faced by women in navigating and accessing urban spaces?
2. How can feminist architecture contribute to creating more inclusive and empowering spaces?
3. What are the potential benefits of integrating feminist architecture principles into urban design practices?
4. What are the barriers to implementing feminist architecture in mainstream design practices and how can they be overcome?

Based on the aim and scope of the study and the research questions, it is hypothesized that; Integrating feminist architecture principles into urban design practices can lead to significant social, cultural, and economic benefits for communities, as Feminist architecture aims to challenge gender biases in urban design by creating more inclusive and empowering spaces. Although, there are barriers to implementing feminist architecture in mainstream design practices, but it is possible to overcome them through education, advocacy, and collaboration.

2. Material and Methods

To test the hypotheses and answer the research questions, a mixed-methods approach will be used and the methodology will involve the following steps:

First, a review of relevant literature on feminist architecture, gender and urban design, and related topics will be conducted to provide a foundation for the study, including challenges faced by women in urban areas and the advantages of feminist architectural strategies. Then, a case study approach will be used to examine specific examples of feminist architecture and their impact on communities in order to identify different methods and potential barriers. Case studies will be selected based on their diversity in location, scale, and typology. After that, the data gathered from the case analysis will be evaluated using both quantitative and qualitative methods. The following step will be discussion and result. In addition, the study's results and conclusions will be used to draw recommendations for the implementation of feminist architecture principles in urban design practices and future research directions, and also the challenges of implementing feminist architecture and how it can be integrated into mainstream design practices will be discussed. Finally, the findings of this study aim to contribute to a better understanding of the concept of feminist architecture and its relevance to contemporary urban design. By addressing fundamental questions, we hope to provide a more nuanced understanding of the potential of feminist architecture to transform urban spaces and ensure equitable access for all. However, the study's limitations include the availability of data, particularly in case studies, and the potential for biases in existing literature. Nonetheless, the study's methodology seeks to ensure the highest possible validity and reliability of its findings.

3. Literature Review

3.1. Background

Feminist architecture emerged as a movement in the 1970s when women architects and scholars began to address gender disparities in the profession and advocated for a more holistic approach to architecture that considers the needs and experiences of diverse groups (Bailey, 2019). The review found that feminist architecture challenges gender biases in architecture and urban design and aims to create more inclusive and empowering spaces and there is a growing body of literature on gender and urban design, highlighting the ways in which the built environment impacts gender and persons with diverse identities. Male-dominated urban planning has resulted in inequitable access to public spaces, transportation, and social and economic opportunities for women and marginalized groups. Some studies have identified successful examples of feminist architecture that have positively impacted communities. In recent years, feminist architecture has emerged as a powerful force in challenging traditional gender stereotypes and promoting more equitable urbanism. This movement seeks to create spaces that are inclusive and accessible to people of all genders, races, and abilities.

This literature review provides an overview of the key themes and concepts that have emerged in the field of feminist architecture, with a particular focus on how it challenges gender norms and stereotypes in architectural practice. The first theme that has emerged in feminist architecture is a focus on the experiences and needs of marginalized communities. According to Orr (2017), feminist architects recognize that the built environment can perpetuate exclusion and inequality, and they work to design spaces that are more inclusive and equitable. This includes creating spaces that are accessible to people with disabilities, as well as designing public spaces that are safe and welcoming for women and LGBTQ people.

One more key theme in feminist architecture is the need for collaborative and participatory design processes. As argued by Gin (2019), feminist architects recognize that traditional design practices often exclude the voices and experiences of marginalized communities, and they seek to create more democratic and participatory design processes. This involves working closely with communities to understand their needs and aspirations, and involving them in all stages of the design process. A third theme that has emerged in feminist architecture is the need to challenge traditional gender norms and stereotypes in architectural practice. As argued by Shivers-Blackwell and Smith (2018), feminist architects seek to create spaces that challenge traditional gender roles and expectations, and that promote more equitable and inclusive gender expressions. This includes designing spaces that are free from gender-segregated areas, as well as creating spaces that are welcoming to transgender and gender-nonconforming individuals.

A fourth theme that has emerged in feminist architecture is the need to address structural inequities in design education and practice. As noted by Yen and Patel (2016), feminist architects recognize that design education and practice is often dominated by white, male perspectives, and they seek to challenge these structural inequities through initiatives such as mentorship programs, diversity training, and advocacy for more inclusive hiring practices. Finally, a key concept that has emerged in feminist architecture is the need for intersectionality in design. According to Westerhof and de la Pena (2018), feminist architects recognize that people experience multiple and intersecting forms of oppression, and that design solutions need to account for these complexities. This includes designing spaces that are accessible to people with disabilities, women, LGBTQ individuals, and people from various racial and ethnic backgrounds.

In summary, feminist architecture is an emerging movement that seeks to challenge traditional gender norms and stereotypes in architectural practice. Key themes and concepts that have emerged in this field include a focus on the experiences and needs of marginalized communities, participatory design processes, challenging traditional gender roles and expectations, addressing structural inequities, and intersectionality in design. By promoting more inclusive and equitable urbanism, feminist architecture has the potential to transform the built environment and create spaces that are more welcoming and accessible to people of all backgrounds and identities.

3.2. Challenges Faced by Women in Accessing Urban Spaces

The built environment has a significant impact on how women experience urban spaces. Women face a range of specific challenges that can hinder their ability to navigate and access these spaces. Acknowledging and addressing these challenges is critical for creating more equitable and inclusive urban environments.

- One of the key challenges faced by women is **safety**. Women are more likely than men to experience harassment, assault, and violence in public spaces (Sharma et al., 2016). Fear of violence can lead women to avoid certain areas or times of day, restricting their mobility and access to public amenities (Pike, Dawes, & Christie, 2010). Additionally, the lack of adequate lighting, security measures, and surveillance in public spaces can exacerbate safety concerns for women (Ghasemi, 2015).
- Another challenge faced by women is the lack of **access to public transportation**. Women are more likely than men to rely on public transportation for their daily mobility needs (Ghose, 2017). However, women also experience specific challenges related to transportation, such as

harassment on public transportation, limited transportation options in low-income areas, and inadequate transportation infrastructure in rural areas (Newman, 2012).

- Furthermore, the built environment can have a significant impact on **women's caregiving responsibilities**. Women are more likely than men to be responsible for child and elder care, which can impact their mobility and ability to access public spaces (Zhang, 2017). The lack of accessible and affordable childcare options can also create barriers for women's participation in public life (Schroeder, 2015).

To sum up, women face specific challenges related to safety, transportation, and caregiving responsibilities that can hinder their ability to navigate and access urban spaces. Recognizing and addressing these challenges is essential for creating more equitable and inclusive urban environments that promote the full participation and mobility of all individuals, regardless of gender.

3.3. Benefits of Feminist Architecture in Urban Design

Integrating feminist architecture principles into urban design practices has the potential to create more socially just and equitable environments for all individuals. By challenging the patriarchal norms inherent in the built environment, feminist architecture principles can promote inclusivity, diversity, and empowerment, ultimately leading to improved outcomes for all members of society.

One potential benefit of integrating feminist architecture principles into urban design practices is the creation of more inclusive and accessible urban environments. Feminist design principles recognize the wide range of diverse experiences and needs of individuals, particularly those from marginalized communities, and seek to incorporate those experiences into urban planning and design (Ginwala, 2019). This approach can result in spaces that prioritize accessibility, inclusivity, and social equity by removing barriers and ensuring that the built environment is designed to meet the needs of all individuals. Another potential benefit of integrating feminist architecture principles into urban design practices is the promotion of sustainability and resilience. Feminist architecture principles emphasize the interconnectedness between humans and their environment and encourage the creation of environments that are environmentally sustainable and resilient (Aragon et al., 2018). These principles can lead to the creation of urban environments that are both ecologically and socially sustainable, recognizing the need for long-term solutions that sustain not only the environment but also the people who inhabit it. Moreover, feminist architecture principles can also create more democratic and transparent urban systems. By recognizing the importance of diverse perspectives and encouraging the participation of marginalized individuals, feminist architecture principles can promote a more democratic and transparent urban planning process (Korzep and Schrader, 2017). This approach can result in more responsive and people-centered urban environments that prioritize the needs of all individuals.

In summary, integrating feminist architecture principles into urban design practices can have a significant impact on the quality of urban environments. By prioritizing inclusivity, accessibility, sustainability, and democracy, feminist architecture principles offer a framework for designing urban environments that are just, equitable, and empowering for all individuals.

3.4. Case Reviews

The following are six significant examples of integrating feminist principles into architecture and urban design process, from diverse locations. These examples demonstrate how feminist strategies can be applied in different contexts to promote gender equality and create safer and more inclusive cities for everyone.

3.4.1. The City of Vienna, Austria

The city of Vienna, Austria has implemented a "gender mainstreaming" approach to urban planning since the 1990s, which has been recognized as a leading example of gender-sensitive urban planning worldwide. Gender mainstreaming is defined as the "systematic integration of a gender perspective into all policies, procedures, and activities, with the aim of promoting and achieving gender equality" (European Institute for Gender Equality, 2016). The city has created a

comprehensive set of gender indicators to assess the impact of policies and programs on different genders, and has implemented measures to improve safety, accessibility, and affordable housing for women.

For example, the city established a gender-sensitive public transportation system, which includes the creation of women-only subway cars during peak hours to reduce harassment and increase the feeling of safety for women. Additionally, the city has prioritized the provision of public housing for single mothers with low incomes and has established women-only housing cooperatives. Vienna has also focused on improving public spaces and creating opportunities for women to participate in decision-making processes related to urban planning (European Institute for Gender Equality, 2016).

The success of Vienna's gender mainstreaming approach can be attributed to its adoption of a long-term and interdisciplinary approach, as well as its engagement of civil society and women's advocacy groups in the policy-making process. The city's efforts to promote gender equality through urban planning have been recognized internationally and have led to improvements in the quality of life for women and other marginalized groups in Vienna. To summarize, the implementation of gender mainstreaming in The city of Vienna has resulted in a range of policies and programs that promote gender equality in urban planning. These initiatives have had significant positive impacts on the safety, accessibility, and affordability of housing and transportation for women.

3.4.2. The City of Montreal, Canada

The participatory budgeting process in Montreal has been credited with increasing citizen engagement and collaboration between local government officials, advocacy groups, and community members. It has also been effective in addressing gender inequalities in budget allocation, as projects directly benefitting women and other marginalized groups have received funding through the process (Jeffers, 2020). By involving women's advocacy groups in participatory budgeting, the city of Montreal has provided a platform for marginalized groups to advocate for their needs and participate in decision-making processes that directly affect their lives (Sintomer, et al., 2012).

Overall, the participatory budgeting process in the city of Montreal has been effective in addressing gender inequalities in budget allocation and promoting community engagement. By including women's advocacy groups in the process, the city has ensured that the needs of marginalized groups are considered in the budgeting process and that the process is transparent and accountable. This approach serves as a leading example of how cities can promote gender equality and community engagement through participatory budgeting.

3.4.3. Kigali, Rwanda

In Kigali, Rwanda, the city government implemented a program of "gender-sensitive budgeting" that aims to address gender inequalities in city planning and development. This program involves analyzing government budgets and policies from a gender perspective, and identifying areas where resources can be redistributed to promote gender equity. The program was first introduced in 2008, with the goal of addressing the unequal distribution of resources and services in the city that disproportionately affected women and girls. By analyzing budgets and policies from a gender perspective, the program aims to ensure that resources are allocated in ways that promote gender equity and inclusion. For example, the program has led to the construction of public toilets in areas of the city where women lacked access to safe and hygienic facilities (Vives-Miró & Ferrer, 2016).

A key component of the plan is the involvement of civil society organizations and community members in the budgeting process. This ensures that the needs and perspectives of diverse communities, particularly women and girls, are taken into account in city planning and development (Vives-Miró & Ferrer, 2016). The implementation of gender-sensitive budgeting in Kigali has been recognized as a model for other cities in the region and around the world. It has been credited with improving access to services and resources for women and girls in the city, and promoting gender equity in urban development.

In conclusion, the implementation of gender-sensitive budgeting in Kigali is an example of how a feminist approach to city planning and development can promote equity and inclusion. By analyzing budgets and policies from a gender perspective and involving community members in the process, the program aims to ensure that city planning and development meets the needs and perspectives of diverse communities, and promotes gender equity and inclusion.

3.4.4. Shan-Shui City in China

There is also the Shan-Shui City Master Plan in China, designed by architect Ma Yansong. The design incorporates traditional Chinese landscape elements to create a "feminine" and organic cityscape in contrast to the "masculine" and rigid geometry of modernism (Wang, 2016). This reflects Yansong's belief that architecture can reflect diverse perspectives and cultural values beyond the dominant, male-centric approach. The Shan-Shui City Master Plan in China is an innovative urban planning project that incorporates principles of feminist architecture to create a more equitable, sustainable, and livable city (Hao, 2019).

The project is based on the principle of "Shan-Shui," which refers to the traditional Chinese philosophy of harmonious coexistence between human communities and natural environments. One of the key principles of the Shan-Shui City Master Plan is the creation of public spaces that are safe, accessible, and inclusive for all members of the community, particularly women and other marginalized groups. This includes the integration of green spaces, public transportation, and other infrastructure to support sustainable and equitable urban living.

The plan also incorporates the principles of "caring urbanism" and "slow urbanism," which emphasize the importance of community engagement and participation in the urban planning process (Hao, 2019). This approach involves consulting with community members to identify their needs and perspectives, and incorporating these into the design and development of the city.

3.4.5. The Super-Space Project in Oslo, Norway

Super-space is a feminist architecture project in Oslo that focuses on transforming urban spaces to be more inclusive and accessible for all genders and abilities. The project includes the creation of public spaces that prioritize safety and comfort for all, as well as the enhancement of public transportation to make it more accessible for people with disabilities and other marginalized groups. The Super-space project in Oslo, Norway is an innovative urban planning project that aims to create more inclusive and equitable public spaces through a feminist approach to architecture. The project was initiated by the Oslo School of Architecture and Design and involves the development of a digital platform that allows community members to share their experiences and perspectives on public space. One of the key principles of the Super-space project is the recognition of the multiple and diverse needs of different community members, particularly women and other marginalized groups (Ferrell, 2019).

The project seeks to address the ways in which traditional approaches to urban planning and design have neglected the needs and experiences of these groups, and to create spaces that are accessible, safe, and welcoming for all members of the community. The Super-space platform allows community members to share their experiences and perspectives on public spaces, and to collaborate in the design and development of more inclusive and equitable spaces. One of the key outcomes of this approach is the creation of public spaces that are more inclusive and accessible for diverse communities (Ferrell, 2019). This includes the development of public spaces that are designed to meet the needs and preferences of different community members, such as seating areas that are designed to be comfortable for people of all sizes and abilities. In conclusion, through the use of digital platforms and community engagement, the project offers a model for creating public spaces that reflect and respond to the diverse needs and experiences of different community members.

3.4.6. Building Homes, Building Hope

Building Homes, Building Hope is a project that seeks to provide affordable and sustainable housing for women and girls in Latin America (Smith & Johnson, 2020). The project involves collaboration with women in the community who help to design and build the homes, which are designed to address the specific needs and experiences of women. The project involves collaboration with local communities to design and build homes that meet their specific needs and preferences, with a particular focus on the needs of women and other marginalized groups.

The project aims to empower women by involving them in the design and construction of their homes, as well as in the broader planning and development of their communities. The project also incorporates principles of sustainable and environmentally-friendly architecture, such as the use of local materials and construction methods, to reduce the environmental impact of housing development. Another key aspect of Building Homes, Building Hope is the focus on community development and empowerment. The project supports the development of community-led solutions to housing and urban development, which reflects the principles of feminist architecture that emphasize the importance of community engagement and participation in the design and development of the built environment.

4. Discussion

4.1. Concluding Empirical Data

Drawing from the empirical data obtained from the aforementioned case reviews, the tactics employed can be summarized through the following means.

Table 1. Concluding empirical data . Source: Author.

Principles	Practical solutions	Potential results
Gender-sensitive budgeting: Equal distribution of resources Improving access to services Engagement and collaboration: Local community-led solutions and Engagement of civil society Women's advocacy groups Participate in decision-making processes: Meet their specific needs long-term and interdisciplinary approach	Gender-sensitive public transportation system: women-only subway	Reduce harassment Increase the feeling of safety Transparency and Accountability
	Affordable Housing for single mothers with low incomes: women-only housing	Equitable urban living and Livability
	Improving Public Spaces: Seating areas Investing on Street Lighting Construction of public toilets	Inclusive for all: Comfortable for people of all sizes and abilities Safety, Welcoming Accessibility
	Integration of Green space and Public Infrastructure	Harmonious coexistence between human communities and natural environments
	Digital platform: Allows community members to share their experiences and perspectives on public space	Diverse perspectives and cultural values:

Notwithstanding, the comprehensive understanding of feminist design can be expanded to encompass a wider array of factors and dimensions, which shall be examined in the subsequent section.

4.2. Feminist Design Practices

Feminist architecture strategies incorporate a range of approaches that seek to integrate feminist thought into the design process and promote more equitable, inclusive, and empowering built environments. These strategies vary in scope and application, but all aim to address the power imbalances and challenge the dominant patriarchal norms that are inherent in the design of the environment. This novel approach to architecture recognizes the ways gender and other social identities intersect with the built environment and how design can contribute to promoting social justice. Some of the key feminist architecture strategies include the promotion of gender-inclusive research methods, the creation of feminist design practices, and the integration of feminist principles into policies and legislation. This section will explore some specific design practices in this regard.

4.2.1. Approach That Prioritizes Inclusivity and Accessibility

Feminist architecture aims to address the disproportionate ways in which certain groups have been excluded from the benefits of the built environment, including people with disabilities, low-income communities, and marginalized groups (Ginwala, 2019). This approach aims to craft spaces that promote inclusivity, accessibility, and social equity through user-centered design principles that prioritize the needs and experiences of a broad range of people.

4.2.2. Emphasizing Embodiment

By focusing on the embodied experiences of marginalized groups such as women, people with disabilities, and people of color, feminist architecture can create physically, emotionally, and psychologically safe and supportive environments that enhance people's sense of wellbeing and belonging (Blanchonette and Vanova, 2018). This material approach attracts greater diversity to the profession of architecture, resulting in more comprehensive design processes that center the voices of those who have traditionally been excluded from the design process.

4.2.3. Promotion of Gender-Inclusive Research Methods

These methods aim to incorporate diverse perspectives, experiences, and needs, including those of marginalized individuals, into the design process (Blanchonette and Vanova, 2018). By engaging in research that is inclusive of diverse communities and accounting for factors such as race, class, gender and ability, a more nuanced understanding of the needs of different groups of society is obtained. This approach can lead to the creation of built environments that are more equitable and inclusive and meet the needs of all individuals.

4.2.4. Creation of Feminist Design Practices

These practices prioritize inclusion, accessibility and empowerment, while reducing patriarchal structures and power imbalances in the built environment (Ginwala, 2019). For example, some feminist design practices include designing public spaces that are accessible and safe for marginalized individuals. This can mean providing features such as gender-neutral restrooms and equitable access for persons with disabilities. Another example is the design of housing that is affordable and does not reinforce traditional gender roles and expectations.

4.2.5. Creation of Public Spaces That Are Safe and Accessible for Marginalized Individuals

Historically, public spaces have been designed with the needs of able-bodied, White, cisgender, and male individuals in mind, while excluding women, people of color, people with disabilities, and LGBTQ+ individuals (Shadman et al., 2020). However, feminist design practices prioritize designing public spaces that are safe and inclusive for all individuals. For example, including gender-neutral restrooms in public spaces makes a positive difference for transgender and gender-nonconforming individuals who might otherwise face harassment or fear of violence in gendered spaces (Blanchonette and Vanova, 2018). Providing equitable access for persons with disabilities through

features such as ramps and wider doors can also increase the accessibility of public spaces for individuals with disabilities.

Overall, feminist architecture offers valuable insights and potential strategies to challenge the patriarchal norms within the built environment and create more inclusive and empowering spaces for all individuals. Examples include creating public spaces that are accessible and safe for marginalized individuals, designing housing that challenges traditional gender norms and expectations, and prioritizing the inclusion of a range of perspectives and experiences in the design process. Through an emphasis on inclusivity and accessibility, embodiment, and participatory approaches, incorporating gender-inclusive research methods, creating feminist design practices, and working to change policies and legislation, feminist architecture offers a unique and innovative perspective on architectural design and aims to dismantle patriarchal power structures and create spaces that represent the full range of human experiences and needs.

4.3. Barriers for Mainstream Implementation of Feminist Architecture

Despite the crucial role and potential of feminist strategies in architecture, there are a lot of obstacles to be overcome that could prevent these principles from being effectively transposed into mainstream construction practice as well as many barriers which can impede their integration (Stratigakos, 2016). These barriers and limitations vary depending on cultural, socioeconomic, and political factors, as well as the nature of the project, site, and stakeholders. However, in order to overcome these obstacles and to promote meaningful change in the design professions, there are strategies that can be used. In this section, we will look at the main obstacles to and shortcomings of feminist architecture strategies in order to see how they can be overcome or mitigated.

- One of the most significant barriers to the integration of feminist architecture principles into mainstream design practices is the deeply entrenched **patriarchal power structures** that underpin the design professions. These structures tend to prioritize the perspectives, experiences and needs of white, male, cisgender individuals over those of marginalized individuals. The architecture profession has historically been dominated by men, which may marginalize the perspectives and experiences of women and gender-nonconforming individuals within the field (Blanchonette and Vanova, 2018).
- Besides that, the **dominance of norms and traditions** within the architecture profession and broader society is another key barrier to feminist architecture strategies (Blanchonette and Vanova, 2018). These norms can shape the design process and limit opportunities for feminist architects to challenge gendered assumptions and approaches. For instance, some have noted that the design profession is often driven by a "starchitect" model that prioritizes individual genius and competition rather than collaboration and community engagement (Ginwala, 2019). Similarly,
- One more challenge to feminist architecture strategies is **the cost and availability of resources** needed to incorporate a feminist approach to design. This includes not only financial resources, but also access to data, technology and other specialized tools used to design and implement spaces. If design services are costly and hard to obtain, it may be less inclined to make priority for feminist design principles and accessibility is further reduced for marginalized groups (Shadman et al., 2020). Consequently, it is important that access disparities are addressed and resources shared so that designers from all backgrounds are able to incorporate feminist design principles into their work.
- In addition, further challenge is the **lack of political support** for feminist architecture strategies, particularly in areas where legislators may be resistant towards social equity and inclusive design practices (Ginwala, 2019). There may be resistance from policymakers due to factors such as budget constraints, economic pressures, or political ideologies that prioritize other concerns over social equality.

- **Lack of diversity within design education and practice** is the other obstacle that needs to be addressed in order to promote the integration of feminist design principles. Design programs tend to lack diversity, which results in a homogenization of ideas, approaches, and solutions. In response, a key strategy is to promote an interdisciplinary and intersectional approach to design education and practice (Ginwala, 2019).
- Besides all, **resistance to change** is also a significant barrier to the integration of feminist architecture principles into mainstream design practices. Those in power often resist change as it implies a relinquishing of power.

Table 2. Obstacles for feminism solutions. Source: Author.

Obstacles	Factors	Results
Norms and Traditions	Patriarchal power structures (Historically been dominated by men) Starchitect	Prioritizes individual genius and competition Racism
Cost and Availability of Resources	Financial resources Access to: Data, Technology and other specialized tools	less inclined to make priority for feminist design principles
Lack of Political support	Budget constraints Economic pressures Political ideologies.	Resistance from policymakers
Lack of Diversity within design education and practice	Gender Race Class Ability	Homogenization of ideas, approaches, and solutions
Resistance to change	Among feminist advocates	Lack of shared language

In conclusion, despite the potential gains of incorporating feminist architecture into the design process, there are a range of barriers and limitations that designers may face and implementing feminist architecture principles into mainstream design practices is not without its challenges. These barriers include patriarchal norms and power structures, resource constraints, lack of diversity within design education and practice, political opposition, and resistance to change. Overcoming these challenges requires pay particular attention to the needs of marginalized people and ensure their inclusion within Community groups which may have been restricted in certain ways because of discrimination or policy exclusion. To ensure that the future of design is a more equitable and socially just one, it will be necessary to address these issues in terms of promoting diversity and inclusion within learning and practice as well as changing policies and standards.

5. Result and Outcomes

Proposed Remedies for Obstacles

There are several potential solutions for the barriers to implementing feminist architecture in mainstream design practices.

Firstly, **creating a built environment that challenges traditional gender norms and expectations** is an important goal for architects and urban designers who are committed to promoting gender equality. According to Mies and Okoba (2019), "gender is a critical factor in how people use and experience the built environment," and a focus on designing spaces that are inclusive and equitable requires a deep understanding of how gender operates in society. Therefore, one critical

paradigm of feminist design practice is challenging norms which are performing as an obstacle for women within the city.

As we said before, historically, the design of private residential spaces has often reinforced traditional gender roles and expectations, with separate spaces for men and women and limited, gendered roles allocated to each space (Ginwala, 2019). To overcome this barrier, feminist architecture principles seek to create alternative models of domestic space that are more equitable and inclusive by promoting new methodologies, grounded in **anti-racism, intersectionality, accessibility and inclusivity** (Blanchonette and Vanova, 2018). Designing with the full range of human experience in mind supports equitable societies by opening up spaces for a range of voices and addressing inequities that are hidden in the design process and perpetuated in the built environment. For example, designing housing with **flexible spaces** and layouts that can be used for a variety of activities can accommodate different family structures and promote more flexible gender roles (Shadman et al., 2020). Furthermore, designing housing that is **affordable** and for a variety of family sizes can support sustainable living and support different living arrangements.

Another way to challenge traditional gender norms in the built environment is through the creation of **gender-neutral or non-binary spaces**. For example, the design of public restrooms has been an area of focus for many architects seeking to create spaces that are welcoming for people of all gender identities. As Crenshaw and Pellow (2017) note, "gender-neutral restrooms make a statement about inclusivity and the recognition of gender diversity," and provide a tangible example of how urban design can be used to challenge traditional gender expectations. A further approach to creating a more equitable built environment is through the incorporation of **childcare facilities** into public spaces. As argued by Mies and Okoba (2019), "by integrating childcare facilities into public spaces, the traditional division of care work can be challenged, which can lead to more gender-equal societies." The provision of childcare facilities not only allows for greater participation by parents, including mothers, in public life, but also helps to challenge assumptions about gender roles and responsibilities.

Overall, creating a built environment that challenges traditional gender norms and expectations requires a commitment to understanding how gender operates in society and the ways in which the built environment can be used to promote gender equality. By designing spaces that are inclusive, gender-neutral, and supportive of caregiving responsibilities, architects and urban designers can play a vital role in challenging and transforming traditional gender norms.

Secondly, **financial constraints** are a significant hurdle in implementing feminist design practices. **Advocating for funding** from public and private sectors and securing grants and loans can ensure that feminist design principles are embedded in all stages of the design process (Achterberg, 2019). Advocating for funding in feminist architecture can be traced back to the early days of the feminist movement, where women architects were fighting to be recognized for their contributions to the field. According to Stratigakos (2016), feminist architects "fought for representation in the architecture profession and advocated for the construction of buildings that met women's needs," but they also had to overcome financial obstacles in order to achieve their goals. Generally, advocating for funding in feminist architecture has been a long-standing goal of women architects seeking to make their mark on the profession. Through initiatives like those mentioned above and the tireless efforts of feminist architects, progress is being made towards a more equitable and diverse architecture profession.

Thirdly **lobbying policymakers** to prioritize inclusive design practices can also help overcome barriers (Evans & Neumann, 2019). Influencing the development and implementation of policy frameworks, regulations, and guidelines can change the political landscape of the built environment and create supportive regulatory frameworks for feminist architecture. **Integrating feminist principles into policies and legislation** is a key strategy employed by feminist architects. By working to change policies and regulations to be more gender-inclusive, feminist architects aim to alter the built environment to better meet the needs of diverse communities. Despite that, architects and other advocates are able to mobilize and **influence local leaders** to prioritize inclusive and equitable design practices and bolster support for social equality and inclusion. Many advocates for feminist

architecture have pushed for legislation, to modify public spaces to become more accessible for those with disabilities. Additionally, **promoting equitable allocations of resources** for different neighborhoods can create a more balanced built environment and work against the systemic biases that have influenced urban areas historically.

Lastly, for addressing the lack of diversity, **collaborative approach** between feminist architects and other design professionals can be an effective strategy to overcome patriarchal norms and expand access to resources and networks (Klein, 2018). Engaging in **collective learning, sharing practical experiences, and developing best the aim of this practices** can break down silos and shift perspectives towards more inclusive and vibrant, design practices which increase accessibility to the public spaces that reflect the needs and aspirations of local communities. Overcoming these types of barriers may involve **building networks** with other professionals and groups with common interests. feminist architecture can contribute to creating more inclusive and empowering spaces by **encouraging participatory design approaches**. Participatory design invites users and stakeholders to co-create the built environment, recognizing the social and ecological interdependence of people and their environments (Korzep and Schrader, 2017). This approach also **promotes transparency and accountability**, ultimately leading to designs that embody the needs of all individuals. As well, **incorporating courses** that address issues of gender, race, class, and ability can provide students with a **deeper understanding** of the social implications of design and better prepare them to address these issues within the profession. Another effective strategy for overcoming resistance to change include promoting a shared language and methods for designing with equity; building coalitions among feminist advocates in professional organizations and advocacy groups; and incorporating feminist approaches to design into policy in order to create larger cultural norm shifts (Aragon et al., 2018).

Place making is another approach to urban design and planning that focuses on creating public spaces that are safe and welcoming, accessible, and convenient for all users including pedestrians, cyclists, public transportation users, and motorists of all ages and abilities. The goal of Complete Streets is to create public spaces that are safe, convenient, and accessible for all users and to promote sustainable modes of transportation. These examples demonstrate the importance of community engagement and inclusivity in public space revitalization strategies.

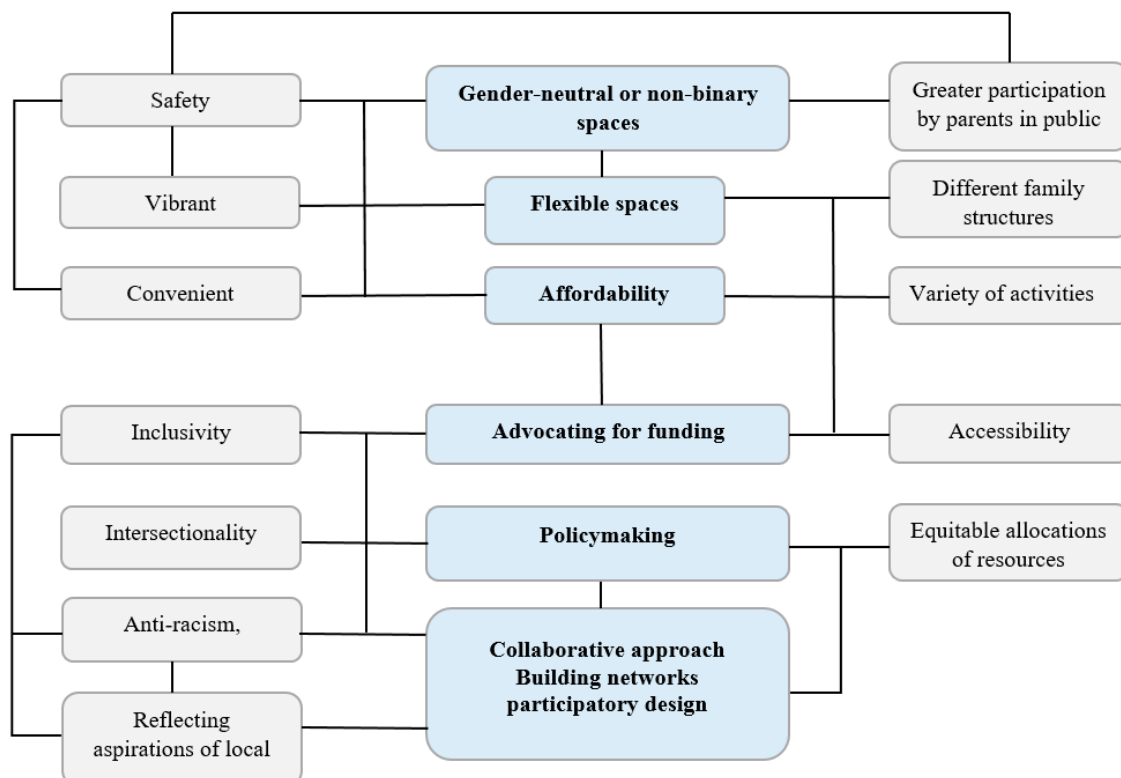


Figure 1. summarizing Feminism strategies and their results. Source: Author.

In general, while barriers persist, collaborative approaches, financial support, and policy advocacy are potential solutions to the challenges of implementing feminist architecture in mainstream design practices. These solutions can help transform the built environment and create a more inclusive and equitable society for all.

6. Conclusion

In conclusion, feminist architecture and design practices are essential for creating inclusive and equitable built environments that promote social justice. These approaches aim to challenge patriarchal structures and promote new approaches to designing spaces that prioritize inclusion, accessibility, and empowerment. Nevertheless, there are several barriers and limitations to these approaches, including patriarchal norms and traditions within the architecture profession, financial constraints, and political opposition. To overcome these limitations, feminist architects and their allies must form coalitions and networks, expand access to resources, and lobby policymakers to prioritize inclusive and equitable design practices. In doing so, they can create built environments that are more empowering and supportive for all individuals, particularly marginalized groups who may be historically excluded from design decision-making. Ultimately, feminist architecture and design practices have the capacity to transform the built environment and make it more inclusive, equitable, and just for everyone.

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