

Caitria Boomsma

Final Research Paper

Teaching Assistant: Jacob Gianni

A Man-Made World

Clara Greed writes: “the design and policy choices of an urban decision-maker reflect that professional’s life experience and assumptions of what the built environment should be like”.¹ If our architecture is designed by men, then our built environment reflects men’s ideals. This research paper will be exploring the tangible impact of a male-dominated field. This will include an exploration of the way in which men’s ideals shaped urban environments throughout history and how the lack of representation of women in the field affects their level of comfort in the built world.

How have men shaped our built environment?

In his book, “Building Sex: Men, Women, Architecture, and the Construction of Sexuality”, Aaron Betsky discusses the Champs-Élysées as an example of a piece of urban fabric that was designed by men, for men. Betsky discusses a conversation he had with a friend in which she asked “Why do I always feel out of place when I’m walking down the Champs-Élysées?”² Upon hearing this question, he realized that she felt out of place because it wasn’t designed for her. The street was designed for men to march down from the Arc de

¹ Molotch, Harvey Luskin., Laura Norén, and Jessica Vasquez. *Toilet: Public Restrooms and the Politics of Sharing*. NYU Press, 2010.

² Betsky, Aaron. *Building Sex: Men, Women, Architecture, and the Construction of Sexuality*. New York: Morrow, 1997.

Triomphe.³ Its grandeur was meant to symbolize the power of man. The street itself represents the body of a man: rigid, symmetrical, muscular.⁴ The Champs-Élysées is intimidating; it is meant to be. Parks were placed on either side of the avenue. These gardens were filled with scattered light and domesticated nature.⁵ Women were meant to occupy these spaces. The Champs-Élysées embodies the relationship between men and women at the time of its construction: men inhabited the central space, while women inhabited the sidelines.⁶



*Troops marching down the Champs-Élysées in 1944.*⁷

Men have created a world with straight streets and rational relationships that women do not feel comfortable in. Betsky argues that while men decided what our streets, towns, suburbs,

³Betsky, Aaron. "Women in a Man-made World: The Need to Build More Holistically." *Architectural Review*. March 6, 2018. Accessed November 20, 2018. <https://www.architectural-review.com/essays/women-in-a-man-made-world-the-need-to-build-more-holistically/10028674.article>.

⁴Betsky, Aaron. *Building Sex: Men, Women, Architecture, and the Construction of Sexuality*. New York: Morrow, 1997.

⁵ Ibid.

⁶ Ibid.

⁷ https://www.architectural-review.com/pictures/1180xany/1/7/7/3102177_btjg5j.jpg

and everything in between would look like, women made these spaces livable.⁸ Women added character and covered up the unfriendly architecture with fabrics and furniture that made people feel “at home”. Women decorated the salons along the Champs-Élysées with sensual materials and asymmetrical designs that suited them.⁹ But women can’t make themselves feel at home everywhere they go. The reality is women inhabit a world influenced by men and for many this world is cold and oppressive.

There is much more evidence of male body imagery influencing architecture and urban planning. Skyscrapers assert dominance over the surrounding landscape and often appear phallic.



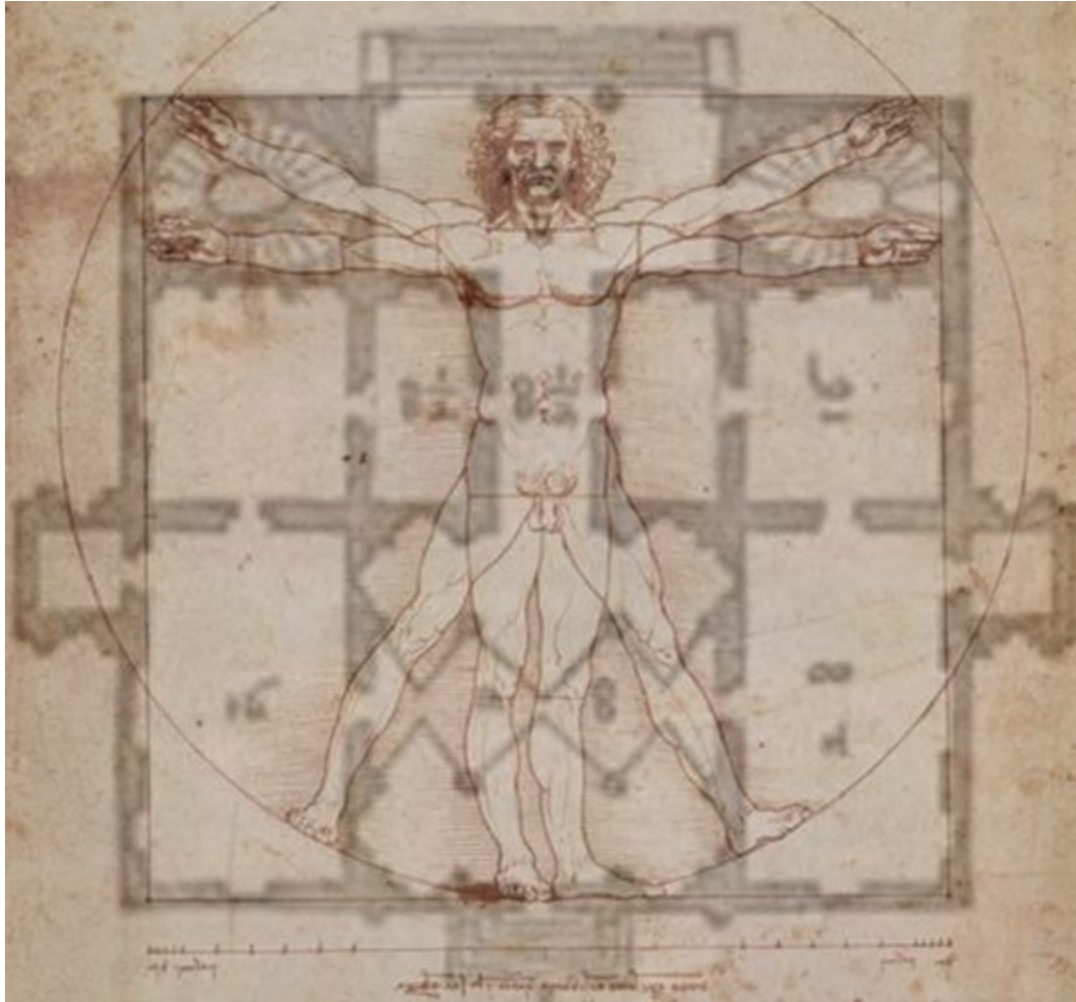
*Phallic skyscrapers.*¹⁰

⁸ Betsky, Aaron. *Building Sex: Men, Women, Architecture, and the Construction of Sexuality*. New York: Morrow, 1997.

⁹ Ibid.

¹⁰[https://www.thoughtco.com/thmb/QNCrH3dLB79ly8x2V2UOtydW364=/768x0/filters:no_upscale\(\):max_bytes\(150000\):strip_icc\(\)/skyscrapers-dubai-488734758-crop-59ee7c490d327a0010f410b6.jpg](https://www.thoughtco.com/thmb/QNCrH3dLB79ly8x2V2UOtydW364=/768x0/filters:no_upscale():max_bytes(150000):strip_icc()/skyscrapers-dubai-488734758-crop-59ee7c490d327a0010f410b6.jpg)

In fact, the proportions of the male body have been used to determine proportions of architectural elements throughout history. The most famous example of this is the “Vitruvian man”.



The Vitruvian Man¹¹ overlaid on Palladian floor plan.¹²

Vitruvius, an ancient Roman architect, decided that the human figure should be the primary influence in determining the proportions of classical architecture. He commissioned Leonardo da Vinci to demonstrate this concept by drawing the “ideal man” inscribed within a circle and

¹¹https://www.google.com/url?sa=i&source=images&cd=&ved=2ahUKEwjSqHs85_fAhVHMt8KHXI1AA8QjRx6BAgBEAU&url=https%3A%2F%2Fwww.allposters.com%2F-sp%2FVitruvian-Man-c-1492-Posters_i350167_.htm&psig=AOvVaw3i1IzDQkFu5cCjFuXJFk39&ust=1544896970208038

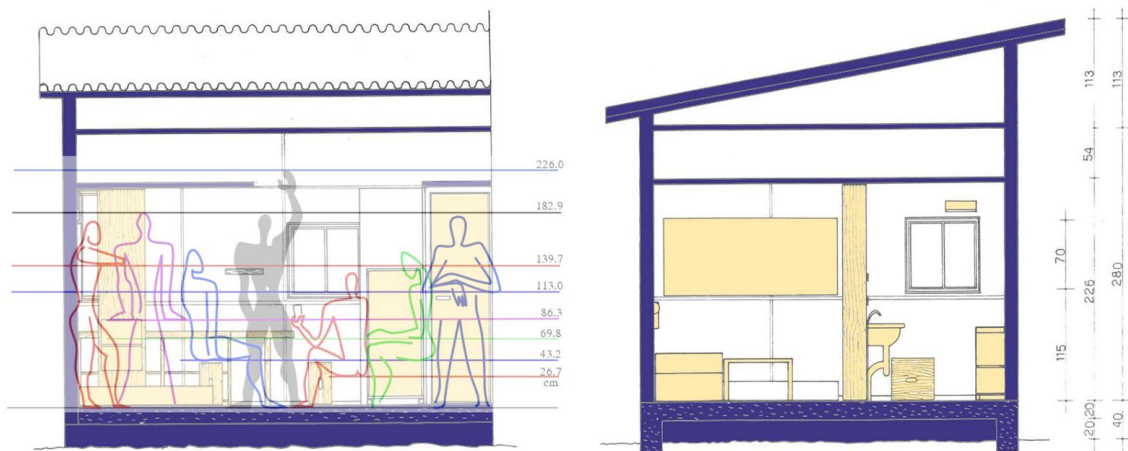
¹² <https://www.house-design-coffee.com/images/four-books-loc-p42-book2.jpg>

square. Not only does this minimize the importance of different body types, it excludes the consideration of female proportions from the design process entirely. It's not surprising that women are made to feel uncomfortable when experiencing architecture based off of such ideals.

While Vitruvius may have pioneered the use of male proportions in design during the first century B.C., this practice is not outdated. Le Corbusier, a Swiss-French architect practicing in the 20th century, created the fictional "Modulor Man". He created the Modulor Man with the goal of creating a "universal" system of proportions.¹³ However, his arbitrary six foot figure was anything but universal; in fact, Corbusier derived inspiration for the height of his Modulor Man from his favorite characters in obscure British crime novels.¹⁴ The measurements and proportions of the Modulor Man were then used to determine measurements of architectural elements such as door handle heights. This system earned widespread praise despite its exclusivity, highlighting the continued presence of male proportions in the modern design process.

¹³"Modulor Man by Le Corbusier." Icon Magazine: Architecture and Design Culture - Icon Magazine. 2018. Accessed December 14, 2018.
<https://www.iconeye.com/opinion/icon-of-the-month/item/3815-modulor-man-by-le-corbusier>.

¹⁴ Ibid.



Corbusier's Modulor Man¹⁵ overlaid on sections of his building "Le Cabanon" ¹⁶, which derived influence from this system.

There are even more literal examples of women's needs being ignored in the design process. Clara Greed discusses the issues with women's bathrooms in the excerpt "Creating a Non-Sexist Restroom". Firstly, many women complain about the lack of public toilets. Many city blocks in England house public bathrooms or urinals for men but contain no restrooms for females.¹⁷ At the University of Virginia in 1970, there were no women's bathrooms in most of the academic buildings.¹⁸ Secondly, even when there are an equal number of bathrooms for men

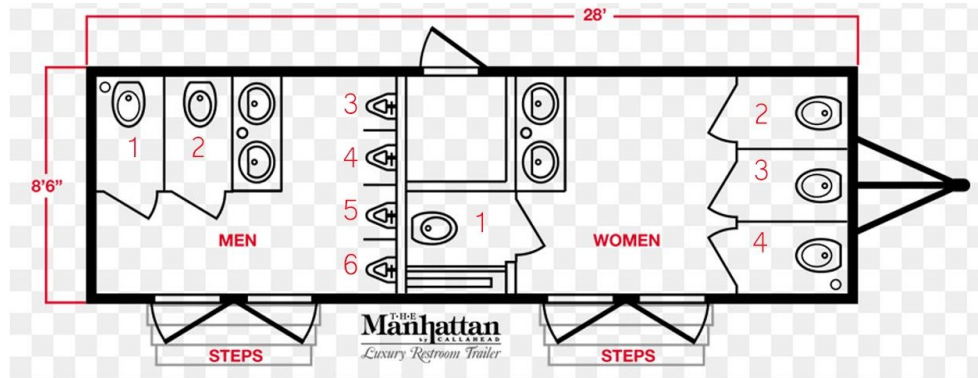
¹⁵ <https://i.pinimg.com/originals/c0/6c/7a/c06c7ae98e808d78945e641f4c0c4065.jpg>

¹⁶ https://images.adsttc.com/media/images/5ba9/6030/f197/ccaa/3500/00f3/newsletter/746px-Modulor_measurement_s.svg.jpg?1537826860

¹⁷ Molotch, Harvey Lusk., Laura Norén, and Jessica Vasquez. *Toilet: Public Restrooms and the Politics of Sharing*. NYU Press, 2010.

¹⁸ "History of Women at UVA." (Re)Imaging Women in STEM. 2017. Accessed November 20, 2018. <http://voicesandvisibilityuva.org/about-these-portraits/women-at-uva-history/>.

and women, men still have more places to relieve themselves. Because urinals take up less space, men's bathrooms can support more occupants than women's bathrooms of a similar size.¹⁹



Typical floor plan representing contrasting size needs for men and women's restrooms.²⁰ The men's bathroom is smaller in width and fits 6 toilets while the women's bathroom is slightly larger and only fits 4 toilets.

In addition, women use bathrooms for many needs other than relieving themselves. Some of these needs include menses, pregnancy, and childcare.²¹ Typical bathrooms aren't supportive of these needs, spatially or practically. Women also comprise a large portion of the disabled²², and many bathrooms merely meet disability requirements provided by the ADA, which often means there is not enough room for the caregivers that accompany them. This is a detail that may not have been overlooked if women, who make up the majority of caregivers, were more involved in the design process.

¹⁹Molotch, Harvey Luskin., Laura Norén, and Jessica Vasquez. *Toilet: Public Restrooms and the Politics of Sharing*. NYU Press, 2010.

²⁰<https://banner2.kisspng.com/20180614/swt/kisspng-floor-plan-architectural-engineering-project-bathr-accessible-toilet-5b2247e96dbf76.4414682815289732894495.jpg>

²¹Molotch, Harvey Luskin., Laura Norén, and Jessica Vasquez. *Toilet: Public Restrooms and the Politics of Sharing*. NYU Press, 2010.

²²Ibid.

What is the history of gender in architectural education and the profession itself?

Architecture, as a profession, is slowly becoming more diverse. However, women are still largely underrepresented. Women have only just been allowed admission into architecture schools in the past century. As recent as the 1950s, many architecture schools were still not open to women in many states.²³ Many colleges did not open up architecture and other programs to women until required to by law. Even the University of Virginia did not fully open enrollment to women until 1972 when the government passed Title IX, prohibiting sexual discrimination in federally funded higher education institutions.²⁴ From 1972 to 1975, the percentage of female architecture students increased from 6 to 14% as a result of the new legislation.²⁵ The percentage continued to rise rapidly until the end of the 1990s when women constituted 40% of architecture students in the United States.²⁶ As of 2016, women make up 44% of architecture students in the United States and the United Kingdom.²⁷ Although this number may seem promising in the fight towards gender equity in the architectural profession, the outlook for women worsens after

²³Stratigakos, Despina. *Where Are the Women Architects*. Princeton: Princeton University Press, 2016.

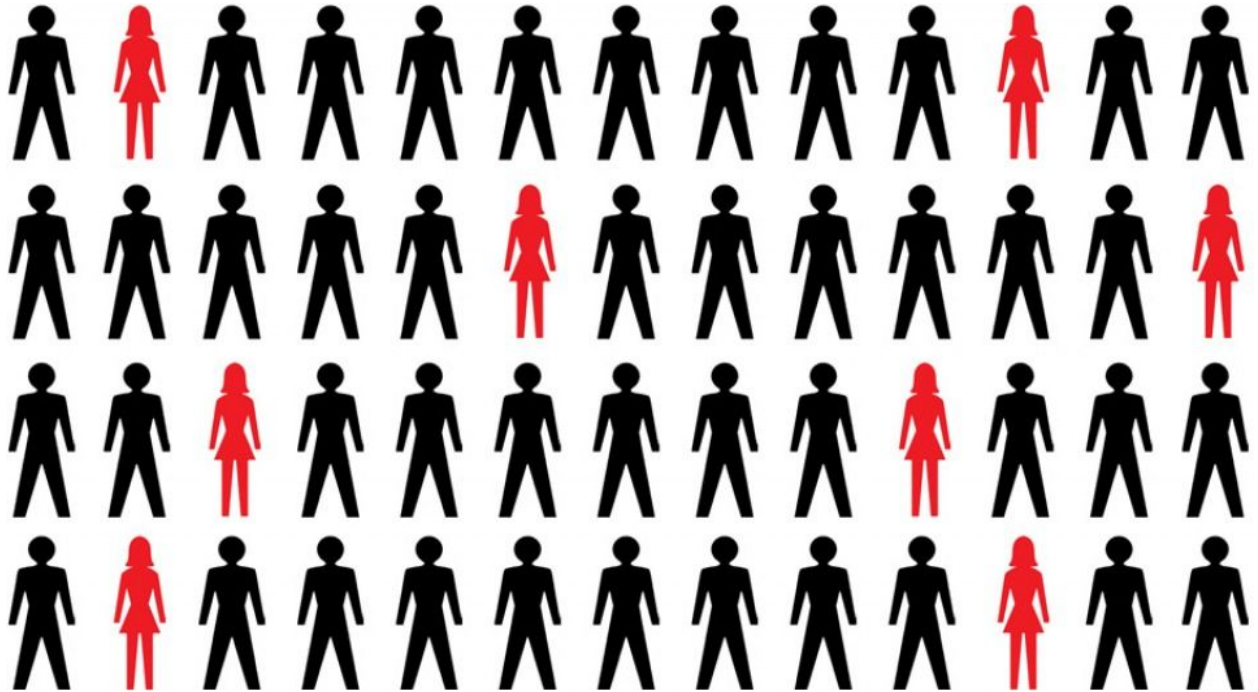
²⁴"History of Women at UVA." (Re)Imaging Women in STEM. 2017. Accessed November 20, 2018. <http://voicesandvisibilityuva.org/about-these-portraits/women-at-uva-history/>.

²⁵Stratigakos, Despina. *Where Are the Women Architects*. Princeton: Princeton University Press, 2016.

²⁶Ibid.

²⁷Ibid.

graduation. Women only make up 20% of licensed architects working in the field.²⁸ And these women earn 20% less than their male counterparts.²⁹



Where are the Women in Architecture? Graphic representing the missing 32% of licensed women architects in the design field.³⁰

So what causes this disparity? According to Despina Stratigakos, architecture schools today do not prepare women for the gender discrimination waiting for them in the professional world.³¹ When confronted with the question concerning the lack of female architects in the

²⁸Stratigakos, Despina. "Building on the Past: A History of Women in Architecture." School of Architecture and Planning. May 05, 2014. Accessed November 20, 2018. <https://ap.buffalo.edu/news/2014/womeninarchitecture.html>.

²⁹Stratigakos, Despina. "Why Is the World of Architecture so Male-dominated?" Los Angeles Times. April 21, 2016. Accessed November 20, 2018. <https://www.latimes.com/opinion/op-ed/la-oe-stratigakos-missing-women-architects-20160421-story.html>.

³⁰ https://hartwrightarchitects.com/wp-content/uploads/2012/10/Missing_32_event.jpg

³¹Stratigakos, Despina. *Where Are the Women Architects*. Princeton: Princeton University Press, 2016.

profession, the answer has usually been “children”. And while the “all or nothing” attitude towards architecture does hinder a female’s ability to maintain both her profession and her children, Architect Diana Griffiths points out that if children were the only hindrance in a female architect’s profession, the women without children would be flying through the ranks.³² This is not the case. In reality, many factors contribute to the high female dropout rate in the profession. Over time the lack of job opportunities, glamorous projects, and promotions disheartens women architects until many of them quit.

What happens when building is informed by women?

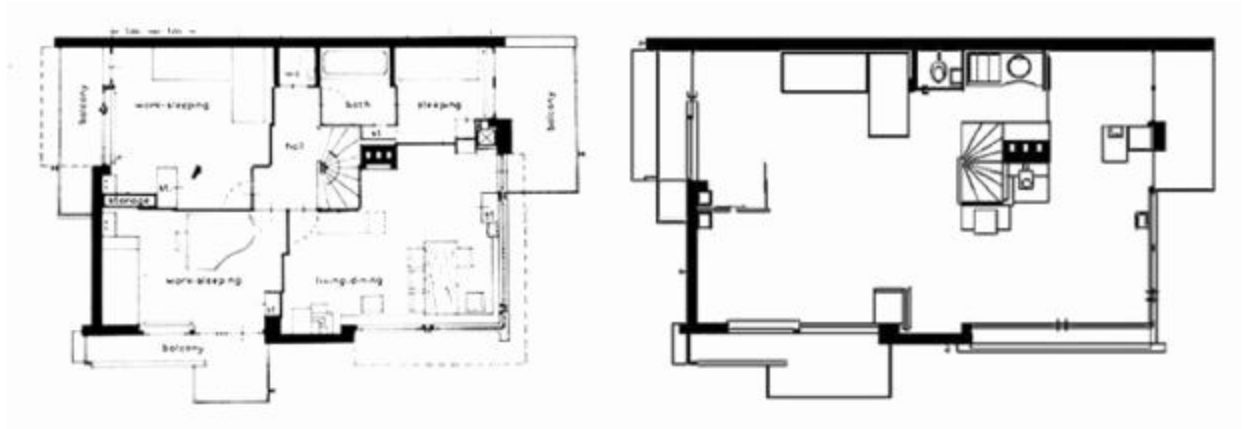
To contrast the previous examples of men dictating our built environment, I will be exploring the Schröder House. The Schröder House, located in Utrecht, Netherlands, was designed by Gerrit Rietveld and Truus Schröder for Schröder and her children. Schröder had a strong vision of a modern house that would support the manner in which she wanted to live.³³ One of the most notable features of the house is the retractable wooden partitions that allowed her to subdivide and rearrange her living spaces at her leisure. Schröder ensured that her house supported and respected the complexities of domesticity. One of her main priorities was bringing parents and children together in an open space.³⁴ The Schröder House reflects modernist ideals of

³²Ibid.

³³Friedman, Alice T. *Women and the Making of the Modern House: A Social and Architectural History*. New York: Harry N. Abrams., 1998.

³⁴Ibid.

adaptability; of creating “scaffolding for the activities of everyday life”.³⁵ Furthermore, the house was considered inimitable, and serves as an example of how the carefully considered life experiences of a woman can bring uniqueness to the built world.



*Plans for the Schröder House.*³⁶

Women’s influence can be found in the academic world as well. In recent years, a female design professor offered a studio addressing the need for housing for survivors of domestic violence.³⁷ This theme was unusual for an architectural school, where feminist topics were usually avoided.³⁸ Despina Stratigakos discusses her experience attending the final review for this course in her book “Where are the Women Architects?”. Stratigakos emphasizes the importance of the architect’s role in creating safe and healing places such as this type of housing. Stratigakos attended the review as the only woman on a panel of five judges. She explains that throughout the course of the review, the male critics did not discuss the purpose of the housing or

³⁵ Betsky, Aaron. *Building Sex: Men, Women, Architecture, and the Construction of Sexuality*. New York: Morrow, 1997.

³⁶<http://www.oconnorhomesinc.com/wp-content/uploads/2018/07/brilliant-schroder-house-floor-plans-plan-awesom-e-rietveld.jpg>

³⁷Stratigakos, Despina. *Where Are the Women Architects?*. Princeton: Princeton University Press, 2016.

³⁸Ibid.

mention survivors of domestic violence at all when critiquing the buildings. Instead, they separated the projects from their intention and merely discussed the architectural elements that composed them.³⁹ Stratigakos describes her experience: “It was almost as if there were no language in this architectural milieu to discuss [the challenge of designing spaces for such a highly vulnerable population]”. Stratigakos’ claim is well founded -- the language of architecture that has been developing since its origin has never included problems and needs unique to women. It was not included in Vitruvius’s notes on da Vinci’s drawing of the ideal man, and it is lacking now. This is strong evidence of the need to create an architectural language that encompasses the needs of women.

Throughout my time in the Architecture School at the University of Virginia, I have always sought to create places of refuge: places that are inviting, nurturing, and comforting. Part of the reason I have always been inclined towards this warmer side of architecture is I have often felt the lack of such spaces in the built environment around me. Since researching the distribution of women in the architectural practice, I understand why. When assigned a project in studio that involves creating a building of such grandeur that it becomes more of a monument than a habitable space, I have often felt deterred from the profession. While I am sure some women enjoy designing monuments, Aaron Betsky’s ideas about women creating habitable spaces have validated my feelings towards architecture. Women’s impact in making our world livable is crucial, but we are not being heard. Women make up 50% of the population in the United States, but only 45% of architecture students, and only 20% of working architects. This

³⁹Ibid.

disparity is evident in our built environment. In order to create spaces that make us feel safe, women need to be represented in the world of architecture.

Bibliography

Betsky, Aaron. *Building Sex: Men, Women, Architecture, and the Construction of Sexuality*. New York: Morrow, 1997.

Betsky, Aaron. "Women in a Man-made World: The Need to Build More Holistically." *Architectural Review*. March 6, 2018. Accessed November 20, 2018.
<https://www.architectural-review.com/essays/women-in-a-man-made-world-the-need-to-build-more-holistically/10028674.article>.

Friedman, Alice T. *Women and the Making of the Modern House: A Social and Architectural History*. New York: Harry N. Abrams., 1998.

"History of Women at UVA." (Re)Imaging Women in STEM. 2017. Accessed November 20, 2018.
<http://voicesandvisibilityuva.org/about-these-portraits/women-at-uva-history/>.

"Modulor Man by Le Corbusier." *Icon Magazine: Architecture and Design Culture - Icon Magazine*. 2018. Accessed December 14, 2018.
<https://www.iconeye.com/opinion/icon-of-the-month/item/3815-modulor-man-by-le-corbusier>.

Molotch, Harvey Luskin., Laura Norén, and Jessica Vasquez. *Toilet: Public Restrooms and the Politics of Sharing*. NYU Press, 2010.

Stratigakos, Despina. "Building on the Past: A History of Women in Architecture." *School of Architecture and Planning*. May 05, 2014. Accessed November 20, 2018.
<https://ap.buffalo.edu/news/2014/womeninarchitecture.html>.

Stratigakos, Despina. *Where Are the Women Architects?* Princeton: Princeton University Press, 2016.

Stratigakos, Despina. "Why Is the World of Architecture so Male-dominated?" *Los Angeles Times*. April 21, 2016. Accessed November 20, 2018.
<https://www.latimes.com/opinion/op-ed/la-oe-stratigakos-missing-women-architects-20160421-story.html>.

Image Citations

https://www.architectural-review.com/pictures/1180xany/1/7/7/3102177_btjg5j.jpg

[https://www.thoughtco.com/thmb/QNCrH3dLB79ly8x2V2UOtydW364=/768x0/filters:no_upscale\(\):max_bytes\(150000\):strip_icc\(\)/skyscrapers-dubai-488734758-crop-59ee7c490d327a0010f410b6.jpg](https://www.thoughtco.com/thmb/QNCrH3dLB79ly8x2V2UOtydW364=/768x0/filters:no_upscale():max_bytes(150000):strip_icc()/skyscrapers-dubai-488734758-crop-59ee7c490d327a0010f410b6.jpg)

<https://cdn.unifiedcommerce.com/content/product/large/5098EUR.jpg>

<https://banner2.kisspng.com/20180614/swt/kisspng-floor-plan-architectural-engineering-project-bathr-accessible-toilet-5b2247e96dbf76.4414682815289732894495.jpg>

https://hartwrightarchitects.com/wp-content/uploads/2012/10/Missing_32_event.jpg

https://www.google.com/url?sa=i&source=images&cd=&ved=2ahUKEwjSqpHs85_fAhVHMt8KHXI1AA8QjRx6BAgBEAU&url=https%3A%2F%2Fwww.allposters.com%2F-sp%2Fvitruvian-Man-c-1492-Posters_i350167_.htm&psig=AOvVaw3i1IzDQkFu5cCjFuXJFk39&ust=1544896970208038

<https://www.house-design-coffee.com/images/four-books-loc-p42-book2.jpg>

<http://www.oconnorhomesinc.com/wp-content/uploads/2018/07/brilliant-schroder-house-floor-plans-plan-awesome-rietveld.jpg>

https://images.adsttc.com/media/images/5ba9/6030/f197/ccaa/3500/00f3/newsletter/746px-Modulor_measurements.svg.jpg?1537826860

<https://i.pinimg.com/originals/c0/6c/7a/c06c7ae98e808d78945e641f4c0c4065.jpg>