

RESETTING MEDIUM: PROACTIVE PRACTICES OF WOMEN IN
ARCHITECTURE IN THE 21ST CENTURY

A THESIS SUBMITTED TO
THE GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES
OF
MIDDLE EAST TECHNICAL UNIVERSITY

BY

DUYGU HAZAL BEZAZOĞLU

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR
THE DEGREE OF DOCTOR OF PHILOSOPHY
IN
ARCHITECTURE

NOVEMBER 2022

Approval of the thesis:

**RESETTING MEDIUM: PROACTIVE PRACTICES OF WOMEN IN
ARCHITECTURE IN THE 21ST CENTURY**

submitted by **DUYGU HAZAL BEZAZOĞLU** in partial fulfillment of the requirements for the degree of **Doctor of Philosophy in Architecture, Middle East Technical University** by,

Prof. Dr. Halil Kalıpçılar
Dean, Graduate School of **Natural and Applied Sciences** _____

Prof. Dr. F. Cânâ Bilsel
Head of the Department, **Architecture** _____

Prof. Dr. İnci Basa
Supervisor, **Architecture Dept., METU** _____

Examining Committee Members:

Assoc. Prof. Dr. H. Ela Aral
Department of Architecture, METU _____

Prof. Dr. İnci Basa
Department of Architecture, METU _____

Assoc. Prof. Dr. M. Haluk Zelef
Department of Architecture, METU _____

Assoc. Prof. Dr. Bülent Batuman
Department of Architecture, Bilkent University _____

Assoc. Prof. Dr. Burcu Şenyapılı Özcan
Department of Architecture, Bilkent University _____

Date: 29.11.2022

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Name Last name : Duygu Hazal Bezazođlu

Signature :

ABSTRACT

RESETTING MEDIUM: PROACTIVE PRACTICES OF WOMEN IN ARCHITECTURE IN THE 21ST CENTURY

Bezazođlu, Duygu Hazal
Doctor of Philosophy, Architecture
Supervisor: Prof. Dr. İnci Basa

November 2022, 262 pages

This thesis aims to reveal and explain contemporary parallelisms between feminist thought and architecture in the mediatized practices of women in architecture. The place of women in the discipline, intensely questioned in the 1990s but mostly replaced by visibility debates after the 2000s, have not yet been sufficiently addressed through the mobility created by online platforms and the plural positions in feminist theory. Pointing to this gap and assisted by an inquiry into medium, shared concerns between feminism(s) and alternative architectural modes of existence form the central question of the thesis. By incorporating two different prior senses, medium comes to mean an environment of communication and functions on three levels. As a conceptual tool it enables to explain architecture's new disciplinary condition, to characterize an ephemeral aspect of space, and to examine practices of women in architecture. In the study, women from non-Western geographies are scrutinized and their practices unpacked via medium demonstrate four categorical alignments with feminist praxis. These indicate that the future of architecture is being shaped by the intersecting agendas of ecology, immateriality, cultural reparation and collectivity. Based on this revelation, the study concludes that

in negotiating and communicating with the *milieu* of their practice, women operationalize architecture as a response. Though intersecting under the highlighted categories, this response varies depending on what each woman refines from their interaction with disciplinary and contextual medium. Complementarily, the study maps the online presence of collectives and reveals their distinctive agendas as well as strategies. It is found that these collectives take different webbed formats including comprehensive projects, which enable accumulation and dissemination of data, extensions of offline support mechanisms and empowering activities of social networking.

Keywords: Medium, Women in Architecture, Feminist Theory, Environment, Communication

ÖZ

MECRAYI YENİDEN KURMAK: 21. YÜZYILDA MİMARLIKTAKİ KADINLARIN PROAKTİF PRATİKLERİ

Bezazoğlu, Duygu Hazal
Doktora, Mimarlık
Tez Yöneticisi: Prof. Dr. İnci Basa

Kasım 2022, 262 sayfa

Bu tez mimarlık ve feminist düşünce arasındaki güncel paralellikleri, mimarlıktaki kadınların dolaymlanan pratiklerinde açığa çıkarmayı ve açıklamayı hedefler. 1990'larda yoğun bir şekilde sorgulanan ancak 2000'lerden sonra yerini çoğunlukla görünürlük tartışmalarına bırakan mimarlıkta kadınlar konusu, çevrimiçi platformların yarattığı hareketlilik ve feminist kuram içindeki çoğul konumlar üzerinden henüz yeterince ele alınmamıştır. Bu boşluğa işaret edip, mecraya yönelik bir sorgulamayla desteklenen tezin ana sorusunu feminizm(ler) ile alternatif mimari varoluş biçimleri arasındaki ortak kaygılar oluşturur. Hem çevre, hem de iletişim anlamlarını içererek hibrit bir yapıda yeniden inşa edilen mecra farklı ölçeklerde işleyen, nesnelere değil nesnelere arası ilişkilere, iletişim ortamına odaklanmayı mümkün kılan bir kavramsal araç olarak yapılandırılır ve üç düzeyde konuşlandırılır. Böylece mecra, mimarlığın yeni disipliner durumunu açıklamaya, mekânın anlık ve süreksiz olanla ilişkili bir yönünü karakterize etmeye ve kadınların mimarlıktaki pratiklerini incelemeye olanak tanır. Çalışmada Batı dışı coğrafyalara odaklanılarak seçilen ve mecra kavramıyla incelenen kadınların pratikleri, feminist praksisle örtüşerek dört kategori oluşturmaktadır. Buna göre, çalışma mimarlığın geleceğinin ekoloji, madde(siz)lik, kültürel onarım ve kolektivite olarak ifade edilen

gündemler tarafından şekillendirildiğine işaret eder. Bu bulgulardan yola çıkılarak, incelenen kadınların pratiklerinin çeşitli sosyal, çevresel ve kültürel ekosistemler ile iletişim halinde şekillendiği ve mimarlığı bu etkileşim üzerinden bir yanıt olarak işlevselleştirdikleri sonucuna varılır. Vurgulanan kategoriler altında kesişmekle birlikte, bu yanıt her kadının disipliner ve bağlamsal ortamlarla etkileşiminden ne çıkardığına bağlı olarak değişmektedir. Tamamlayıcı olarak, çalışma kadın odaklı kolektiflerin çevrimiçi varlıklarını haritalandırmakta ve bu grupların çeşitli gündemlerinin yanı sıra etkileşim stratejilerini de ortaya koymaktadır. İncelenen kolektiflerin, verilerin biriktirilmesi ve yayılmasını sağlayan kapsamlı projeler, çevrimdışı destek mekanizmalarının uzantıları ve sosyal ağların güçlendirici etkinlikleri dahil olmak üzere farklı web tabanlı formatlar aldığı tespit edilmiştir.

Anahtar Kelimeler: Mecra, Mimarlıktaki Kadınlar, Feminist Kuram, Çevre, İletişim

To Semih,

ACKNOWLEDGMENTS

I would like to express the sincerest thanks and deepest gratitude to my supervisor Prof.Dr. İnci Basa whose wisdom, guidance and support had a transformative impact in my life. This thesis would not be completed without her ability to discern authenticity and her encouragement to pursue it further. I feel profoundly lucky for being in her supervision in this long and challenging journey. Any “thank you” to her would be an understatement.

I am grateful to my thesis supervising committee, Assoc. Prof. Dr. Haluk Zelef and Assoc. Prof. Dr. Bülent Batuman, who have lent their supportive comments with sympathy and joy. I am particularly indebted to them for transforming my initial way of thinking and challenging me to redirect the course of this study. I would also like to express my gratitude to the members of the examining committee, Assoc. Prof. Dr. Ela Aral and Assoc. Prof. Dr. Burcu Şenyapılı Özcan for their valuable critics and inspiring discussions. Their comments and sensitivity in appreciating my labor and efforts heartened me even more in recognizing the contribution of this study to the field.

I would also like to thank to my friend Zuhale Acar Metin for doing her best in helping me whenever I needed and for sharing her clear perspective, which I benefited a lot in dealing with my confusions. I am indebted to Günce Eşingen Kinayoğlu and M. Pınar Uz Baki for their guidance during the thesis writing process and Feyza Topcuoğlu for her technical assistance that saved me hours of travel. I am also thankful to my friend Cemre Öner Türk for being a great study-mate and her openness to intellectual exchange.

I would like to extend my gratitudes to dear friend-colleagues Bengi Yurtsever and Pelin Cengizoglu who continuously support my work with infinite faith. I would like to thank my dear friend-colleague Esmâ Aksoy Khurami as well for always being there without ever withholding her support and making my life easier. I feel lucky to

have these supportive and motivating women in my life. I am also indebted to Elif Öztekin and Seren Ertan for their empathetic comments and encouragement.

The research does not have a linear process. It includes many uncertainties and unexpected challenges. One of these moments led me to find a new friend in Italy, Maria Chiara Virgili. She not only shared important literature on the topic but also actively assisted me in locating the women who were featured in the Maxi Museum's Good News exhibition by physically visiting it. Maria deserves all the credit for the list in the Appendix, which provides potential for future studies.

I am indebted to my brother Hakan Simser who provided me with the best holiday retreat at a time when stress took over my whole body. My nephew Elias Kaan and my niece Sofia Hazal have been my joy and happiness in the most difficult and tough times. I clung to their presence in all the ups and downs of life. The most important clarifications for the thesis came after our happy hours of playing where Elias taught me to stay in the moment. I want to extend my thanks to Katrine Thorup Simser for her enthusiastic comments for this study. I am particularly grateful to my father Sadettin Simser for showing me to be bold and authentic, for raising me by giving responsibility. I am indebted to the moral support and encouragement provided by my friends Fadime Uzun Tunçer, Hayrettin Tunçer, Yasemin Limon Kahyaoglu and Canberk Kahyaoglu.

Last but not least, I am tremendously indebted and grateful to Semih Bezazoğlu, for the convenience, understanding and support he has provided during all phases of my academic career. His existence elevated my life and helped me to construct a better version of myself, one that is more organized and self-assured. Since I never hid myself from him, he was the only person who witnessed my darkest moments and who lifted me up with his rational solutions. He is an excellent companion in sharing all the joys and sorrows of life.

TABLE OF CONTENTS

ABSTRACT.....	v
ÖZ	vii
ACKNOWLEDGMENTS	x
TABLE OF CONTENTS	xii
LIST OF FIGURES.....	xv
LIST OF ABBREVIATIONS.....	xvi
CHAPTERS	
1 INTRODUCTION	1
1.1 Context and Problematic of the Study.....	1
1.2 Epistemological Position and Methodology	10
1.3 Structure of the Thesis	15
2 A POLYMORPHIC DISCOURSE: MEDIUM	19
2.1 A Macro View: Theories on Medium and Culture.....	21
2.2 A Micro View: Translation and Translocation	34
2.2.1 Translating Medium in Architecture.....	34
2.2.2 Translocating Medium in Architecture	42
2.3 Recasting Medium as a Conceptual Tool	48
2.3.1 Medium as Environment.....	57
2.3.2 Medium as Means of Communication.....	66
2.4 Medium Redefined: A Communicatory Milieu	78
3 GENDER AND ARCHITECTURE: A SYNOPTIC MAPPING.....	83
3.1 The Manifold Positions in Feminist Scholarship	83

3.1.1	Postcolonial Feminism.....	84
3.1.2	Ecological Feminism	87
3.1.3	Cyberfeminism	91
3.1.4	Postfeminism(s).....	94
3.2	Gender, Technology and Media.....	98
3.3	Gender Discourse in Architecture	104
3.4	Historical and Contextual Positioning: Women in Architecture.....	111
3.4.1	Nonstandard Work and Women’s Labour	113
3.4.2	Feminist Spatial Practices in the late 20th century.....	116
3.5	Feminist Sensibilities of the 21 st century.....	122
4	ALTERNATIVE AND MEDIATIZED PRACTICES.....	133
4.1	Women Negotiating with Medium: Architectural Productions	133
4.1.1	Architecture as Ecological Technology.....	140
4.1.2	Architecture as (Im)material Technology	157
4.1.3	Architecture as Cultural Reparation Technology	176
4.1.4	Architecture as Collectivizing Technology.....	193
4.2	Mediatized Practices of Online Collectives by Women in Architecture...205	
4.2.1	Social Networking Platforms	208
4.2.2	Project Websites	213
4.2.3	Support Systems	216
4.3	Situated Practices.....	221
	CONCLUSION.....	227
	REFERENCES	233

APPENDICES

A. Mapping of the Chapters.....	253
B. A Relation Diagram - Layers of the Research	254
C. Elaboration of Method – Steps of Selection	255
D. A Diagram of Categories in Chapter 4	256
E. The List of Women in Architecture Exhibited at Good News.....	257
CURRICULUM VITAE	261

LIST OF FIGURES

FIGURES

Figure 1.1 The organization of research.....	14
Figure 2.1 Mobile Office, Hans Hollein, 1969.....	65
Figure 2.2 Negroponte's Venn diagram: Different Industries around Media	67
Figure 3.1 Themes to be address at the Venice Architecture Biennale 2016.....	128
Figure 4.1 The hybrid framework of the study.....	134
Figure 4.2 A collage of Anupama Kundoo's works	147
Figure 4.3 A collage of Bat Tower designed by Joyce Hwang	152
Figure 4.4 Naturban Project Proposal by SO? Architecture.....	156
Figure 4.5 A collage of Lithutopia by Mariana and Kim Ibanez.....	162
Figure 4.6 Two projects by Design Across Scales Lab.....	166
Figure 4.7 Medium Matters by Catty Dan Zhang.....	169
Figure 4.8 Fabricating Networks Exhibition by Felecia Davis	175
Figure 4.9 A collage of Lightweaver Project led by Azra Akšamija.....	188
Figure 4.10 A collage of An African Almanac led by Sumayya Vally	190
Figure 4.11 Community activities - Now Hunter's Point Project by Liz Ogbu	201
Figure 4.12 A collage of Roonrakwit's Collective Design Process.....	204
Figure 4.13 An illustration of MWA's Founders.....	210
Figure 4.14 The homepage of Women Writing Architecture.....	214
Figure 4.15 The cover of Survey Report by Soy Arquitecta	218
Figure 4.16 The initial group of women selected for close examination	223
Figure 4.17 The group of women examined in detail	223
Figure 4.18 A diagram that demonstrates the connections among four themes....	224

LIST OF ABBREVIATIONS

ABBREVIATIONS

AMG : Architecture Machine Group

ANT: Actor-Network Theory

MIT : Massachusetts Institute of Technology

IBM: International Business Machines

ICT: Information and Communications Technology

IDC: Indigenous Design Collaborative

UABB: Bi-City Biennale of Urbanism/Architecture

GSAPP: Graduate School of Architecture Planning and Preservation

IRAAS: Institute for Research in African American Studies

MoMA: Museum of Modern Art

WBYA?: Who Builds Your Architecture?

CHAPTER 1

INTRODUCTION

1.1 Context and Problematic of the Study

The relationship between gender and architecture has magnetized considerable intellectual energy. While in these debates, conceptualizations oscillate between the role of gender for architecture and the role of architecture for gender in the last quarter of 20th century; the limiting dichotomy that places architecture as art in respect to feminism, and feminism as politics in respect to architecture has long been overcome. Still, ‘the limits of architectural discourse to ‘express’ sociocultural and political critique’¹ remains to be a relevant question. As a plurality movement, feminism continues to act as a critique for architecture.

Traditional accounts explain feminism with reference to some periodic categorizations to manage the change of focus that the movement underwent with time. Though geographically non-homogeneous, this categorization is effective in addressing the outlines and highlights of each period as a shift of thought and emphasis in feminism. It also marks the time when the movement took an active social power in history in European context and allows to trace how, in broad strokes, main aspirations of feminism have changed with time. According to this traditional account, ‘the first wave’, starts in the 19th century struggles of ‘search for equality’ within patriarchal societal constructs. In the 1960s however, feminist struggle

¹ Debra Coleman, ‘Introduction’, in *Architecture and Feminism* ed. by D. Coleman, E. Danze and C. Henderson (New York: Princeton Architectural Press, 1996), p. xv.

transforms into an advocacy for ‘acknowledgement of difference’. Questions addressed to the built environment finds place in the plural agenda of ‘the second wave’ where many radical groups such as Matrix or Women’s Design Service, mainly in the UK, start to engage with spatial concerns to dismiss inequality and make room for difference. Research on gender and architecture first starts to appear via the impact of this mobility in the late 1970s. The white and overtly western formation of feminism shifts with critical attacks during the 1970s and 1980s; hence the agenda of the movement evolves in a way to accentuate the plurality of difference and the heterogeneity of inequalities, which is followed by a heightened scholarly production. This ‘third wave’ is pinpointed by how issues of race, ethnicity, class, cultural location, sex, embodied capacity and dis/ability collide and ‘intersect’ with feminism. While ‘intersection’, as coined by Kimberlé Crenshaw in 1989, has turned into an indispensable part of feminism ever since; intersectional understanding of difference becomes the distinguishing aspect of ‘the third wave’. This period is also the climax for gender discourse in architecture. Many key texts around gender and architecture proliferated in this period. In 1990, a symposium titled ‘Sexuality and Space’ was held in Princeton University. Organized by Beatriz Colomina, who is also the editor of the book with the same name, the symposium was the first initiative to bring ideas about gender generated in other fields to touch on architectural studies.²

In setting the agenda for the book, Colomina stresses how feminist theories of the past fifteen years are disregarded in architectural discourse and practice. To her, this ignorance reflects nothing but the repression of sexuality in most critical discourses. The motive behind the symposium and the book seem to recuperate this missing piece via critical reflections from feminist theorists; in that sense, *Sexuality and Space* marks the introduction of feminist theory into architectural discourse. This initiative was followed by an intense theoretical production around the subject so

² *Sexuality and Space*, ed. by Beatriz Colomina (New York: Princeton Architectural Press, 1990).

much so that the year 1996 saw the publication of multiple anthologies of architectural theory dedicated to questions of gender and sexuality.³ Published in 2000, in *Gender, Space and Architecture* (2000) the editor of the collection Jane Rendell provides an interdisciplinary ground and offers a map of the territory by thematically and chronologically organizing seminal texts from the last twenty years.

A transition from activism to intense scholarly production in the 1990s was considered as a 'relative silence' around the turn of millenium.⁴ Some stated this silence as an 'architectural blindness to feminist work' in the decades after the hot-climate of 1990s.⁵ Yet, in the last decade, a return to a more active feminist movement that bypasses 'postfeminism' is apparent.⁶ Characterized by the use of online modes of operation and strategies of communication in claiming women's rights and unearthing inequalities, this reactivation has taken place as the women's organization primarily via online platforms and social media, then their moving back into public space. Since the early 2010s, several authors have begun to discuss whether this initiation of feminism and its relevant phenomena can be a new 'fourth

³ *Architecture and Feminism*, ed. by Debra Coleman, Elizabeth Danze and Carol Henderson (NY: Princeton architectural press, 1996); *The Architect: Reconstructing Her Practice*, ed. by Francesca Hughes (London: The MIT Press, 1996); *The Sex of Architecture*, ed. by Diana Agrest, Patricia Conway and Kanés Weisman (Harry N. Abrams Publishers: 1996); *Desiring Practices: Architecture, Gender and the Interdisciplinary*, ed. by Katerina Ruedi, Duncan McCorquodale, Sarah Wigglesworth (Black Dog Publishing, 1996).

⁴ Torsten Lange and Lucía C. Pérez-Moreno, 'Editorial Introduction to Architectural Historiography and Fourth Wave Feminism', *Architectural Histories*, 8 (2020).

⁵ *Architecture and Feminisms: Ecologies, Economies, Technologies*, ed. by Helene Frichot, Catharina Gabrielsson and Helen Runting (New York and Oxon: Routledge, 2018), p. 21.

⁶ Postfeminism is frequently used in denunciatory tone to describe ambivalence regarding feminism. It denotes the approach adopted by those who favor female empowerment but do not oppose patriarchal norms and structures. Rosalind Gill defines post-feminism as a sensibility rather than a critical movement. See Rosalind Gill, 'Postfeminist Media Culture: Elements of a Sensibility', *European Journal of Cultural Studies*, 10 (2007) <<https://doi.org/10.1177/1367549407075898>>.

wave'. Along with the emphasis on digital technology as an environment for activism and discussion, other key denominators of this movement can be described as the commitment to 'a 'diversity of purpose', which recognizes intersectionality as a key issue, and the questioning of established sex/gender systems, heterosexism, and binary gender norms'.⁷

Certainly, architectural discipline and profession are thrilled by these developments. It is possible to state 'an explosion of initiatives' which predominantly organize and exchange knowledge online. However, as the editorial account of a special issue around the topic showcases critical reflection about the fourth wave feminism 'in academic debate both within and beyond architecture has largely remained absent'.⁸ This is especially true for historical and cultural processes and practices of architecture.

Despite the instable energy around feminism and architecture in the last 50 years, producing recent histories of feminist architectural theory is as much a need as of its distant past.⁹ Along with that, the question of the most effective operational field for feminist action come to the fore quite often. For some feminists, writing theory and academia does not fulfill the drastic changes feminism aspires to.¹⁰ For others, theory is indispensable to inform political action. However, as embraced here, 'without history and theory, the personal is disconnected from a long discourse'.¹¹ Therefore, the present study underscores the importance of theory in directing feminist practice.

⁷ Lange and Pérez-Moreno.

⁸ Ibid.

⁹ Karen Burns, 'Feminist theory and praxis, 1991–2003', *Architecture and Feminisms: Ecologies, Economies, Technologies*, (Oxon and New York: Routledge, 2018).

¹⁰ Sherry Ahrentzen, Diane Ghirardo, Pat Morton, Mary McLeod, Margaret Crawford, Andrea Kahn and Lois Nesbitt were the leading voices of this opposition as cited by Burns, 'Feminist theory and praxis, 1991–2003', p. 13.

¹¹ Ibid., p. 21.

Moreover, it attempts to unearth multiple operational fields for feminist actions in architecture by providing a partial history of the present.

The history of feminism and architecture showcases not only the evolution of architecture and feminism relationship with certain developments in both fields, but also the emergence of multiple voices that challenge the long established and taken for granted premises of architecture. The issues and problems feminism introduced in architecture are not limited to the disproportional representation of woman in the discipline, the invisibility of women architects or controlled inclusion or exclusion of women from the public space. These are only the more apparent, and much pronounced reflections that comes to fore easily. Above all, feminism lends architecture a mode of engagement with the world that foregrounds experience¹² and thus shifts the focus from buildings to people.¹³ This suggestion has the following implications for the study. First, it requires to comprehend architecture not as ‘a goal in itself’ but as ‘a way to respond to the continually evolving ‘human condition’ in Arendtian sense’.¹⁴ Simultaneously, this idea implicitly reflects the essence of what Colebrook means by ‘becoming’.¹⁵ Hence a feminist framework can be operationalized in unpacking the social world of architecture which is termed here

¹² Experience is one of the key concepts in feminist theory and research so much so that it is considered *the* basis of feminism. See Christina Hughes, *Key Concepts in Feminist Theory and Research* (Sage, 2002).

¹³ Sandra Karina Löchke, ‘Architecture is not about buildings: perspectives on people-centred approaches in architecture’ in *Nonstandard Architectural Productions: Between Aesthetic Experience and Social Action* (Oxon and New York: Routledge, 2020).

¹⁴ Löchke, ‘Architecture is not about buildings: perspectives on people-centred approaches in architecture’, p. 4. Hannah Arendt, *The Human Condition*, (University of Chicago Press, 2013).

¹⁵ Man is traditionally defined as being: as the self-evident ground of a politics of identity and recognition. Woman, as his other, offers the opening of becoming. Cohen Colebrook ‘Introduction’, in *Deleuze and Feminist Theory* ed. by I. Buchanan and C. Colebrook (Edinburgh: Edinburgh University Press 2000), 1-17.

as architectural ‘productions’.¹⁶ Second, the shift from buildings to people, opens up many processes that occurs via the active participation of architects. This niche, which is triggered by architecture’s engagement with a feminist viewpoint enables the discipline to reflect back on its theoretical and practical modes of operation. In that sense, this study endorses ‘critical theory’ to provide this ‘self-reflective’ look, and refrains from an objectifying position that claims to offer a universal truth.¹⁷

Departing from this point, the study aims to introduce a new perspective for various architectural practices in the 21st century and thereby captures inherent potentials that feminist theory holds for architecture. Understood ‘as a process which occurs not only through the design of buildings but also through activities of use, occupation and experience as well as writing and imaging’¹⁸, the concept of practice takes central stage within a plurality that is constructed via media. Therefore, in the study ‘practice’ diverges from its more limited meaning that denote the act of designing spaces that will be built and acquires a more comprehensive meaning that is sensitive to manifold processes within architecture’s practical media.

The interaction between architecture and technical, social, and cultural limitations that predetermine its materiality has become the issue of concerns for many theorists in the 20th century.¹⁹ Though in these accounts, technology has been a more

¹⁶ Productions is used as a way to address the diverse forms that relate to architecture and people. See Löchke.

¹⁷ Jane Rendell, ‘Critical Spatial Practices’, in *Feminist Practices: Interdisciplinary Approaches to Women in Architecture*, ed. Lori A. Brown (Farnham and Burlington: Ashgate, 2011), p. 21.

¹⁸ See the definition of critical spatial practice in Jane Rendell, ‘Feminist Architecture From A to Z’. <https://www.readingdesign.org/feminist-architecture-a-z>

¹⁹ Generally considered to be the first in scope, emphasis and interdisciplinarity, Giedion’s study appears as the modern forerunner of technologically laden approaches in architecture with intellectual extensions to the 19th century developments. Sigfried Giedion, *Space, Time and Architecture* (Cambridge: Harvard University Press, 1959). Reyner Banham is also an influential name in this regard. See Reyner Banham, *Theory and Design in the First Machine Age* (New York-Washington: Praeger Publishers Architecture, 1960).

mechanical outlook, it is possible to come across manifold explanations for the rise and development of modern architecture-technology alliance from this mechanic perspective. Since the early 2000s and predominantly in the recent years, architecture is being loaded with a new terminology inaugurated by digital revolution. The current age which has been qualified by ‘information’ compounded myriad radical changes for architecture. These range from the new roles of the architect-subject to the rise of new terms to cope with this transformation; while automation is redefining the design process, the built environment is getting smart²⁰, the identity of architect-subject is changing via digitalization while ‘archi-preneurs’ emerge.²¹ Admittedly, the transformation that technology created the tools and methods of design is of great importance. It is, therefore, no surprise that the change in the design medium from manual to digital resulted in a misleading synonymy that equates technology and digitalization with design process. However, the impact of technology on architecture is not limited to the change of design medium. Understood as digital media, while technology seems to dematerialize various practices in the built environment, it also penetrates into architecture’s cultural spheres; thus, affects ways of engaging with architectural production, consumption and dissemination. This change of the dominant medium of the discipline is accompanied by practice-led research and the rise of interdisciplinary. Thus, raises questions about the architecture’s existence and its different modes as a discipline in the 21st century.

Although the seeds of digital medium can be traced back to the World War II, to the studies of mathematician-engineers Norbert Wiener, Warren Weaver, and Claude Shannon on self-governing systems and communication theory, it is the 21st century

²⁰ Sergio M. Figueiredo, Sukanya Krishnamurthy and Torsten Schroeder, ‘What About Smartness?’, *Architecture and Culture*, 7 (2019), 335-349.

²¹ Two special issues of *Architectural Design* were dedicated to the architect’s changing identity. Dennis Shelden, ed., “The disruptors: technology-driven architect-entrepreneurs” [Special issue] *Architectural Design*, 90 (2020). Laura Iloniemi, ed., ‘The Identity of Architect: Culture and Communication’ [Special issue] *Architectural Design*, 89 (2019).

that it has become the dominant cultural form.²² This domination can easily be summed up via the term ‘digitalization’, yet digital medium’s packaging and remediation of earlier media types such as photography and moving-image further complicate its relationship to architecture. Digital medium becomes a technology of (re)production and it duplicates architecture’s existence by adding new layers to its reality. How these layers, not as separate entities, i.e. film and architecture or photography and architecture, but as a continuum affect the discipline can be posed as a fundamental yet usually taken for granted question of the century. Moreover, vaguely defined and digitally complicated omnipresence of medium in architectural culture complicates its functions for the discipline. The thesis deals with this question from within a particular perspective. It does not specify the question of digital medium, but it looks into the medium phenomenon from a variety of perspectives to unlock its functions for the discipline in the current century. This scrutiny is later utilized in revealing the shaping of new and visionary agendas by women in architecture.

As a matter of fact, despite the new terminology that digitalization inaugurated, architecture has frequently been understood as an object of analysis in its relation to technology, or emphasis is laid on the heroic modern male architects in the earlier accounts of architecture technology alliance. Therefore, the agencies and narratives of different actors are mostly neglected. However, as broadly referred to as fourth wave feminism, online environments reshape feminist knowledge and praxis by extending its geographical and cultural limits and this has reflections in architecture as well. Thus, while the co-operations between feminism and technology enable to form transnational as well as national alliances, architecture’s technical and

²² Norbert Wiener, *Cybernetics: Or Control and Communication in the Animal and the Machine*. (Paris: Hermann and Cie); Camb. Mass.: MIT Press, 1948). Shannon, Claude Elwood, ‘A Mathematical Theory of Communication’, *Bell System Technical Journal*, 27, (July 1948) 379–423. [doi:10.1002/j.1538-7305.1948.tb01338.x](https://doi.org/10.1002/j.1538-7305.1948.tb01338.x).

technological concerns cannot be limited to practical outcomes and should extend into the scrutinization of its cultural sphere. New digital platforms provide places for different forms of knowledge to overlap, formal and informal. This surely includes architectural ways of knowing and producing knowledge.²³

This understanding does not mean to outlaw the complex social processes accompanied by the prevalence of technological mediated environments in the 21st century. On the contrary, the great potential that these processes embrace, which enable to overcome the limits of predigital era are crucial to be able to ideate feminist futures of architecture. To this end, the understanding of architecture as a sole object of analysis is replaced by a different lens that regards architecture itself as an effective technology in advancing alternative forms of practice and enables to ‘practice otherwise’²⁴ in relation to its cultural agenda.

As boldly stated in the preface of *Gender Space Architecture*, ‘architecture is a subject that demands to be understood in context’.²⁵ It is the claim of this study that, the context of architecture’s consumption, representation and interpretation has shifted through its plural and miscellaneous engagement with media and that this shift reshapes cultural processes and practices of architecture via the experiences and operations of women architects in the discipline. Hence, different frames of analysis and new terms of engagement between feminism and architecture are sought in the study. In doing this, the study opposes to the underlying stereotypes of what

²³ Karen Burns, ‘Feminist Theory and Praxis’ in *Architecture and Feminisms: Ecologies, Economies, Technologies*, ed. H. Frichot, C. Gabrielson, H. Runting (Oxon and New York: Routledge, 2018), 11-24 (p. 19).

²⁴ Doina Petrescu, ‘Altering Practices’ in *Altering Practices: Feminist Politics and Poetics of Space*, ed. by Doina Petrescu (London and New York: Routledge, 2007).

²⁵ Jane Rendell, Barbara Penner and Iain Borden, ‘Preface’, in *Gender, Space, Architecture* ed. by J. Rendell, B. Penner and I. Borden (London and New York: Routledge, 2000), xi.

constitutes a feminist mode of action for architecture and looks into feminist practices in their diverse geographic and cultural specificity.

1.2 Epistemological Position and Methodology

Feminists have critiqued positivistic scientific methods since the 1970s. These endeavours unmask that, what is considered as objectivity and the invisible subject behind the objective knowledge claims reflect the androcentric rules and canons of traditional philosophy and science which are dominantly practiced by white male figures. In this line of thought, Dorothy Smith points out the invisibility of women caused by taken for granted research practices associated with positivism.²⁶ Similarly, Sandra Harding addresses to the inefficiencies of positivism that excludes feminist and postcolonial concerns.²⁷ Harding also stresses the important role of researcher in the knowledge production process. Parallel to Harding, Donna Haraway opposes to the disembodied scientific objectivity, and suggests an embodied objectivity that has potential to accommodate paradoxical and critical feminist science projects. She describes this mode of feminist objectivity as situated knowledges.

These feminist oppositions and challenging the traditional norms of knowledge production lead to a shift in many disciplines and simultaneously inaugurated a questioning of methods. Undoubtedly, compared to predominant methodological approaches, feminist research practices ‘require diverse methodological and self-reflexive skills’.²⁸ In this sense, feminist researchers are seen to be innovative in

²⁶ Dorothy Smith, *The Everyday World as Problematic: A Feminist Sociology*, (North Eastern University Press, 1987).

²⁷ Sandra Harding, ‘The Method Question’, *Hypatia: A Journal of Feminist Philosophy*, 2.3, (1987) and Sandra Harding, ‘Gender, Development and Post-Enlightenment Philosophies’, *Hypatia: A Journal of Feminist Philosophy*, 13 (1998).

²⁸ Nancy Naples, ‘Feminist Methodology’ in *The Blackwell Encyclopedia of Sociology*, ed. by George Ritzer (John Wiley & Sons, 2017).

terms of developing new research approaches and frameworks.²⁹ In *Feminist Methodology*, Fonow and Cook reveal that the discussions of feminist methodology at the beginning of the 21st century are dominated by the concerns about ‘reflexivity of the researcher, transparency of the research process, and women’s empowerment’.³⁰

In accordance with these concerns, this thesis adopts a feminist version of objectivity that relies on the partial nature of ‘vision’ and dismiss the neutrality of the subject who produces knowledge. Drawing from ‘situated knowledge’ that is developed by Haraway³¹, a feminist epistemological position that accepts the fragmentality of knowledge while refraining from universal claims is embraced. This position allows social construction of knowledge as opposed to pure objectivity and favors qualitative and complex mode of analysis over quantitative one. In elaborating the positionality of the researcher, Haraway uses the metaphor of an embodied vision to displace a view from above, which she notes as ‘god-eye trick’. However, embodiment does not correspond to a fixed location in a corporeal body, contrarily it allows for multiple connections, ‘resists fixation and curious about the webs of differential positioning’. Haraway articulates the fragmentality of situatedness most obviously in the notion of split and contradictory self. This conceptualization enables to interrogate positionings and be accountable simultaneously:

The knowing self is partial in all its guises, never finished, whole, simply there and original; it is always constructed and stitched together imperfectly, and therefore able to join with another, to see together without claiming to be another.³²

²⁹ Ibid.

³⁰ Mary M. Fonow and Judith A. Cook, ‘Feminist Methodology: New Applications in the Academy and Public Policy’, *Signs: Journal of Women in Culture and Society*, 30 (2005).

³¹ Donna Haraway, ‘Situated Knowledges and Science Question in Feminism the Privilege of Partial Perspectives’, *Feminist Studies*, 14 (1988).

³² Ibid., p. 586.

Haraway presents critical positioning as the key practice for this mode of ‘vision’, while her conceptualization of fragmented and contradictory self enables to switch among different critical positions. Due to this flexible nature and multiplicity of positions, this feminist form of objectivity prefers webbed accounts over master theory.³³

Grounding in Haraway’s ‘situated knowledge’, the epistemological position of the study is complemented by embracing reflexive methodology. Reflexivity requires to pay ‘serious attention to the way different kinds of linguistic, social, political and theoretical elements are woven together in the process of knowledge development’ and diffuses into all phases such as construction, interpretation and writing of research material. It also requires the researcher’s reflective position towards his/her operations, thus ‘turning a self-critical eye onto one’s own authority as interpreter and author’. The potential of reflexivity is that it can supply a crucial basis for ‘a generation of knowledge that opens up rather than closes’.³⁴ Similar to Haraway’s aim to produce ‘better accounts of the world’ via ‘an accountable positioning’,³⁵ reflexive methodology lays emphasis on the understanding rather than establishing ‘truths’.³⁶

This feminist methodology, which is articulated with reference to Haraway and consolidated via reflexive methodology, is supplemented through a series of conceptualization. The function of concepts to organize chaos via meaning is used extensively in tackling with complex web of relations among gender, architecture and medium. In doing this, the conceptual ground of the research mainly constructed through two theoretical fields; these are feminist theory and media theory. Thereby the theoretical framework of the study is constructed by the interplay between

³³ Ibid., p. 588.

³⁴ Mats Alvesson and Kaj Skoldberg, *Reflexive Methodology: New Vistas for Qualitative Research* (London, California, New Delhi: Sage, 2000), p. 5.

³⁵ Haraway, ‘Situated Knowledges’, p. 590.

³⁶ Alvesson and Skoldberg, p. 5.

pluralist positions within feminism, and the rhizomatic relations that emerge from the concept of media. There are two reasons behind operationalizing media in this feminist project: first the dominance of technologically mediated environments in the twenty first century triggers the proliferation of new modes of practice for architects and leads to a change not only in the communicational form of these practices but also more traditional ones. Secondly, architecture has a paradoxical relationship to media. On the one hand, media appears inextricably linked to architecture via housing its representations in different formats thus conditions its knowledge. On the other hand, it affects architecture more indirectly on societal level. This less articulate meaning of the concept, which will be elaborated further in the Chapter 2, come into view in the form of milieu and gives a sense of environment. This meaning denotes the totality of influential circumstances that emerges from the surrounding physical or social setting and helps to explain the position of women architects against diversified challenges posed by the century. Along with that, it helps to unearth multiple processes behind the manipulations and mediations of these challenges by varied practices. Medium used in this sense, enables to excavate both the diversity of architectural practices and their negotiation in the experience of women architects. Thus, this sense enables to investigate architecture's *milieu* with respect to the different practices of women in architecture. On the other hand, the more explicit meaning of communication medium, which is often found in the plural form as 'media', enables to capture and delve deep into newly proliferating online performances of the organizations by women in architecture. Scrutinized via the frame of analysis provided by mediatization, this attempt aims to figure an architectural account for the fourth wave of feminism.

Adhering to epistemological and existential fragmentation, the research is designed in way to include manifold perspectives and situations in engaging with multifaceted practices of women in architecture. In the body of the thesis, 'several voices are

allowed to pervade the text'.³⁷ Therefore both Chapter 3 and Chapter 4 demonstrate a certain plurality via diverse practices, the experiences of different individuals and mediated existence of multiple organizations. Yet within this diversity, the experience of the marginal rather than the dominant is focused. This selection conforms to both postmodernist decanonization. Hence, it consistently functions with feminist standpoint of the study as well as its plural and fragmented nature that echo critical postmodernist methods.

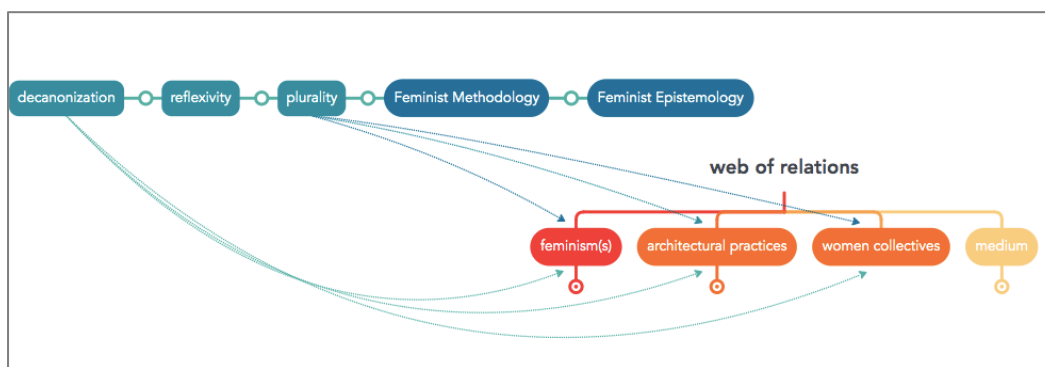


Figure 1.1 The organization of research

Deeply implicated in cultural field of postmodernism³⁸, critical pluralism promotes looking at from various angles. Therefore, it allows for various readings and multiple interpretations. The methodological implications of pluralism in the research design can be summarized as seeking variation, providing space for the appearance of multiple selves, which is in line with partial and contradictory self-informed by Haraway's ideas, and lastly focusing on the opposite of mainstream. To this end and

³⁷ Alvesson and Skoldberg, p.186.

³⁸ Ihab Hassan, 'Pluralism in Postmodern Perspective', *Critical Inquiry*, 12 (1986), 503–20.

in line with pluralism, the study operates within a vast land; therefore, provides an overview ³⁹ rather than particularization.

1.3 Structure of the Thesis

In this introduction, some questions in relation to the epistemology and methodology are tackled thus both the scope and the theoretical stance of the thesis are clarified. This preface aims to function as a brief background to the study and it marks the current socio-technological condition as the departure point to discuss various practices of women in architecture in the 21st century. In doing this, it signals main concerns that motivate the research. These appear first as the lack of research for the fourth wave feminist reflections in the discipline and second, the web of relations among women architects in the current century and different modalities of architectural practice that they operationalize. The research aspires to provide a detailed analysis of the processes behind these diverse architectural productions as well as mediatized existence of women collectives via a hybridized theoretical framework informed by different feminist and media theories. Thus, it aims to provide a better understanding for women in architecture and the potentials that their practice harbor for the discipline. Epistemological grounding of the study mainly rests on Donna Haraway's *Situated Knowledges* which suggests the partial perspective of the researcher over universal truths. On the other hand, this approach is open to new connections and flexibility of positions. Adhering to epistemological and existential fragmentation, the research is designed in way to include manifold perspectives and situations, therefore it adopts pluralism. Methodological

³⁹ Initially, 50 women whose practices and positionalities overlap with the scope of the research are identified. Certain commonalities among their practice led to the formation of categories as appeared in their practice as 'tendencies'. In the end, not all selected women discussed in the study, among them 18 of them scrutinized in detail. The details of this process can be seen in the Appendix C.

implications of pluralism are deployed via the procedures of seeking variation, providing space for the appearance of multiple selves, and considering the experience of the marginal rather than the dominant. These procedures are applied in the selection of women as well as women collectives.

The thesis attempts to provide an extended discussion on spatial concerns that intersect with feminism and alternative architectural modes of existence in the 21st century. These include touching on the economic, environmental and technological challenges of the century and their penetration into architectural agendas. Thus, it intends to pinpoint that how due to this penetration, a shift in architecture's operational field occurred. In doing this, the study constructs a series of connections among the dissolution of architecture's disciplinarity, its engagement with feminist theory and new communicational technologies.

The body of the thesis is inseparably linked to its theoretical formulation which appears in the discussions throughout the thesis. Chapter 2 and Chapter 3 lay out these issues intensely. Theoretical and conceptual backdrop of the thesis as well as the outline of the research field are mainly introduced and elaborated in these chapters.

In Chapter 2 the concept of medium is scrutinized from macro and micro perspectives, namely from its disciplinary formation as part of Cultural Studies and its position within architecture. Additionally, several contexts related to the burgeoning of new communicational technologies are visited. These contexts revealed the intricate implications of two senses codified in medium, that of environment and communication, for architecture. Hence, both the rhizomatic connections that medium possesses, as well as the modification that its meaning has undergone since the emergence of digital medium are identified. With these investigations, medium is constructed as a conceptual framework for the examined practices of women in architecture, it simultaneously frames the overall study.

The base for the relationship between the pluralities within feminism and architecture are laid on Chapter 3. Internally, the third chapter organized in a

pyramidal way. It starts with divulging various positions in feminism. Then it narrows down on historical and contemporary reflections of gender in architecture. By doing so, this chapter not only frames the relationships between architecture, medium and feminist theory but it provides insight for the historical and contextual background for the distinct position of women in architecture. Lastly, it portrays the intricacies of current socially and culturally cognizant situation within the discipline by addressing to various concerns and initiatives. Hence, it helps locate the analyses of Chapter 4 in a wider context.

The overall aim of the thesis is to pose some implicit and explicit reflections of feminist positions in the practices of women architects, and the reconfiguration of different modalities for architecture. Chapter 4 plays a significant role in attaining this goal. How women architects negotiate social, cultural and environmental problems and operationalize new fields for architectural practice form the central question of this chapter. The reactivated concept of *medium* enables to understand the radical and pioneering attempts of different women in architecture. In recasting the problems that emanate from social and cultural medium as architectural, the deployment of certain techniques and strategies are analyzed. In this attempt, not only the practices of women architects are put at the forefront but the transformations that they introduced for the discipline are highlighted. The theoretical discussions initiated in Chapter 2 and Chapter 3 acts as the fulcrum point for these analyses.

The mediatization of architectural content and the digital existence of women in architecture via multiple collectives are also tackled in Chapter 4. In these discussions, mediatization theory offers a framework to view a new social condition where the permeance of media in social and cultural institutions makes it impossible to analyze it as a separate entity. Therefore, the fourth wave feminism's reflections on architecture, as well as the demonstration of different feminist positions in the discipline are analyzed through the digital and mediatized operations of these collectives. Thus, their broader impact on feminist architectural culture are uncovered.

CHAPTER 2

A POLYMORPHIC DISCOURSE: MEDIUM

The current epoch that is being typified by information explosion brings forth myriad radical changes for architecture. These changes, as discussed in the Introduction, vary from the presentation of new roles for the architect-subject to the emergence of new terminology to cope with this shift. However, the change and the multiplication of interactive media appear as the most explicit transformation among these. In brief, the pervasiveness of digital media in the 21st century creates a condition where the conceptual pair media and medium is reduced into all-encompassing short hand terms in addressing a great variety of practices and processes behind digitally mediated communication. As Micconi and Serra argue the increasing interest to defog the ambivalences surrounding the concept of medium points to a crisis in the meaning of the term.⁴⁰ It is even possible to read this accumulated energy as the sign of an upcoming ‘medium theory’. Despite these efforts, the concept's vagueness⁴¹ obscures its influence on the techno-cultural sphere of architecture.

As a cultural category medium plays fundamental roles in contemporary modes of being; its interventions in filtering the world affect the perception of what is real to

⁴⁰ Andrea Micconi and Marcella Serra, ‘On the Concept of Medium’, *International Journal of Communication*, 13 (2019).

⁴¹ ‘The notion of “medium” reduces to a fragile and even ephemeral state of “in-between-ness,” as much a moment (let alone an object) of separation as of mediation, a moment taken by a virtuality becoming an actuality, a moment of structuring and encoding and thus of the creation of order, but also the source of disruption and “noise”’ See, Eva Horn, Editor’s Introduction ‘There are No Media’, *Grey Room*, 29 (2008), 6–13 (p. 8), <https://doi.org/10.1162/grey.2007.1.29.6>

the extent that it inaugurates discussions for mediated construction of reality.⁴² In conjunction with this, architecture's evolution in the 21st century cannot be predicted without a clear understanding of medium's projection in the discipline. At first sight, this problem evokes familiar instances in everyday experience; for example, the predominance of architectural images in digital media might be thought as a part of this problem, it surely is. However, these familiar situations might be only one sign of more intricate and different problems. Furthermore, in addition to the duality implicit in the concept, the existence of various categories under which architecture and medium come together complicates this connection even further. Therefore, unpacking architecture's relation with medium and media on discursive level via reflecting on the literature around the subject is quite essential. It is also a contemporary demand; while architecture is materially and environmentally renewing itself, the discursive presence of this activation calls for attention.

In the following section, the polymorphous set of relationships between media and architecture are unpacked incrementally; these relationships are examined first with a macro then with a micro lens. On macro level, the realm of culture, usually technologically mediated culture, appear as the communing ground that environs media and architecture as two bodies of knowledge with at times intersecting and converging yet distinct core concerns. At this level, issues around the study of media, emerge primarily with discussions on cultural meanings and implications of (new) communication technologies. While also reflecting the literature review of the state of the art, micro level surveying reveals more intricate web of relations between media and architecture. These operations of media in architecture is tackled via the concepts of translation and translocation. After these investigations, the duality embedded in the concept of medium is 'reactivated' by considering these concepts 'in terms of their effects'. Thus, medium is presented as a twofold apparatus that can

⁴² Nick Couldry and Andreas Hepp, *The Mediated Construction of Reality* (Polity Press, 2017).

serve to analyze different formations of feminist concerns in architecture that enables to ‘think differently’.⁴³

2.1 A Macro View: Theories on Medium and Culture

Many of the theories and discussions on medium predominantly emanate from and with reference to the disciplinary body of media and communication studies. Being formed as an interdisciplinary field through a set of studies in the 1920s and as a formal discipline in the 1950s, media studies constitute the body of knowledge based on the research from a broad spectrum of social, cultural, political, and economic contexts in which the media acts as a significant component.⁴⁴ The field has ambiguous boundaries; it interacts with more established disciplines in the humanities and the social sciences such as history, political science, sociology, psychology, anthropology, linguistics, and literature. On the other hand, it possesses overlapping scopes with many other newer disciplines and interdisciplinary fields of study one of which may be considered as architecture. All in all, media studies encapsulate diverse and growing area of concerns that aims to reveal the complexity and agency of mediation. Drawing from similar contexts with distinct focuses, both media studies and architecture propound different modes of cultural analysis. In other words, they both strive to develop better and novel understandings of themselves so that socio-cultural significance of the practices entailed in their body of knowledge can be specified. Since the cultural realm encircle both architecture and media, a profound understanding of media studies requires to map and carve out its deeper interactions with this broader realm. To this end, it is pivotal to underscore

⁴³ ‘Feminism at its most vibrant has taken the form of a demand not just to redress wrongs within thought, but to think differently’. Ian Buchanan and Claire Colebrook, *Deleuze and Feminist Theory* (Edinburgh University Press, 2018)
<<https://doi.org/10.1515/9781474400527>>.

⁴⁴ Angharad N. Valdivia, ‘Introduction’ in *A Companion to Media Studies* ed. by A. N. Valdivia, (Oxford, UK: Blackwell, 2003), 1-16.

the periodically different and approach-wise varying contributions of influential cultural and literary theorists to the field. Thus, their impact in the formation and development of the discipline and on the theories of media can be pinpointed.

As an outstanding social and cultural analyst, Raymond Williams comes to the fore with the impact he created especially in the United Kingdom. In the first place, Williams' redefinition of 'culture'; mostly through his studies *Culture and Society* (1958) and *The Long Revolution* (1961), enables the notion to be recovered in a way to include ordinariness that is rooted in 'the soil of everyday life'. Furthermore, the development of the academic disciplines of cultural and media studies in the UK in the 1960s owes much to his studies. In direct relation with media, his short book on *Television: Technology and Cultural Form* (Williams 1974), his historical account of the evolution of media, 'Communication technologies and social institutions' (Williams 1981) and a chapter on 'culture and technology' in *Towards 2000* (Williams 1985) can be enumerated.⁴⁵ In his work, Williams stresses on the lack of social power in technological determinism and rejects the accounts of 'false causality'. In other words, he refuses the teleological accounts of technology; his interests focus more on the social conditions that enable certain technologies possible. In line with this, the interests underlying the development of technology, their purposes or the addressed audiences can be highlighted as his primary concerns.

Critical Theory has tremendous impact in media studies mainly through the key figures of Frankfurt School; among these 'Culture Industry' (1944) and Walter Benjamin's idiosyncratic mode of analysis require a close scrutiny. Adorno's and Horkheimer's critique of 'Culture industry' aims to unfold various techniques that transforms culture.⁴⁶ In their view, resulting from industrialization of media

⁴⁵ As cited in Des Freedman, 'Raymond Williams', in *Key Thinkers for the Information Society* ed. C. May (London and New York: Routledge, 2003).

⁴⁶ Theodor W. Adorno and Max Horkheimer, 'Culture Industry: Enlightenment as Mass Deception', in *Dialectic of Enlightenment* (Stanford: Stanford University Press, 2002).

production, the conditions that characterize market extends towards culture through the dissemination of media; every cultural element, from film to magazines follow the same formula. On the other hand, in their critique they elaborate the dissolution of the boundary between real life and the media; the line separating art and life acquires a blurry state which brings an illusion of reality.⁴⁷ All in all, *Culture Industry* appears as a reference study that preserves its relevancy after fifty years; Adorno's impact on media continues to be addressed in the current century.⁴⁸

Contrasting with Adorno and Horkheimer through his optimistic interpretation of film as a progressive medium, Walter Benjamin holds a canonical and steady position in media theory. In addition to his writings on film and photography, his essay 'The Work of Art in the Age of Its Technological Reproducibility' (1935), where he delves deep into the social and political impacts of technical mechanization, is a highly addressed study in the way he amalgamates the transformation of media and culture.⁴⁹ Albeit, in describing photography and film he prefers the word 'technology of production' and 'apparatus' over 'medium' and 'media', as Tobias Walke argues, what the concept of medium entailed in Benjamin was a rather wider scope. In one instance that Benjamin uses the word, he writes: 'The way in which human perception is organized -the medium in which it occurs- is conditioned not only by nature but by history'. As an analytical category, medium designates the spatio-temporal notations of sensory experience. Therefore, what Benjamin conducts in his photography and film-oriented writings can be described as 'medium-specific' historical analysis; since he traces the agency of mechanical reproduction in the change of perception, experience, and reproduction, in the new

⁴⁷ Shane Gunster, 'Revisiting the Culture Industry Thesis: Mass Culture and the Commodity Form', *Cultural Critique*, 45 (2000), 40–70.

⁴⁸ Both the conference and exhibition that took place in 2019 with the same title 'Adorno and the Media' can be considered in this regard.

⁴⁹ Walter Benjamin, 'The Work of Art in the Age of Mechanical Reproduction', in *Illuminations* (New York: Schocken Books, 1969).

technical capabilities. Walke's analysis of Benjamin is reminiscent of the meanings that the term milieu acquires. As he argues, for Benjamin the term covers 'the comprehensive force field that links human sensorium to world and that is constituted in doing so by the interplay between natural (physiological, physical) and historical (social, technological, and aesthetic) factors'. Moreover, Benjamin's other studies, most notably *The Arcades Project* has formative influence on the development of alternative branch of media, which is called media archaeology.

A great deal of work in media studies are influenced by structuralist thinker Roland Barthes' semiotic analyses.⁵⁰ In that regard his *Image, Music, and Text* draw attention. In this study, Barthes problematizes the structural autonomy of media without referring to the word but rather dissecting and focusing on its constitutional elements. With reference to press photography, he points out that regardless of the origin or destination of the message, the photograph is more than a channel; henceforth, the unique structure that photograph constructs should be clarified. For Barthes, this structure is in communication with other structure, the text. Therefore, through a structural analysis he embarks on to uncover the different layers of information embedded in different media, from photographic message to Eisenstein's stills, and to narratives. In 'The Death of the Author', Barthes reveals that the author is a modern construct whose ties can be found in English empiricism, French rationalism and the personal faith of the Reformation. He aims to disavow the centrality of the author and interrelatedly, the tradition of explaining the text with the personality of the author. Barthes' main claim is that it is not the author but the language that speaks, the primacy is on that what precedes and exceeds the writing. From this point forth, the characteristics of the medium of text and context are discovered; 'the text is a tissue of quotations drawn from the innumerable centres of

⁵⁰ Roland Barthes, *Image Music Text* (New York: The Noonday Press, 1977) and Roland Barthes, *The Semiotic Challenge*, trans. R. Howard (New York: Hill and Wang, 1988).

culture'.⁵¹ The reader is the space on which all the quotations a text's unity lies not in its origin but in its destination; 'the death of the author' draws to a close with the birth of the reader.

Jean Baudrillard's theoretical explorations problematize transformation of culture through the conditions of being postmodern. Thus, his studies can be placed at the intersection of culture, media, and postmodernity. As Mark Poster remarks both baffling and captivating characteristics of advanced industrial society has been disclosed in Baudrillard's theory.⁵² In forming an authentic linguistic reality, new media adopts the montage technique of film, and time-space separation that contrasts face to face communication. In *Simulation and Simulacra* Baudrillard theorizes the emergence of a new culture; one that is novel by being invulnerable to the established forms of resistance and impenetrable by theories entrenched in classical metaphysical premises.⁵³ Baudrillard argues that simulations control culture and that neither things nor discourses have a clear source or foundation.

Contemporary to Raymond Williams, Marshall McLuhan can be located at the intricate line that separates media studies from cultural studies. McLuhan maintains a prominent position in media theory due to the unprecedentedly central role that media plays in his research. His groundbreaking book, which is first published in 1966, *Understanding Media: Extensions of Man* is considered by many as the first detailed elaboration of media's impact on society at large.⁵⁴ The famous idiom 'medium is the message' finds echo in numerous studies with at times supportive at

⁵¹ Roland Barthes, *Image Music Text*, p. 146.

⁵² Mark Poster, 'Introduction' to *Selected Writings of Jean Baudrillard* (Stanford University Press, 1988).

⁵³ Jean Baudrillard, *Simulacra and Simulation* (University of Michigan Press, 1994).

⁵⁴ Striving to restore social context in his own studies, Williams accuses McLuhan of formalism and isolating theory of 'the media'.

times critical and opposing voices.⁵⁵ The ideas in the book disseminated extensively so much so that even a critical edition has been published to unfold the multiple meanings of this famous idiom possesses. Through this critical edition, the meaning expands to include the personal and social consequences of any medium.⁵⁶ Since with a change of medium, a new scale is introduced into the affairs of human relations; ‘the message of each technology is the change of scale or pace or pattern that it introduces’. This understanding first and foremost bases on McLuhan’s constitutional claim of medium as the extension of human. The idea of extension is quite central to McLuhan’s media theory; two successive chapters in the original book reflect not only this centrality but how the formation of this idea is intricately tied to architecture.

As McLuhan suggests in *Understanding Media*, the outer layer of the skin, clothing, makes it possible to store and channel energy. According to him, this extension has been stimulated in electric age so much so that centuries long hegemony of ‘uniform visual space’ has been overturned; with electric age the world has become a place in which ‘living, breathing and listening’ requires the engagement of the entire epidermis. The argument he presented is further developed in the following part ‘Housing: New Look and New Outlook’. Clothing’s near but younger ‘twin’ housing indirectly extends the inner control mechanism of the organism. Hence housing manifests collective means to achieve ‘storing heat and energy’. While McLuhan regards shelter as indirect ‘extension’ of bodily regulation system, his analogy between clothing and architecture evokes Gottfried Semper’s four elements.⁵⁷ In *The Four Elements of Architecture* (1851) Semper investigates the origin of architecture

⁵⁵ Marshall McLuhan, *Understanding Media* (London and New York: The MIT Press, 1994) <<https://doi.org/10.2307/2711172>>.

⁵⁶ Marshall McLuhan, *Understanding Media: The Extensions of Man, Critical Edition*, ed. by Terrence Gordon (China: Gingko Press, 2011).

⁵⁷ Gottfried Semper, *The Four Elements of Architecture* (New York; New Rochelle, Melbourne, Sydney: Cambridge University Press, 1989).

via the origin of space defining elements. In this attempt, he differentiates four performances and explains them by addressing different architectural elements. He discusses pottery and the function of a building in relation to a hearth; carpentry and tectonics are related to a roof support structure; while masonry and stereotomy are presented with reference to mound; and the textile arts are assigned the role of an enclosing membrane. Hearth and textile are frequent themes that Semper and McLuhan both discuss. Moreover, McLuhan's references to 'tribal' and 'non-literate' human reverberate Semper's primary sources of investigation; the antique civilizations of Egyptians, Assyrians and Babylonians. However, there is a very slight difference in the connections they made between clothing and architecture. Semper looks for specific traces in the history of 'costume' to connect it with tectonics, whereas McLuhan adopts a more phenomenological approach and uses architecture as the physical manifestation of human life in the world.

The idea of extension in McLuhan essentially originates in the experience of 'tribal' human, who accepts their body as the model of the universe. Conceiving their body as a model, thus center, tribal human sees their house or any other media of communication, as the extension of this central force. However, 'literate' human, in McLuhan's elucidation, prefers separateness and compartmented spaces rather than this more open and embracing view, being a part of the cosmos. For McLuhan a shift occurs with the extension of the body with new social technology and inventions. The establishment of a new equilibrium among all of the senses and faculties leads to a 'new outlook' that brings new attitudes and preferences in many areas. Both the way electric energy has transformed the living and working spaces, and electric media's effect on the space-time experience become another point of reference to strengthen his argument. In essence, McLuhan presents both clothing and housing as extensions of skin and moreover, as media of communication. Because they shape and rearrange the patterns of human association and community.

Similar to McLuhan in the sense the impact he created, German literary scholar and media theorist Friedrich Kittler is a remarkable name in many respects. In addition to his unique perspective that He emphasizes the materiality of discourses, and his

use of media as a methodological source results in crucial routes that his successors pursue.⁵⁸ Kittler's persistency in highlighting the importance of media for discourse has bestowed him a strong position in media theory. In *Discourse Networks 1800/1900* (first published in 1985 under the title *Aufschreibesysteme 1800/1900*) he expands Foucault's discourse formulation and aims to incorporate all technological media by combining post-structuralist theory with the materiality of media.⁵⁹ The notion of discourse is thus reamed by Kittler as the effects of historically existing media technologies. With this understanding, Kittler embarks on to unravel discourse networks of two contrasting incidents. Denominating the title of the book as well, these turning points are universal alphabetization around 1800 and technological data storage around 1900. In Kittler's view, discourse networks are 'networks of technologies and institutions' that have a crucial role in data selection, storage and procession. As a basic element, literature stores, processes and transmits data. While library is a discourse network, it is not the only type; for Kittler, data storage, transmission and calculation in technological media should be considered to better elucidate the archaeologies of the present. Thus, Kittler underlines why and how different modes of technological knowledge should be incorporated into discourse analysis.

In line with his materialist approach, Kittler adopts a mechanistic tone and lays the emphasis on the hardware in his writings. Kittler's thoughts on space are most clearly merged in "The City is a Medium".⁶⁰ This work, which was first published in 1988, exhibits a techno-materialist media approach in a particular setting: city space. Kittler sets out to explain the city via a set of actions and operations. These allow

⁵⁸ It is also possible to discuss Kittler's impact on the formation of a radical branch in media theory called 'media archaeology'.

⁵⁹ Friedrich A. Kittler, *Discourse Networks: 1800/1900*, ed. by Michael Metteer and Chris Cullens (Stanford: Stanford University Press, 1990)
<<https://doi.org/10.1017/CBO9781107415324.004>>.

⁶⁰ Friedrich A. Kittler and Matthew Griffin, 'The City Is a Medium', *New Literary History*, 27 (1996), 717–29.

him to make a comparison between the media and the city; three actions of storage, transmission, and reproduction form the analogical connection Kittler establishes. He views city as the medium that is capable of transferring the complex culture contained in the aforementioned facilities, whereas buildings, vaults, archives, monuments, tablets, and books are considered storage facilities. When compared to the limitations of the current electronic processes for storing information, Kittler believes that the complex human order of the city suggests a higher condition.

Along the same line and under the influence of both Kittler and McLuhan, Scott McQuire looks at the contemporary city as ‘a media-architecture complex’ in *Media City*.⁶¹ Basing his claim on ‘the proliferation of spatialized media platforms’ and ‘hybrid spatial ensembles’, he prefers media city rather than digital city for two reasons. In order to emphasize ‘a longer and more diversified history of the mediated construction of urban space’ and to synthesize the perspectives of the two key figures described above; McQuire views ‘media’ in a McLuhanian sense, but he also sees the city in Kittlerian terms, as a ‘medium’.⁶² Hence, he expands the understanding of public and private space as well as social life in modern cities by fusing two significant approaches to media at the city scale.

Quite different yet complementary in the sense it incorporates architecture into his inquiry, another key media theorist, Vilém Flusser reconfigures factory. He conceptualizes the architecture of factory as the cultural stamp that reflects cultivation level and the development of a society.⁶³ From this point on, imagining

⁶¹ Scott McQuire, *The Media City* (Los Angeles, London, New Delhi, Singapore: SAGE, 2008) <<https://doi.org/10.1017/CBO9781107415324.004>>.

⁶² Kittler and Griffin, ‘The City Is a Medium’.

⁶³ Vilém Flusser, *The Shape of Things: A Philosophy of Design*, trans. Anthony Matthews (London: Reaktion Books, 1999). This paper was written for a lecture at AGIPLAN, in Mühlheim/Ruhr, for a meeting on the theme of ‘the factory of the future’. It was first published in German in 1993 and was later included in this book.

the factories of future leads Flusser to envision them as schools where robots' transformative powers alter the overall process of production. In Flusser's approach, architecture operates as a prospective 'medium', since it both embodies and orchestrates culture and mediated experience.

This survey on media theory marks certain lots to envision further connections with architecture. However, media studies encompass a wide area. As it develops, the interpretive and critical frameworks inside it change, and media start to show up with various pairings, creating sub-branches.⁶⁴ As portrayed through this limited mapping, many of the discussions in media studies do not centralize around architecture. Yet, on a micro level, these discussions closely interact with it. Because architecture provides a physical context for media's reformulation, so, facilitates the materialization and embodiment of its issues. This perspective is also cardinal to comprehend architecture's dialectical relation with influential circumstances that surrounds it. On the other hand, internal attempts within the discipline echo together with this outer realm; medium/media appears as a promising interface to rethink architecture.

There are more specific theories that grapples with idiosyncratic nature of digital media. As a matter of fact, the vastness and multimodal nature of digital media make it a tough object of study. The primary cause of this difficulty lies behind the

⁶⁴ This is the case for media archaeology, as a radical and frictional branch of media studies, media archaeology embarks on to provide new perspectives when embraced as a methodological novelty. This sub-field can be described as 'a bundle of closely related approaches' that are 'discontent with canonized narratives of media culture and history'. Its theoretical roots can be found in what has been mapped heretofore, yet it is distinguishable with the opponent stance against the teleological and triumphalist narratives. In other words, it aims to shake the readily accepted histories of technologies from past to present. As opposed to these canonized narratives, media archaeology aims to construct fresh understanding for the new 'against the grain of the past'.⁶⁴ Pointed as forerunners, Foucault and Benjamin had influential power on the development of the field. Erkki Huhtamo and Jussi Parikka, *Media Archaeology* (Los Angeles, London: University of California Press, 2011) <<https://doi.org/10.1017/CBO9781107415324.004>>.

process of computer's captivation of all cultural production since the late 1990s. Undeniably, the evolution of the computer from a tool to a medium had irrevocable effects on social and cultural forms. Lev Manovich observes that:

As distribution of all forms of culture becomes computer-based, we are increasingly 'interfacing' to predominantly cultural data: texts, photographs, films, music, virtual environments. In short, we are no longer interfacing to a computer but to culture encoded in digital form.⁶⁵

In the past decade, digital media has further branched out with mobile phones and other devices that enable to reach and produce online content. Thus, Manovich's observation is valid not only for computer but for every surface that enables to interact digitally. In line with the cultural expansion of the role of digital media, theories that were concordant to mass media and interpersonal communication are not amenable for this new media environment, since it often has elements of both. Against this backdrop, social scientist Ralph Schroeder⁶⁶ identifies three strands as the dominant theories on digital media; these are theory of network power, actor-network-theory and mediatization theory.

Castell's theory of network power undertakes the construction of social power via the processes of communication; it elaborates the distribution and organization of power in the network society.⁶⁷ His approach challenges media's ontology and configures it as *working networks*. The second layer of his theory, 'power' operates at the macro level. By focusing on 'global transnational media conglomerates'⁶⁸ this

⁶⁵ Lev Manovich, *The Language of New Media*, (The MIT Press, 2001), p. 80.

⁶⁶ Ralph Schroeder is Professor in Social Science of the Internet at the Oxford Internet Institute. For the elaboration of dominant theories on digital media see, Ralph Schroeder, 'Towards a Theory of Digital Media', *Information, Communication & Society*, 21 (2017).

⁶⁷ Manuel Castells, *Communication Power*, (Oxford: Oxford University Press. 2009).

⁶⁸ Schroeder.

network approach emphasizes global and local multimedia networks of mass communication organized around the Internet.

On the other hand, actor-network theory (ANT), which is originally derived from the sociology of science, deals with the distribution of agency of either individuals or non-humans. Its radicality lies behind its overturning of anthropocentrism by including non-human agents and its replacement of the essentialist notion of ‘the social’ with actors and networks. Though, it deals more with new technologies than digital media, applying ANT in media has the potential to provide analysis of media, its production, and effects. However, due to the theory’s adherence to the idea that ‘science and technology are constructed or shaped by specific local social contexts’⁶⁹, it is impossible to generalize about the role of media beyond the individual contexts of constructed-ness.

Lastly, mediatization theory offers a framework to study the influence of media on societal and cultural change.⁷⁰ As a framework, mediatization enables to view a new social condition where the permeance of media in social and cultural institutions makes it impossible to analyze it as a separate entity. Thus, mediatization provides a novel perspective to tackle the integratedness of media in modern society and culture. Meanwhile, it rejects the old models that conceive media as being disconnected from the operations of society and culture. The manifold attempts that cover ‘the ways in which social institutions and cultural processes have changed character, function, and structure in response to the omnipresence of media’ find critical attention within mediatization.⁷¹ In this perspective, media is not understood merely as tools and technology. Rather than that, mediatization theory reconciles

⁶⁹ Ibid.

⁷⁰ Stig Hjarvard, ‘The Mediatization of Society: A Theory of the Media as Agents of Social and Cultural Change’, *Nordicom Review* 29 (2008), 105-134.

⁷¹ Ibid.

with medium theory⁷²; they both pay attention to ‘particular formatting of communication and the impacts on interpersonal relations it gives rise to’.⁷³ Yet it diverges from medium theory by not only incorporating but foregrounding contextual, i.e. specific historical, cultural, and social, relations. As Krotz warns ‘mediatization as a process cannot be decontextualized’.⁷⁴

Schulz defines the processes of mediatization at four different levels: extension, substitution, amalgamation, and accommodation.⁷⁵ Media ‘extends’ communication both in time and space by bridging spatial and temporal distances. Traditional forms of communication including social activities and social institutions are ‘substituted’ by media, thus they change their character. On the other hand, media ‘amalgamates’ the traditional mode of communication with mediated one. Thus, it infiltrates into everyday life; media activities and non-media activities ‘merge and mingle with one another’. Lastly, it manipulates actor’s behaviors to adapt to media by ‘accommodation’, what Schulz calls ‘the media logic’ permeates in the actors and organizations. These traits of the process are not mutually exclusive; they can happen simultaneously, or partially.

Informed by the aforementioned ideas, this study endorses the mediatization theory in scrutinizing online practices of women collectives in Chapter 4. This approach helps uncover multiple operations between digital media and non-mediated reality. In this view, media does not mimic or merely represent what is outside, it becomes active in the shaping of cultural content. This appropriation allows for different

⁷² Walter J. Ong, *Orality and Literacy: The Technologizing of the Word*. (London: Methuen, 1982). Marshall McLuhan, *Understanding Media* (London and New York: The MIT Press, 1994) <<https://doi.org/10.2307/2711172>>. Joshua Meyrowitz, *No Sense of Place: The Impact of Electronic Media on Social Behaviour* (New York: Oxford University Press, 1986).

⁷³ Hjarvard.

⁷⁴ As cited by Andreas Hepp, *Cultures of Mediatization*, (Polity Press, 2013).

⁷⁵ Winfried Schulz, ‘Reconstructing Mediatization as an Analytical Concept’, *European Journal of Communication*, 19 (2004).

facets of mediatization. In Jansson's account, mediatization of culture describes a process where 'mediatized cultural products' gain status as 'cultural referents' thus provide 'the development and maintenance of cultural communities'.⁷⁶ This is significant in delineating the role of media in the formation of organizations for women in architecture. Moreover, it enables to examine the mediated presence of these organizations as culturally valid reference points. Thus, it can be claimed that online practices of organizations for women in architecture contain the formation and dissemination of 'mediatized cultural products' specific for a certain architectural audience and for a particular time. Additionally, the formulation offered by Schulz helps to unpack the mediatization process behind these organizations and pinpoint to what extent their initiatives hover in between the non-mediated and mediated realm.

2.2 A Micro View: Translation and Translocation

2.2.1 Translating Medium in Architecture

Stemming from the contemporary resonance the word 'media' evokes, its relationship with architecture, at first, reminds current developments in digital technologies. Although such a grasp would not be wrong to estimate the time period in which discussions on media in the discipline intensify, this relationship stretches farther than the digital turn allows one to think. The influence of communication technologies on Western architectural theory in the pre-digital era has been comprehensively analyzed by Mario Carpo.⁷⁷ By focusing on 'the feedback loop

⁷⁶ André Jansson, 'The Mediatization of Consumption: Towards an Analytical Framework of Image Culture', *Journal of Consumer Culture*, 2 (2002), 5-31.

⁷⁷ See Mario Carpo, *Architecture in the Age of Printing: Orality, Writing, Typography, and Printed Images in the History of Architectural Theory* (Cambridge- London, The MIT Press, 2001).

between the media and architectural theory'. Carpo contends that the history of Western architecture was altered at the dawn of the modern era by the transition from script to print and from hand-drawn illustrations to machine reproduced graphics. More specifically, the print media inaugurated an architectural method that is different from the orality caused in the Vitruvian era. This method dictates a simplified theory of design, which requires the repetition of isotropic elements. Based on this central thesis of the study, Carpo argues that due to 'a shift from text to hypertext, printed to digital representations', which is experienced today 'a similar revolution'⁷⁸ awaits. In effect, he develops the outlines of such a revolution in *The Second Digital Turn* and shows the potential of the designs that are informed by digital tools replaces architects while bringing a new way of thinking about design.⁷⁹ In contrast to predigital media, digital tools promise a technology that meant to produce variations rather than copies or standardized products. Therefore, it opens the way for mass production of variations. What Carpo does in both of the studies is to capture and outline a paradigmatic shift in architecture by relying on the terms that come from technical and technological media. He embarks on to draw a perspective for architecture via the lexicon provided by communicational tools.

This approach of reassessing different developments in architecture with the lenses provided by communication technologies is a tendency which has further reflections such as interpreting fundamental and intrinsic components or even the essence of architecture as if it is a medium. Within the scope of this study, and with respect to the literature around architecture and media, this tendency is addressed via the concept of translation. Translation here means the act, attempt, eager, or the will to reconfigure architecture via terms, methods, and knowledge that comes from media

⁷⁸ Mario Carpo, *Architecture in the Age of Printing*.

⁷⁹ Mario Carpo, *The Second Digital Turn: Design Beyond Intelligence* (Cambridge: The MIT Press, 2017).

technologies. As exemplified by Carpo, this generates quite bold claims as well as more moderate ones, as the discussions in this part help unfold.

Either explicitly or implicitly the approaches that embark on to describe architecture itself as a medium, compose a temporally heterogenous category. The beginning of this understanding can be marked as the discovery of architecture as an arena of semiotic endeavor with post-modern theory, therefore dates to the 1970s. Under the drive of semiotics, architecture has been treated as a medium that signifies and communicates meaning.⁸⁰ However, as Agrest and Gandelsonas indicate this idea is problematic. What architecture signifies and what it communicates refer to two different areas of study; while the former points to semiotics, the latter refers to communication theory.⁸¹

Additionally, it is possible to spot some other studies that do not engage with semiotics, yet embark on to describe architecture as a specific type of medium, a communicatory environment.⁸² This disposition to align architecture with media prominently might be related to the catchall nature of media to epitomize the unprecedented connectedness that became the characteristic of the century. Therefore, approaching to architecture with media saturated tools and concepts endows a certain contemporaneity to the position.

Among these, Reinhold Martin's approach deserves attention due to its profundity; deciphering not architecture but an architectural component, he suggests curtain wall as a medium where 'patterns' of organization in the corporate architecture of the

⁸⁰ Charles Jencks and George Baird, *Meaning in Architecture*, (New York: Braziller, 1970).
Nelson Goodman, 'How Buildings Mean?' *Critical Inquiry*, 11 (1985), 642-653.

⁸¹ Diana Agrest and Mario Gandelsonas, 'Semiotics and Architecture: Ideological Consumption or Theoretical Work', in *Theorizing a New Agenda for Architecture*, ed. by Kate Nesbitt (New York: Princeton Architectural Press, 1995).

⁸² Tricia Austin, *Narrative Environments and Experience Design: Space as a Medium of Communication* (1st ed.). (Routledge, 2020). <https://doi.org/10.4324/9780367138073>

United States after the World War II becomes visible.⁸³ His interdisciplinary inquiry crosses the boundaries of aesthetics, cybernetics, architecture, media, and art theory, thus, weaves an alternative explanation to curtainwall. Though the abundance of networks with which Martin deals with obstructs the intricate relationship between media and corporate culture in this specific context, they help to reveal a multitude of events and individuals that have been influential in the development of this relationship. Thus, as a concept medium helps Martin to historically examine the potential of architecture as a communicatory interface.

Martin is not alone in translating the intricate networks within a system, i.e. architecture, with reference to another complex entity, i.e. communications media. The constant dialogue between media and city becomes a matter of attention in numerous studies. However, this endeavor, by and large, rises from the other side of equation, media theorists embark on to explicate ‘city as medium’⁸⁴, ‘architecture-media complex’⁸⁵, or they focus on mediation of the city’s ‘data infrastructure’⁸⁶. All these approaches provide different perspectives for urban architecture via medium driven concerns or cognizance.

On the other side, there exist the media production spaces that operate as an intermediary zone between the real and constructed. As part of the media-architecture problematic, this issue has been dealt with particular focus on different genres of mediated space⁸⁷; i.e. entertainment, advertising, and broadcast news. Additionally, TV towers and other media complexes gathered under the name ‘media

⁸³ Reinhold Martin, *The Organizational Complex* (The MIT Press, 2003).

⁸⁴ Kittler and Griffin.

⁸⁵ McQuire, *The Media City*.

⁸⁶ Shannon Christine Mattern, *Code + Clay . . . Data + Dirt : Five Thousand Years of Urban Media* (London: University of Minnesota Press, 2017). Shannon Mattern, *Deep Mapping the Media City*, (Minneapolis: University of Minnesota Press, 2015).

⁸⁷ James Brown, *Mediated Space* (London: Riba Publishing, 2018).

house' have been considered as spaces that produce centrality.⁸⁸ In these undertakings, the inner ties that these spaces have with media are revealed via shaking what is considered as inherently architectural. Therefore, this intersection between media and space provides a fertile ground to discuss how media structures architecture.

A more comprehensive approach that grapples with optical media can be found in *Visioning Technologies*. The essays grouped under themes on perspective, photography, film, and digital technologies shed light on the way architecture has been reframed and restructured by different technologies of sight. Cairns claims that 'certain patterns of technological motivation and evolution repeat themselves with the emergence of every new technology of sight'.⁸⁹ In *Visioning Technologies* this repetition is theorized as optical mimicry. Despite the multiple perspectives that engage with media, Cairns describes the field in which he positions his study as 'a thread of architectural theory that has yet to be fully explored and exposed' are of 'direct contemporary relevance'.⁹⁰

A peculiar account of Modernism by revolving around new communication technologies are developed in 'Everything Counts in Large Amounts' by the architectural studio FAT.⁹¹ The article on the one hand connects communication with modernism and on the other hand it marks it out as the expositive quality that underlies contemporary condition. In this attempt, two striking claims are offered: first, FAT imagines modernism as 'the sign of architecture that seeks to respond to the new experiences of communication'. A dissolution of space emanating from

⁸⁸ Staffan Ericson, Kristina Riegert (ed.), *Media Houses: Architecture, Media and the Production of Centrality* (New York: Peter Lang, 2010).

⁸⁹ Graham Cairns, *Visioning Technologies: The Architectures of Sight* (New York: Routledge, 2017), p. 3.

⁹⁰ *Ibid*, p. 5.

⁹¹ FAT., 'Everything Counts in Large Amounts (the Sound of Geography Collapsing)', in *This is Not Architecture*, ed. Kester Rattenbury (London-New York: Routledge, 2002), 244-252.

wireless communication is thought to be reflected in architecture. This insight is demonstrated by modernist architectural acts such as providing connection between formerly distinct spaces and the removal of internal and external boundaries. The second and much novel interpretation investigates a base at the intersection of abstraction and McLuhan's 'medium is the message'.

By pointing out that McLuhan was half-right in his conception, FAT claims that the content matters as much as the medium. Moreover, they expand how this problematic found an echo in architecture through the binary opposition between abstraction and ornament. According to FAT, the misunderstood idea of abstraction gained a major role in modernism, then grew into a 'mystical belief'; yet, the digital revolution made ornamentation the visible structure of communication. All in all, despite dealing with a highly discussed matter, this study develops a fresh lens to understand modernism in architecture.

The intricate alliance between media and modern architecture first and foremost discussed extensively by Beatriz Colomina. Genuinely, she can be named as a prominent figure who deals not with a specific medium in relation to architecture but the media phenomenon itself. In each of her writings, she presents a refreshed vision and construct novel avenues for the relationship of architecture with media. For instance, in *Architectureproduction*⁹², Colomina dismantles architecture's relation to mass media via the impact that the context of production had on modern architecture. By using critical theory developed in Frankfurt School as the base of her interrogation and specifying her research question to the relationship between modern architecture and changing reproduction techniques of its time, she delves deep into the meaning of reproduction and points out the change that the

⁹² This article is originally excerpted from the book *Architectureproduction* which Colomina co-edited with Joan Ockman and published in 1988. Beatriz Colomina, 'Architectureproduction', in *This is Not Architecture*, ed. by Kester Rattenbury (London-New York: Routledge, 2002), 207-221.

reproduction brought to the notion of ‘user’ in architecture. ‘With photography, illustrated magazine and tourism architecture’s audience enlarged and so its consumption’, the notion of user has transformed and expanded to include both the reader, the viewer and the consumer. As a result, the ways architecture is ‘produced, marketed, distributed and consumed’ have a constituent role in ‘institution of architecture’ and thus inevitably linked to the perception and definition of architecture’s role in society, in the age of mass (re)production and the culture industry. Thus, she delineates a vision of architecture that is shaped by media radically.

Reminiscent of FAT’s reading of modernism through the lenses of communication, but before them, Colomina interprets an architectural element, glass as a communication apparatus.⁹³ In Colomina’s account the fluidity of communication finds reflections in architecture through the immense use of glass. In addition to their reflection, the social and cultural ethos are molded via architecture. This function of architecture emerges as a notable fulcrum to investigate its potential alignments with communication. According to Colomina:

If communication is basically about bringing the outside in (as when reading a newspaper to bring world events into your life) and getting the inside out (as when sending a letter) then glass unambiguously represents the act of communication. It is as if glass literally takes over more and more of a building as the systems of communication became more and more fluid.⁹⁴

In ‘Unclear Vision’, Colomina describes how ‘the glass box has become something else altogether’ with reference to SANAA’s Glass Pavilion at the Toledo Museum of Art. In this description, she stresses the mediating function of glass with a parallel argument entrenched in the influence of medical imaging technology for the human

⁹³ Beatriz Colomina, ‘Unclear Vision’, in *Engineered Transparency: The Technical, Visual, and Spatial Effects of Glass* ed. by Michael Bell and Jeannie Kim (New York: Princeton Architectural Press, 2009).

⁹⁴ Ibid.

body and the transparency in contemporary architecture. Yet, the way she frames the issue goes beyond the adoption of transparency or the influence of architecture on other fields. What she accentuates and ponders the most is ‘how architecture absorbs the latest communication systems’.⁹⁵ As these studies exemplify, media occupies central place in many of Colomina’s studies.⁹⁶ The way she treats the subject matter diversifies; she deploys media as a tool for analysis, or media of circulation and dissemination dominates the discussion through their direct relation to architecture, especially to modern paradigm. Nevertheless, it is possible to detect a pattern in her writings to better understand her multi-layered conception of the topic. Colomina primarily deals with modern architecture’s embeddedness in technology, with a particular extension of media. Whatever lenses she prefers, the issue develops around ‘publicity, privacy, communication, media, and modern architecture’.

It is possible to come across with quite radical accounts that replaces deep rooted concepts with medium, thus alter one’s perspective of space fundamentally. A significant example of such an account can be found in *Medium Design*, where architectural theoretician Keller Easterling equips medium with a potential to invert some ‘habitual approaches to problem solving, aesthetics and politics’.⁹⁷ Thus, shifting the focus from object to medium, she aims to rewrite space as the mixer of networks. Based on this, space is deployed as an information system to address spatial and non-spatial problems. This approach to medium is reminiscent of the

⁹⁵ Ibid. 86.

⁹⁶ Although Colomina’s studies centralize around media, her writings provide various outlooks with genuine perspectives. Despite these changing angles, it is possible to assert that ‘domestic space’ not only complementary, but also as vital as media to her. For instance, in ‘Domesticity at War’, which appeared in *Assemblage* in 1991, she deals with ‘cohabitation of disparate meanings’ that a cabinet undertakes. Through a case study, Underground House, she unravels tacit character that the cabinet encapsulates; a house hosting the media and a separate entity decontextualized and displaced into the media itself. Beatriz Colomina, ‘Domesticity at War’, *Assemblage*, 16 (1991), 14-41.

⁹⁷ Keller Easterling, *Medium Design* (Strelka Press, 2018).

understanding of milieu in the sense Newtonian mechanics refers to intermediary environment.

Based on the scrutinized studies, how the concept of medium/media is absorbed in architecture and which additional attributes this pair undertook during the circulation should be clarified. It is eye-opening that rather than a redefinition of medium, there are many accounts that explain architecture with reference to an intact and fixed understanding of media. Keller Easterling's insightful extension of the concept can be seen as an exception since it has novel openings for medium too. Also, these studies show that the majority of the approaches adhere to the meaning that resonates with mass media. Therefore medium/media appear as a complementary tool that enables to see the different facets of architecture altered by media. Herein the issues of communication, networks, interaction, even infrastructure come to the fore. In particular examples, the emphasis dissolves from the communication towards the sense of an environment that embodies certain characteristics. Yet, to what extent architecture is engaged with the emphasized environment as well as the nature of agency remains as unaddressed questions. As a complementary category that is capable of specifying the processes of intervention, mediation does not find a prolific ground in the elaborated studies. It only and tacitly assists to denote material consequences stemming from the proliferation of media.

2.2.2 Translocating Medium in Architecture

The link between medium and architecture is quite intricate and indistinguishable because medium provides the space where architecture is reproduced. In line with this understanding, Carpo pushes the history of medium in architecture as back as Vitruvius, to the oral ways of communication.⁹⁸ This link, which renders media-architecture relationship so profound and tangled, in effect stems from the fact that

⁹⁸ Mario Carpo, *Architecture in the Age of Printing*.

the discourse on medium harbors a voluminous discussion embedded at the center of the discipline; this is the issue of representation. Each representation requires a medium, and via its medium each representation poses an ontological question for architecture.

However, partiality and limitedness are intrinsic to every medium and every representation. This premise has become the central departure point for many studies that ‘transplant’ and ‘question’ the position of medium in architecture. Different from treating architecture as a medium or unsettling central asset of the discipline via terms that derive from media, these studies deal with ‘the specificities of architectural media’. In this sense, they disconnect medium from the broader field of cultural production and relocate it within the tissues of architectural production. Therefore, in this section some of the studies that address different set of issues and concerns emanate from architecture’s multiple mediums are reviewed with reference to this act of translocation.

The claim of ‘the impossibility of dissociating the medium from what it conveys’ can be seen as the common point epitomizing these approaches. Each medium’s inextricable link to the content it encapsulates, thus medium’s agency is a subject matter that is ceaselessly consumed with reference to the concept of representation. These can be exemplified with reference to *This is not Architecture: Media Constructions*, a canonical book on this topic. Specifically, in the chapter entitled as ‘The Shape of Representation’, the place of media for architecture have been discussed in a broad spectrum, which includes iconic images and their agency in shaping architectural beliefs⁹⁹, designs of well-known architects’ and their

⁹⁹ Kester Rattenbury with contributions from Catherine Cooke and Jonathan Hill, ‘Iconic Pictures’ in *This is Not Architecture*, ed. by Kester Rattenbury (London-New York: Routledge, 2002), 57-91.

multimodal representations ranging from book to buildings¹⁰⁰, operational power of diagrams¹⁰¹, the dichotomy between ‘photo-graph and photo-shop’¹⁰², computer games’ mediation of perceived spaces¹⁰³. This diversity just depicts the comprehensive nature of the topic. Moreover, Pierluigi Serraino unravels the kind of architecture reflecting from the iconic photographs and their acceptance in architectural culture by addressing to Case Study House #22 in Los Angeles.¹⁰⁴ On the other hand, Kester Rattenbury problematizes ‘the media coverage’ of architecture in national newspapers and discloses how architecture’s aesthetic agenda are manipulated in favor of journalists and ‘the strong’.¹⁰⁵

However, medium do not always assure an affirmative ground for architecture. Clare Melhuish represents the pessimistic accounts of global expansion of connectivity which she discusses through destabilization, dematerialization and loss of cultural substance.¹⁰⁶ What disturbs Melhuish appears to be architecture’s embeddedness in operational practices of media.¹⁰⁷ In line with problematizing cultural effects of

¹⁰⁰ Kester Rattenbury, ‘Think of it as a farm! Exhibitions, books, buildings: An Interview with Peter Smithson’, in *This is Not Architecture*, ed. by Kester Rattenbury (London-New York: Routledge, 2002).

¹⁰¹ Ben van Berkel and Caroline Bos, ‘Diagrams: Interactive Instruments in Operation’ in *This is Not Architecture*, ed. by Kester Rattenbury (London-New York: Routledge, 2002), 99-110.

¹⁰² David Greene, ‘Foto-graph, Foto-shop’, in *This is Not Architecture*, ed. by Kester Rattenbury (London-New York: Routledge, 2002), 121-125.

¹⁰³ Philip Campbell, ‘The Height of the Kick: Designing Gameplay’ in *This is Not Architecture*, ed. by Kester Rattenbury (London-New York: Routledge, 2002), 110-121.

¹⁰⁴ Pierluigi Serraino, ‘Framing Icons: Two Girls, Two Audiences. The photographing of Case Study House #22’, in *This is Not Architecture*, ed. by Kester Rattenbury (London-New York: Routledge, 2002), 127-136.

¹⁰⁵ Kester Rattenbury, ‘Naturally Biased: Architecture in The UK Nation Press’, in *This is Not Architecture*, ed. by Kester Rattenbury (London-New York: Routledge, 2002), 136-156.

¹⁰⁶ Clare Melhuish, ‘From Dematerialisation to Depoliticisation in Architecture’, in *This is Not Architecture*, ed. by Kester Rattenbury (London-New York: Routledge, 2002) 222-230.

¹⁰⁷ This echoes Michael Hays’ main critique that is raised in K. Michael Hays, ‘Architecture Theory, Media, and the Question of Audience’, *Assemblage*, 27 (1995), 41–46 <<https://doi.org/10.2307/3171428>>.

broadening audience, yet diverging with the focus on sociopsychological aspects, Neil Leach provides a contemporary portrayal.¹⁰⁸ Drawing from Georg Simmel's blasé individual and deploying her as a post-modern metropolitan type to reflect a new predominant sensibility, he puts forward a character naming it as 'Wallpaper person'. In the experience of this pleasure-seeking amnesiac, architecture is reduced to an aspect of life-styling, similar to other aspects of this metropolitan culture.

Digital medium alters the space for architectural knowledge production¹⁰⁹ and dissemination. This triggers certain critical reflections as to these new spatial environments. In introducing these concerns via a special issue dedicated to the subject, Blacksell and Walker describes this space as a new territory in between architecture and editorial design.¹¹⁰ In these accounts, 'progression of these spatial environments in both architecture and publishing from the physical (and static) to the virtual (and dynamic)' forms the main focus. In contrast with earlier studies, where 'the representation of architecture' appears as the often-referred parcels of the inquiry area, the issue reframed as editorial design tackles the medium of architecture more effectively. It helps better define the connections made with architecture and reduces distractions stemming from the wideness of different mediums included within the umbrella term the media. A solid reference to Marshall McLuhan's

¹⁰⁸ Neil Leach, 'Wallpaper Person: Notes on the Behavior of a New Species', in *This is Not Architecture*, ed. by Kester Rattenbury (London-New York: Routledge, 2002) 231-243.

¹⁰⁹ '(...) instead of isolating a body of knowledge from others by defining its borders, this new medium enables connections between them. That is why knowledge cannot be produced in isolation, particularly in this time of the networked world. As the production of new knowledge transforms the relations in the network, changes in the structure of the network alter the ways knowledge is produced.' Next to the change of medium, Acar mentions the impact of post-positivist philosophy of science on the subversion of 'scientific ideal of linear progression' and the rise of a new form of knowledge production that is oriented at innovation. See, Zuhail Acar, 'A Reconceptualization of the Production of Knowledge in Architecture Through Research Laboratories' (unpublished doctoral thesis, Middle East Technical University, 2022) 13-20.

¹¹⁰ Ruth Blacksell and Stephen Walker, 'Architecture and the Spaces of Information', *Architecture and Culture*, 4.1 (2016).

assertion ‘any understanding of social and cultural change is impossible without *a knowledge of the way media work as environments*’ displays the adoption of the term in the broadest sense and the conception of virtuality as an environment. Understood as an environment, new media requires to construct unexplored openings for architecture thus it harbours a potential beyond representation. This necessitates to understand and appropriate an entire mediating context and structure. Within the scope of the issue, these constructed environments are broadly described as ‘spaces of information’.

There are a few more studies that require attention with their particular approach. In this respect, *Mediated Modernism: Architectural Cultures in Britain* comes to fore by exemplifying the agency of the printed medium and its reshaping functions in architecture.¹¹¹ Bringing published magazines together with prevailing discourses in architecture, this study highlights the formative effect of media. The limited focus of the study deals with Britain and surveys the time period between 1920 to today to show how architecture exists through and in the media. In *Mediated Modernism*, a succession of discourses elaborated through *Architectural Review* in the 1930s and 1950s, *Architectural Design* in the 1960s, *Archigram* and recent Architectural Association (AA) publications, as well as official plans and a number of key books all having had a wide influence. *Mediating Modernism* provides an understanding of media in the sense the word gains with modernity; therefore, it presents a different context to a rehearsed portray that is beforehand developed by Beatriz Colomina. However, in the current literature in architecture, it is also possible to come across with an understanding of ‘medium’ that becomes quite literal as to denominate the application of media screens.

Not as profound as so far elaborated, a rather practice-based approach to media-architecture coupling arises from the oft-repeated notion: "screenization" of façade

¹¹¹ Andrew Higgot, *Mediating Modernism: Architectural Cultures in Britain* (USA; Canada: Routledge, 2007).

and augmentation of urban space. This strategy appears to be developing its discourse under the heading "media-architecture," and it has been expanding via several organizations since 2007.¹¹² Going beyond the façade, and conceptualizing the use of media as an (im)material component of public space via interactive, light-emitting elements on the outer shell of architectural structures is another approach that adds the materialities of information, next to the traditional materials.¹¹³ These perspectives as well translocate media from its broader context of cultural field and repositions it within architecture by modifying its function and scale.

In many accounts that exemplify translocation of medium in architecture, medium appears as a means that intervenes in the production, perception, and reception of architecture. In this perspective, the emphasis shifts from architecture's material existence to its extensions into other mediums where the mediums' agencies are foregrounded. This thread approximates and intersects with studies of visual culture. For instance, architecture in the film medium can be considered as medium's translocation into architecture. As architecture's theoretical and practical interaction with different mediums increases, the boundaries of each side blur. Scrutinizing architecture's relation to medium in this described sense is not unprecedented. Moreover, it is attracting attention at an accelerated pace after the 2010s.¹¹⁴ Although

¹¹² These organizations vary from Media-Architecture Conference to Media Facades Festival and more recently to Media Architecture Biennale. Significant for this formation is the institutional body of media-architecture, Media Architecture Institution (MIA), which is composed of designers, architects, interaction designers, artists and researchers. MIA organizes events and conducts projects that bring media art and architecture together via screen-based designs. The publications on the issue are not limited to those connected to MIA. Some examples might include Dave Colangelo, *The Building as Screen: A History, Theory, and Practice of Massive Media* (Amsterdam University Press, 2020). The writer of the book, Colangelo is an artist who deals with outdoor projections, programmable architectural façades, and urban screens both in his artistic and writing practice.

¹¹³ Alexander Wiethoff, Heinrich Hussmann, (ed.) *Media Architecture: Using Information and Media as Construction Material* (Berlin/Boston: De Gruyter, 2017)

¹¹⁴ Most of the books published around the issue dates to the 2010s. However, their emergence might be located to the 1990s.

the inclusive concept-term of medium/media rarely took central place and became the sole object of inquiry¹¹⁵, at times it is deployed as a complementary component to other agendas.¹¹⁶ In between these two poles, more often than not it provides a visually, politically, and culturally loaded ground to examine architecture and its apparatuses in technologically mediated environments. Thereby, these attempts that positions media within architecture fabricate fresh viewpoints and render what is visible yet unseen more explicit and articulate.

2.3 Recasting Medium as a Conceptual Tool

In *What is Philosophy?* where Deleuze and Guattari deal with the cause and effect relations between thought and concepts,¹¹⁷ they reject the widely held association that regards concept as the cause of thought. As Claire Colebrook further explains with reference to Deleuze, ‘in its confrontation with chaos, thought creates concepts’.¹¹⁸ Elizabeth Grosz also touches upon the interaction between thought and concept with reference to Deleuze’s ideas via following words:

¹¹⁵ Exceptional in this regard is the essays collected in *This is Not Architecture: Media Constructions* that present theoretically partial yet contentwise comprehensive mapping of media architecture relationship with a focus on architectural representation, reporting of architecture, and construction of theory. Kester Rattenbury, ed., *This is Not Architecture*, (London-New York: Routledge, 2002), 136-156.

¹¹⁶ Joel McKim *Architecture, Media, and Memory*, (Bloomsbury Visual Arts, 2018); Elizabeth Ellsworth, *Places of Learning: Media Architecture Pedagogy*, (Routledge, 2004); Mark Dorrian and Christos Kakalis, *The Place of Silence: Architecture / Media / Philosophy*, (Bloomsbury Visual Arts, 2020).

¹¹⁷ For reactive philosophy see, Deleuze, Gilles, *Difference and Repetition*, trans. Paul Patton, (New York: Columbia University Press, 1994a), p. 118. Elaboration for the idea on thought and concept. Deleuze, Gilles and Félix Guattari, *What is Philosophy?* trans. Hugh Tomlinson and Graham Burchill, (London: Verso, 1994).

¹¹⁸ Claire Colebrook, ‘Introduction’ in *Deleuze and Feminist Theory* ed. by Ian Buchanan and Claire Colebrook, (Edinburgh: Edinburgh University Press, 2000), p. 8.

For Deleuze, philosophy is a site for the invention of concepts. Concepts can no longer be understood as self-contained nuggets of mental contents, nor as the blurred product of continuous streams of consciousness, but are complex assemblages perhaps best understood in terms of *hecceities*, as event or advent. Thought results from the provocation of an encounter.¹¹⁹

Hence, thought does not have to abide by the rules enacted by concept, rather than that a reactivation of the concept by the thought is needed. This requires to see concepts in terms of their ‘effects’. In brief, reactivation suggests to think through how ‘a concept might be made to work’. What concepts do, how they function, and the forces that every act of thinking empowers have long been central issues in feminist theory.¹²⁰ The difficult position of the feminist thinker who confronts with the dichotomy between relating the current corpus of concepts while at the same time trying to ‘think differently’¹²¹ can be grounded with this approach. Deleuzian reactivation necessitates concentrating on the various ways in which a concept might operate by looking into ‘what concepts do’. This allows one to think constructively about feminism's relationship to philosophy: not merely as the expose of masculine prejudice or interests inside an otherwise valid rationale, but as an endeavor to analyze the force of concepts and to generate new ones.¹²²

Moving from this point, the present study seeks to reactivate ‘medium’ by focusing on how its functions have changed as a result of the settings that have led to the formation of new interpretations of it. Tracing medium's historically developed meanings reveals how its conceptual functions transform. More importantly, this revelation provides a base for the use of medium as a multilayered formation that allows to examine different contact points between feminism and

¹¹⁹ Elizabeth Grosz, *Architecture from the Outside* (Cambridge- London: The MIT Press, 2001), p. 60.

¹²⁰ Colebrook, ‘Introduction’, p. 9

¹²¹ Ibid.

¹²² Ibid. p. 9

reconceptualization of architectural production in the discipline. This reactivation begins with etymological research and progresses via the materialization of two unique senses of medium in different architectural contexts. Thus, the web of relationships that these senses activate and are related to can be discovered.

Before the nineteenth century, both ‘medium’ and ‘media’ had different connotations that are not perfectly in line with their modern use. It appears that until the nineteenth century, two semantic clusters constitute the content of the word; ‘a medium was either a material means of expression or it was the *milieu* in which a communication took place’.¹²³ Etymology of the concept reveals that in the 1580s ‘medium’ was used in the meaning of ‘a middle ground, quality, or degree, which holds a middle place or position’. This meaning is thought to derive from Latin *medium* connoting ‘the middle, midst, center; interval’ and it is linked to the root ‘medhyo’.¹²⁴

In effect, what is understood from media today lies behind a process of evolution and expansion of its originally secondary senses. Emerged in different centuries, these senses become so powerful that they take over the meaning of the term.¹²⁵ Thus, connoting ‘middle position’, to a large extent modified by the sense of ‘intervening substance through which a force or quality is conveyed’. This yields the

¹²³ Knut Ove Eliassen, and Y. Sandhei Jacobsen, ‘Where were the media before the media’, in *This Is Enlightenment* ed. by W. Siskin and C. Warner (Chicago; London: The University of Chicago Press, 2010), p. 64-87.

¹²⁴ It is the hypothetical source of/evidence for its existence is provided by: Sanskrit madhyah, Avestan madiya- "middle," Greek mesos, Latin medius "in the middle, between; from the middle," Gothic midjis, Old English midd "middle," Old Church Slavonic medzu "between," Armenian mej "middle." The word median which connotes occupying middle position derives from the same origin: medhyo. "pertaining to or situated in the middle, occupying a middle or intermediate position," 1590s, from Middle French médian (15c.) and directly from Latin medianus "of the middle," from medius "in the middle" (from PIE root *medhyo- "middle"). Medhyo-, Etymonline, Online Dictionary. https://www.etymonline.com/word/*medhyo-?ref=etymonline_crossreference (Accessed August, 2019).

¹²⁵ While the sense of communication dates to 1590s, the sense of milieu dates to 1865.

meaning of ‘one's environment or living conditions’ (1865), whose origin can be found in the word's application in mechanics.¹²⁶ The second direction that carries the connotation of ‘intermediate agency, channel of communication’ (1600) provides the sense of ‘a print publication’ (1795) and this later grew into the meaning that is grasped in media. As conceptions that carry the peculiarity of communication era, both senses have triggered distinct reflections, thus lead to experimentations in architecture. This process of ‘coming to terms with medium’ can also be considered as a process of digestion and architecture's reflexivity towards the new conditions that surrounds it.

In the following sections, how the history of the medium's evolution led to the development of two distinct senses is explained. Moreover, how these two senses found reflection in architecture is discussed with reference to certain times, events and individuals. Thus, while a brief history for two conceptions is provided, the intricacies of each sense for architecture are addressed. Using these discussions as a backdrop and interweaving the overlapping ideas between them, medium is proposed as an effective conceptual tool.

Medium's acquisition of the sense of environment lies behind the historical development of another term; milieu. The connection that *milieu* shares with *medium* can be traced back to their Latin root, *medhyo*.¹²⁷ Furthermore, both terms conceptually derive from Newton's studies; ‘intervening substance through which a force or quality is transferred’ is a notion that develops from Newton's fluid mechanics.¹²⁸ However, evolution of this meaning towards ‘environment’ and

¹²⁶ Citations are from Online Etymology Dictionary and the Oxford English Dictionary Online.

¹²⁷ French milieu, ‘middle, medium, mean,’ that was used literally in the meaning of ‘middle place’ (12c.), from mi ‘middle’ + lieu ‘place’. ‘Online Etymology Dictionary | Origin, History and Meaning of English Words’, Etymonline.com, <https://www.etymonline.com/> (accessed August, 2019).

¹²⁸ Georges Canguilhem, ‘The Living and Its Milieu’, *Grey Room*, 27 (2004), p. 53 <<https://doi.org/10.5840/tpm20042754>>.

‘surrounding’ is linked to the travel of the concept in other fields like biology and geography.

In *‘The Living and Its Milieu’*,¹²⁹ Canguilhem clarifies *milieu*’s different trajectories within scientific literature. This circulation which takes place across different study fields reveals the expansion of the uses that can be roughly referred as ‘physical milieu, behavioral milieu, and geographical milieu’. Among these extra layers that the term gains with time, the physical milieu delineates the conceptual origin of both milieu and medium. Although, neither of them existed as words, but the mechanical idea that they entail can be found in Newton’s theory of mechanics and it determines the following usages.

In Cartesian physics the notion of milieu had no place because back in the day, for Descartes, the only physical action was impact which was possible in the existence of contact. For Newton’s day, however, fundamental problem that mechanics confronted was ‘action of distinct physical bodies at a distance’. In the existence of separate point particles, Newton had to posit the problem for the means of action; therefore, a transition happened from the notion of fluid as a vehicle to its designation as a medium [milieu]. Being intermediary between two bodies and penetrating to them, medium/milieu is situated in the fluid. French mechanists referred to *milieu* ‘in order to indicate what Newton meant when he said ‘fluid’; for whom the model for this was ether.¹³⁰ This mechanical sense can be exemplified by the water as a milieu for the fish. That is also the sense that Jean-Baptiste Lamarck understood the term.

¹²⁹ Ibid.

¹³⁰ ‘In ancient cosmological speculation: an element conceived as filling all space beyond the sphere of the moon, and being the constituent substance of the stars and planets and of their spheres. Now historical.’ OED : Oxford English Dictionary’, Oed.com, <https://www.oed.com/>. (Accessed 2019).

The importation of the term from mechanics to biology in the second half of the eighteenth century, as Canguilhem argues, can be linked to Newton's optics. For Newton, ether was something found not only in the air but also in the eyes and even in muscles. Thus, Newton's optics appears as the first instance that explains an 'organic reaction with the action of milieu'. Canguilhem elucidates how the mechanical meaning acquired additional connotations through Lamarck's studies. Lamarck's use of the notion reveals his perception of it as the whole set of 'outside actions' on a living thing; arguably, converging with the contemporary use of 'milieu'. Although Lamarck does not use the word 'milieu' he indicates this sense through the phrase 'influential circumstances'. As a category, circumstance subsumes 'climate, place and milieu as species'. Thus, Lamarck is thought to have benefited from Newton's 'physicomathematical model of explaining the living through a system of connections with its environment'.

Auguste Comte's use of the term can be seen on the verge of creating a dialectical relationship between the organism and milieu¹³¹; Comte maintains that 'through the intermediary of collective action humanity modifies its milieu'. This approach is interesting in the sense that he seeks an interaction similar to Newton's principle of 'action and reaction' between 'organism and its milieu'. Unlike 'circumstances' and 'surroundings', which hold a symbolic value, *milieu* abandons any evocation other than a position indefinitely defined by exteriority. Because it enables pure system of relationships without supports; the notion of milieu, for Canguilhem, has a prestigious position for analytical scientific thought. This position underlies its

¹³¹ Interestingly, Auguste Comte, French philosopher known as the founder of sociology and of positivism, considers himself as the inventor of 'milieu' as an analytical concept in biology. In 1838, he provides a general biological theory of the milieu and expects to take credit, for he introduced an abstract and universal concept in biology. Although Comte believes that he went beyond the sense of 'the fluid in which a body is immersed' and provided the meaning of 'the sum total of outside circumstances necessary to the existence of each organism', in Canguilhem's view, the mechanical origin of the notion stays dominant. Canguilhem, 'The Living and Its Milieu', 9-12.

potential to become ‘a universal instrument of the dissolution of individualized organic synthesis in the anonymity of elements and universal movements’.¹³²

Following these detailed accounts, Canguilhem puts forward a striking observation with reference to a shift that occurred in understanding of space. As heliocentric model gained currency to explain the World’s position in the Universe, man’s centrality was shaken. Marking the transition from centralized space to decentralized space, the shift that came to the fore with the discoveries of Copernicus, Galileo and Kepler influenced the understanding of milieu as well. In centralized space milieu has been conceived as center; inherent in its meaning middle place, *mi+lieu*. In decentered space, however, the emphasis shifts towards dissolution and the milieu is conceived as an intermediary field. In this conception three meanings of the word comes into play ‘median situation, a fluid of suspension, and environment’.

Canguilhem is not alone in tracing a change in the notion of space through cosmology. His description of a shift from centralized to decentralized space, to a certain extent, overlaps with what Michel Foucault’s codifies at the beginning of the text ‘Of Other Spaces’. Foucault propounds this codification to briefly analyze ‘the history of space’. Composed of three phases¹³³, this analysis not only enables to bridge Canguilhem’s elucidation to the present day but it also provides a ground to

¹³² Canguilhem’s argument develops around many issues; among these geographers’ description of milieu and varying approaches of other biologists, including Darwin, are addressed. In understanding organism’s relationship with its environment, the question of the determiner, whether it is the milieu or the intrinsic mechanisms of the organism emerges as the fundamental issue. This biological reasoning can be epitomized through Jakob Johann von Uexküll’s categorization behavioral milieu, the geographical environment, and scientific universe which in German Umwelt, Umgebung and Welt. Canguilhem, ‘The Living and its Milieu’, 19-21.

¹³³ Contextualized through the zeitgeist of each period, this formula is further discussed elsewhere as ‘space of pre-industrial space, industrial space and post-industrial space’. Duygu Hazal Simser, ‘Unfolding and Reframing the Concept of Heterotopia Within the Context of Peripheral Consumption Spaces’ (unpublished master thesis, Middle East Technical University, 2017).

define how simultaneous connectivity of communicational technologies altered the understanding of space today. Canguilhem's description of centrality is framed by Foucault as 'space of localization' and explained through the hierarchical organization of spaces in middle ages.¹³⁴ Dissolution of this understanding via the discoveries of Galileo, Copernicus and Kepler leads to a notion of decentralization in Canguilhem's account, which is denominated by Foucault as 'space of extension'. Parallel to the decentralization of the World's location in the Universe, comprehension of space extends beyond city centers to infinity through technological and economic capabilities of productive society.¹³⁵

If the dissolution of geocentric model brings about an understanding of space that is boundless, that extends to infinity, its replacement with third phase 'space of emplacement' defines a condition where connections among spaces overshadow their locations.¹³⁶ This last phase in Foucault's argument can be said to reflect the global, interconnected world where the idea of connection has superseded the physical proximity. In McLuhan's words, the world has transformed into 'global village'.¹³⁷ Such a reading has also potential to better locate present-day's ubiquitous and boundless understanding of space that does not cease to reproduce new relations

¹³⁴ The emphasis on centrality is evident even in place names for that period: 'Medalhus, Medalland, Medalfell, Midgard, Midhus, Midberg' ('Middle Enclosure', 'Middle House', 'Middle Mountain', etc.) Aroni I. Gurevich, *Categories of Medieval Culture* (London: Routledge and Kegan Paul, 1985), 55-56.

¹³⁵ Based on the periodical coincidence with Industrial Revolution, 'space of extension' can be thought in line with morphological transformations that cities underwent in this period.

¹³⁶ Translation of the phases are adopted according to the translation of Lieven de Cauter and Michiel Dehaene in Michel Foucault, 'Of Other Spaces' trans. by Michiel Dehaene and Lieven de Cauter in *Heterotopia and The City* (London: Routledge, 2015).

¹³⁷ Marshall McLuhan, *The Global Village: Transformations in World Life and Media in the 21st Century* (New York- Oxford: Oxford University Press, 1992).

through virtual worlds and identities. In essence, to describe the third phase Foucault finds inspiration in ‘contemporary technology’.¹³⁸

A further touch to Foucault’s conception of space can make it possible to elucidate this phase for the current century. In the existence of multiverse theories, and the concept of holographic universe, the understanding of space can be argued to shift towards a new phase that is awaited to be identified. A description of this phase inevitably requires to elucidate simultaneous interaction and communication thus the multiplication of spaces and the mediation process among them. It is these spaces that in which both extended versions of the body and extended environments of architecture circulate. Fiercely debated in feminist theory¹³⁹, this simultaneity and multiplicity evidence the relevancy and urgency of the issues at the intersection of feminism and media for architecture in the 21st century.

There lays a great difference between two premodern senses embedded in medium. While milieu refers to the immediate relations that one’s establishes around one’s living environment, the other points to a communicatory means, which necessitates a distance between the source and the receiver. Therefore, both meanings refer to two distinct modes in explaining the relation between one and its environment, while one being immediate, the other is mediated.

As semantic histories of medium and media disclose, the singular and the plural form have alternating yet intersecting meanings. Referring not directly to the word but to the concept that they signify, it is possible to point out two different tracks; the meaning of environment is one aspect of the notion which explains medium’s conceptual affinity with French originated term *milieu*. On the other side, the use that

¹³⁸ ‘The problem of storage’, ‘the circulation of discrete elements’, ‘materiality’ and ‘operational processes of technology’ provide a techno-material loaded metaphorical base with which Foucault embarks on to describe how space of emplacement functions. Michel Foucault, ‘Of Other Spaces’, p. 15.

¹³⁹ See discussions in 3.1.3. Cyberfeminism

gains currency with the change and increase of both techniques and frequency of communication, thus affiliated with modernity is media/medium in the sense of 'means of communication'. Both meanings have different reflections for architectural productions.

2.3.1 Medium as Environment

The rise of the notion of environment as an alternative to space is closely related to cybernetic research, which leads to the development of new communication technologies. Technological and scientific progressions catalyzed by the World War II altered the cultural landscape in the decades that followed. The theoretical base of this was Norbert Wiener's studies on cybernetic systems and Claude Shannon's studies on communication theory, both published in 1948. These studies introduced the modern and meaningful way of thinking about the communication of information. They had a daunting impact on technology and on the emergence of the information era. Undoubtedly, these developments had societal repercussions; a series of ideas and questions regarding their cultural and social meaning started to circulate in the post-war years. Along with scholars from diverse fields, the ideas of Marshall McLuhan, which is considered to be the founder of media theory, gained prominence. Discussions about the cultural and social significance of new technologies intensified at the Culture and Communications seminars at the University of Toronto (1953–1955) which McLuhan co-directed together with cultural anthropologist Edmund Carpenter and British urban planner Jaqueline Tyrwhitt. The weekly seminars held in this institution provided a fruitful ground to discuss and develop a novel understanding of technology's and media's impact on culture. It was in these seminars that Sigfried Giedion's ideas, though having origin

in early modern technological developments, found a constitutive ground.¹⁴⁰ Thereby, McLuhan developed a new conception of space that aims to compensate the dominance of visual sense by relying on multiple senses.

With genealogical links to Giedion's space-time and more contemporary links to the other scholars in the Toronto School, such as Harold Innis¹⁴¹, McLuhan called this new conception 'acoustic space'. The idea is crystalized most avowedly in his book *Gutenberg Galaxy* (1962), where McLuhan refers to the conception of the Eskimo in elucidating acoustic space. The non-visual approach of Eskimos to spatial forms and orientations demonstrates that they lack systematic units of measurement for both time and space. Moreover, they do not consider space as static. As McLuhan reveals, the oral tradition of the Eskimos illustrates how the spread of speech was not intended to be one-directional; it was meant to resonate from the nameless to everyone, which is similar to Giedion's anonymous history. This clarification is offered by McLuhan in order to support the multi-directional perception for work of art.¹⁴² By juxtaposing the overestimation of visual space with the underestimation of acoustic space, he relates the development of the former to the ideologies and ways of thought that were formed alongside alphabet technologies and were then further developed by print. McLuhan's concept of acoustic space overlaps with the Eskimos' multi-directional and immaterial understanding and contrasts with visual

¹⁴⁰ Jaqueline Tyrwhitt was the translator of Giedion's texts and she was a direct link to Giedion's ideas. On the other Giedion came to Toronto School. Beyond this meeting, McLuhan and Giedion kept exchanging ideas via correspondence. Michael Darroch, 'Giedion and Explorations: Confluences of Space and Media in Toronto School Theorization', in *Media Transatlantic: Developments in Media and Communication Studies between North American and German-speaking Europe*. Edited by Norm Friesen (Switzerland: Springer, 2016).

¹⁴¹ There is much on this subject in *Empire and Communications* by Harold Innis, as well as in his *The Bias of Communication*. In the chapter on 'The Problem of Space' in the latter book (92-131) he has much to say on the power of the written word to reduce the oral and magical dimensions of acoustic space: " See McLuhan, *Gutenberg Galaxy*, p.61, footnote 16.

¹⁴² Marshall McLuhan, *Gutenberg Galaxy: The Making of Typographic Man* (Canada: University of Toronto Press: 1962)

space, which signifies the one-directional view that becomes indisputable with perspective and has been in use since the Renaissance. What is critical is that McLuhan justifies his reactionary attitude towards the visual sense in the form of a retrospective compensation; a remuneration that comes to the fore with the advancements of new technology: ‘the increase of visual stress among the Greeks alienated them from the primitive art that the electronic age now reinvents after interiorizing the unified field of electric all-at-onceness’.¹⁴³ Admittedly, to cope with the technological pressure of the time McLuhan finds a solution in the past and suggests this as the base to efface enclosed space, and to reverse the dominance of non-organic approaches in art and architecture. Thus, his proposal of acoustic space, foregrounds all senses over visual one and aims to overturn the dominance of abstract and enclosed space. Published two years later, in his most controversial study *Medium is the Message*, he emphasizes that the new electronic medium defines this understanding of space by fostering multidirectional interactions between the human body and the environment. In doing this, he directly draws from architecture. Proposing architecture as the primary extension of body, a prosthesis, McLuhan provides a base for Hans Hollein’s brave manifesto¹⁴⁴ that forges to rethink architecture on the grounds of an expanded understanding of materiality, as an atmosphere, an environment.

After the 1960s, an avid interest in positioning architecture in relation to war-born technological developments has been the common ground of multiple radical voices from all around the world. A young Viennese, Hollein who fused the post-war technological discourse that is primarily influenced by communication theory into a radical agenda for architecture insisted to extend and transcend the medium of architecture beyond the tectonic building. With Oswald Oberhuber and Gustav Peichl, Hollein can be seen as the Viennese branch of a group of young architects

¹⁴³ McLuhan, *Gutenberg Galaxy*, p. 63.

¹⁴⁴ Hans Hollein, ‘Alles ist Architektur’, *Bau*, 1/2 (1968), 1–32.

who strived to formulate a technological forecast. This group was contemporary to other radical groups that left a remarkable impact on the architectural scene: such as Arata Isozaki and Metabolists in Japan, Peter Cook and Archigram in England, Adolfo Natalini and Superstudio in Italy.

Similar to Archigram's fanzines, yet less manual in the production Hollein and his fellows used the power of published media to manifest their ideas. In 1965 Hollein, Pichler, and Feuerstein took over the direction of the Viennese magazine *Der Bau* and renamed it *Bau: Schrift für Architektur und Städtebau*.¹⁴⁵ The magazine became a stage for the group where they could control not only the content but also the framing of their reactionary ideas; *the context* of their reception.

One of the most frequently revisited texts that appeared in *Bau*, an unsettling manifesto that stretches the established boundaries of what is counted as architecture, is Hans Hollein's 1968 dated text 'Alles ist Architektur'.¹⁴⁶ In the text, where the impact of technology and new communication technologies is evident, two central themes appear, the limits of architecture and the importance of the notion of environment. Fusing these two into a whole, Hollein proposes an ever-expanding conception of architecture that operates beyond the built; in this conception architecture takes effect as a technical environment, it evolves from the fixed to dynamic. For this to happen, he proposes to suspend the validity of traditional definitions of architecture. The impetus behind his suggestion is the altered human sphere, which is extended with new communication technologies. Throughout the text, Hollein uses McLuhan's media theory, which has been quite fresh at the time, without direct reference to him. The idea of media as an extension of the human

¹⁴⁵ The editorship of the magazine *Der Bau*, published by Zentralvereinigung der Architekten Österreichs was given over to Hans Hollein, Gunther Feuerstein, Walter Pichler, Gustav Peichl, and Sokratis Dimitriou in 1965, who renamed it as *Bau: Schrift für Architektur und Städtebau*. Craig Buckley, *Graphic Apparatuses: Architecture, Media, and the Reinvention of Assembly 1956-1973* (published doctoral dissertation, Princeton University, 2013)

¹⁴⁶ Hollein, 'Alles ist Architektur'.

body, and reading the shelter as the most instinctive example of this seem to spark Hollein's interest in formulating his suggestion for the new architecture. The extension in Hollein becomes the physical extension of the body via new devices, but also he stresses the inner/psychological extension of the mind. In these extended boundaries of the discipline, he addresses four features to define this concept of architecture, these are architecture's symbolic value, its function to control bodily heat, its conditioning of psychological state and its establishment of space, environment. Hollein's use of the words 'space' and 'environment' next to one another, can be read as a hinted signal that suggests environment as an alternative to space for architectural thought.

The concept of 'acoustic space', and 'everything is architecture', though not with the same naming, had transatlantic repercussions in certain intellectual circles. McLuhan's emphasis on plurality of senses and its portrayal with reference to electronics, is not an exceptional articulation; rather it is the reflection of 'international contemporaneity' of the subject. As Hans Hollein's text¹⁴⁷ demonstrates with reference to architecture, McLuhan's ideas provide a theoretical source for a tendency that brings together cultural impacts of cybernetics and their integration into society via media. The reception of these ideas and their crystallization into an agenda were not limited to Hollein. Even before that, in 1966, a group of multi-disciplinary artists named Environment Society testified the limits of the modification of senses via new technologies on an artistic ground in Japan. 36 artists two of which are architects, came together for a two-partite exhibition and event program. This cross-genre collaboration was a testbed for conceptual implications of cybernetics. Furthermore, it was the inauguration of an ideational shift from the fixed to dynamic, from the anchored and constant to chaotic, untamed and boundless.

¹⁴⁷ Ibid.

In a sense, McLuhan's communication theory was the means for the artists who embark on inventing conceptual applications of 'cybernetics and system thinking within the larger framework of environment'.¹⁴⁸ By interpreting the environment as an interactive site, Environment Society suggested to break traditional relationship between the subject and the object via an exhibition; they proposed a new interaction by stepping in the dynamicity of site, which they called environment: '...the static, harmonious relationship between the viewer and the work of art has been broken, and the notion of the *site* has shifted from a conventional "space" toward a dynamic and chaotic 'environment' that includes the viewers and the artworks.'¹⁴⁹ The idea of environment which implied 'a dynamic relationship between the human and his/her surroundings' suggested an expanded field of architecture. In this field, everything exists with its relation to the context, nothing is isolated and the boundaries between viewers and performers are blurred. Inherited by Frederick John Kiesler's manifesto 'Correalism II', this widened area of perception is declared in the concept statement of the exhibition *From Space to Environment*; 'we believe that our works are not autonomous and complete by themselves but they become open to external world by involving viewers in their environment'.¹⁵⁰

As important as the central theme of *From Space to Environment* was its experimental approach that brings technology and art together. This organization constituted a vague area among different media and become the precursor of intermedia art in Japan. However, in the same context, the technological astonishment would be tested on a more radical scale in the following years. *World Expo 1970*, which took place at Osaka, coincided with the process of rebuilding

¹⁴⁸ While the artists were developing the program of the exhibition, McLuhan's writings had just been introduced to Japan. Midori Yoshimoto, 'From Space to Environment: The Origins of *Kankyō* and the Emergence of Intermedia Art in Japan', *Art Journal*, 67 (2008), 24-45.

¹⁴⁹ Doryun Chong, Michio Hayashi, Fumihiko Sumitomo, Kenji Kajiya, *From Postwar to Postmodern, Art in Japan, 1945-1989: Primary Documents* (New York: The Museum of Modern Art, 2012), 238-240.

¹⁵⁰ Cited by Yoshimoto.

Japan after the WWII. With an inexplicit reference to war-time devastation, it has been arranged around the theme of ‘Progress and Harmony for the Humankind’. Using advanced technologies in rebuilding the country, this theme also implied a peaceful use of technology. Thus, the Expo became a showcase at the intersection of new technologies and architecture. In addition to the technocratic vision of Kenzo Tange who was assigned as the official designer of the Expo’s master plan, it was Arata Isozaki’s Festival Plaza that comes to be an architectural experiment of the essential premise of *From Space to Environment*. The ideational infrastructure of Isozaki’s design comes from his two former experiences: first, he was involved in a research project initiated by the City Design Research Group back in 1961, and this research project led him to appreciate ‘the notions of contingency and eventfulness’. Second, he was a member of Environment Society and he took an active part in *From Space to Environment* exhibition. These experiences prevented him to grapple with a visible equation of ‘network fever’¹⁵¹, instead Isozaki proposed an ‘immaterial ambiance’ where visitors are immersed in a play of light, sound, colour and dynamic movement. His design Festival Plaza was a perceptual environment, an ‘open stage’ and it acted as an architectural manifesto of *From Space to Environment*.¹⁵² It implied the effacement of the boundaries of space and placing the focus on the interaction. Visitors are considered as performers; they constructed an environment by engaging with novel electronic interfaces. Thus, modern conception of static space turned into a stage and lost its definition in materiality. This multisensory environment echoed McLuhan’s ideas that set forth in another text ‘Invisible Environment’, where he suggested the primary constituent of environment as electronic information.

¹⁵¹ Mark Wigley, ‘Network Fever’, *Grey Room*, No. 4. (2001).

¹⁵² Isozaki’s 1966 dated text *Invisible City* suggest a conception of a city where the city is composed of invisible components.

Exemplified in *Expo '70 Osaka*, emergence of new 'environments' where unprecedented modes of communication take place brought about an information boost. It was this preoccupation with information loaded environments that tempted Hollein to suggest remove disciplinary boundaries of architecture. Similar to Isozaki, Hollein also went beyond the textual medium and explored the limits of this idea in the form of a design. A year after *Alles ist Architektur*, he suggested a mobile office that meets his basic principles of architecture: to become symbolic, protecting bodily heat, providing a boundary, an environment and conditioning psychological state.¹⁵³ Hollein's mobile office was utterly mediatic, it included a typewriter, telephone, drawing board, pencil, rubber, thumbtacks. Its ground was synthetic turf while pneumatic PVC-foil encapsulated the air around him (Fig. 2.1). Moreover, his design was a stage, configured for a performance that was aired as part of a TV show 'Das Österreichische Portrait'.¹⁵⁴ Sat in a pneumatic room, and framed along with airplanes and cameramen, Hollein demonstrated the limits of his thought in the age of telecommunications.¹⁵⁵

¹⁵³ 'Architecture is cultic, it is mark, symbol, sign and expression. Architecture is control of bodily heat, protective shelter. Architecture is determination-establishment of space, environment. Architecture is conditioning of a psychological state'. Hollein.

¹⁵⁴ Mackenzie Goldberg, *Screen/Print #66: Hans Hollein's Mobile Office and the New Workers' Reality*, (2018) <https://archinect.com/features/article/150057955/screen-print-66-hans-hollein-s-mobile-office-and-the-new-workers-reality> (accessed June 2022).

¹⁵⁵ In 1965 Hollein conceived the 'Minimal Environment' in collaboration with Walter Pichler and Ernst Graf for the youth biennale in Paris to debate issues of contemporary architecture. For the one square meter of space allotted to them, Hollein proposed a telephone booth, with all the connections required for survival. At the same time, he sketched 'Inflatable Room Furnishings' (1965) and a year later his proposal for an 'Extension of the University' (1966): a TV set.



Figure 2.1 Mobile Office, Hans Hollein, 1969

The idea that space is not static, but dynamic, chaotic and transitory dissolved the central position of materiality. Triggered by the invisibility of new communication means, everything, including architecture started to be conceived as fluid. This unlocked a new way of thinking about space as an environment. McLuhan's theoretical work on acoustic space, Hans Hollein's bold claims and performance, and the exhibition of Environment Society all lead to the advancement of this idea. The intersection of all these 'quests' was to come in the terms with new communication technologies, respond to transformative impulses of socio-technological changes and align space with these changes. Based on this discussion, two important inferences can be made. The etymological link between medium and milieu, i.e. environment, evolves with several developments and questionings, particularly with reference to space. This link takes such a form that via new technologies, medium in the sense of communication, leads to the transformation of space as environment, and generates medium in the sense of environment. Therefore, the idea of medium of communication, though embedded, still exists in the idea of environment. Second and more drastically, via these conceptual elaborations, invisible aspects of space brought to the fore and this paved the way for discussing architecture on another, invisible plane.

2.3.2 Medium as Means of Communication

The word media as the plural form of medium, rises as a modern phenomenon that denotes communicational channels such as ‘newspapers, radio, TV, etc.’ (1927). Abstracted from a technical term in advertising, the use of ‘mass-media’ (1923)¹⁵⁶ demonstrates that the plural form was not used commonly before modernity. Medium acquires a specific meaning via this plural form and relates to communication technologies and their cultural constructions with ‘mass media’. This sense, which frequently appears as *media* more often than medium, inserts distance to the modern scene of communication.¹⁵⁷ In effect, the rise of the notion *a medium of communication* owes its existence to print technologies, and it is reinforced via miscellaneous uses of the plural mode in referring to other technologies of mass communication. Hence, medium as a communication channel has its roots in modernity and therefore strictly adhered to technology.

Communication in the existence of a distance guarantees the possibility of media. However, in a world that is constantly connected via new media, the difference between the near and the far disappears. This leads to a situation where the scope of media has significantly expanded to the point that it is being operationalized by several industries. Foreseeing this expansion, Nicholas Negroponte proposes a Venn diagram called ‘teething rings’,¹⁵⁸ which reflects his anticipation of the diverging and overlapping industries around media (Fig 2.2). According to this scheme, ‘the broadcast and motion picture industry; the print and publishing industry and the

¹⁵⁶ Citations from Online Etymology Dictionary. Year information shows an approximate time when these uses became prevalent. <https://www.etymonline.com/search?q=media>

¹⁵⁷ Guillory, p.44.

¹⁵⁸ The scheme was described with this phrase by Muriel Cooper. See Molly Wright Steenson, *Architectures of Information: Christopher Alexander, Cedric Price, and Nicholas Negroponte & MIT’s Architecture Machine Group*, (unpublished doctoral thesis, Princeton University, 2014).

computer industry, all converge in the field of media'. Negroponte anticipated that the rings would merge into one by the year 2000.¹⁵⁹

In the following paragraphs, the intersections between these industries and architecture are discussed in their context of emergence. The postwar America rises as a significant setting where architects and designers mediated the computers' dissemination into wider public, but took part in many critical initiatives and projects that mark the transition from analogue to 'computer' media.¹⁶⁰

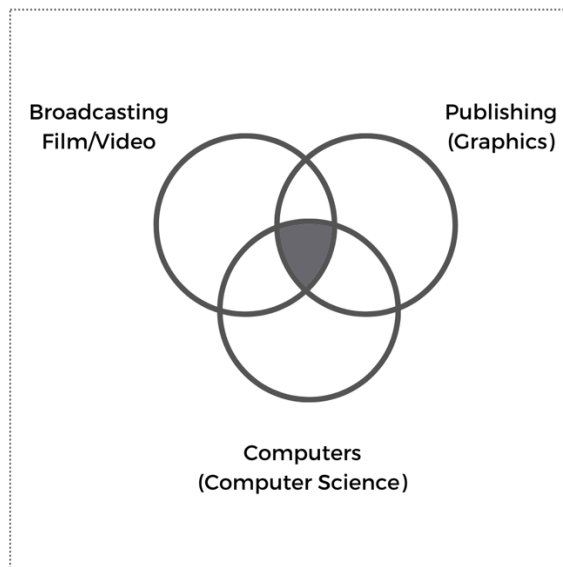


Figure 2.2 Negroponte's Venn diagram: Different Industries around Media
(Reproduced by the author)

When it comes to recognition of new communicational technologies in respect to design, the multidisciplinary work of architect/designer couple Ray and Charles

¹⁵⁹ Steenson, 'Architectures of Information'.

¹⁶⁰ Negroponte specifically uses the signifier of media. Steenson.

Eames draws attention. Eameses have a comprehensive view of architecture that is independent of scale and medium. Transferring knowledge and skills from one medium to another, they work on various projects to broadcast postwar technological developments and just burgeoning computers into everyday lives. This link between Eameses' practice and new communication technologies encapsulates both the potential alliances between architecture and communication channels and the process of digestion of the latter by the former.

In 1953, without a commission, the couple produces a film specifically addressed to architects. *A Communications Primer*, aims to inform architects with the latest developments in communications theory.¹⁶¹ Believing that these theories around communication 'will be the greatest tool ever have fallen into the hands of architects'¹⁶²; they combine visual informatory boards with some photographs to better communicate the abstract ideas through contextualization and exemplification. In the end, *A Communications Primer* manages to effectively convey the ideas emanating from Claude Shannon's Information Theory¹⁶³. By synthesizing and delivering the importance of communications, Eameses became not only one of the first designers who were responsive to these ideas, but they also partook an important role in forming the intellectual basis of the information age.

¹⁶¹ Since Eames's want to create a work of a more universal value, communications appears to be an interesting field in expressing an idea to the audience. Eames Demetrios, *An Eames Primer | Eames Designs* (New York: Universe Publishing, 2001).

¹⁶² Charles Eames wrote to Ian McCalum the editor of *Architectural Review*: "One of the reasons for our interest in the subject is our strong suspicion that the development and application of these related theories will be the greatest tool ever have fallen into the hands of architects or planners." Demetrios, *An Eames Primer: Eames Designs*.

¹⁶³ Claude Shannon presented Information Theory in her *Mathematical Theory of Communication* in 1948.

In the same period, IBM Company (International Business Machines) embarks on to establish a new corporate image. The firm's consultant director Eliot Noyes¹⁶⁴ commissions the best architects and designers for any design-related project and sets the designers relatively free from budget, time and function constraints. The design team Noyes brought together includes many important names including Charles Eames.¹⁶⁵ Eames' earlier work *A Communications Primer* forms the basis of his inclusion and it paves the way for numerous films and exhibitions Eames produced for IBM. The first among these, *The Information Machine* (Man and the Data Processor) was screened at the *1958 World's Fair* in Brussels. Being the first complete animation produced by Eames, the film undertakes the mission of 'humanizing computers'; hence the computer is presented with an analogical link to the creative mind of artists who may take different forms as architects, mechanics, scientists or politicians.¹⁶⁶ Charles Eames narrates how these artists built stores of information in their active memory banks and how the stored information in turn enables them to speculate and predict. Just as other tools human devised to deal with the increasing amounts of data, the emergence of the electronic calculator is heralded in the film as a tool that makes cumbersome mathematical theories workable. Interestingly, in describing how this tool can broaden man's concepts and intuition, Eames uses the image of a man passing by an unconventional structure. In effect,

¹⁶⁴ Eliot Noyes was hired for this mission in 1956, he was a designer who studied with Gropius at Harvard.

¹⁶⁵ John Harwood, *The Interface: IBM and the Transformation of Corporate Design: 1945-1976* (Minneapolis-London: University of Minnesota Press, 2015). The team of fellow consultants Noyes brought together also included the graphic designer Paul Rand, the designer and critic George Nelson, and architecture and design critic and patron Edgar Kaufmann Jr.—IBM also hired a host of high-profile architects such as Marcel Breuer, Egon Eiermann, Wallace Harrison and Max Abramovitz, Ludwig Mies van der Rohe, Paul Rudolph, and Eero Saarinen for individual commissions, and coordinating these efforts with engineers and designers in IBM's own design department. In between 1956-1978, Charles Eames worked as design consultant for IBM's design program.

¹⁶⁶ Charles Eames, *The Information Machine Creative Man and the Data Processor*, (1958).

this image implicitly addresses to Buckminster Fuller's geodesic design *Biosphere* for *Expo 67* in Montreal. *The Biosphere* embodies Fuller's vision of buildings as 'environmental valves' regulating transmissions of information along with energy, light, air, moisture between interior and exterior.¹⁶⁷ While Fuller's design is the celebration of war-time achievements in the form of architecture, what Eameses do is to publicize the same achievements in a different format. Thus, using Fuller's biosphere to symbolize the computer's capabilities to broaden the horizon of humanity proves to be a perfect fit.

Though the films produced under the coordination of IBM are almost always related to computers, as the subtle reference to Fuller's Expo exemplifies, they are not devoid of architectural allusion. In 1962, Eameses produce another film for Seattle World's Fair. *The House of Science* is a combination of animation, video and still images; this becomes a multi-media event that was comprised of 6 simultaneously projected screens. In the film, the developments in the scientific universe are narrated via the expansion and transformation of different architectures. Serving as a means to diagnose progress and reflect the diversity of scientific activity among different scientists, one more time architecture comes into view.

The use of multiple screens was not unprecedented for Eameses. Even before *Seattle World's Fair*, they used this multi-screen technique to project the film *Glimpses of the USA* which was produced for the United States Information Agency (U.S.I.A.), at the American Exhibition in Moscow in 1959. However, the connection with Fuller was reversed because the film was screened inside Buckminster Fuller's Golden Dome.

Eameses' multi-media experiments kept being housed by esoteric structures as part of fairs. In IBM's Pavilion at *New York World's Fair* (1964), the couple's designer

¹⁶⁷ Jonathan Massey, 'Buckminster Fuller's Cybernetic Pastoral: The United States Pavilion at Expo 67', *The Journal of Architecture* ISSN:, 21.5 (2016), 795–815.

role was twofold: they not only designed the multi-media event but they were the partner designers of *Ovoid Theater* with Eero Saarinen Associates.¹⁶⁸ Inside the auditorium of *Ovoid Theater*, Eameses' another multi-media production was displayed with an unprecedented range of screens. 14 large and 8 small screens placed with different angles to communicate the film called *Think* where Eameses presented an analogical link between computer processing and daily situations to explicate the commonalities of these two in problem-solving techniques. Moreover, Eameses produced four other films as records of the fair to extend the life of this at once architectural and mediative event.

Eameses' multidisciplinary work accommodates significant insights. Their engagement with media has a reconciling mission; as opposed to the alienating connotations of modern experiences, both their films and installations aim at 'familiarization'. Resting on this dilemma, Eameses practice provides an interesting case to disentangle architecture's schizophrenic relation to media. As the forerunners of many developments that characterize the modalities of media in the present era, these multi-media experiments introduce information bombardment via visual media. Moreover, Eameses' later projects become testbeds for the interactivity that characterizes digital medium. Their relatively overlooked two projects, *The Art Game* and *Merlin and the Time Mobile* foreshadow 'the advent of interactive media' by experimenting with techniques for creating interactive photo/video and applications.¹⁶⁹ It is possible to say that by exemplifying the coalescence of architecture, design, media and technology their works acted as the interface in between public and newly emerging medium.

¹⁶⁸ Risen above the canopy called 'People Wall', the oviform structure was covered with white tiles on which IBM's logo was engraved.

¹⁶⁹ Jim Hoekema, 'Art Game: An Early Interactive Design from the Office of Charles and Ray Eames', *Interactions*, 24.3 (2017), 26–35 <<https://doi.org/10.1145/3064812>>.

With the help of Eameses, The IBM Design Program shaped the contemporary image of computation for a vast public. Yet, IBM's collaborations with architects were not confined to the built structures, pavilions and multi-media displays, the influence of mathematics and information technologies on the architects of Post-war America extended further in different circles. Following his graduation from MIT in 1965, Nicholas Negroponte found in IBM an atmosphere that can gratify his mathematical appetite. In the summer of 1966, he pursued his interest in computing at IBM Cambridge Scientific Center and kept working part-time at IBM for two years.¹⁷⁰ In 1967, Nicholas Negroponte and Leon Groisser founded the Architecture Machine Group (AMG) at MIT. This was a laboratory that brought architecture together with engineering and computing to form a new vision for architectural research and teaching.¹⁷¹

AMG's first architectural research projects, The *URBAN* series were computer-aided design (CAD) systems funded by both MIT and IBM. These experiences led to the book, *Architecture Machine* in 1970, but the experiments of group continued in the following years; of particular importance among these was the project called *Spatial Data Management System* (SDMS) which dates to 1976.¹⁷² This project, next to other control command projects of AMG¹⁷³, formed a seminal step in the development of the computer interface. Investigating multiple media human-machine interaction, the project principally drew from the link between memory and spatial organization.

¹⁷⁰ Kristin Leutwyler, "The Guru of Cyberspace" in *Scientific American*, 273 (September, 1995), 50-52.

¹⁷¹ Steenson.

¹⁷² The primary purpose of the SDMS was managing tactical military tasks. Initially, it was designed for ship fleet management. Steenson, p. 238.

¹⁷³ In experimenting with new environments of communication, Architecture Machine Group has been operating within three paradigms, "microworlds, command and control, and media. Steenson.

To reveal and interrogate the user's sense of space in data retrieval and coordination, an immensely mediatic environment called Media Room was created. *The Spatial Data Management System* was one of the multimedia and hypermedia projects that were housed on the Media Room platform. Configured as a demonstration space the room was overfilled with different means of communication. An Eames chair outfitted with ten-inch-square tablet and stylus, combined with a wall-size color display that fills the visual field of the user. Located on either side of the chair was two touch-sensitive monitors to receive gesture inputs and 8-channel speaker system was used to provide sound feedback (Fig. 2.3). This arrangement surrounds the user with data receptors to convey the data coming from different senses. Hybridizing the real and the virtual space, it functions as a set of prosthesis for the user. As Negroponte had suggested at the beginning of *The Architecture Machine*, the Media room embodies spatial human-machine integration and prototypes 'architecture machines in which life take place one day'.¹⁷⁴

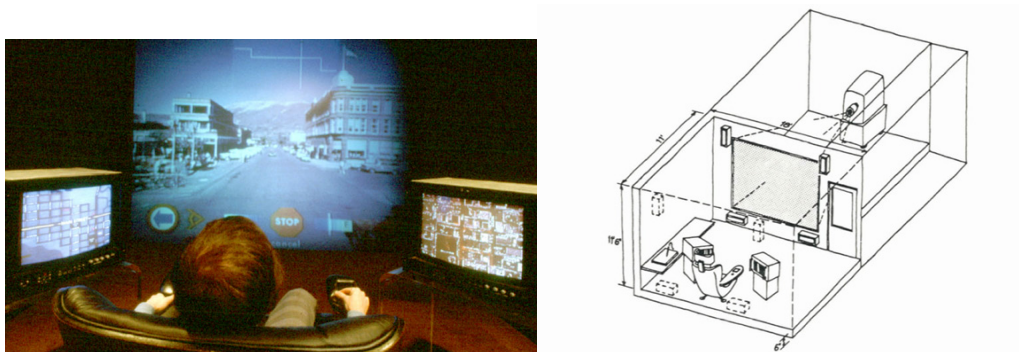


Figure 2.3 AMG's Media Room (left) and its organizational diagram (right)

¹⁷⁴ Steenson, p. 229.

While the room includes different applications to ensure ‘being in the interface’¹⁷⁵, its design hints at the decisions that reflect the idea of creating a place. For instance, the preference of an Eames chair over an office chair, is to construct ‘placeness’ of the interface. Instead of anonymity and systematized abstractness of space, place emphasizes the pleasant and the familiar. It differs from ‘space’ by having an ‘aura’, an ‘identity’ and connoting familiarity¹⁷⁶. Echoing Hans Hollein’s attempts and *From Space to Environment’s* assertion, the idea of space was challenged, this time by ingraining placeness within virtual means of communication.

On a different level, spatial navigations of the projects in the Media Room aims to make information and data familiar, ordered, pleasant, and recognizable. Negroponte expresses by refraining from using space: ‘The “place” or milieu that we envisage...is perhaps most directly conceived of as a compatible, comfortable place to be with computers’.¹⁷⁷ As the surfaces of contact and interaction between a machine and user, interface is thus constructed as an ‘information environment’. The physical fabrication of interface is also emblematic for the materialization of the medium of interface.¹⁷⁸

Despite the emphasis on place in creating a mediatic environment, space has become an important source of reference for the arrangement of virtual space per se. With an eagerness to develop a better interface to reach information, the project relied on the insight that is gained from a spatial organization and proposed desktop metaphor to

¹⁷⁵ Nicholas Negroponte, ‘Books without Pages,’ Nicholas Negroponte Personal Papers 8, (Cambridge, MA, 1996).

¹⁷⁶ Yi-Fu Tuan, *Space and Place: The Perspective of Experience* (Minneapolis: University of Minnesota Press, 2001), 5.

¹⁷⁷ Architecture Machine Group, ‘Augmentation of Human Resources in Command and Control through Multiple Man- Machine Interaction: Proposal to ARPA’, (Cambridge, MA: MIT Architecture Machine Group, 1976), 5.

¹⁷⁸ The Object based media project shows that this issue continued later on, exploring the intersection of interface with media through the media qualities of different objects between 1999 and 2020.

organize different notations. This not only firmly ingrains space as the source of reference in the virtual, but it also points to the shared origin between virtual and the real.

When Negroponte founded MIT Media Lab in 1985, AMG was one of the four groups within the Lab. The groups also included Visible Language Workshop, which Muriel Cooper cofounded with Ron MacNeil in 1974 in MIT's Department of Architecture. Neither Cooper nor MacNeil were computer programmers, yet they saw the potential of computers 'as tools for inventing new ways to organize visual information'.¹⁷⁹ In VLW, the idea of design existed not only for the end product, the group was after 'designing the tools of design' from the very start as reflected in Cooper words: 'we aim to make the tools and to use them'.¹⁸⁰ In parallel to Benjamin's 'The Author as Producer', Cooper signified the figure of the 'designer as producer'.¹⁸¹ How a designer can produce to control perception and facilitate its reception appear as important questions for her. This producer role of designer appears to be critical when the rigidity of print contrasted with the malleable nature of electronics. In this regard, Cooper underscores providing information as an understandable matter by remarking that information is only useful when it can be understood.¹⁸²

Ray and Charles Eames' practices showcase the broadcasting of computers. The couple explain the complex systems behind the computers in simple terms and in doing this they operationalize the medium of motion picture. Nicholas Negroponte's initiatives in AMG and MIT Media Lab enlighten the spatial data management

¹⁷⁹ Margaret K. Ewans, *Muriel Cooper's Lasting Imprint*, (2018)

<https://www.media.mit.edu/posts/muriel-cooper-lasting-imprint/> (Accessed August, 2022).

¹⁸⁰ Robert Wiesenberger, 'Print and Screen, Muriel Cooper at MIT' (unpublished doctoral thesis, Columbia University, 2018), f.n. 30.

¹⁸¹ It is Ellen Lupton who conceives Cooper's contribution to this new role for designers with reference to Benjamin. See, Wiesenberger, 'Print and Screen', f.n. 31-32.

¹⁸² Wiesenberger, 'Print and Screen'.

system. Lastly, the work of Muriel Cooper at MIT Media Lab facilitates the graphic advancements of computers, which appears most significantly in Cooper's contributions to interactive media design. All these attempts of dealing with an *emerging medium* from the perspective of design indicates that media, which now became an industry of logistics and AI, was explored and engaged by architects decades ago. Ideas were generated first in the field and then abandoned, only later to become the most important issues in the world.

Ever since the burgeoning of digital medium, transformations that it initiated increased the permeability of the interface such that body found a new existence in the information environment. Reality has extended digitally and started to be qualified as augmented, virtual or mixed. Recent developments, frequently referred to as Metaverse, foster a coexistence of these extensions in the post-reality universe, where multisensory interactions with virtual environments, digital objects and bodies of multiuser platforms are provided with an interconnected space. In this universe, while physical reality blended with digital virtuality, once materially centralized body has been replaced by its polycentric duplicates, i.e. avatars or other means that enable navigation and representation in cyberspace.

Moreover, the pervasiveness of low-cost machine learning processors has permeated into the fabric of the physical world, increasing machine-to-machine communication.¹⁸³ This invisible world, which is composed of algorithms, activations, keypoints, eigenfaces, feature transforms, classifiers and training sets, radically alters visual culture that is now governed by a new a machinic landscape.¹⁸⁴ As speculative architect Liam Young explains 'now the dominant apparatus looking

¹⁸³ Benjamin H. Bratton, 'Further Trace Effects of the Post-Anthropocene'. *Architectural Design*, 89 (2019), 14-21. <https://doi.org/10.1002/ad.2382>

¹⁸⁴ Trevor Paglen, Invisible Images: Your Pictures Are Looking at You. *Architectural Design*, 89 (2019), 22-27. <https://doi.org/10.1002/ad.2383>

at the world is not the human eye, but machine-vision algorithms and neural nets'.¹⁸⁵ In this condition where the past, present, and future are all merely various states of the same model, simulation increasingly takes on the role of designers.

The recent developments around media include the expansion of MIT Media Lab as well. The forerunner in architecture's engagement with new technologies on multiple scales and contexts, MIT Media Lab keep widening the comprehensiveness the term media connotes via various projects and research groups. Intriguing in this regard is the foundation of a new center as part of the lab. The MIT Center for Constructive Communication aims to bring together various researchers from fields as diverse as AI, journalism, computational social science, digital interactive design, community organizers and many others to tackle the 'deepening societal fragmentation in America'.¹⁸⁶ The project's goal is to promote the creation of new tools that unite social, cultural, and political differences within the social and mass media environment. Furthermore, via engagement with local organizations as well as figures who have millions at their reach they plan to exist beyond academia. Thus, the overall aim of connecting with underserved marginalized communities can be achieved. These intentions are thought provoking in terms of resetting the agenda and function of communication technologies. Hence, it points to a condition where inequalities are seemed to be tackled via emancipatory potentials of technology. This marks a condition where the most essential aspect of communication, which is to unite will be sought.

Bridging the machine with placeness and the virtual via spatial references, the reconfiguration of the role of designer via media, and dissemination of this culture via multimedia events pave the way for a new understanding of the medium. While its inside organization relies heavily on space as reflected in the term 'cyber space'

¹⁸⁵ Liam Young, 'Calibration Camouflage'. *Architectural Design*, 89 (2019), 28-31. <https://doi.org/10.1002/ad.2384>

¹⁸⁶ <https://www.media.mit.edu/>

or ‘virtual space’, the physical medium of computer was conceived as a place to vibrate sense of familiarity and identity. Violating the boundaries between the body and space as a prosthesis, both milieu and communication are hybridized in the physical medium of computer.

2.4 Medium Redefined: A Communicatory Milieu

As revealed in the inquiries on acoustic space, *Alles ist Architektur*, Environment Society’s exhibition and World Expo 1970, different aspects of ‘the environmental’ are embedded in the concept of medium. Furthermore, this environment role of medium, its being a milieu, is implicitly linked with a series of concepts that connote the transitory disposition and invisibility of new communication technologies. The formulation of acoustic space positions space next to environment as a corporeal, light, and ephemeral entity. On the other hand, dwelling on fluidity and unboundedness accentuates space as an environment that enable the possibility of communication. This disassociates placeness from space and replaces it with a mere function of communication. Thus, it implies the communicative function of space. The potential of atmospheric space is further explored by focusing on the interaction between the user and the environment. Thus, the ephemerality of communication is entrenched within the discussions on the contact between user and environment.

On the other hand, experiments with multimedia means and explanations of complex procedures behind the information system by using every-day examples help disseminate the culture of new technologies to a wider circle. Whereas, the set-up in Media Room demonstrate how the idea of environment is embedded in the physicality of communication, considerations in the design of graphical interface show how familiarity is ingrained in the then emergent medium of computer. In developing the digital medium via a human-centered approach, the quality of communication was foregrounded in its design.

These discussions that touch upon theories on media, digital medium's emergence and introduction to a wider public, the processes of its absorption in architecture, intricacies behind its transformation into an extension of body as an interface evidence that the two senses of the concept are merged and medium's meaning has evolved into an environment with agency where processes of communication, mediation, and negotiation take place. Undoubtedly the seeds of this intertwinement are hidden in the context of digital medium's emergence. Yet its rise is indiscernibly linked to the prevalence of digital medium in the current cultural scene. This condition is characterized by a hybridity where the physical is managing the virtual for the purposes that extend beyond communication. The virtual amalgamates with the physical, it replaces some functions of the physical and translates them into its unique settings.

Digital media created a condition where constant interconnectedness has enlarged the meaning of medium, from communicatory means to an environment that are linked with its means. Thus, two distinct paths that originated in the Newton's mechanics and the invention of print intersect with cultural prevalence of digital medium. Owing to this evolution, and satisfying the situatedness of this claim in terms of its temporal position, medium can be suggested as an environment where the processes of communication, accompanied by mediatization, negotiation and cooperation, enable and allow interdependent interactions of multiple agencies, within the confines of its, that of medium's, environing conditions. Medium, in this approach, can be suggested as a milieu with specific assets that flourish and facilitate communication.

This study offers medium not as a representative means, as in the case of evocative faculties of photography, and film. Contrastingly, it deals with the aspects of medium that provides a communicatory atmosphere that is open to interaction; thus, change. Defining medium as such implies its flexibility stemming from the emphasis on interactions, rather than boundaries. This sense is dependent on the evolution that the term underwent as disclosed in this section. Therefore, it is related with the

disruption of boundaries by the digital medium, its penetration into everyday space and becoming a part of it.

As the digital medium challenges a wide variety of boundaries and the way things are connected, medium leaves behind the static meaning that it acquired with the linearity of print technologies and takes on a new meaning characterized by inter-network connections. This exploration makes medium a crucial theoretical tool that can function across scales. Marked by dynamicity and decentralization, it denotes interconnections among different networks and actors. In the study, with this function, medium is conceptualized on three different levels.

Architecture has included, and continues to include a variety of other outside techniques of practice or disciplinary approaches to ‘a shared object of investigation’ to find a new ground and thus deepen and broaden the identity, practice, and its own product. For architecture’s disciplinary ‘environment’, seeing this web of interactions as a medium helps explain architecture’s interactions with other disciplines at its edges.¹⁸⁷ In cases where disciplinarity is unable to adequately address a network of transactions and interactions among several fields and concerns, medium proposes an alternate model to account for these transdisciplinary¹⁸⁸

¹⁸⁷ Igea Troiani and Suzanne Ewing, ‘Inside Architecture from the Outside:

Architecture's Disciplinary Practices’, *Architecture and Culture*, 2.2 (2014), p. 152.

¹⁸⁸ To explain the exchanges with other disciplines Mark Linder offers a third term, transdisciplinarity instead of disciplinarity or interdisciplinarity. It is distinct from more pervasive notions of interdisciplinarity that understand the combination of various disciplines as a means to establish shared methods or concepts. Yet it also insists on the value of distinctly disciplinary identities. Transdisciplinary work, as Homi Bhabha suggests, ‘happens at the edge or limit’ of one’s own discipline. It is ‘not an attempt to strengthen one foundation by drawing from another; it is a reaction of the fact that we are living at the real border of our own disciplines, where some of the fundamental ideas of our discipline are being profoundly shaken.’ But those borders are also where we become most aware and in need of the tools, techniques and technologies of the discipline. Like the call for a return to discipline, transdisciplinarity ‘is a move of survival.’ But it is in no way a retrenchment: it involves ‘the formulation of knowledges that require our disciplinary scholarship and technique but demand

communications. The field of interaction between disciplines,¹⁸⁹ might be thought of as a particular *milieu*. The system of connections with this medium is unique to each specific body of knowledge. This conceptualization which points to ‘a thick disciplinary edge’, an interface, describes an open state compared to the static definitions of disciplinarity; rather than marking a field with boundaries, it foregrounds the connections among different interdependent activities. This can be a way to understand architecture’s increasing transactions, ongoing conversations that shape discipline’s agenda. Inspecting these set of interactions that take place in between a medium, a dynamic field that facilitates and environs these interactions.

In line with this nomadic disciplinary condition, as a concept medium enables to uncover the formation of architectural practices, as used in the thesis to analyze the practices of women in architecture. For this level, medium can function to understand the communication in the formation of action. In other words, it provides insight for the way these women negotiate and communicate with the milieu of practice. The main discussion in Chapter 4 is formulated by looking from this perspective. Medium thinking for the practices of women necessitates to pay close attention to how certain components of the milieu are activated in the process of reception and how they are transformed into architectural productions, as an answer to the priorities arising from ‘influential circumstances’.¹⁹⁰

that we abandon disciplinary mastery and surveillance.’ Mark Linder, ‘TRANSdisciplinarity’, *Hunch: The Berlage Institute Report*, 9 (2005), p. 12.

¹⁸⁹ In explaining transdisciplinarity, Mark Linder points to this field as ‘spaces between disciplines’: ‘transdisciplinarity scrutinizes architecture’s appearance and seeks its significance in the forms of other disciplines, or in the spaces between disciplines, but it in no way abandons the specific modes of the architectural discipline’.

¹⁹⁰ The sense of milieu as reflected in Lamarck’s terms.

CHAPTER 3

GENDER AND ARCHITECTURE: A SYNOPTIC MAPPING

3.1 The Manifold Positions in Feminist Scholarship

The conceptualization of medium provides a tool to decipher architecture's encounters with growing number of disciplines and diverse theoretical frameworks. Among these, feminism has a unique position due to its capacity to generate critical and timely interactions. It is possible to describe feminism as constantly evolving and heterogenic body of work. Within this fluctuation, multiple theoretical positions¹⁹¹ as well as different variants of feminism can be observed. This heterogeneity portrays feminism as a polyphonic, open-ended and responsive body of knowledge. Though addressed in a self-contained manner under this section, none of these positions and strands emerge independently and chronologically. This also applies to broader categories within feminist thought. Despite traditional descriptions that tend to distinguish liberal, socialist, and postmodern feminisms, 'in reality they did not develop as independent strands or in a simple chronological order'.¹⁹² Nevertheless, different positions presented in this section can be divided into two broad categories. While post-colonial feminism, ecological feminism, and cyber-feminism appear as critical positions that extend the critique within feminism to new territories, post-feminism appear as a counter-critical position developed

¹⁹¹ In Companion to Feminist Studies, these theoretical positions are articulated as: essentialism, marxist and socialist feminisms, radical and cultural feminisms, materialist feminisms, queer, trans and transfeminist theories, black feminism and womanisms, postcolonial feminism, transnational feminism.

¹⁹² Judy Wajcman, 'Feminist Theories of Technology', *Cambridge Journal of Economics*, 34 (2010), p. 143.

‘against’ the negative connotations of feminism and subsumes internal links to popular, neoliberal and cyber feminisms.¹⁹³

3.1.1 Postcolonial Feminism

Feminism and postcolonialism are critical discourses that ‘promote subversion and change’. Moreover, they both problematize the gap between the center and the margins, while seeking ways of ‘bringing the knowledge of and from the margins to the centre’.¹⁹⁴ Its encounter with feminism provides postcolonial theory with ‘a more critical and self-reflexive account of cultural nationalism’, whereas feminism acquires a new conceptual toolbox with postcolonial theory. Thus, seeing new facets of oppression and refusing the universalism in the gendered experiences of both women and men can be possible. On the other hand, feminists interact with postcolonial discussions for the perceptions of ‘third-world women’ and in unseating gender inequalities in racialized settings. Furthermore, the concept of difference which becomes an effective theoretical tool to in critiquing the homogeneity of second wave feminism, arise from the integration of postcolonial concerns. However, as Parashar states difference exists not just between the West and the non-West, but also inside these geographies and temporalities. Therefore, postcolonial feminism accepts that any universalism is discursive violence that erases histories and silences voices.

Resting on the explanations above, postcolonial feminism seeks to dismantle power imbalances between the colonizer and the colonized, as well as to repudiate indigenous men's hegemonic control over women. It can be stated in broad strokes that postcolonial feminists strive to deconstruct representation of non-Western

¹⁹³ Cyberfeminism and postfeminism is related one another via the discussion of fourth-wave feminism.

¹⁹⁴ Swati Parashar, ‘Feminism and Postcolonialism: (En)Gendering Encounters’, *Postcolonial Studies*, 19.4 (2016), 371–77 <<https://doi.org/10.1080/13688790.2016.1317388>>.

women. They also challenge Western feminists' production of hegemonic discourses in which non-Western women are objectified and portrayed as 'the other.' Most notably in this regard, Chandra Talpade Mohanty opposes homogenizing tendencies for the category of woman and delves deeply into the construction of 'Third World Woman' as a single monolithic subject. By emphasizing the distinction between Woman, as a discursively constructed category, and women, as real and material subjects of these discourses, she contends that some feminists from the United States and Western Europe, discursively colonize the material and historical heterogeneities of third-world women's lives, resulting in the construction of a monolithic 'third-world woman'. Along the same line, in her book *A Critique of Postcolonial Reason* (1999) Spivak contends that the notion of marginality has contributed to the creation of the canons of Western culture. It also enhanced the East vs. West binaries and cultural hierarchies. Hence, Western feminists have frequently taken it upon themselves to reflect on issues pertaining to the (third) world woman and thereby constructed third world woman as a monolithic subject.

Inevitably, intersectionality emerges as an important concept of postcolonial feminism, one that is also linked to another central feminist concept of difference. Introduced in the late 1980s, intersectionality is a heuristic term that draws attention to 'dynamics of difference and solidarities of sameness in the context of anti-discrimination and social movement politics'.¹⁹⁵ Ever since Kimberlé Crenshaw coined the term in 'Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory, and Antiracist Politics'¹⁹⁶, the term exceeds the limits of feminist theory and gains currency in the

¹⁹⁵ Sumi Cho, Kimberlé Williams Crenshaw and Leslie McCall, 'Toward a Field of Intersectionality Studies: Theory, Applications, and Praxis', *Signs* 38, No. 4, Intersectionality: Theorizing Power, Empowering Theory (Summer 2013), p. 787.

¹⁹⁶ Crenshaw, Kimberlé Williams, 'Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics', *University of Chicago Legal Forum* (1989), 139–67.

interdisciplinary arena as a theoretical and methodological paradigm. In feminist theory, intersectionality can be described as a critical lens that helps dismantle the layering of the discrimination of gender when it is intensified or modified with other discriminatory labels such as race/ethnicity, class, sexuality, and nation. This also applies to the subordination that white females exert on the women with ethnic identities. Intersectionality converges with postcolonial feminism on different levels.

While issues around the exploration of gender, class, sexuality in different geopolitical contexts are addressed within postcolonial feminism, intersectionality suggests that these different geographies belong to a non-Western context, the geography can be the source of discrimination, moreover when combined with gender it yields more intensified results in terms of discrimination.

Postcolonial feminism appears as an important source of reference for this study. Dealing with the work of women from a wide range of cultures and geographies¹⁹⁷ that are not canonically Western, the study reverses the ‘monolithic view of third world woman’. Moreover, it provides insights for the diversity within this plurality and implicitly signals the power of being ‘other’.

The specificity of each context is embraced as a medium, an agglomeration of ever-changing web of relations exists in the active circumstances. How these women negotiate with the medium in their professional practice enables to pay attention to their work despite their individual differences.

¹⁹⁷ The list includes women with origins in the following geographies: China, Korea, India, Algiers, Turkey, Africa, Argentina, Venezuela, Haiti, Bosnia, Colombia, Native America, Mexico, Thailand, Taiwan, Nigeria, Iran.

3.1.2 Ecological Feminism

Coined by French feminist Françoise d'Eaubonne¹⁹⁸ in 1974, the term ecological feminism (ecofeminism)¹⁹⁹ connotes feminist concerns for environment and highlights the manner in which patriarchal society treats both nature and women. Two major social movements of the latter half of 20th century, feminism and the environmental movement, raise a number of fundamental issues. Ecological feminism can be described as the position that essentially responds to and seek answers for these issues. This approach can be positioned within a larger group of strategies that address environmental problems. The different intellectual threads of environmentalism were able to find political expression starting in the 1960s owing to 'green' political movements in the form of activist nongovernmental organizations and ecological political parties. In the 1980s, many scholars²⁰⁰ provided analyses of

¹⁹⁸ "Françoise d'Eaubonne coined the term "*ecological feminisme*" in 1974 to call attention to women's potential to bring about an ecological revolution."

Aug 29, 2014; revision Mon Apr 27, 2015. Feminist Environmental Philosophy. Stanford Encyclopedia of Philosophy. <https://plato.stanford.edu/entries/feminism-environmental/#NatFemlss>

¹⁹⁹ "After the charges of gender essentialism - accurately leveled at cultural feminism, a branch of thought in both feminist and ecofeminist theory - most feminists working on the intersections of feminism and the environment thought it better to rename their approach to distinguish it from essentialist feminisms and thereby gain a wider audience; hence, the proliferation of terms such as "ecological feminism" (Warren 1991, 1994), "feminist environmentalism" (Agarwal 1992; Seager 1993), "social ecofeminism" (Heller 1999; King 1989), "critical feminist eco-socialism" (Plumwood 2002), or simply "gender and the environment."

Greta Gaard, "Ecofeminism Revisited: Rejecting Essentialism and Re-Placing Species in a Material Feminist Environmentalism", *Feminist Formations*, 2011, Vol. 23, No. 2, 26-53.

²⁰⁰ Blaikie 1985; Blaikie and Brookfield 1987; Guha 1989; Jones, 1990, 1991, 1995; Stonich 1995; Peet and Watts 1996

power relations with regard to gender and ethnicity to better explain control operations and access to natural reserves.²⁰¹

In these studies, while the historical and contextual evaluations of the relationships between nature and society at various scales are elaborated, the involvement of various actors, gender inequalities, and their perspectives, explanations, and interventions are implicitly revealed. As a result, these studies identify the new social actors and their ability to act as a significant problem in environmental analyses. Environmental change in the form of land degradation and poverty are stated as key challenges. However fresh insights on environmental issues prompted evaluations of national policies and their effects on resource use. Likewise, access to resources was examined from the viewpoints of gender and race.

In the 1990s, the environmental crisis, demographic shifts, and economic inequality were major topics in political ecology. This decade witnessed research on the ability of social actors to comprehend connections between power and knowledge. Environmental political actions were linked to many and emerging social actors.²⁰² This shift of focus to power/knowledge relationships and social actors trigger the integration of feminist frameworks within environmental approaches. Along the same line, advances in theoretical perspectives on social movements, political ecology, and analyses of poststructuralist discourses enable a greater emphasis on the political implications of knowledge construction processes, paving way for the critique of modern categories such as ‘development, nature, democracy, sustainability, and the political’.²⁰³ Tackling the connections between woman and nature, ecofeminism, also articulated as feminist environmentalism or socialist feminism, emerges from this web of relations.

²⁰¹ Astrid Ulloa, ‘Feminist Political Ecologies in Latin American Context’, in *Companion to Feminist Studies* ed. by Nancy Naples, (Wiley Blackwell, 2021), p. 429

²⁰² Ulloa, ‘Feminist Political Ecologies in Latin American Context’.

²⁰³ Ibid.

On the other hand, via its contacts with various kinds of dominance, particularly those of race and class, feminism experiences significant struggle, transformation, and richness. Within this enrichment, an important but challenging frontier for feminist theory appears a feminist explanation of nature's dominance. As Plumwood expounds the close embeddedness of issues of gender and nature makes it even more challenging and disputed. Nature, which essentially seems to be a fairly inclusive and dynamic term, in effect was subjected to a wide range of colonization techniques. The dominance of nature therefore plays a crucial unifying function in descriptions of different types of oppression.²⁰⁴

Over the last two decades, the significant contributions that ecofeminism has made to both activist struggle and theoretical linkages between women's oppression and nature's dominance can be observed. In various guises, it has addressed all four types of exploitation: race, class, gender, and nature. Simultaneously, ecofeminism has been labelled in some areas as both intellectually weak and doubtfully free, as well as entirely related to what is now commonly referred to as cultural feminism.

As an ecofeminist Plumwood provides an alternative foundation for environmental politics and philosophy by exposing the 'subtle and disguised' dualistic dynamics in the patriarchal environmental accounts. Drawing from a number of feminist thinkers and incorporating the ethics and politics of mutuality, she claims to build a better foundation for the field. Via this reformulation, Plumwood opposes to the masculine presence in environmental philosophy and operationalize her critique via exposing the logic of colonisation, and dualism. On this basis, she makes an effort to demonstrate how the handling of nature may be considered from both a political and ethical standpoint. The 'third position' of ecofeminist theory can help resolve the

²⁰⁴ Val Plumwood, *Feminism and Mastery of Nature* (London and New York: Routledge 1993), p. 1.

issues underlying the contentious ‘ecopolitics debate’ between ‘deep ecologists’ and ‘social ecologists’.²⁰⁵

The feminist ecological concerns include the colonization of women, indigenous people and their lands. According to ecofeminists, this exploitation results from the male dominated system that science and technology cultivated. Seeking the liberation of women from male domination cannot overlook the fact that ‘development’, ‘modernization,’ and ‘progress’ processes led to the deterioration of the natural world.²⁰⁶

The critics of environmental activists on science and technology paved the way for feminists’ exposition on non-gender neutral nature of these constructions. In this way, some feminists awakened to the close connection between dominance of man over nature and reductionist enforcements of modern science since the 16th century. Moreover, they realize that even in industrially developed societies, ‘oppressive and exploitative’ relations between men and women persist.²⁰⁷

In contrast with these earlier eco feminist concerns, some other feminists do not consider science as a potential ally against nature. Moreover, the overlapping goals between scientific ecology and ecological feminism form an agenda.²⁰⁸ Therefore, critical accounts for science and technology cannot be pointed as the common denominator of all ecofeminists. Lee Lampshire provides an interesting philosophical ground for ecofeminism by drawing from latest developments in

²⁰⁵ Val Plumwood, ‘Introduction’, in *Feminism and the Mastery of Nature*, (London: Routledge, 1993) p. 2.

²⁰⁶ Maria Mies and Vandana Shiva, ‘Introduction’ in *Ecofeminism* (London - New York: Zed Books, 2014), p. 2.

²⁰⁷ Mies and Shiva, ‘Introduction’, p. 3.

²⁰⁸ Catherine Zabinski, ‘Scientific Ecology and Ecological Feminism: The potential for Dialogue’, in *Ecofeminism, Women, Culture, Nature* ed. by Karen J. Warren (Indiana University Press, 1997).

science.²⁰⁹ By pointing out that the referent in the mind-body analogy does not exist, she proposes an alternative standpoint for ecofeminists. With some connections to Haraway's cyborg²¹⁰, this alternative relies on the biopsychosocial positions occupied by things.

3.1.3 Cyberfeminism

Marking the feminist issues and concerns that are linked to the internet, cyberspace and new media technologies, the term cyberfeminism was coined by Sadie Plant in 1994. The term and movement grow out of what is roughly called 'third wave feminism' which supports the heterogeneity of the category of woman. More recently, cyberfeminism not only became a part of, but to a large extent subsumed by the discussions around fourth wave feminism. Before cyberfeminism, feminist approaches to technology was preoccupied with the social and cultural construction of technology. These accounts aimed to uncover the masculine bases that underlie in the development of technology as well as the processes that largely ignores the participation of women in these developments.

Contrasting to these earlier approaches, Sadie Plant embarks on to explain the parallelisms between women and the internet, conceiving both as 'non-linear, self-replicating systems concerned with making connections'. Plant argues that women are naturally inclined to using the Internet, therefore she proposes it as a comfortable space for women. To highlight the emancipatory potential of cyberspace Plant points

²⁰⁹ Wendy Lee Lampshire, 'Women Animals Machines: A Grammar for a Wittgensteinian Ecofeminism', in *Ecofeminism, Women, Culture, Nature* ed. by Karen J. Warren (Indiana University Press, 1997).

²¹⁰ Donna Haraway, *A Cyborg Manifesto Science Technology and Socialist Feminism in the Late Twentieth Century* (1985, *Socialist Review*; repr. University of Minnesota Press, 2016).

out the Internet's capacity to 'experiment with identity' and its handing over a new environment for 'claiming power and authority'.²¹¹

Not preoccupied with feminist viewpoints, still some younger feminists suggest the internet to 'claim their territory'. In their accounts, cyberspace is seen to be deployed as a vital tool for women's empowerment. For some, these approaches seem reductionist and simplistic, moreover they do not consider the inequalities in accessing to computers and internet. For instance, Luckman dismisses an uncritical use of technology and suggests to weigh technology's larger role in culture.²¹²

More recent discussions that bring feminism and online culture together refer to the term fourth wave feminism. Broadly, the fourth-wave feminism is used to describe integration of mediated activism of internet culture into feminism. It arose in connection with some incidents that draw attention to the issues on sexual harassment, body shaming, and rape culture.²¹³ The use of social media to highlight and address these concerns can be stated not only as the key component of fourth wave feminism but also as the major distinction from its predecessors. Therefore, fourth wave feminism is defined by action-based viral campaigns, protests, and movements such as #MeToo moving from the margins of society to the front pages of daily news. Yet similar to earlier attempts, it continues to challenge the systemic white male supremacy as a problem.

²¹¹Sadie Plant, 'Babes in the Net', *New Statesman & Society*, 27 (January 1997), p. 28.

²¹² Susan Luckman, '(En) gendering the Digital Body: Feminism and the Internet.' *Hecate*, 25 (1999), 36–48.

²¹³ In December 2012 a young woman was brutally gang-raped in India and subsequently died, sparking local protests and international outrage. Another important incident in this regard was the launch of #Metoo campaign in 2006 in the United States to help survivors of sexual abuse, particularly women of color. The campaign got global prominence in 2017, following the revelation that film mogul Harvey Weinstein had sexually harassed and raped women in the business with impunity for years.' The fourth wave of feminism.

<https://www.britannica.com/topic/feminism/The-fourth-wave-of-feminism>

Though fourth-wave feminism can be proposed to evolve from cyberfeminism, it converges with postfeminism on certain points, such as celebrating the successes of feminism and shifting the responsibility from collective to the individual.²¹⁴ Postfeminism's resigning from proposing a new form of feminist politics and its shift to signify the full rejection of feminist projects and goals can be traced in certain complexities within fourth-wave feminism.²¹⁵

Nevertheless, a return to a more active feminist movement that avoids the middle ground between feminism and anti-feminism, that is postfeminism, can be observed in the recent years. This wave spurred the women's organizations via online platforms and social media, and triggers organizations to place women back into public space. Characterized by the deployment of online modes of operation and communication tactics in asserting women's rights and exposing injustices, these activities go beyond hashtag activism. Most prominently, 'crowd-feminism'²¹⁶, and 'transhackfeminism'²¹⁷ come into view as important online strategies of feminist activism. Along with the reliance on digital technology as a platform for activism

²¹⁴ Nasrullah Mambrol, Postfeminism and Its Entanglement with the Fourth Wave, October 5, 2018. <https://literariness.org/2018/10/05/postfeminism-and%E2%80%AFits-entanglement-with-the-fourth-wave/>

²¹⁵ Nicola Rivers, 'Between 'Postfeminism(s)': Announcing the Arrival of Fourth Wave', in *Postfeminism(s) and the Arrival of the Fourth Wave* (Palgrave Macmillan, 2017), https://doi.org/10.1007/978-3-319-59812-3_2

²¹⁶ Sara Rabie uses the word 'Crowd-Feminism' to describe the way that women are using crowd mapping as a tool for activism. Sara Rabie, *Crowd-Feminism: Crowdmapping as a Tool for Activism*, (unpublished master thesis, Goldsmiths University, 2013).

²¹⁷ As a term transhackfeminism is used to mean 'a re- politicization of feminism through (bio)practice, as a multiplicity of methods. This proposal has its origin in the transhackfeminist manifesto by Pechblenda and to the first Transhackfeminist meeting THF!, as well as its subsequent versions, nodes and tentacles and presence in Hack the Earth. In general terms, 'transhackfeminism' refers to hacking_with_care, using hacking with a meaning of (active) resistance and transformation to generate transversal knowledge through transdisciplinary artistic, aesthetic or cultural practices/ proposals.' <https://syllabus.pirate.care/topic/transhackfeminism/>

and discussion, another common thread in this movement is a commitment to ‘a ‘diversity of purpose,’ which recognizes intersectionality as a key issue, and the questioning of established sex/gender systems, heterosexism, and binary gender norms’.²¹⁸

3.1.4 Postfeminism(s)

In rough terms, postfeminism is described as ‘no but culture’.²¹⁹ Though it often becomes a label that is used in an ‘accusatory’ manner, it is not always the equivalent of a purely negative statement.²²⁰ Rather, it can be described as the middle ground between feminism and anti-feminism; since it supports equality and empowerment but rejects the connotations of feminism by negating the feminist struggle and critique of patriarchal norms. Postfeminism, or as in Rosalind Gill’s expression ‘sensibility’ came to prominence in the 1990s and emerged out of the need to name paradoxes in the representation of women. For Gill, postfeminism is not a perspective or standpoint but an object to be analyzed critically. In this analysis, Gill refers to three different uses of the term. At times, it is used to signal the temporal shift, to mark a time after 2nd wave feminism; or to delimit a new kind of feminism, or something analogous to a third wave of feminism.²²¹

²¹⁸ Mia Consalvo, ‘Cyberfeminism’ in *Encyclopedia of New Media*, Sage Reference, https://study.sagepub.com/sites/default/files/Ch17_Cyberfeminism.pdf [accessed online June 24, 2022]

²¹⁹ Elaine J. Hall and Marnie Salupo Rodriguez, ‘The Myth of Postfeminism’, *Gender and Society*, 17.6 (Dec. 2003): 878—902.

²²⁰ Rosalind Gill, ‘Postfeminist Media Culture: Elements of a Sensibility’, *European Journal of Cultural Studies*, 10.2 (2007), p. 148.

²²¹ Rosalind Gill, ‘Postfeminism, popular feminism and neoliberal feminism? Sarah Banet-Weiser, Rosalind Gill and Catherine Rottenberg in conversation’, *Feminist Theory*, 21 (2020), p.5.

There is an unavoidable link between postfeminism and popular media because the emphasis on equality and empowerment that circulate in the media culture of the 90s reinforces the hollowing out of feminisms' core values and its replacement by a superficial understanding. In the media culture of the 90s, it was possible to see the calls for equality and empowerment next to 'lad culture' or misogyny.²²² Arguments over postfeminism entail discussions of how feminism and media culture have changed, as well as how these changes relate to one another. Gill defines postfeminism as a discourse constituted by these dominant themes:

Femininity is a bodily property, the shift from objectification to subjectification, the emphasis upon self-surveillance, monitoring and discipline, a focus upon individualism, choice and empowerment, the makeover paradigm, a resurgence in ideas of sexual difference, sexualization of culture, emphasis upon consumerism, the commodification of difference.
223

These themes coincide with persistent inequalities that relate to race ethnicity, class, age sexuality and disability as well as gender.²²⁴ According Banet-Weiser, popular feminism resides on a spectrum. In this range, whereas flamboyant, media-friendly phrases such as 'celebrity feminism and corporate feminism' gain prominence; statements that criticize patriarchal structures and systems of racism and violence are marginalized.²²⁵ From organizing marches to hashtag activism to commodities, popular feminism refers to behaviors and situations that are accessible to a large public.

²²² Ibid.

²²³ Gill, 'Postfeminist Media Culture: Elements of a Sensibility', p. 149.

²²⁴ Ibid.

²²⁵ Sarah Banet-Weiser, 'Postfeminism, popular feminism and neoliberal feminism? Sarah Banet-Weiser, Rosalind Gill and Catherine Rottenberg in conversation', *Feminist Theory*, 21 (2020), p.9.

Contrasting feminism's political entanglements, popular feminism surfaces as a 'happy' feminism of uplift culture,²²⁶ instead of a 'feminist killjoy'.²²⁷ A feminist criticism of structure is frequently overshadowed by seeing and hearing a securely affirming feminism in stunningly apparent ways, as well as by the labor required to produce oneself in accordance with popular feminism. The visibility of popular feminism, where examples appear on television, in film, on social media, and on bodies, is meaningful but it often ends there, as though seeing or buying feminism is the same as abolishing patriarchal systems.²²⁸

On the other hand, as a discursive object feminism appears at neoliberal discussions that seek professional and economic success without excluding family. Catherine Rottenberg deals with this intersection of neoliberalism and feminism. She coins the term 'neoliberal feminism' to point out its difference from postfeminism and popular feminism yet positioning it with reference to them. Neoliberal feminism, as she argues, provides a new vocabulary stemming from a 'lean-in culture', this vocabulary promotes happiness and balance while it replaces discussions on 'autonomy, rights, liberation, and social justice'. In neoliberal feminist discourse, the schizophrenic essence of postfeminism became apparent; while inequality is acknowledged, socioeconomic structures that shape people's lives are seen to be rejected. On the other hand, neoliberal feminism constructs a new subject that is in line with market needs. This subject accepts full responsibility for her own 'well-being and self-care'. Happy work-life balance appears as a central tenet of this discourse while balance is articulated as a feminist ideal. In the context of high demanding professions, such as architecture, the indications of well-being and self-care are different. It takes different forms such as being professionally well-equipped

²²⁶ Ibid.

²²⁷ Sara Ahmed, *The Promise of Happiness*. Durham, (NC: Duke University Press, 2010).

²²⁸ Sarah Banet-Weiser, *Empowered: Popular Feminism and Popular Misogyny*, (London: Duke University Press, 2018), p. 4.

despite family and child responsibilities, an extreme emphasis on self-improvement, and more importantly carrying the sole responsibility for this improvement.²²⁹

The conceptualization of neoliberal feminism connects an emptied feminism with the interests of work environment. Considering all these aspects, Rottenberg puts forward neoliberalism as a variant of feminism. Neoliberal feminism relies on an understanding of neoliberalism as more than just a set of economic policies; indeed, neoliberalism is a dominant political rationality that moves from state management to the inner workings of the subject.²³⁰ At this point, Foucault's theory on the construction of the self as subject provides important points to make sense of the various aspects of the neoliberal project. In his later work, Foucault saw subjects as more than merely passive bodies.²³¹ By explaining individuals as 'active subjects' who build themselves via processes of self-constitution, recognition, and reflection, he elucidated what he calls 'technologies of the self'.

Understanding neoliberalism from this perspective sheds light on both the state's and individuals' investment in human capital, which is deemed effective both for individuals to improve their employment chances and by the state to boost national productivity.²³² This create a shift of perception where populations made up of citizens turn into a group of consumers. Neoliberal feminism's imposition of certain ideals for personal development, such as personal accountability and responsibility, can be understood from this perspective. In the end, neoliberal terms of arrangement

²²⁹ Catherine Rottenberg, 'Postfeminism, popular feminism and neoliberal feminism? Sarah Banet-Weiser, Rosalind Gill and Catherine Rottenberg in conversation', *Feminist Theory*, 21 (2020), p.7.

²³⁰ Ibid.

²³¹ Michel Foucault, 'Technologies of the Self', in *Technologies of the Self: A Seminar with Michel Foucault* ed. Luther H. Martin, Huck Gukman and Patrick H. Hutton, (The University of Massachusetts Press 1988), 16-50.

²³² Elizabeth Houghton, Becoming a neoliberal subject, *Ephemera*, 19.3. (2019).
<http://www.ephemerajournal.org/contribution/becoming-neoliberal-subject>

intensify a pervasive sense of uncertainty and insecurity for people both globally and in their personal lives.²³³

3.2 Gender, Technology and Media

A feminist perspective enhances our understanding of technology; this includes not only the technological artifacts but cultures, environments, actions and processes that are shaped by technology. Despite some myopic debates that limit feminism's engagement with technology to current setting, the manifold relationship between the two has a historically debated ground; technology has been an important matter of concern for socialist, radical and liberal feminists in the late 20th century as well.

As the complexity of women's interactions with technology became apparent, the concerns shifted from the inclusion of women in technology related work toward the gendered nature of technology and science. By the 1980s, feminists were investigating the mechanisms through which technology is developed and used, as well as the processes through which gender is constructed. Both socialist and radical feminists began to inquire into the gendered character of technical knowledge; the societal variables that shape various technologies were scrutinized, particularly how technology reflects gender differences and inequality.²³⁴ With these attempts the issue went beyond men's technological domination, as claimed by liberal feminists. Radical feminists believed that gender power relations are deeply ingrained within technoscience. Hence, they relocated the problem beyond the male ownership of 'neutral' technologies.²³⁵

²³³ Maurizio Lazzarato, 'Neoliberalism in action inequality, insecurity and the reconstitution of the social', *Theory, Culture & Society*, 26.6 (2009), 109-133.

²³⁴ Judy Wajcman, 'Feminist Theories of Technology', *Cambridge Journal of Economics*, 34.1 (2010), 146.

²³⁵ According to radical feminism women and men are fundamentally different, and women's power, culture, and pleasure are viewed as having been systematically controlled and

While radical feminists tackled women's bodies and sexuality, therefore problematized the link between reproduction technologies and women, the central concern of socialist feminism was the relationship between women's labour and technology, particularly exclusion of women from technically and technologically qualified work. In socialist feminist frameworks, technology was perceived to be socially formed, but by men to the exclusion of women; instead of being an autonomous force, socialist feminists embarked on to expose how it is affected by class relations of production. They then explained the division of labor as a sexual hierarchy. While this literature reflected an appreciation of the historical diversity of the categories of 'women' and 'technology', it was skeptical regarding the likelihood of remaking technologies to promote gender equality.²³⁶

Feminists in the 1980s were skeptical of what technology might give women. However, by the late 1980s in response to continuous attacks from black feminism, queer theory, postmodernism, and postcolonial theory second-wave feminism had modified itself. To signify both an epistemological split and the time following the peak of second-wave feminism, the term 'third-wave feminism' is used; in certain contexts, this took the form of postfeminism as well. However as mentioned in the preceding section, although it signals a chronological transition, postfeminism more firmly refers to a kind of feminism that is unenthusiastic in adhering to the primary concerns that feminism originated.

Despite the pessimism of radical feminism, feminist perspectives from the 1990s onwards become more hopeful about the role of technology in empowering women and transforming gender relations. So much so that, feminist theorists imagine a new relationship between human and machines, between male and female, thus assume

dominated by males, functioning via patriarchal institutions like as medicine and militarism. Western technology, like science, is profoundly entwined with the masculine ambition of dominance and control over women and environment. This technique has proven especially significant in the field of human biological reproduction technology. Wajcman, 146.

²³⁶ Wajcman.

alternative identities for woman. With this imagination, the feminine is aimed to be revalorized.

Sadie Plant considers the internet and cyberspace as feminine media, and describes the online culture as a new type of society that is liberating for women. Donna Haraway's (1985, 1997) cyborg metaphor perfectly captures the optimism of this literature. Imagining oneself as cyborg gives a method for changing the gender dynamics of technoscience. Haraway emphasizes the tremendous ability of science and technology to generate new meanings and beings, as well as to construct new worlds. Haraway investigates how women's lives intimately complied with technology. Via cyborg, she proposes a new feminist 'imaginary' different from the 'material reality' of the existing technological order. Her work has opened up new possibilities for feminist analyses of Information Communication Technologies (ICT) and biotechnologies.

The link between gender and technology has been theorized as one of mutual influencing in by feminist authors. It is no longer accepted that things and artifacts are purely technical but rather they are constituted by the social fabric that holds society together. The relationship between technology and society is ever-changing. The gendering of technologies can also be seen as reconfigured at the various sites of 'consumption and use', in addition to how they are designed.²³⁷ The development of technology relies on the social context and cannot just be predicted using predetermined arrangements of power.

Technological advancements frequently bring innovative practices while also altering the nature and meaning of tasks. Gender, on the other hand, is now seen of as an achievement or 'performance' built via interaction (Butler, 1990). The concept of performativity, sometimes known as 'gender as doing,' considers the building of

²³⁷ Ibid.

gender identities to be formed in tandem with the technology in the creating.²³⁸ However, performativity is a contentious concept that triggers different discussions thus embody different perspectives. Karen Barad, a feminist theorist who works at the intersection of technology and science, advances performativity not as a call to transform everything -including material bodies- into ‘words’, but rather a reaction to the overwhelming authority given to ‘language’ in defining ‘what is real’.²³⁹

From a materialist perspective, performativity is a challenge to unquestioned mental habits that give language and other kinds of representation greater influence on ontology than they should. In an interesting way performativity brings formation of the subject together with the production of matter, thus links Butler’s account of ‘materialization’ and Haraway’s notion of ‘materialized refiguration’.²⁴⁰ The discussions of technology and science from a materialist feminist perspective triggers ‘the nonhuman turn’, that is linked to materialist approaches to feminism. However, this approach differs from the traditions of materialist (Marxist) feminism and often it is referred to as new material feminism.²⁴¹

The fundamental shift in the discussions on material turn is a ‘bend’ away from social deterministic tendencies that are perceived as being present in constructionist viewpoints. Material understanding of reality critiques these viewpoints for paying

²³⁸ Ibid.

²³⁹ Karen Barad, ‘Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter’, *Signs*, 3.28 (2003). <https://www.jstor.org/stable/10.1086/345321>

²⁴⁰ Ibid. In composing new ideas Barad draws from what is called ‘a diffractive methodology’. She defines this methodology as reading ideas diffractively against each other. In constructing new ideas diffractive methodology requires to read carefully and to identify important differences in fine details, while accepting that this analysis is essentially an ethics based on entanglement, not externality. Therefore, her bringing together Butler’s and Haraway’s ideas to form a new understanding of performativity is a result of this methodology. Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Duke University Press, 2007).

²⁴¹ Hanna Meißner, ‘New Material Feminisms and Historical Materialism’ in *Mattering* ed. by Victoria Pitts-Taylor (New York University Press, 2016).

insufficient attention to the agency and historicity of the material when social structures, discourse, culture, and human activity are emphasized as explanatory variables for the distinctive construction of historical reality. The idea of ‘emancipation’ as it is suggested in the traditions of historical materialism is seriously challenged by the focus on ‘the agentic dynamism of matter’ and the critical observation that the world's being is not just a result of cultural imprints or human effort.²⁴²

Therefore, the divided views of postmodernist constructivism and positivist scientific materialism are rejected by new materialism, which instead seeks to explain, in Baradian terms, the co-constructive ‘intra-actions’ between meaning and matter, which preserves neither materiality nor ideality. Being the first non-human feminist imagination, (new) materialist turn owes much to Haraway’s Cyborg, but it is also affected by Bruno Latour’s *Science in Action* in 1987.²⁴³ On the other hand, new research on feminism and technology relationship dwells on technoecologies.²⁴⁴ These perspectives stress the cruciality of ‘corporeality, affects, ethics, and vulnerability in the materialization of technoecological connections’, and they question (hu)man's special status while providing novel tools or modes of inquiry to envision new patterns of ‘care’ and thinking about environmental sustainability.²⁴⁵

On the other hand, as the culturally relevant subset of technology, feminist concerns are highly influenced by discussions of media. The scholarship that deals with gender in relation to media has flourished in the past two decades of the 20th century and it acquired a completely new configuration in the last decade with the expansion of

²⁴² Ibid.

²⁴³ Richard Grusin, *The Nonhuman Turn* (Minneapolis, London: University of Minnesota Press, 2015).

²⁴⁴ *Feminist Technoecologies, Reimagining Matters of Care and Sustainability*, ed. by Dogmar Lorenz-Meyer, Pat Treusch, Xin Liu (Routledge, 2019).

²⁴⁵ <https://www.routledge.com/Feminist-Technoecologies-Reimagining-Matters-of-Care-and-Sustainability/Lorenz-Meyer-Treusch-Liu/p/book/9780367727864>

online activities. The emergence of gender discussions within communication and media studies follows what is roughly referred to as second wave feminism, the women's movement of the 1960s and '70s. The inclusion of media in Gender Studies acts as a complementary endeavor to provide a cultural context for feminist inquiry; since the issue of 'representation' is inextricably linked to the construction of gendered cultural hegemony. Therefore, it was no surprise when in 1981, African-American black feminist bell hooks²⁴⁶ published her well-known study *Ain't I a Woman* she strengthened her argument by unveiling the portrayal of black women in the media. The way woman is represented in the popular media has been a key question for feminist scholars; approaching to the problem from within by providing an alternative venue for women, a reactionist magazine called *The Bitch: Feminist Response to Pop Culture* begins publication in 1996.²⁴⁷ On the other hand, studies that intersect social and cultural geographies of gender and media keep growing and find intellectual integrity in 2001 via the international journal, *Feminist Media Studies*; a journal avowedly assembles the feminist approaches to the field of media studies. Thus, it marks not only the recognition of the field, but it guides further inquiries beyond representation. As the last issues of the journal indicate, studies that bring feminism and media together question more than representation of women; they exhibit multivalent engagements among media practices and intersectional discrimination. Moreover, the content of the journal seems to expand toward the contemporary uses of digital media. Therefore, the gender media intersection can be argued to involve popular depictions of women to use of online tools and environments for feminist organizations. The present study operates within these 'multivalent engagements' but from within the discipline of architecture. Hence, it

²⁴⁶ In her writing bell hooks consistently uses her name without capitalizing initials and this naming is continued in academic literature.

²⁴⁷ This magazine intends to provide 'smart analysis of feminist pop culture and underlines the feminism's link to popular culture (<https://www.bitchmedia.org/history-0>, accessed May 16, 2021)

tackles decoding and specifying medium-gender relationship with reference to architecture.

3.3 Gender Discourse in Architecture

Following the genesis of Second Wave Feminism in the early 1960s, the last decades of the twentieth century witnessed fierce criticisms for the underlying patriarchal order in architecture's mode of knowledge production. In the late 1970s, research on gender and architecture began to appear, mostly written by women and from an overtly political feminist perspective.²⁴⁸ One of the earliest attempts that lay bare the significance of feminist research was a publication and exhibition named *Women in American Architecture: A Historic and Contemporary Perspective* (1977), it was organized by the Architectural League of New York through its Archive of Women in Architecture.²⁴⁹ On the other hand, published in 1989, Dennis Scott Brown's essay 'Room at the Top? Sexism and the Star System,' heralded upcoming work for the uncredited successes of women architects. Not only the criticisms but the scholarly work around the issue of gender has intensified. During the 1990s, many influential edited collections devoted to this subject was published; including *Sexuality and Architecture* (1992), *Architecture and Feminism* (1996) and *Gender, Space and Architecture* (2000). These books can be seen as the representative of the rigorous endeavor to relegate the dominance of masculine voices.

However, gender awareness, which was in demand in the 1990s, brought along some superficial initiatives as well. Modifying the surface rules of inclusion has not

²⁴⁸ Jane Rendell, Barbara Penner, and Iain Borden, *Gender Space Architecture: An Interdisciplinary Introduction* (London: Routledge, 2000).

²⁴⁹ Meltem Ö. Gürel and Kathryn H. Anthony, 'The Canon and the Void: Gender, Race, and Architectural History Texts', *Journal of Architectural Education* (1984-), 59.3 (2006), 66–76.

ensured ‘deep changes in architectural culture’²⁵⁰. As Lisa Jardine has pointed out, ‘having made it’ can also signify ‘an acceptance that is not followed by any change in the power dynamics between women and men’.²⁵¹ Therefore, the need to revive questions about the boundaries of architectural discourse in the articulation of sociocultural and political critique is repeatedly stated in the following decades.²⁵²

Essentially, in the late 1990s feminist architectural production was a contested ground. The interpenetration of poststructuralist terminology into theoretical discourse brought along some concerns and critiques. While Diane Ghirardo characterized writing of poststructuralist feminists as ‘circular indecipherability’ (indecipherability being a key Derridean word), Sherry Ahrentzen described theory-making process as an interaction with linguistic and semiotic endeavour, what is ‘essentially formal and philosophical’. The most severe critic was from again Ahrentzen who denounce feminist philosophy for being in line with patriarchy. For Ahrentzen this is related to feminist philosophy’s ‘separateness and control through abstraction’ and its lack of accessibility, because it was directed at ‘a specialized audience that shares a language or a coded familiarity’. As a result, Ahrentzen

²⁵⁰ Debra Coleman, ‘Introduction’, *Architecture and Feminism*, ed. by D. Coleman, E. Danze, C. Henderson (Architecture and Feminism, Princeton Architectural Press, 1996), xii.

²⁵¹ Jardine uses this phrase with reference to feminist psychoanalytical theory. As Coleman suggests, this approach can be applied to the discipline of architecture as well. Lisa Jardine, ‘The Politics of Impenetrability,’ in *Between Feminism and Psychoanalysis*, ed. Teresa Brennan (London: Routledge, 1989), 63. Cited by Coleman, *Architecture and Feminism*, xii.

²⁵² Jane Rendell, ‘Tendencies and Trajectories: Feminist Approaches in Architecture’ in *SAGE Handbook of Architectural Theory* ed. by H. Heynen S. Cairns (2012); Sandra Kaji-O’Grady, ‘Effete, Effeminate, Feminist: Feminizing Architecture Theory2, in *The Figure of Knowledge Conditioning Architectural Theory, 1960s - 1990s* ed. by Hilde Heynen. (Leuven University Press, 2020); Frichot Hélène, Gabrielsson, Catharina, Runting, Helen, eds., *Architecture and Feminisms: Ecologies, Economies, Technologies*, (London: Routledge, 2018). Karin Reisinger, and Meike Schalk, eds, *Becoming a Feminist Architect, Field: A Free Journal for Architecture*, Special Issue, 7. 1 (2017).

claimed that this ‘highly theoretical form of feminist knowledge production’ perpetuated the Western patriarchal project.²⁵³

In wider historical context, poststructuralist theory was viewed as ‘a replacement’ for a form of action. During the 1990s, the dissatisfaction with feminist poststructuralist theory has been addressed with different phrases that point to a mismatch between the realities of spatial practice and theoretical production. Poststructuralist approaches were described as ‘the hunt for better theories over intervention’,²⁵⁴ a condition of ‘discourse versus design’, with discourse being more significant.²⁵⁵

These disciplinary decisions proved a fundamental historical change in which activism was supplanted by texts and work on architecture's symbolic worlds.²⁵⁶ As Patricia Morton stated briefly; ‘focus on the ‘poetics’ of architecture and its gendered representational systems’ have superseded the socially involved work of an earlier generation, represented by feminist design groups, such as Matrix. Similarly, in the preface of *The Sex of Architecture*, another collection dating to 1996, this feeling of periodical change is reflected: ‘we are in an era where discourse is as important as design, often more important’.²⁵⁷ However, feminist opponents of the theory shift were not demanding a return to market practice. Instead, they advocated for ‘a return to alternate modes of community-based practice’ as well as a commitment to establishing alternative forms of architectural production, which were important elements of feminism in the 1970s.²⁵⁸

²⁵³ Burns, ‘Feminist Theory and Praxis’.

²⁵⁴ Helene Frichot and others, *Architecture and Feminism*.

²⁵⁵ Agrest and others, *The Sex of Architecture*.

²⁵⁶ Burns, *Feminist Theory and Praxis*, p. 14.

²⁵⁷ Agrest and others, *The Sex and Architecture*.

²⁵⁸ Burns, p. 14.

The gender discourse in architecture includes direct as well as indirect relations between space, gender and architecture. The indirect relations often come from the discussions of space in the fields that are different from architecture. These focus on places that are not typically thought of as architectural, since arguments concerning the gendering of space as public and private originated in regard to the term ‘built environment’ rather than ‘architecture’ as it is normally described.²⁵⁹ Interdisciplinarity not only reveals architecture's peculiar disciplinary status of intersections, but it also provides a solid foundation for the discipline’s interaction with feminism from various perspectives.²⁶⁰

To be examined critically, architecture needs to be contextualized and gender has provided this context for many scholars. With the impact of poststructuralist thought, architecture is viewed as a system of representation in thinking about gender.²⁶¹ To think architecture in the same way that one thinks of drawings, photographs, models, film, or television, expands the field of critique from feminist viewpoint. Being gendered is not limited to architecture as a material object; as cultural documentations, architectural representations reflect and encompass issues related to gender, class and race as well. As a result, the representations of architecture are included in the critique of its gendered construction.

Within these broadlines, scholars problematize different aspects of gender bias in the discipline. Beatriz Colomina’s media saturated view extends the critique from gendered spaces to their reproduction via media. Furthermore, she proposes the body to be perceived as a political construct, a ‘product’ of these systems, instead of the embodiment in which we encounter them. Different from Colomina, Wigley

²⁵⁹ The contribution of film theory for the discussions of space and gender are quite central.

²⁶⁰ These diverse viewpoints are framed by Jane Rendell and others via a comprehensive edited collection structured by the cross-relations among space, architecture, and gender. Jane Rendell, Barbara Penner, and Iain Borden, *Gender Space Architecture: An Interdisciplinary Introduction* (London: Routledge, 2000)

²⁶¹ Colomina, *Sexuality and Space*.

expresses that gender distinctions are actively produced at all levels of architectural discourse; as he discusses, gender discourse's involvement in both the general cultural inferiority of the 'feminine' and the particular subordination of specific 'women' can be identified at each place, often openly but more often through implicit social mechanisms.²⁶² In effect, this recognition aligns well with Marxist understanding of buildings as the products and processes of capitalism, as objects that reflect the values of dominant class. Early feminist architects benefited from this perspective as well as critical methodologies introduced by Marxism in exposing the intersecting oppressions of class, gender and race.

The gender discourse in architecture also includes architectural historians' attempts to reclaim the neglected work of women architects. It is possible to mention many projects that aim to recover the contributions of women architects to the discipline.²⁶³ On the other hand, places designed by and designed for women creates another category of investigation. But most significantly, this discourse includes critical analyses of architecture. Drawing from theoretical tools provided by feminist theory

²⁶² Mark Wigley, 'Housing Gender' in *Sexuality and Space* ed. by Beatriz Colomina (New York: Princeton Architectural Press, 1990).

²⁶³ WikiD: Women, Wikipedia, Design is a project to increase the number of Wikipedia pages on women in architecture and the built environment through an international education and advocacy initiative. Wiki Women Design is a project undertaken by the Flanders Architecture Institute to collect and disseminate knowledge and data on women who have made their imprint on the designed environment. Wiki Women Design is a project undertaken by the Flanders Architecture Institute to collect and disseminate knowledge and data on women who have made their imprint on the designed environment. It encourages Wikipedia edit-a-thons or writing sessions to record the contribution of women on Wikipedia and 'make up for this backlog'. Co-funded by the Creative Europe Programme of the European Union, MoMoWo - 100 Works in 100 Years. European Women in architecture and Design, 1918-2018, is a travelling exhibition and a book project mobilized by the absence of the contemporary history of women's creativity and the tangible cultural heritage produced by women's work. MoMoWo - 100 Works in 100 Years. European Women in architecture and Design, 1918-2018 / García, Ana María Fernández; Franchini, Caterina; Garda, Emilia Maria; Seražin, Helena. - STAMPA. - (2017), 1-374.

and from the view point of inequalities, architects question architecture's traditional ways of being, making, and knowing, which roughly refers to its ontology, methodology and epistemology. The feminist energy targeted to subvert hegemonic narratives in architecture constructs a new perspective that is conscious of gender bias. This theoretical position in turn constitutes itself not only as a new field of inquiry but also opens a new path for architectural historiography.²⁶⁴ Now, the firm position that feminist scholarship constructed within the discipline includes manifold issues varying from the gender implications of advanced parametric design²⁶⁵ to feminist ethics²⁶⁶.

Within this division, a closer look at the intersection of architecture and gender reveal some concerns for women architects. These can be collocated as women's relation with the architectural profession, women's marginalised experience as practitioners, feminist struggles for women's equal access to architectural education and professional status, new forms of feminist architectural practice. Furthermore, the spaces and building types that are associated with women and perhaps therefore deemed insignificant found critical reflection in feminist accounts of architecture. The history of architecture relegates to the background areas that are linked with women and these previously negligible designs, such as different housing structures, interior design, textile design.²⁶⁷ Another consideration of feminism in architecture can be found in the scrutiny of women's exclusion from particular areas. These

²⁶⁴ Karen Burns and Lori Brown, 'Telling Transnational Histories of Women in Architecture 1960–2015', *Architectural Histories*, 8(1): 15, p 1–11.(2020). Meltem Ö. Gürel and Kathryn H. Anthony, 'The Canon and the Void: Gender, Race, and Architectural History Texts', *Journal of Architectural Education*, 59.3 (2006), 66–76 <<https://doi.org/10.1111/j.1531-314X.2006.00036.x>>.

²⁶⁵ Shelby Doyle and Leslie Forehand. 'Fabricating Architecture: Digital Craft as Feminist Practice.' *The Avery Review* 25 (2017).

²⁶⁶ Shelly Cohen and Tovi Fenster, 'Architecture of Care: Social Architecture and Feminist Ethics.' *The Journal of Architecture* 26, no. 3 (April 3, 2021): 257–85.

²⁶⁷ Rendell, *Gender Space Architecture*.

studies mostly put emphasis on spaces at various scales where women are excluded because of the patriarchal pattern of space and analyze the opportunities for these spaces to be women-friendly.

The question of effective sites for feminist action has been a central problem for feminist scholars, activists and architects since the 1970s. In effect, the poststructuralist critiques were also related to this problem of locating the transformative force coming from feminism into architecture. Ahrenzten proposed architect's function as a social advocate as a counterargument to feminist theory. Drawing on the advocacy work that had developed out of the 1970s and flourished in the 1980s she pronounced on the particular ethical responsibilities of the architect such as 'the realization of empowerment potential within the individual and the community'.²⁶⁸ However, not all female theorists of the 1990s who disagreed with poststructuralism defined their objectives harshly in opposition to the emerging theory. In their contributions to the 1996 collection, *The Sex of Architecture*, Sharon E. Sutton, a longtime social advocacy practitioner, and the younger Leslie Kanes Weisman introduced advocacy ideas for architectural education and 'ideals of architecture as social agency, social justice, and community-oriented architectural design'.²⁶⁹

Yet, the question of effective sites also includes not only the medium of action, but its location. There exists a dilemma between working within existing institutions or moving beyond the established and producing alternative organisations. The present

²⁶⁸ Sherry Ahrentzen, 'The F. Word in Architecture', in *Reconstructing Architecture* ed. by Thomas Dutton and Lian Hurst Mann (Minneapolis-London: University of Minnesota Press, 1996), p. 96.

²⁶⁹ Leslie Kanes Weisman, 1996, 'Diversity by Design: Feminist Reflections on the Future of Architectural Education and Practice', in *The Sex of Architecture*, D. Agrest, P. Conway, L. K. Weisman (eds.) Harry N. Abrams, Inc. Publishers, New York.

study provides thought-provoking insights for this question as well as embarks on to synthesize ‘the effective sites of feminist action’.

This study appears at a critical point in relation to this dilemma.²⁷⁰ The close examination of the selected women architects as well as women collectives exhibit a remarkably diverse distribution. They show how concerns that align well with feminism leads to alternative practices and organizations as well as how they force the change of agendas in established institutions.²⁷¹

Contrary to other approaches where biography takes central stage when discussing women in architecture, this study strives to reveal commonalities among nonstandard work of women in architecture. Moreover, it investigates how the issues of diversity and equity find reflection via their work in the 21st century, how their practice offers new avenues of action, foster innovation, and provide a critical perspective on the profession. In doing that, it delves into critical discussions from an intersectional viewpoint, which means initiatives that combine gender concerns with others such as identity, color, age, socioeconomic class, or disability.

3.4 Historical and Contextual Positioning: Women in Architecture

Similar to other marginalized groups such as ethnic minorities and disabled people, women's interests are not represented in the design process throughout history. Women's interests, like those of other marginalized groups, have historically been ignored in the design process. Walker notes that practicing architecture was considered an amateur pursuit for women until the second half of the nineteenth

²⁷⁰ Though the practices examined do not define themselves feminist, it is the objective of the study to explore the interactions of these practices with feminist agendas.

²⁷¹ There are many examples within the examined women that have important positions in leading institutions. These positions vary from being a dean to directing research laboratories. More interestingly, their influence is visible in the curriculum and the scope of the courses, as well as invited lectures that these institutions host.

century. So much so that there were some constraints as to the types of buildings that are found appropriate for a woman to design. Since women's socially constructed roles were limited to private life, only the design of domestic architecture, a church, or chapel for a memorial to a family member was found acceptable. Legislations were in accordance with this exclusion, as well. Married women were not allowed to make contracts in their own right; they were eliminated from many of the professional responsibilities in architecture. Hence architecture remained an exclusively male profession until the 1880s.²⁷² Though in the 1850s and 1860s Women's Movement led by Barbara Leigh Smith challenged the inaccessibility of women to paid work in the UK, this did not change their subordination. The least prestigious and detail required works such as tracing plans and writing specifications assigned to women in architects' offices. This was a boring job that was deemed proper for the most junior member of the firm. Even after their access to paid work, women remained as a source of cheap labor throughout the nineteenth and twentieth centuries. Their presence was 'a threat as well as an assistance to the male workforce'.²⁷³ Professional marginalization was carried out as a spatial marginalization as well in the offices; women could work in a separate "women-clerks' room as a 'draughtswoman'" which requires neatness, delicacy of touch, attention to detail, patience and care, characteristics that are identified with femininity.²⁷⁴

However, since the early 1960s, a period which is roughly identified as second-wave feminism, the issue of underrepresentation for women in architecture started to change radically compared to earlier struggles that call for equity. Not only theoretical scrutiny of the subject but stemming from the activist aura of the era,

²⁷² Lynne Walker, 'Women and Architecture', in *Gender Space Architecture* ed. by J. Rendell, B. Penner, I. Borden, (London: Routledge, 2000).

²⁷³ Ibid.

²⁷⁴ Cheryl Buckley, 'Made in Patriarchy: Toward a Feminist Analysis of Women and Design', *Design Issues*, 3. 2 (1986), pp. 3–14. <https://doi.org/10.2307/1511480>.

some woman collectives, mainly in the UK, were formed and took command to reverse the subordination of women. Women's Design Service and Matrix can be named among these groups who engaged in various practices to better the built environment for women and elevate women's interests.

3.4.1 Nonstandard Work and Women's Labour

Despite the efforts of highlighting women's invisibility and the solid position that feminist scholarship procured in the discipline, women in architecture suffer from marginalization, specifically in the advanced stages of the profession. As Denise Scott Brown observes, 'the early years in practice bring little differentiation between men and women. It is as they advance that difficulties arise when firms and clients shy away from entrusting high-level responsibility to women'.²⁷⁵ Research on the subject consolidates Brown's views; Tharenou (2001) found that women advanced less than men in lower and middle management roles when male hierarchies were present.²⁷⁶

It is clear that women architects experience gender-based challenges and these continue to affect their career decisions. Perceived as male-dominated, the construction industry historically has not appealed to women. Even though it is decreasing in the twenty-first century, there still is a discrepancy between the number of female architecture students and the registered female architects working in

²⁷⁵ Denise Scott Brown 'Room at the Top? Sexism and the Star System in Architecture,' Reading Design, <https://www.readingdesign.org/room-at-the-top>, Accessed Online, October 19, 2021.

Originally published as 'Room at the Top? Sexism and the Star System in Architecture,' in *Architecture: A Place for Women*, ed. Ellen Perry Berkeley and Matilda McQuaid (Washington, DC: Smithsonian Institution Press, 1989), 237–46.

²⁷⁶ Tharenou, P. 'Going Up? Do Traits and Informal Social Processes Predict Advancing in Management?' *Academy of Management Journal*, 44.5, (2001), 1007–1017. <https://doi.org/10.5465/3069444>.

architectural firms. Job insecurity, poor work-life balance, low professional worth and temporary teams appear as the general stressors in the construction industry. As Sang and others put forward, the challenges that women architects face in the working environment pave the way for higher occupational stress compared to men. According to them, these challenges are primarily related to discrimination and concerns for the future due to fewer career progression opportunities.²⁷⁷

In another study that deals with professional women's career advancement in construction, Valerie Francis presents that exclusion from male-dominant networks, lack of mentors, less organizational support, missing out developmental opportunities, informal recruitment processes create cultural and structural barriers for women. When this adversity in career development combined with unequal pay, it is inevitable that women tend to reshape careers based on their priorities.²⁷⁸

In deciphering women's career choices and providing an alternate model to explain career transitions of well-educated women, Mainiero and Sullivan found that women describe career development differently from men.²⁷⁹ Women participants in the study rejected the concept of linear career progression and they articulated a preference of creating non-traditional, 'self-crafted careers that suited their objectives, needs, and life criteria'. The case is no less different when it comes to the architecture profession. Due to the discrimination and lower expectations for career advancement, nonstandard models of employment²⁸⁰ appeal to many women

²⁷⁷ Katherine J. C. Sang , Andrew R. J. Dainty & Stephen G. Ison, 'Gender: a risk factor for occupational stress in the architectural profession?', *Construction Management and Economics*, 25:12 (2007). 1305-1317, DOI: 10.1080/01446190701546177.

²⁷⁸ Valerie Francis, What influences professional women's career advancement in construction?, *Construction Management and Economics*, 35.5, (2017), 254-275, DOI: 10.1080/01446193.2016.1277026.

²⁷⁹ Mainiero, L.A. and Sullivan, S., 'Kaleidoscope careers: an alternate explanation for the 'opt-out' revolution'. *Academy of management executive*, 19, (2005), 106–123.

²⁸⁰ Non-standard forms of employment usually mean part-time and temporary work and self-employment, however it encompasses any work which is neither full-time nor permanent with

architects. There are multiple reasons why women prefer to turn away from traditional roles in the profession. For some, this is a response to a bad past experience in the early stages of their career or to combine childcare and work. However, there are also many women who consider nonstandard employment as a choice that enables increased autonomy and flexibility.²⁸¹

As many of these studies date back to a period after the 1980s, it can be said that despite the increasing feminist voices within the discipline, gender-based challenges continue to be a deterrent for women in architecture, especially as their careers advance. A survey conducted by Dezeen in 2017 shows that women exist only 10 percent of the highest-ranking jobs at the world's leading architecture firms, while 16 firms do not have any women in senior positions. According to this survey, only 3 of the world's 100 biggest architecture firms are headed by women and two firms have management teams that are more than 50 percent female.²⁸² However, this deterrence does not always result in giving up on the career. Rather, it increasingly becomes a trigger for women professionals to create a new path for their engagement with the discipline.

This dissertation deals with exceptional cases where the disadvantaged conditions of female architects are reversed by their agency. It is motivated by the belief that the varying and impactful contributions of women in architecture to the discipline are as

a formal contract of employment for an indefinite period. Valerie Caven, Career building: women and non-standard employment in architecture, *Construction Management and Economics*, 24:5 (2006), 457-464, DOI: 10.1080/01446190600601354 Caven 2006,

²⁸¹ Ibid, p. 457.

²⁸² 'To compile the data, Dezeen visited the website of each of the 100 biggest architecture firms in the world, as listed in the 2017 edition of the respected [World Architecture 100](#) table of international practices ranked by size. Many firms proudly list their senior staff on their websites, along with photos and brief biographies. In many cases the senior roles are overwhelmingly held by men and in many cases architects' staff pages consist of dozens and dozens of male faces, occasionally punctuated by a female.

<https://www.dezeen.com/2017/11/16/survey-leading-architecture-firms-reveals-shocking-lack-gender-diversity-senior-levels/>

important as unearthing their marginalization. Therefore, selected cases exemplify the outstanding contributions of women architects to the discipline, rather than repeating the oft-repeated problems. For each one, the interaction between the environmental forces and the architects' response to these are at the center of the analyses. Rather than the 'otherness' of the woman, the emphasis is placed on the spaces that women try to open for their practice in the discipline. Moreover, it is claimed that 'the other' is reconceptualized as 'the alternative' in the practices of these architects. Hence, this study aims to demonstrate how these architects deal not only with the well-being of a gendered community but the future of specific cultural and environmental contexts via their 'nonstandard' approaches. In this, the study endorses 'difference' not with the terms of oppressed, deactivated and discriminated; on the contrary, via its opposite. The difference of each women architect is considered as the fuel of their agency.

3.4.2 Feminist Spatial Practices in the late 20th century

In the late 20th century, there has been many attempts to integrate the concepts constructed in feminist theory and philosophy into spatial practice. Next to other social movements of the 1970s, feminist activism posed critical questions for architecture. Interpenetration of these radical ideas into the discipline, was followed by the formation of various collectives and design groups. While some of these have been concerned with providing equality via architectural design by bettering built environment for women, others have followed a more critical path and sought ways of 'practicing otherwise'. United Kingdom appears as an important context where this mobility most intensely observed and evolved into interdisciplinary feminist spatial practices in the 21st century.

Women's Design Service (WDS) was formed in 1987 in London, by a team of women architects, designers, and planners who were committed to giving women's organizations access to the knowledge they needed to find, modify, and enhance buildings. Working with women's groups led to the emergence of a number of

common themes that are essential to the development of successful environments for women. The following topics kept coming up: restrooms, changing diapers, creches, housing design, parks, pavements, safety, and transportation. Women's Design Service entered a phase in which it conducted research into these topics and created publications and advice for designers and decision-makers.²⁸³ This British collective stressed that cities need to be drastically changed to accommodate women's demands. The 'Defensible Space Theory,' which was developed by American academic Oscar Newman, was also gaining popularity in the UK at the same period. It argued that architecture may prevent crime and increase neighborhood safety, if not completely. WDS uncovered that the theory had lacked a gendered approach, and the reasons why women are vulnerable in the city were being disregarded.

The projects that WDS inaugurated and involved during the 25 years of its activity include building management trainings, the issue of safety for women, the regeneration process and inclusive practices in urban regeneration, the disabled women and housing design considering their needs, involvement of volunteer women in organizations, women's convenience for the design of public toilets. Some of these projects have published material in the form of guidelines or other forms of practical guides that include information, resources and ideas that provide a way to consider the perspective of women and to improve the complications that they encounter in the physical environment.

Even before WDS in 1981, a group of radical feminist architects came together to form one of the first architectural organizations with the feminist approach. In effect, this group has been formed in connection with New Architecture Movement (NAM) that was influential in the 1970s. A group of NAM-affiliated women started meeting independently in the late 1970s to discuss feminist viewpoints and particular problems that women face in the built environment. These women organized a

²⁸³ Women Design Service official website <https://www.wds.org.uk/history.html> Accessed July, 2022

campaign to stop 'sexist advertising in the building press'.²⁸⁴ Based on their knowledge on prior single-issue campaigns throughout the late 1970s that had been successful, they went into this practical campaign with a confident faith in the effectiveness of political action. Many of the women who attended NAM meetings would have been identified as socialists, feminists, or a combination of the two. In their feminist analysis, socialist feminists looked into the interdependence of class relations. WDS had changed direction in the mid-1980s and had become a research-based organisation.

In 1978, a group of about twenty women formed the Feminist Design Collective (FDC). The name of the group was carefully crafted: the term 'feminist' was 'contentious'; for that time the statement of political position such openly by an architectural practice was unprecedented in the United Kingdom. The group uses the term 'design collective' rather than 'architectural practice' to regard non-architects as highly as architects. This choice was profoundly affected by contemporary critiques of professionalism and architects' professional institutions.²⁸⁵

Architectural projects were at the focus of FDC's meetings. They involved in a project for a community organization that questioned how the National Health Service was providing healthcare for the community in inner South London. Despite not being built, the Health Centre provided the Collective with its first exposure to the dynamics of dealing with a client group that was predicated on consensus as well as the ability of drawings to reflect ambitions and deceive.²⁸⁶ In 1980, the Feminist Design Collective split into two groups. The Matrix Feminist Design Co-operative was established by some group members who wished to put theory into practice,

²⁸⁴ Julia Dwyer and Anne Thorne, 2007, 'Evaluating the Matrix, Notes from Inside the Collective, in *Altering Practices*,' in Petrescu, Doina (ed.). *Altering practices: feminist politics and poetics of space*. London: Routledge.

²⁸⁵ Matrix Feminist Design Cooperative. <https://www.spatialagency.net/database/115>

²⁸⁶ Ibid.

while others chose to work inside traditional practice institutions and reform them from within.

Matrix appear at the heart of a network of feminist architects, builders and academics. Challenging patriarchal systems in the design of built environment, Matrix's practices included built projects, theoretical work, research and publication. The studies of feminist geographers, architects and historians provided theoretical underpinnings for Matrix's work. Scholars, architects, and historians including Susanna Torre, Doris Cole, Gwendolyn Wright, Clare Cooper-Marcus, and Dolores Hayden, provided the intellectual context for British feminists' ideological development. *Making Space* (1984), was the first British anthology of works on women and the built environment.²⁸⁷ Via this book, Matrix's theoretical work expanded and deepened the feminist project by connecting it to other reformist and revolutionary initiatives in the production of the built environment throughout history.

When Matrix was founded in 1980 in architect Anne Thorne's East London home, it contravened traditional professional practices from the start; these practices were dissected, analyzed, and re-ordered. The analysis was conducted in a small co-operative business subjected to the normal demands of day-to-day practice. Women's inclusion and exclusion from architectural processes and the built fabric of the city were addressed through the development of working methods. Next to a dash of middle-class guilt, the designers' motivation to pinpoint and address the issues was their 'passion and commitment to women's causes', 'a belief that all issues could be addressed through altered practice'.²⁸⁸ Addressing feminist concepts as difference and experience, at the outset of the book *Making Place* the group states that:

²⁸⁷ *Making Space* was published in 1984 by Matrix. Matrix, *Making Space: Women and the Man-Made Environment*, (London: Pluto Press Ltd, 1984).

²⁸⁸ Dwyer, *Making Space: Women and the Man-made Environment*

We believe that, precisely because women are brought up differently in our society we have different experiences and needs in relation to the built environment which are rarely expressed.²⁸⁹

Relying on this premise, Matrix pursues ‘altered practices’ and techniques. The decision to take the difference of women into account gave rise to discussions about the meanings of equality. Calling for equality in accessing to the profession while setting up a women-only practice was found contradictory, though these were nothing but the repetition of age-old arguments throughout the women’s movement. For Matrix, paying attention to equality meant addressing the structural inequalities among co-op members. The co-operative shaped with a series of initiatives including childcare organization and funding, awareness trainings on disability, racism and sexual orientation, and careful assemblage of contracts of employment and equal opportunities statements.

To evaluate the ‘altering practice’ of Matrix, Julia Dwyer and Anne Thorne provide details within the organization. As they explain, due to its involvement in previous critiques of the architectural profession, Matrix adopted a ‘no star’ system, and recognized architecture as a collaborative endeavor.

Rejecting separation of the group into individual labour, they supported a corporate identity and placed the organization above all. The organizational structure was neither a partnership nor a corporation, but rather a worker cooperative limited by guarantee. The comparative status of architects and administrative employees within society was tackled by creating an egalitarian pay system in which all workers, architects or not, could become members. Rather than private companies, voluntary groups, housing associations and co-operatives were the source of clients. Owing to this, architects were able to work with people who ‘do not normally have access to architects’, specifically in Matrix’s case, these were working-class women.

²⁸⁹ Ibid.

During the project children's centre in Dalston, East London, the shortcomings of traditional architectural representations were felt. Being lack of aura and completeness, complicated the communication of design. Therefore, they started to engage with participatory processes, working with a mixed race and class women's organisation which gave high priority to access for people with disabilities also required this. In addition to reconsideration of drawings, a large-scale model was used to spark discussion among different actors.²⁹⁰

Matrix engaged in providing technical aid and design support in different scales. This support, which makes up the majority of their work enabled them to reach out more than eighty women and other voluntary groups over seven years. Next to these, the cooperative supported some publications. *Building for Childcare*, targeted at community groups and childcare workers; incorporating advice on buildings for children under 5. *A Job Designing Buildings*, on the other hand was designed and put together thinking young women interested in pursuing a career in architecture or construction.

The echo of Matrix's practice continues to reverberate owing to people who visit the office as well as feminist organizations that incorporate Matrix into their agenda. These connect Matrix to a wider network of radical women architects who met regularly around specific issues. These networks revived under a new name, helping in the birth of twenty-first-century initiatives such as Taking Place. In this sense it can be claimed that Taking Place took over where Matrix left off, and their practice reflect the evolution of feminist spatial practice in the context of United Kingdom in the 21st century.

Frank contends that the approaches of feminist methodology can be seen as essential design principles in the discourse and practice of feminist architects based on the experiences and practices of these collectives. These ideas, which emphasize

²⁹⁰ Dwyer and Thorne, p. 46-47.

relationality and inclusivity, acknowledge the significance of everyday life as design principles, and valuing complexity and adaptability.

Based on the experiences and practices of these collectives, Frank argues that the approaches of feminist methodology can be seen as fundamental design principles in the discourse and practice of feminist architects. These principles, which emphasize relationality and inclusivity, recognize the significance of everyday life and value complexity and adaptability.²⁹¹ Relationality and inclusivity as a design principle criticizes the capitalist and patriarchal patterning of space produced by binary logic. Binary distinctions such as public/private, urban/suburban, work/home and production/consumption create an inter-spatial caste system in urban and architectural theory and design.²⁹²

Feminist architects advocated the removal of spatial disparities established by binary logic in the built environment. Not only the division of male and female spaces but they opposed all spatial oppositions generated by binary thinking. Hayden argues that the center/periphery distinction should be abolished as well, and that the design approach seen in modern cities, which is based on segregated zones for housing, workplace, education, and commerce, should be changed and instead offers concrete and realizable proposals.

3.5 Feminist Sensibilities of the 21st century

The contemporary dialogues between feminism and architecture rest on a series of developments dating back to the 1990s. Revealing the contribution of feminist work to architecture during this period help make a better understanding of the current

²⁹¹ Karen A. Frank, 'A Feminist Approach to Architecture', in ed. by E.P. Berkeley and M. McQuaid eds *Architecture: A Place for Women*, (Washington, D.C.: Smithsonian Institution Press, 1989).

²⁹² Weisman.

situation. Paralleling the questioning of the function and role of feminist perspectives during the 1990s, the role of theory has shifted in architecture. Rather than invert-looking formation, theory has started to function via tools coming from external intellectual terrains. Hence its prescriptive role that determines ‘how-to-do’, was firmly replaced by critiques of design methodologies.²⁹³ Moreover, these external perspectives have paved the way for an enlargement for the scope of theoretical work; not only its production but architecture’s reproductions via consumption, appropriation, occupation and representation have entered the discipline’s agenda.

On the other hand, many feminist practices, some of which have been addressed in the previous parts, started to test ‘the disciplinary and professional boundaries’ of the discipline.²⁹⁴ For Rendell, via some feminist architectural practices, feminism has been tried to be integrated into architectural design.²⁹⁵ In this regard, the work of British interdisciplinary art and architecture practice muf²⁹⁶, theoretical and practical contributions of Jennifer Bloom as well as critical work of Elizabeth Diller can be mentioned. These influential feminist work has activated new forms of design. Additionally, collaborating with other spatial practitioners not only offered architects new tools in the form of strategies and tactics, but it also helped them to understand how the construction of subjectivity is crucial for the roles of audience, user and critic, thus for architecture’s reproduction.²⁹⁷

²⁹³ Jane Rendell, ‘Critical Spatial Practices’.

²⁹⁴ Effective sites for feminist action have been a question since the 1990s. Discussion for the optimum mediums of practice for feminism in architecture, see previous section Gender Discourse in Architecture.

²⁹⁵ Jane Rendell, ‘Critical Spatial Practices’.

²⁹⁶ ‘muf is an internationally recognised practice whose work is a collaboration between art and architecture – simultaneously pragmatic and endlessly ambitious. muf architecture/art was established in 1995 and has never had less than 80% female members, including founding partners Katherine Clarke and Liza Fior. muf is an accredited Living Wage Employer.’
<http://muf.co.uk/>

²⁹⁷ Rendell, ‘Critical Spatial Practices’.

These combined with influential projects of the 1990s, led to the critiques of disciplinary boundaries, and political understanding of subjectivity.²⁹⁸ Thus, architecture's engagement with gender has moved from gendered analysis of spaces and its representations to a more entangled ground performed inside and outside academy. This has not happened by opposing and negating theory. Therefore, it cannot be said 'the 1990s anti-theory feminism of the United States', which found voice in Ahrentzen's radical approach, has helped dissolve theory or determined this shift.²⁹⁹ Rather, with the amalgamation and evolution of discussion via other fields, feminist architectural practice has transformed and taken the form of experimental, nonstandard and alternative work inside and outside academy.

A shift from theory to experimental ways of practice has been merged with the rise of practice-led research in the discipline. Contemporary feminist practices are located at the intersection of different disciplines around space and this enlargement inevitably has certain links with other influential theoretical work, most prominently Henri Lefebvre's *The Production of Space* and Michel De Certeau's *The Practice of Everyday Life*. Admittedly, in the 21st century, feminist spatial practices dwell less on the end product and more on the process of design, which demonstrates the growing significance of the interaction between theory and practice. This is what Rendell calls 'feminist architectural praxis' in her comprehensive collection dating

²⁹⁸ Ibid.

²⁹⁹ Pat Morton and Sherry Ahrentzen would refer to the work of the British feminist collective Matrix to strengthen their social agency thesis at the beginning of new century, but as Burns discusses Matrix had pursued a new line of critique; one that contradicted patriarchal and professional conspiracy theories. Matrix stated in their 1984 book *Making Space*, 'We do not think that the structures around us are part of a plan to oppress women.' They arose from other priorities, most notably the business motivation... Buildings do not rule over our life. They reflect the prevalent ideals in our society... yet we might live in them in ways other than those intended.' (source) Matrix also made it evident that acquiring professional codes and training included the absorption of (white) middle-class values and the defense mechanisms developed by See Karen Burns, 'Feminist Theory and Praxis, 1991-2003'.

back to 2000.³⁰⁰ Yet, in the following decades of the 21st century, she revises her phrase as ‘critical spatial practice’ to reflect more interdisciplinary and inclusive nature of spatial practices that resonate with feminism.³⁰¹

The consideration of practice as a process that extend beyond the design of buildings to their use, occupation and experience has brought along architectural design to be understood in a more comprehensive way. Architecture has been opened to the stimulating contractions with other creative and critical disciplines.³⁰² This also coincided with professional architectural practice to venture into collaborative and interdisciplinary work where new relations established with different disciplines started to appear in public realm. These attempts provide notable architectural alternatives that question conventional divides between ‘producer and user, needs and pleasures, real and virtual, mass and high culture’, and open the way for ‘more people-centered architectural production’.³⁰³ Furthermore, they have sparked a critical reexamination of architecture social role. The understanding that architecture is not a goal in itself but a way to respond to evolving ‘human condition’, has required to rethink the boundaries between these different spheres of production and has highlighted the role of architect as producer.³⁰⁴

As Sandra Karina Löschke professes, ‘contemporary architecture is not about buildings but about people’.³⁰⁵ In essence, the emphasis on human experiences, interactions, acts, and engagement above objects is what makes it genuinely contemporary. This understanding runs parallel to what Keller Easterling describes as ‘medium thinking’, shifting the focus from object to the ‘matrix, medium of

³⁰⁰ Rendell, *Gender, Space and Architecture*.

³⁰¹ Jane Rendell, ‘Critical Spatial Practices’.

³⁰² Ibid.

³⁰³ Löschke, *Non-Standard Architectural Productions*.

³⁰⁴ Architects ‘produce’ rather than solely ‘build’, they mediate, exhibit, intervene, research, and talk, probing the boundaries of the discipline in a variety of ways. Ibid.

³⁰⁵ Löschke.

activities and latent potentials that those objects generate'.³⁰⁶ Seen from this perspective, the term 'production' as used here means that architecture is a synthesis of various processes that represent the collective work of many individuals, reacting to a wide range of disciplines and concerns that affect people's lives and span the spectrum from human experiences to actions. Recognizing architecture as a complex field of activity with multiple actors behind its production, prompts the shift of critics and historians' attention 'from the architect as a single figure, and the building as an object, to architecture as collaboration'.³⁰⁷

On the other hand, in the 21st century, architectural landscape is challenged by a series of pivotal changes triggered by problems in the environment, society and technology in addition to continuing effects of different forms of discrimination. Combined with critical theoretical frameworks developed uncovering their relevance for the discipline, these changes inevitably required a redefinition of the roles, both for architecture and architect. Many projects and initiatives that deal with socially responsible architecture are emerging. Every year, numerous events, in the form of meetings, exhibitions, competitions are being organized with this cognizance. Moreover, this redefinition extended into the realm of architectural practice.

The enlargement of architectural audience with media makes certain approaches more visible. The whole pedagogical structuring of the discipline, though partially and limitedly, are fed by the channels provided by digital media. Students in this epoch are confronted with a setting that is shaped by the world's growing cultural consciousness. Content and ideas from the discipline are consumed as a whole primarily through online platforms.³⁰⁸ Within this plurality, socially and

³⁰⁶ Keller Easterling, *Medium Design: Knowing How to Work on the World* (Verso, 2021)

³⁰⁷ Beatriz Colomina, 'Collaborations: The Private Life of Modern Architecture,' *Journal of the Society of Architectural Historians* 58, no. 3 (1999): 462–463.

³⁰⁸ Tom Wiscombe, Chair of the Undergraduate Program at SCI-Arc, hosts a series of informal Friday gatherings. Being part of a conversation, facilitated by Wiscombe and moderated by Tony Avila, a fourth year B.Arch. student. These news that appeared on Archinect deal with

environmentally conscious approaches disseminate wildly. For instance, the most ‘pressing issues in architecture’ in 2021 are identified as ‘the future of cities, automation, collective design, green architecture, adaptive reuse, migration, equity and interior wellbeing’³⁰⁹; almost all reflecting the issues emerging from societal and natural entanglements.

The 15th International Architectural Biennale at Venice in 2016, can be seen as the emblematic of architecture’s new milieu that is saturated by these socially and environmentally charged concerns. Curated by Chilean architect Alejandro Aravena who won The Pritzker Architecture Prize at the very same year, this biennale embarks on to expand ‘the range of issues to which architecture is expected to respond’, by adding ‘the social, political, economic and environmental’ dimensions. It simultaneously underscores the necessity of architecture to address multiple dimensions at once by integrating many different areas (Fig. 3.1.) From including a variety of works that creatively use natural materials such as mud and brick, to the use of recycled waste that remained from The Art Biennale of the previous year, the 15th Architectural Biennale reflects how architecture’s agenda is aligning with ecological and social confrontations.

the influence of social media on students’ lives and design thinking. The discussion includes four other fourth year B.Arch. students; Ann Gutierrez, Hannah Lee, Erik Valle, and Tucker van Leuwen-Hall. News sponsored by Sci-Arc, Social Media vs. Architectural Discourse: A Conversation, Nov 7, 2017 <https://archinect.com/news/article/150036865/social-media-vs-architectural-discourse-a-conversation> Accessed online June 8, 2022.

³⁰⁹ Fabian Dejtiar (trans.by Amelia Pérez Bravo) 10 Architectural Opinions of 2021, Archdaily (January 10, 2022), <https://www.archdaily.com/974494/10-architectural-opinions-of-2021>.

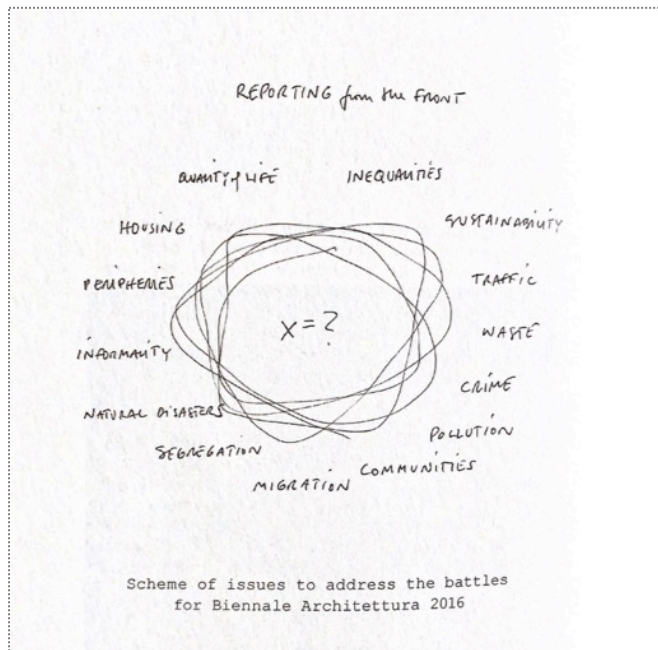


Figure 3.1 Themes to be address at the Venice Architecture Biennale 2016

In a similar vein, with a different focus, the curator of 18th Architecture Biennale Lesley Lokko proclaims the rise of ‘a new world order’, with new centres of knowledge production and control’.³¹⁰ She calls for ‘a more equitable and optimistic future in common’, by celebrating the chance to cast ‘The Laboratory of the Future’ a title that reflects how being the world’s youngest continent Africa holds a potential

³¹⁰ ‘New audiences are also emerging, hungry for different narratives, different tools and different languages of space, form, and place. After two of the most difficult and divisive years in living memory, architects have a unique opportunity to show the world what we do best: put forward ambitious and creative ideas that help us imagine a more equitable and optimistic future in common. Speaking to you from the world’s youngest continent, I would like to thank President Cicutto and the entire team of La Biennale di Venezia for this bold, brave choice’. News Editor. 2021. Lesley Lokko Appointed Curator of the Venice Architecture Biennale. 15 Dec 2021. Biennial Foundation. <https://www.labiennale.org/en/news/lesley-lokko-appointed-curator-biennale-architettura-2023>

for a better future, as well as frames *La Biennale di Venezia* as ‘a kind of laboratory of the future’.³¹¹

The ability of architecture to adapt to the current imperatives, particularly in terms of ecological sensitivity, inclusion, and social sustainability, is positively impacted by the expansion of the professional audience in the sense of gender equality.³¹² The issue of equality sometimes takes the form of tokenistic attempts such as organizing women-only events and prizes. Nevertheless, more robust and in-depth attempts also exist. An important example in this regard is a recent exhibition called *Good News* at Maxxi Museum, Rome. Curated by Pippo Ciorra, Elena Motisi and Elena Tinacci, the exhibition *Good News: Women in Architecture* focuses on the transformative role of women in the profession and their increasing effect since the 20th century. It strives to capture how new figures are creating new forces into contemporary architecture, as well as credits the important work of women architects from the 20th century. The exhibition involves four parts. These are Stories, Practices, Narrations, Visions and includes a site-specific installation *UNSEEN* by Frida Escobedo. In the part called *Pratiche*, 12 women who are considered exemplary cases for the quality of their architecture characterized by different ways of interpreting the profession and the struggle for professional equality are exhibited.³¹³ There are some other initiatives that embark on to recuperate the contribution of women in the discipline. These most frequently take the form of projects, and exhibitions like *Good News*.³¹⁴

³¹¹ <https://www.labiennale.org/en/news/biennale-architettura-2023-laboratory-future>

³¹² Its Liquid, 2022, *Good News, Women In Architecture*. Accessed Online June 18, <https://www.itsliquid.com/goodnewswomen-inarchitecture.html>

³¹³ Among them: Kazuyo Sejima, Benedetta Tagliabue, Elizabeth Diller and Grafton Architects (Shelley McNamara & Yvonne Farrel) Mariam Kamara, Lu Wenyu, Anupama Kundoo, Lina Ghotmeh, Dorte Mandrup, Jeanne Gang, Assemble (source: <https://arkt.space/en/good-news-women-in-architecture/>)

³¹⁴ There are a number of projects that aim to restore the contributions of women in architecture. Among these, Wiki Women Design (2020-2021), *Good News: Women in Architecture* exhibition, *Kadin Mimar* exhibition, The *Frau Architekt* exhibitions can be listed.

Another demonstration of interdisciplinary encounters between feminism and architecture with socially informed design approach can be seen in the project called *Caring City*. Selected via an open call for transformative projects and ideas by The Future Architecture platform, *Caring City* suggests to approach to the city from a feminist and caring viewpoint, which implies to replace socially and politically limiting production rationales and accentuating surroundings that puts more emphasis on the people who use them. Hence, in the project a new urban model, that is centralized around individuals' decision-making processes, is proposed. This necessitates assessing a diverse variety of experiences and breaking the tendency of standardizing subjects, objects, homes, and goals. The goal is also to ensure that spaces are created to meet the needs of individuals, rather than compelling people to adapt to the standardized conditions. The concept of the caring city, in which cities are considered as places that care for people, embodies this new urban paradigm.³¹⁵

Considering all these shifts, emergence of new focuses and areas of encounter between feminism and architectural productions, this study intersects with Rendell's definition of critical spatial practice in terms of tackling with 'creative practices which seek to resist the dominant social order of global corporate capitalism'.³¹⁶ Conversely, it departs from those practices via searching a new way of operationalizing feminist theory within architectural 'production'. The study coheres

Wiki Women Design is a project undertaken by the Flanders Architecture Institute to collect and disseminate knowledge and data on women who have made their imprint on the designed environment. Organized by Goethe-Institut Kadın mimar (2021) exhibition aims to highlight the work of 18 women from Germany and Turkey. For details see:

<https://www.goethe.de/ins/tr/tr/kul/sup/ekt.html>. Frau Arkitekt: Over 100 Years of Women in Architecture exhibition was presented at the DAM (German Architecture Museum) in Frankfurt, in 2017. Another exhibition with the same name took place in Nicosia (07.12.2021–19.03.2022) to highlight the work and personal portraits of 11 female Cypriot architects - in addition to the 22 female German architects originally presented at the DAM. Details can be accessed via: <https://www.goethe.de/ins/cy/en/kul/sup/fra.html>.

³¹⁵ <https://futurearchitecturerooms.org/the-caring-city>

³¹⁶ Ibid.

with the plurality of feminism(s), so seeks new paths between feminism and architecture that exist beyond cause-effect relations. This is achieved by expanding the theoretical hinterland that come from feminism(s), by looking into multiple feminist forms, modes, issues and concerns: In other words, looking at feminism on a horizontal axis and without reducing it to one single fixed modality. As a consequence of this expansive lens, the links between feminism and architecture appear at the interstitial zones; resulting in the certain themes that architecture has been grappling to come in sight as issues that carry feminist concerns. These themes are concerns for environmental problems, new ways of amalgamating with technology, confronting with culturally constructed inequalities, and operating collectively. Furthermore, the study aims to construct a new perspective that refrains from labelling architectural practice and architects as feminists, rather it shows the inner connections between feminism(s) and futurity inherent in current modes of architectural making.

The research is developed with the understanding that ‘there is a premium on establishing the capacity to see from the peripheries and depths’.³¹⁷ For this reason, the following chapter focuses on the link between feminism and non-standard as well as future-defining architectural productions of women in architecture. The practices that form the subject of the chapter belong to women from a variety of geographies. Though the issue of centrality has been considered in selecting the women, their practices can be seen to exist on different geographies including the West. Via this, the study aims to provide a crucial foundation for a body of knowledge that fosters understanding rather than establishing fixed truths.

³¹⁷ Donna Harraway, ‘Situated Knowledges’.

CHAPTER 4

ALTERNATIVE AND MEDIATIZED PRACTICES

4.1 Women Negotiating with Medium: Architectural Productions

‘Architecture, too often regarded as a matter of style, is now a matter of survival.’
Leslie Kanés Weisman
Diversity by Design

Feminist architectural research, which operates within an interdisciplinary framework, appears as a heuristic form of inquiry that is always linked to reflexivity. Similar to different modes of architectural inquiry, this requires a process, within which critical evaluation in the integration of knowledge appears at the center. The steps of this process can be generalized as: a proper cognizance of the matter, developing/inventing best interrogation tools in questioning the matter and reflecting on the object of analysis.

Such a mode of inquiry first and foremost decodes the ontology of the problem that exists at the intersection of architecture’s encounter with web of relations which whines particular attention with every new diagnosis. In other words, architecture’s inner positionings affect the degree of entanglement with the encounter. Whether it is social, economic, cultural, or historical, architecture’s peculiar mode of analysis encapsulates and locates the issue in a particular niche and strives to discover genuine ways to elucidate it. Therefore, in a discipline where standard theories and techniques are deemed to be insufficient, feminist architectural research can be articulated as the reflexive process that results with discovery of a way of thinking. This study operates from this understanding of architectural research and embarks on to construct this via a hybrid theoretical framework (fig. 4.1).

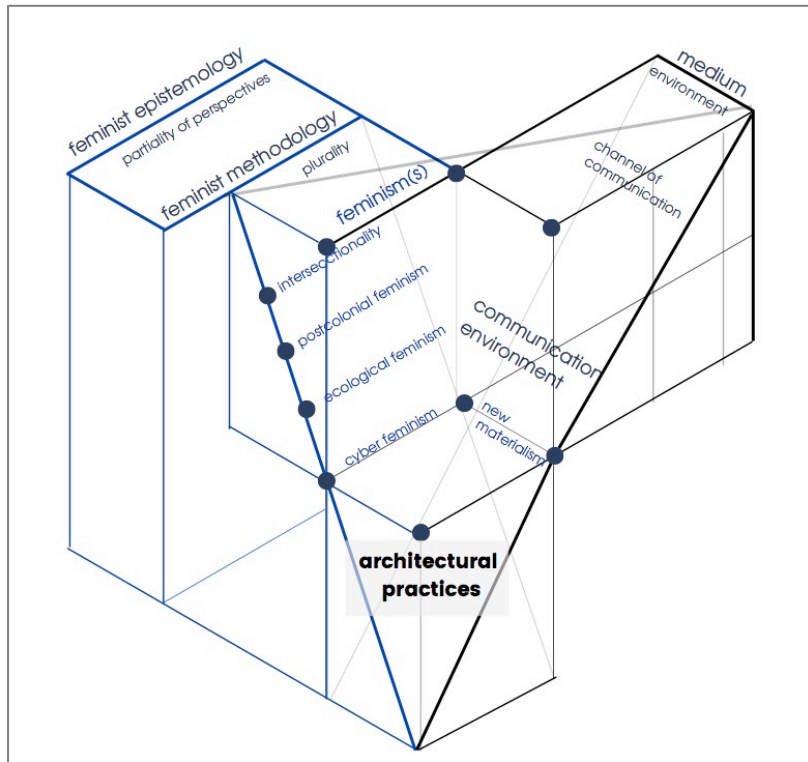


Figure 4.1 The hybrid framework of the study

Since the 1990s, interactions between architecture and feminism have taken place on an interdisciplinary field. A series of changes in architecture's ways of dealing with gender discourse can be portrayed within this interdisciplinarity. These changes include the changing role of theory in the discipline and the penetration of other spatial disciplines into architecture's agenda. With these shifts, feminist approaches in the discipline can be said to operate on a more inclusive and interdisciplinary arena what is often called as 'spatial practice'.

Theory has served for the purposes of legitimation or prescription to architectural designs until the invasion of critical theories from outside the discipline. Due to the engagement with critical theories and under the influence of post-structural theory, theoretical production in architecture has significantly intensified in the 1990s. These theories, including feminist theory, had an effect on architecture by providing crucial tools that help produce new questions, interrogate basic assumptions, put forward

alternative ways of doing and thinking architecture. Some feminist architects found these theoretical productions ineffective and called for the need to engage with action-based alternative practices, which were important elements of feminism in the 1970s.

In addition to this shift, architecture's position in relation to gender discourse fluctuated among different approaches that include politicized discussions of the 1960s, liberal tones that emphasize equal representation, and to more action-oriented projects. As discussed in chapter 3, this fluctuation does not pertain to architecture but it is rather a reflection of multifold feminism(s) in the discipline and they are not specific to merely one period. Moreover, they may exist simultaneously. Feminist concepts have influenced the work of women operating within the internal concerns of architectural practice, but gender and spatial theories also became departure point for architectural ideas. As a result, both the importance of gender to architecture and the importance of architecture to gender appear to be inevitable.

In the 21st century, architects with feminist concerns engage with critical theories in exploring difference and imagining equal futures. The pressing need that comes from social and economic problems combined with the reinforcement of intersectionality lead feminism to act as a broad vision that emphasizes 'the rights of all bodies, identities, voices, and viewpoints'.³¹⁸ This inclusive character of feminism that is sensitive to the challenges posed by environment, economic crises, and political conflicts forms the futurity inherent in architecture because feminism posits organized strategies and triggers action against the problems that create imbalances of any kind. On the other hand, this enumerated and many more not unforeseen challenges require interdisciplinary mode of engagement in dealing with spatial

³¹⁸ Owing to its diverse variants, and reinforcements with intersectionality, feminism acts as a broad vision for practice that emphasizes the rights of all bodies, identities, voices, and viewpoints. See Meike Schalk, Ramia Mazé, Therese Kristiansson, Maryam Fanni, *Feminist Futures of Spatial Practice: Materialisms, Activisms, Dialogues, Pedagogies, Projections* (AADR, 2017).

problems. As professed by Rendell, contemporary challenges of urbanization necessitate a discourse around geography, anthropology, cultural studies.³¹⁹ Directed from these points, the thesis interrogates this inclusive character and future dimension implicit in architecture's engagement with feminism through diverse spatial practices, or as termed here, architectural productions.

In that sense this chapter develops around the concerns such as social change via practice, the role of architects as mediator of these changes in creating just environments, the technics and methods of directing spatial practices in responding to challenges posed by the century and theoretical comprehensions behind these actions. All these require a scrutinization of basic understandings and inventing alternative instruments that are linked with feminist theory. Thus, this chapter discusses spatial practices that challenge, confront, project, empower, or suggest alternative norms. These practices frequently cross disciplinary boundaries and offers unique strategies of engagement, and ethics of practice. Their operational field intersect with discussions raised in feminist theory. Since this pluralism also linked with feminism's cross transactions with other disciplines, as well as architecture's engagement a multitude of spatial disciplines, this field is described as a new disciplinary medium for architecture, characterized by a plurality mode of engagement and interaction where the dissolved boundaries of disciplines enable to construct synchronous agendas.

What Jane Rendell refers to as critical spatial practices³²⁰ corresponds to different modes of operation that draw from the interactions among various disciplines around space. These modes have certain commonalities such as foregrounding the design

³¹⁹ Jane Rendell, 'A Way with Words: Feminists Writing Architectural Design Research' in *Design Research in Architecture*. (Routledge, 2013).

³²⁰ Rendell prefers the term critical spatial practices over her earlier identification of 'feminist architectural practices' due to the inclusivity of spatiality and criticality. See Jane Rendell, 'Critical Spatial Practices', in *Feminist Practices: Interdisciplinary Approaches to Women in Architecture* (New York: Routledge, 2016).

process over the end product, and emphasizing the need of ‘dialogue’ between thought and action in architecture. Endorsing reflexivity and situatedness, this study aims to contribute to this understanding by revealing practices that pose alternatives, spaces that challenge what is accepted, and projects that marginalize capitalist interests while prioritizing community needs. Yet, within this attempt, it is important to clarify what is understood from practice.

Architecture serves both a critical object of examination and as ‘a highly effective technology’ for expanding the various projects of contemporary feminism.³²¹ To address the much-needed dialogue between thought and action, theory and practice, knowing and doing, this study proposes the term ‘architectural production’ in referring to various kinds of actions, interventions, and processes. Furthermore, it frames these productions as technologies to signal the theoretically informed actions, to highlight their mediatory character which enable negotiation with their medium of operation. Hence, various practices of women architects in 21st century are unpacked via a lexicon informed by feminist thought and this conceptualization.

Certainly, the formulation of the study is in an expository dialogue with some prior attempts of defining this relationship. In this sense Rendell’s ‘critical spatial practices’, Petrescu’s ‘altering practices’, and Meike Schalk’s ‘feminist futures of spatial practice’ all function as foundational bricks for initiating this debate and defining this field. Yet, the study differs from these earlier accounts by its focus on Non-western women, dealing with what is traditionally excluded as being not overtly declared as feminist, with the scope of the tackled issues, by its plurality and by looking at the interstitial field.

In this sense, the study is built on the cross-relationships and through dialogues with the aforementioned conceptualizations, but shifts its focus to another field. The

³²¹ Hélène Frichot, Catharina Gabrielsson, and Helen Runting, ‘Introduction’, in *Architecture and Feminisms*, ed. by Hélène Frichot, Catharina Gabrielsson, and Helen Runting, 1st edn (Routledge, 2018), p. 1.

reason behind formulating a new set of tools can be explained via two interrelated intentions. First one is a lesson from Foucault who discloses the project-specific nature of conceptual tools. The study accredits what Foucault puts forth by saying ‘each conceptual tool designed as a means of working on specific problems and furthering certain inquiries’; rather than serving to a certain end.³²² Second, the need to address architecture’s increasingly expanded arena of responsibility and concerns requires anew description, this is where technology steps in. In this arena, as termed in the study as architecture’s new disciplinary medium, architecture co-operates with feminism(s), its multiple strands calibrated with other critical concerns. Technology helps underscore the function of architecture in this web of relations.

Conceptually deployed, technology merges knowledge with practice. In effect, the term’s etymological kinship with architecture can be marked in the act of making. Technology derives from the Greek word ‘techno’ which is a combining form of ‘techne’. Meaning *a system or method of making, or doing*, techne denominates the act and system of assembling things together and it constitutes the core of creative action in architecture. Technology helps frame architecture’s ways of operation. It can be used as an effective analytical tool to decode varying practices, their different aims, motivational and theoretical drives. Thus, it allows to raise a claim for the function of architecture in relation to other disciplines within a broader realm, in its disciplinary ‘medium’. This function as suggested here bases on the practice of architectural productions.

The set of productions formulated as technology here corresponds to a multitude of processes comprised of organized strategies, activities, interactions with communities, mediations, facilitations, unearthing, consciousness-raising, caring and other often neglected processes that make difference for the way architecture is

³²² David Garland, ‘What is a “history of the present”? On Foucault’s genealogies and their critical preconditions’, *Punishment & Society*, 16.4, (2014), 365–384.

practiced. These productions are deliberately and consciously directed towards a goal of making, which is informed by knowledge that comes from feminist way of engaging with the world. The examined practices are feminist in the way they are positioned within their professional, social and political context. Their feminist strengths are ingrained in the way they ‘take place’ and ‘alter’ it.³²³

Understood as a technology, architectural productions, and their practice enter into a broad realm where the role of architecture oscillates between the cultural production, ecological prevention or cutting-edge means of innovation. In effect, different qualifications of architectural productions as technology enables to settle the significant and prominent practices of women architects in a wider context, the context that defines architecture’s way of existence in the 21st century.

On the other hand, as the branching of categories in this chapter demonstrates, architecture’s operations as technology allow the discipline to be more porous to the needs of nature, local communities, ethnic, racial or marginalized groups of ‘others’ as well as it enables to see the potentials of robotics, raw materials and synthesis of the two to imagine better futures. In brief, architecture’s system of creation is being redefined through these capabilities and solutions. However, as implied by the shared origin, the relationship between the two is not one-sided; interaction of these human-made spheres encompasses a field of action and thinking that extends beyond ‘technology *for* architecture’.

Therefore, the examples of social change through practice and architects' methods of mediating these changes to build just environments are central to this chapter's development. Petrescu suggests the politics of location as poetics of location. For her, poetics of location imagine the place taken by the feminist subject and at the same time the way in which this place is removed from the dominant culture.³²⁴ For

³²³ *Altering Practices: Feminist Politics and Poetics of Space*, ed. by Doina Petrescu (London; New York: Routledge, 2007).

³²⁴ *Ibid.*, p. 14.

the present study, this place is the site of alternative action, and it is being codified here via multiple yet intersecting architectural agendas of women in architecture. Hence, alternative architectural productions examined here are elaborated through theoretical underpinnings drawing from feminist theory. Easterling's accentuation on 'describing the chemistry between things or the repertoires they enact'³²⁵ finds reflection in this mode of analysis. Focusing on the network or medium of actions and hidden potentials generated by them is necessary for medium thinking where the focus shifts 'from object to matrix' .³²⁶

4.1.1 Architecture as Ecological Technology

Contemporary scene of architecture confronts with various environmental problems. Demanding consideration starting from the design phase, these problems revolve around atmospheric crises, waste disposal, poor air and water quality, carbon footprints, loss of biodiversity, and many other consequences of rising urban population. Self-evidently, acting between nature and invention, 'the art of building' starts with controlling natural conditions through the 'inventive' capabilities of human mind. While architects are expected to produce livable spaces with good comfort levels, this has to occur without harming nature and if possible by bettering the current problems. Framed as such, the environmental problems seem to concern the capabilities and responsibilities of architects, who often defy these problems via 'sustainable' solutions. However, feminist perspectives call attention to structural problems that underlie in approaching nature. These enable to see the problem with different lenses and in the long-range.

³²⁵ Keller Easterling. 'Medium Design: Knowing How to Work on the World.' p, 11.

³²⁶ Ibid. p, 17.

As explained in detail in Chapter 3, ecofeminism arose from the intersections of feminist research and various movements for social justice and environmental health. Its base is deeply linked to investigations that revealed the interconnected oppressions of gender, ecology, race, species, and nation through foundational texts such as Susan Griffin's *Woman and Nature* (1978) and Carolyn Merchant's *The Death of Nature* (1980). Ecological feminists primarily seek to find causes of the problems rather than dealing with bettering the consequences. These radical approaches question the structural issues that lies at the base of human's dominance over nature. As revealed by feminist critiques, the same patriarchal structures that oppress women continue to have profit-oriented brutal actions on nature. In other words, feminist perspectives on environment that are agglomerated around but not limited to eco-feminism study how power relations in the context of gender and ethnicity also have adversary effects on natural sources. Various scales of historical and contextual examinations of the links between nature and society demonstrate the existence of numerous actors and gender disparities at the heart of human-made systems that affect nature on various scales.

In 'The Return of the Repressed: Nature', architectural theorist and historian Diana Agrest draws attention to the absence of nature in urbanistic discourse for more than fifty years.³²⁷ She unravels how the complicated relations among architecture, gender and nature ingrained in the ideology of modernist urbanism. As Agrest remarks, the American 'scene/sin'³²⁸ is built around the opposition between nature/culture, nature denoting the unknown and danger. Yet, this later took different and more architecturally specific forms such as the dichotomy between nature/city and nature/architecture.³²⁹

³²⁷ Diana Agrest, 1996, 'The Return of the Repressed: Nature' in *The Sex of Architecture*, (eds. Diana Agrest, Patricia Conway, Leslie Kanes Weisman), Harry N. Abrams, Inc., Publishers. p. 49.

³²⁸ *Ibid.*, p. 49.

³²⁹ *Ibid.*, p. 55.

Machines play the role of mediator in the opposition between nature and culture. For Agrest, this cannot be understood without the question of science and nature; since ‘the equivalence between woman and nature’ is historically developed by scientific discourse. In philosophy and throughout the history of science, nature has been viewed as a female-gendered entity or mechanism. While nature was conceived as feminine and passive, the active use of nature, dominance over *her* was male. Understanding this is important to comprehend male gendered power which is used over ‘the double image of woman/nature’.³³⁰

After the 16th century scientific revolution, the mechanistic understanding of the world reinforced the hegemony over the feminine aspects of nature further. ‘The machine’ conquered ‘the virgin earth’ for the exploitation of the earth's products ‘in a race where industrialization and technological progress, backed by an ever-more rationalized view of the world’, facilitated the development of capitalism.³³¹

In line with scientific discourse, nature was ascribed with different attributes to justify the violation by the machine. It was deemed to be a wild creature to be controlled, described as a bearer of plagues and other diseases. All these characteristics identified the nature with female sex, which has to be enslaved and exploited. This approach also justified the search of power over nature and over women.³³² Paradoxically, woman was adored as a ‘virgin’, just like virgin nature’s conception as a nurturing mother in the service of the ‘mankind’, but she was also burned as a ‘witch’, which symbolized the wildness of nature. The process that prioritized the mechanistic over the organic, simultaneously excluded women from the socially and economically dominant ideology and practices.

The overall dichotomy between nature and culture is translated into another contrast between nature and architecture in modernist urbanism. Based on the mechanistic

³³⁰ Ibid., p. 53.

³³¹ Ibid., p. 55.

³³² Ibid.

scientific ideology, modernist architecture and urbanism took the form of *machinism*, an ideology that tacitly endorses repression/suppression of women. This approach also ignored and then artificially reinserted nature into the city in the form of controlled light of the sun, machine mediated air, and geometrically regulated green plane as a visual field for placing ‘the object’ of architecture.³³³ When ‘the modern city’ came into focus by replacing the historical city, a new dichotomy of fabric/object arose.³³⁴ This dichotomy enters the architectural urban discourse as the fabric of historical city versus the objects of the modern on a green plane; resulting in a new morphology and identity problem for cities.

Wells and Wirth identify three omissions in the practice of ‘development’, which is also the justificatory hinge for the discourse on modernist urbanism. These voids are nature, local culture and women, along with other repressed groups. This identification implies how ‘developmental’ initiatives not only ignore the needs and interests of these entities, moreover, violate their rights with justifications of superiority. Ecological feminism provides insight to uncover how these justifications operate. This critical position aims to act by opposing three characteristics of oppressive conceptual frameworks.³³⁵ Value hierarchies, which are practiced as up-down thinking and ranking; value dualisms, where one disjunct is valued more than the other; such as male/female or nature/culture, and a logic of domination, where difference justify oppression. In a promising way, there are some architectural practices that undermine these discourses and their impact by realizing their inefficiency for local culture and environment. Furthermore, they activate architecture's potential to make a difference in the world in ways that invert oppressive frameworks; thus, overlap with ecological feminism.

³³³ Ibid, p. 60

³³⁴ Ibid.

³³⁵ Karen J. Warren, ‘Feminism and Ecology: Making Connections’, *Environmental Ethics*, 9.3 (1987), p. 320.

Context-independent and Western-originated ideology of development produces not only homogenizing results but maladjustments for built environment. Anupama Kundoo is an Indian architect who came to realize these problems and mobilizes her practice within these matters. Her remarkable approach to nature is primarily related to the way she engages with materials. By embodying the transformative role of women with her novel and hopeful practice, she was selected as part of the exhibition called '*Good News*'.³³⁶

Kundoo describes her research-oriented practice and practice-oriented teaching via a phrase that can provide double meaning: 'building knowledge'.³³⁷ With this, she reflects her belief in the act of 'building' knowledge through practice where she values the traditional techniques of the local workforce as a 'source of information'. On the other hand, she highlights the importance of 'knowledge about buildings' and their milieu. This milieu includes geography, climate, people, material and other forces that shape the spatiotemporality and materiality of any architectural project. Her integrative perspective that does not isolate the architectural object from its environment can be traced in this approach.

³³⁶ Curated by Pippo Ciorra, Elena Motisi and Elena Tinacci, the exhibition *Good News: Women in Architecture* focuses on the transformative role of women in the profession and their increasing effect since 20th century. It strives to capture how new figures are creating new forces into contemporary architecture, as well as credits the important work of women architects from 20th century. The exhibition involves four parts. These are Stories, Practices, Narrations, Visions and includes a site-specific installation UNSEEN by Frida Escobedo. In the part called Practice *Pratiche* 12 women who are considered exemplary cases for the quality of their architecture characterized by different ways of interpreting the profession and the struggle for professional equality are exhibited. Among them: Kazuyo Sejima, Benedetta Tagliabue, Elizabeth Diller and Grafton Architects (Shelley McNamara & Yvonne Farrel) Mariam Kamara, Lu Wenyu, Anupama Kundoo, Lina Ghotmeh, Dorte Mandrup, Jeanne Gang, Assemble. Vittoria Silvaggi, 'Good News. Women in Architecture', *Arkt: Space to Architecture*, 28 March 2022 <<https://arkt.space/en/good-news-women-in-architecture/>>.

³³⁷ Anupama Kundoo, 'Building Knowledge, Building Community,' YouTube Video, 2018, ACSA Administrators Conference, <https://www.youtube.com/watch?v=gnozAFKtYSYg&t=101s>

Kundoo's approach to design has inevitably been shaped by her way of filtering the constraints and potentials of the context. Being one sixth of the global population, India occupies only 2.4 percent of the world's land. This disproportionateness also means the lack of resources. Thus, the battle between urbanization and nature, which creates a compelling scene for this particular geography, becomes the starting point for her. Realizing how lack of resources are intensified by rapid migration from rural to urban areas, and loss of identity in the built environment lead Kundoo to readjust her practice.

In India the western 'inspired' developmental initiatives generate loss of identity and isolated objects. It is against this approach that, by revealing the value hierarchies, value dualisms and the logic of domination embedded in this developmental understanding, ecofeminists directed their criticisms. Kundoo draws attention to this discrepancy; buildings erected as part of this developmental model also require high levels of energy consumption, even though some were approved as 'green' by various ranking systems.³³⁸

The practices that are linked to the discourse of development have intensified the deterioration of the environment. The natural realm has suffered greatly as a result of colonization, industrialisation, and urbanization's desire for progress. These catastrophic consequences are deepened with an understanding of architecture as the product of a machinic system, an object that is materially linked to global web of relations but isolated and disconnected from its immediate environment. Observing these led Kundoo to comprehend the criticality of 'process'. As she remarks without a new process, one cannot obtain a different product.³³⁹ Extending the scarcity of

³³⁸ Anupama Kundoo: 'How can one justify this kind of thing if buildings are way more high consumption than the normal buildings in those countries? The model of development that is being sold is all very high consumption even the green buildings as approved by various rating systems.' *Anupama Kundoo - Building Knowledge | Building Community*, Engaging the World | 2018 ACSA Administrators Conference.

³³⁹ Ibid.

resources by disregarding the natural, so called developmental methods of construction ‘produces more problems than that they solve’.³⁴⁰

Unfolded against this background, the power of Kundoo’s approach does not rely on inventing new materials but it is built on inventing new ways of using age-old time-tested materials or seeking ways of transforming materials that are out of use into objects that serve specific purposes. Borrowing the phrase from Frei Otto, ‘thinking with the hands’³⁴¹ as she names, includes looking into new opportunities of experimenting and leaving the process to yield unusual results. Yet, she manages to incorporate research to this open-ended process as well. One example of this can be viewed in the project that she developed for homeless children.

Planned to accommodate 15 children and 5 foster parents, for the project *Volontariat Home for Homeless Children* (2008-2010) Kundoo embarks on to fabricate low-budget solutions. Drawing from her research around the subject during her PhD, she experiments with ‘baking a mud house insitu’. This fired house is based on a technology pioneered by Ray Meeken, it originates in Meeken’s realization that ‘about forty percent of the heat generated is absorbed by the kiln’. Kundoo develops the idea of ‘baking in-situ’ moving from this. Since these local people are accustomed to making bricks, they know how to fire kilns, hence it is possible to produce a house by using local materials.³⁴²

³⁴⁰ Ibid.

³⁴¹ Ibid.

³⁴² The mentioned project is located in Pondicherry, India, (2008 – 2010).



Figure 4.2 A collage of Anupama Kundoo's works

The construction process includes building a mud house with mud bricks and mud mortar, and cooking the structure to ensure the strength of brick. There is almost no purchased material in this technology, while the role of labor is much more important. 'Catenary shaped domes' appear as the architectonic form of the building, since they provide the optimal structural solution for all phases; before firing, during firing and after firing. Their sizes vary based on the number of inhabitants of the program.³⁴³ Even urban waste has been incorporated in the project, the window

³⁴³ Anupama Kundoo, *Volontariat Homes for Homeless Children*, 2008
 <https://anupamakundoo.com/portfolio-item/volontariat/?utm_medium=website&utm_source=archdaily.com>.

frames are produced from bicycle wheels, which act both formwork and grill of windows. Glass bottles and chai cups are also used for different purposes.

In effect, the pottery and ceramic experience that Kundoo had in the early years of her career has become a radical point that distinguishes the peculiarity of her approach in the following period. It all starts with her observation of unsold cooking pots and her channeling the potter's community's workforce to produce the units of a roof system. Observing people whose lives are linked to the production of raw resources such as lime, Kundoo wanted to critically study this relationship between people and their milieu, how they are involved in the making of these materials. Dating to the 1990s, this very first project of Kundoo starts her experimentation with these cooking pots.

In another project, cooking pots serve to develop a filler slab system that works like waffle slabs. Kundoo's experimentation with locally produced materials and techniques finds a free ground in her most well-known project, the Wall House (fig. 4.2). In this project, which she designed for herself, Kundoo embarks on to develop her other ideas as well, most crucially testing ferrocement. The primary motivation of scrutinizing the limits of this material is related to its availability and lightness. Produced by layering plaster or cement over a metal mesh, ferrocement requires low cost and low energy consumption during production, which makes it ecology-friendly. Experimenting to make the process easier for everyone, Kundoo propounds ferrocement as something with which any person can produce house components in their backyard, thus lessening the ecologically hazardous impacts of construction.³⁴⁴

Designing by considering energy consumption and preferring local materials can be exemplified in other settings with nuanced differences and sensibilities to other

³⁴⁴ These ideas are crystallized in her installation design 'Full-Fill Homes' at the Venice Architecture Biennale in 2016. In this project, small, inexpensive dwelling units that use a mix of high- and low-tech materials are used to minimize their negative effects on the environment.

climatic conditions. Marina Tabassum, who is a Bangladeshi architect based in Dhaka, emphasizes the cruciality of ‘architecture of relevance’. According to her, the building sector should shift its focus from profit-driven operations to social and economic equality. With the belief that small adjustments can have a significant impact in the world, she calls attention to the necessity of reconsideration and reassessment of our needs and ways of living. The focal point of Tabassum’s practice, critical regionalism defines a field of operation as a mediatory ground in between locality and universally shared values. In her embracement of the notion, critical regionalism enables Tabassum to ‘explore and extract’ what is essential in her locality; yet, at the same time, it enables her to be a part of the universal. For Tabassum, architecture starts with understanding the location, the climate and geography, but also with the uniqueness of culture. As she remarks: her ‘ingredients for design’ comes from these elements, ‘climate, people and culture’.

The traces of her approach to architecture can be seen in the way she expresses the most essential design elements in this warm-humid climate of Bangladesh. Based on the moderate temperature difference between dry and wet seasons, she simplifies what she and her team have been trying to achieve all through their pursuit in architecture as ‘a raised plinth and a roof’. Her climate and culture sensitive approach to design is articulated in a solution as simple as getting off the ground, so that the structure can be protected from water, and providing a roof.

Tabassum’s practice is interweaved by the understanding of architecture as an ecological technology combined by its cultural and collective facets. Similar to Anupama Kundoo she utilizes the potential of local materials such as sun-dried mud bricks, mud mortar and mud plaster which is predominantly applied by women. In doing this, again echoing Kundoo she mediates the engagement of community. For a project Tabassum and her team foster a community initiative, through which craft diversification workshops were organized. In these workshops, product designers were brought to teach different kind of product making. By empowering villagers to create new products, the design team led to the formation of savings group where women save one dollar a week. All these approaches are crystallized in Tabassum’s

following words: ‘I wouldn't say that I'm the architect in that sense making buildings but more kind of a facilitator process designer’.³⁴⁵

The recalibration of design in line with ecological concerns in the built environment is not limited to effective and conscious use of materials. There are some cases where the concept of ‘care’ takes different formats by being extended to include ‘the care of non-human organisms’. Taiwan originated American architect Joyce Hwang specializes in ‘habitecture’, a practice describing the integration of animal habitats into the built environment. As she explains, her interest in architecture and biology is further reinforced by a series of observations and peculiar experiences around the Buffalo-Niagara region, which is situated along a major bird migration path and near several bodies of water. For Hwang, due to these geographical characteristics of the region, many animals are roaming around the city. The post-industrial infrastructure at the periphery and abandoned residences inside the city are frequently bustling with life.

For Hwang, this immense urban wildlife in the Buffalo-Niagara area has a lot to do with her involvement in designing structures for animals. After moving into Buffalo in 2005, she was informed that a neighboring ‘empty’ building had turned into a habitat for raccoons. Raccoons were reportedly seen entering, exiting, and circling this property before confidently strolling through the neighborhood. Including Hwang, people in the neighborhood got accustomed to the racoons that resided nearby over the course of the following several years. Hwang notes her feelings after a particular experience of coinciding with a raccoon that calmly crosses the sidewalk toward the tree where she lives. At the time, Hwang, who was in the backyard of her house, realizes that the raccoon does not seem hurried or shocked, rather vibrates a

³⁴⁵ Marina Tabassum, Columbia GSAPP, A lecture by Marina Tabassum with response by Columbia GSAPP Professor, Kenneth Frampton September 23, 2019.
<https://www.youtube.com/watch?v=Vt4uPzOd750&t=354s>

sense of familiarity. This incident makes Hwang feel like witnessing a family member returning from work and leads her to have a better understanding of what urban wildlife goes through.³⁴⁶

Abandoned homes and overgrown areas in effect might be excellent examples of biodiversity. A wide range of species that would be prohibited from a well-kept lawn may reside in an unmowed yard of ‘weeds.’ The built environment is often thought of as having a binary set of values, with cleanliness being viewed as positive. Urban wildlife, which may be environmentally helpful, unfortunately thrives in so-called poor habitats. Hwang’s practice reverses this binary thinking and extends the concept of care in a way to include often disregarded parts of the ecosystem.

³⁴⁶ Joyce Hwang, My Neighbor, The Bat By Joyce Hwang, 07.2021
<https://www.biodesigned.org/joyce-hwang/my-neighbor-the-bat>



Figure 4.3 A collage of Bat Tower designed by Joyce Hwang
(Griffis Sculpture Park, Buffalo)

Bat Tower (2010) is the first prototype in a series of bat habitation projects that Hwang designed. The structure is intended to catalyze public awareness for bats as important components in the ecosystem. Consisting of ‘ribbed structure and landing pats’, the tower is a vertical structure that challenges typical discreet bat house designs via its aspiration to be visible. Hwang prefers sunlight absorbing dark wood panels which cover the structure to provide a warm interior for bats. A pattern of holes on the surfaces of the design allow bats to easily climb and cling on to the surfaces. This vertical cave boosts mosquitoes and other bat-attracted organisms. It stands in Griffis Sculpture Park, south of Buffalo as a permanent sculpture reminding the passersby the importance of bats. Hwang takes a stance against unsettling ethics that disregard the needs of the nonhumans. Expanding its sphere of impact to include

the lives of non-human occupants recalibrates architecture's focus for the living, but it also generates new ways of seeing the relations between the living and its milieu.

Hwang's approach, on the other hand, exemplifies the plurality of 'natures' and plurality of forms of 'caring'. At this point it is important to note that caring and 'the construction of nature as an object of care' are starting points for feminist ethics and environmental philosophy.³⁴⁷ As a core feminist value and with reference to feminist environmental philosophy³⁴⁸, the concept of care necessitates the realm of environment to reach beyond the narrow concept of conservation. It must expand into the realm of environmental justice that includes social, political, economic and

³⁴⁷ Roger J. H. King, 'Caring about Nature: Feminist Ethics and the Environment', *Hypatia*, 6.1, (1991), 75–89.

³⁴⁸ Many of the key features of canonical Western philosophy are challenged by positions in feminist environmental philosophy. Warren summarizes these features as followed: '(a) a commitment to *rationalism*, the view that reason (or rationality) is not only the hallmark of being human; it is what makes humans superior to nonhuman animals and nature; (b) a conception of *humans* as rational beings who are capable of abstract reasoning, entertaining objective principles, and understanding or calculating the consequences of actions; (c) conceptions of both the ideal moral agent and the knower as *impartial, detached* and *disinterested*; (d) a belief in fundamental *dualisms*, such as reason versus emotion, mind versus body, culture versus nature, absolutism versus relativism, and objectivity versus subjectivity; (e) an assumption that there is an *ontological divide* between humans and nonhuman animals and nature; and (f) *universalizability* as a criterion for assessing the truth of ethical and epistemological principles'. See Karen J. Warren, 2009, *An Unconventional History of Western Philosophy: Conversations Between Men and Women Philosophers*, Lanham, MD: Rowman & Littlefield. Ecofeminism is described as one of the three positions within feminist environmental philosophy by. There are three distinct kinds of positions *within* feminist environmental philosophy. They are: (1) positions whose historical beginnings are located in non-feminist Western environmental philosophies; (2) positions that were initially identified with 'ecofeminism' (or 'ecological feminism') generally, but, since the late 1980s and early 1990s, are more accurately identified with 'ecofeminist *philosophy*,' specifically; and (3) new or emerging 'stand alone' positions that offer novel or unique perspectives on 'women-nature connections' that are not identified with either (1) or (2). Stanford Encyclopedia of Philosophy, Feminist Environmental Philosophy, First published Fri Aug 29, 2014; substantive revision Mon Apr 27, 2015, Available online <https://plato.stanford.edu/entries/feminism-environmental/> (accessed August 15).

built environment. For Hwang's practice, this alternative way of 'caring nature' via preserving and promoting biodiversity can be understood as 'architecture of care at a larger scale'. Hwang's approach requires to envisage a different milieu for architectural practice. This is a territory that is not only attentive but also concerns the environment beyond human habitancy. Therefore, architecture's medium can be configured as the influential circumstances that 'care' for the lives of non-human.

Architectural attempts to negotiate the natural and the urban can be seen in different spatial scales. Sevince Bayrak,³⁴⁹ seeks ways of reconciling the potentials and problems of a site. Naturban is a project developed by Bayrak and her partner Oral Göktaş at their Istanbul-based practice SO?. As understood from its naming, the proposal is an intervention to negotiate the natural and the cultural via a series of design strategies which are backed by a robust research with a long incubation process.³⁵⁰ The ecological zone at the Northern part of Istanbul is threatened by the unplanned urbanization that extends along the North-South axes. The proposal's two goals are to limit urban expansion in the direction of Northern forests and watersheds and second, to clearly define the boundary between the city and environment such that the boundary could balance the allocation of public space and social infrastructure. In developing a solution to backlash this growth, they also envision an alternative future of the Sultanbeyli district.

To achieve the coalescence between natural lands and urban space, a series of design strategies were defined. The most crucial aspect of these is the design intervention to define a new boundary line between Sultanbeyli and the ecological zone. The line is delineated by considering the river and topography. Thought as an interface between Northern forests and urban area, it is envisaged as the transformation of

³⁴⁹ Bayrak has been the only Turkish architect invited for 'Good News' exhibition. This invitation was due to her practice which reflects hope for architecture's future.

³⁵⁰ The project team consists of Sevince Bayrak, Oral Göktaş, Derya Ertan, Dilara Sezgin, and Güzde Gülaç.

vehicle road into a pedestrian path. To reinforce the relationship between nature and culture, this path takes on different spatial characters; it is shaped in a way to provide forest terraces. Facing these terraces, it turns into an elevated path that surrounds and defines event spaces, considered as social facilitators for Sultanbeyli. Moreover, perpendicular connections are reinforced as links within the boundary strip. Lastly, parking places and public transportation are created to provide pedestrian access to these locations.³⁵¹

Thus, the border is suggested as a pedestrian path by the forest that interacts with the nearby neighborhoods. The district's uncertain future also serves as the breakpoint for Naturban. Against the intensive demolition of illegally built structures, considering the youth population Bayrak and Göktaş suggest spaces that can be used for recreational and social purposes.³⁵²

³⁵¹ SO?, *Naturban* (Istanbul: SO? Architecture), p. 19.

³⁵² *Ibid.*, p. 14.



Figure 4.4 Naturban Project Proposal by SO? Architecture

Naturban reflects Bayrak and her collaborators' ecologically cognizant and egalitarian³⁵³ framework to design, but it also manifests their critical and realist position against the pressing problems that are posed by urbanization. The eagerness to provide such a balance between cultural and ecological values demonstrates a strategy that goes beyond the binary thinking and that surpasses value dualisms. In this regard, Bayrak and her collaborators engage with an agenda that echoes the intersecting and complementary spheres of feminism, equality and environmental justice.

³⁵³ Referring to Lefebvre's concept The Right to the City, the group is driven by the ideal of a balanced and equal city. SO?, Naturban project document, p. 5

4.1.2 Architecture as (Im)material Technology

As nature came to seem more like a machine, did not the machine come to seem
more natural?
Sandra Harding'³⁵⁴

Having roots in Cartesian philosophy, the practice of framing problems in terms of opposites, such as the sun and moon or reason and emotion, is known as binary or dichotomous thinking. This approach also divides mind and body; sharpening the difference between woman and man by attributing masculine traits to mind and identifying body with the female. Hélène Cixous who is one of many voices that reveal the problems of binary thinking, claims that wherever there are polar oppositions, there is dominance. Binary thinking invariably fosters privilege or domination, sometimes publicly and sometimes subtly. To overcome this mode of thinking, feminists developed new conceptions, and technology provided an important milieu for the invention of these feminist tools. Pioneer in this regard was Donna Haraway's 'A Cyborg Manifesto' that dates to 1985. This groundbreaking study effectively illustrates how divisions between humans and animals, organisms and machines, and the physical and non-physical can be overcome both in technological situations and in ostensibly natural settings.³⁵⁵

As a potential substitute for the human-centered figures of 'woman'³⁵⁶ and 'labor' that undergirded the political criticisms of the late 20th century, socialist-feminism

³⁵⁴ Sandra Harding, *The Science Question in Feminism* (Ithaca and London: Cornell University Press, 1990).

³⁵⁵ Iris van der Tuin, *Generational Feminism New Materialist Introduction to a Generative Approach*, 2015.

³⁵⁶ Feminist theory literature has rich in terms of alternative subjectivities to substitute the category of women. In this regard Benhabib's (1992) exile and Braidotti's (1994) nomad can be positioned next to Haraway's construction of cyborg. These conceptions are viewed as alternative postmodern subject. For different theoretical models on identity. See Irene Gedalof Identity in Transit: Nomads, Cyborg and Women. *The European Journal of Women's Studies*, 7 (2000), 337–354.

frequently directed at information technology and science. Haraway's study can be seen within these approaches. However, her paradoxical conception of the cyborg, a hybrid of human and non-human, not only challenges a vision of woman that excluded the nonhuman from its scope, but more than that cyborg helps suspend patriarchal ideas based on sexual distinctions. Thereby, Haraway propounds a model to envision a world that transcends inequalities caused by binary thinking. This hybrid entity in between human and machine provides a niche within which the potential of technology as a feminist tool is discovered.

Influential feminist researchers and philosophers such as Karen Barad, Elizabeth Grosz and Rosi Braidotti can be said to be in a constant dialogue with Haraway's ideas. These discussions mainly draw from another fundamental study by Haraway; the problems imported by universalism and relativism into feminist theory are sought to be contravened in her acclaimed article 'Situated Knowledges'. Haraway's creative approach in this study, simultaneously repudiates well-known feminist epistemological categories as complete and constructs a feminist objectivity known as situated knowledges.

Interestingly, the active role that materiality plays in processes of signification takes Haraway's attention. By echoing Bruno Latour, she uses the term 'material-semiotic generative nodes'.³⁵⁷ Her earlier attempts that aim to defeat the boundaries between human and non-human can be seen to converge into a different discourse that recognizes the connections among these actants, that is network. As Grusin clearly summarizes, 'the Nonhuman Turn would have looked very different without Haraway's and Latour's studies'.³⁵⁸ Produced by 'material-semiotic actors' of both

³⁵⁷ Haraway, 'Situated Knowledges The Science Question in Feminism and the Privilege of Partial Perspective', p. 595.

³⁵⁸ Specifically, Grusin names the publication of two formative works of critical STS', Haraway's 'Manifesto for Cyborgs' in 1985, and the English publication of Bruno Latour's *Science in Action* in 1987. Richard Grusin, 'Introduction' in *The Nonhuman Turn* ed. by Grusin, (Minneapolis, London: University of Minnesota Press), xv.

the human and non-human kind, Haraway's approach replaces 'the seed of what are nowadays called 'feminist new materialisms''.³⁵⁹ For feminist new materialists, almost everything is covered by Haraway in 'Situated Knowledges'; the interrelations between epistemology, ontology, ethics, and politics, the agentic capabilities of 'objects' and methodologies, human and non-human, the impossibility of clear-cut disconnections.

By engaging with ideas presented by Donna Haraway, Rosi Braidotti, Elizabeth Grosz, Karen Barad appear at the front line of this interdisciplinary inquiry field. Acknowledging its cruciality in forming new accounts of 'processual nature, formative impetus, and self-organizing capacities', new materialist thinkers invigorate 'matter' as an underexplored question. Their eagerness can be phrased as a serious engagement with the dynamics of materialization and its intertwined entailment with discursive practices, hence new materialists tackle corporeal life or material phenomena, such as inorganic objects, technologies, nonhuman species, and processes. For them, human existence and experience are active forces that shape matter, but they are also co-productive in shaping and permitting social worlds and expression. Feminist new materialists combine knowledge from a variety of fields that share a criticism of binary thinking that divides nature and culture. They underscore the strength of auto-organization for both human and non-human processes.³⁶⁰

In this quest, the idea of 'living matter' offers a fresh perspective on subjectivity and 'a new ethics for humanity'. Additionally, this idea renders the opposing views of postmodernist constructivism and positivist scientific materialism unsupportable.

³⁵⁹ Iris van der Tuin, *Generational Feminism New Materialist Introduction to a Generative Approach*, (Lexington Books, 2015), p.21

³⁶⁰ This perspective also examines how social practices are related to the physical processes of capitalism and desire.

Instead, it aims to explain, in Baradian terms, the co-constitutive ‘intra-actions’ between meaning and matter, which do not preserve either ideality or materiality.

This section of the thesis attempts to present theoretical repercussions of new technologies within feminist theory and discusses (im)materiality with reference to different practices of women in architecture. It is the claim of the study that, new vantage points that feminist theory provides help imagine alternative configurations for architecture and these can be seen to crystallize in the work of particular women architects. However, the study does not intend to ‘prove’ architectural practice as some sort of materialized outcome of feminist theory. Therefore, it defies any hierarchical links between feminism and architecture. Rather it aims to underscore the rhizomatic relations that constitute the core concerns of architectural practice in the 21st century with reference to feminist theory. Thereby the study posits feminist concepts and ideas within this ‘web’ as an important ‘node’ that provide multiple ‘networks’.

More than the practical outcomes for industrial and daily uses, digital technologies harbor liberating niches of exploration and therefore they have massive potential for research and design. Deploying architecture as an immaterial technology provides various paths to imagine alternative spaces and to explore this potential of computation for the built world. This study embarks on to reveal some of these paths in the practices of women in architecture. Embracing this approach, seven women draw attention based on the scope of their work and originality in relating architecture with impalpable infostructures. In this regard, while Mariana Ibañez, Meejin Yoon, Catty Zhang and Felecia Davis will be dealt in detail with reference to their projects, Soomen Hahm, Monica Ponce de Leon and Mitch McEwen will be discussed in more general terms.

Conceived both for the nonhuman and human, Argentinian architect Mariana Ibañez and her partner Kim Ibanez propose *Lithutopia* as part of a competition.³⁶¹ Echoing non-binary thinking that Haraway's concept of cyborg spreads and dissolving the divide between nature and culture as new materialist thinkers promote, this proposal sets out a radical approach that requires to overthrow habitual hierarchies as to what is human, matter, or nature. *Lithutopia* consists of open and fluid spaces loosely defined by occupiable and gradating surfaces.³⁶² In other words, the idea of removing the boundaries generates a smooth and continuous flow of surfaces, thickness, depth, and curvature. It suggests to think the world beyond solids by incorporating 'the movements, vibrations, and transformations that occur below the threshold of perception and calculation'.³⁶³ Hence, it helps redefine space beyond the scope of practical questions that are pinned by 'now' but opens up its boundaries for alternative futures. It can be argued that by opposing to fixed and static, *Lithutopia* intersects with the essential idea behind the concept of cyborg; it envisions a future devoid of strict distinctions. Therefore, Ibanez's work can be read as a possible embodiment that position the potential of immaterial technologies at the center in a way to reflect feminist ideas.

³⁶¹ The Design Team of the project includes. Khoa Vu, Aidan Kim, Michelle Chew, Emma Peng, Brett Lee

³⁶² <https://www.ibanezkim.com/lithuania>

³⁶³ Grosz, 174.

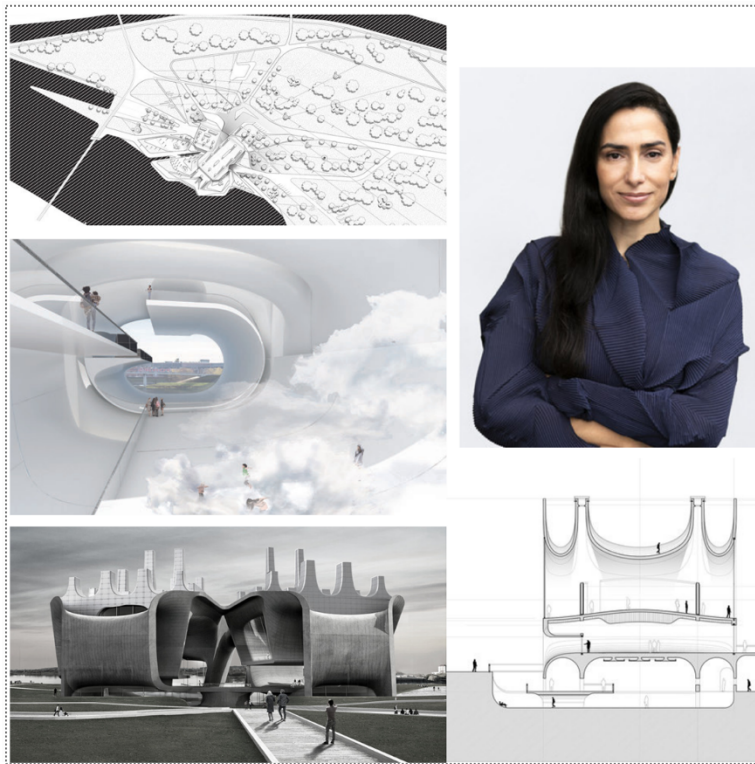


Figure 4.5 A collage of Lithutopia by Mariana and Kim Ibanez

While the conceptual exploration of immateriality culminates in hypothetical projects, Ibañez’s practice also seeks solutions for social problems and utilizes immaterial means in translating their solution into materialized forms. In reaction to the growing number of homeless people, Ibanez and Kim developed a prototype shelter called The Architectural Prototype Companion, or APoC. The pavilion is conjured up as a truncated sphere, components of which are engineered as double-curvatures considering the ease of transportation.³⁶⁴ Made up of laminated birchwood, the structure is designed in a way to provide two overlapping surfaces, the outer surface requires two people to be wrapped, while the inner one provides an

³⁶⁴ <https://www.ibanezkim.com/work#/apoc/>

enclosure.³⁶⁵ Though the project is far from being a permanent solution to this social problem, it nevertheless points the potential of digital tools in creating nontraditional and effective solutions to existing problems.

Similar to Mariana Ibanez in approaching the potential of emergent technologies yet differing via the extent and content of her work, Korean-American architect Meejin Yoon engages in various scales of design and different modes of architectural practice that vary as writing, designing, teaching and research. In addition to her work at the internationally renowned design firm Höweler + Yoon, which she co-founded with her partner, Yoon is the Dean of Cornell University's College of Architecture, Art, and Planning (AAP) since 2019 and the founder of the Design Across Scales Lab. Yoon's practice covers a wide array of experimental work. This diversity, which ensue from her engagement with emergent technologies for more than 20 years, also reflect the evolution of the matter she engages. In her earlier work that dates to early 2000s, she exploits the potential of media as 'material', most avowedly in *White Noise*, *White Light*. In the project that was applied in 2004 in Athens, Höweler and Yoon designed an interactive sound and light field via the use of fiberoptics and speakers that stores the movement of visitors and turns it into white light and white noise. This activation transforms the initially static and neutral looking grid field into a luminous sound-scape by night.³⁶⁶ By tracing the presence of visitors and echoing it back in a different form, the design explores 'the dynamics of materialization'³⁶⁷ where architecture is performed via ephemeral matter, thus it becomes a momentarily environment. Even before *White Noise and White Light*, the idea of media as skin is probed in the project called *Defensible Dress*. Yoon comments that she came up with the idea after a year spent in Korea but could not

³⁶⁵ Ibid.

³⁶⁶ Höweler + Yoon, *White Noise White Light*, <http://www.howeleryoon.com/work/157/white-noise-white-light>

³⁶⁷ This approach reverberates new materialist ideas.

realize it until she started teaching at MIT.³⁶⁸ Defensible Dress is understanding of media as the extension of body in literal sense, it is a design between ‘concept clothing and an intimate architecture’.³⁶⁹ Basing on the idea of customizable distance of comfort, the dress aims at providing personal space to the wearer. The activation of *nitinol*, a material with shape-memory, via heat and electricity enables arms embedded in the dress to act as levers so the dress helps sustain a desirable level of distance with the surrounding.³⁷⁰

On the other hand, Yoon’s practices at Design Across Scales Lab unveil her more recent engagements with advanced technology. The work in the lab primarily tackles environmental problems via data-driven research projects. Two projects of the Lab can be briefly mentioned as different scales of the same approach; Houston-Urban Climate Risk, and UABB Bienalle, a response to the 2019 Shenzhen Biennale of Urbanism\Architecture (UABB). Both projects extract data gained through research and generate a visual outcome that can serve as a foundation base for different implications. Thus, they exemplify how Yoon’s practice resounds new materialist concerns via tackling inorganic processes and technologies.

Departing from the diversity of factors, such as flooding, extreme heat, hurricane or wildfires in increasing the risk profiles for cities, the project Houston | Urban Climate Risk embarks on to provide alternative patterns and layered risk profiles for Houston.³⁷¹ Moreover, it also seeks to disclose the impact of urban development and climate change for the increase of risk profiles. These alternative readings of Houston help the research group to generate a series of maps that displace the

³⁶⁸ Meejin Yoon: ‘Public Works: Projects in Play,’ YouTube Video, April 12, 2013, Syracuse University School of Architecture, 4:48 to 6:33, *Ecofeminism Women, Culture, Nature*, ed. by Karen J. Warren (Bloomington and Indianapolis: Indiana University Press, 1997).

³⁶⁹ Ibid.

³⁷⁰ Ibid.

³⁷¹ The ongoing project Houston | Urban Climate Risk, Alexander Kobald, Joe Ferdinando, Cait McCarthy, Jordan Young, <http://designacrossscales.org/coh/>

insufficiency of earlier methods. The translation of data into a conceptual structure enables to monitor design interventions on macro scale by providing alternatives.

In another project that was developed as a response to the 2019 Shenzhen Biennale titled '*Urban Interactions*', the team presents an image of energy flow across cities and regions in the US. In effect, the idea springs from the intangibility of disproportionate consequences of energy economy on urban and rural areas in the United States which leads to rising economic disparity, increasing environmental pollution, and declining populations. The change of relationship between the city and region also affects the energy infrastructures. As cities expand, urban hubs along the coast are fueled by a vast extraction landscape that is connected to arterial pipelines across the country.³⁷² Despite the abstract conception of energy, this unearthing of energy infrastructures gives cities a more comprehensive view by allowing them to be seen outside the limits of their metropolitan areas. Thus, the region can be conceived as energetically active material entities and flows, owing to depiction of the data extracted from this infrastructural web.

³⁷² UABB Biennale Project description: <http://designacrossscales.org/uabb/>



Figure 4.6 Two projects by Design Across Scales Lab

Basically, the research that the group conducts at the Lab is aimed to inform design decisions mostly on urban scale. Yet on a different level it can be seen as a filtering of reality by using medium as a lens; when environmental problems are translated into data-sets, what is done is a redefinition of the physical on the grounds of (im)materiality. The physical set of relations that are ‘captured’ via AI, are translated into visual elements and acquire a different mode of tangibility. Using the means of immaterial to better understand and regulate the material world can be pointed as the key denominator for Yoon’s practice, which opens a new path to think about the future of the coalescence between mediated and immediate.

Collocating the changes that caused and compelled by the relationship between global corporatism, the technical revolution in information storage and retrieval, and the resulting change of global communications, Grosz stresses that not only ‘how we

understand ourselves, our bodies, our place in cities and communities, but our relation to the future' was also affected. This simultaneous 'anxiety and joy', also registered by Yoon's projects, exist within 'the hopes and fears' that constantly evolving digitalization fosters. Its endowment is an apprehension that humanity approximates with acceleration. This is an apprehension of what the future holds in store, whether it elevates the desires to the status of the attainable or real, 'or whether we and our hopes are transformed beyond recognition into something other than what we are now.'³⁷³ The recent research projects that Yoon lead can be viewed from this interval. They help to envision the cities of the future as different from that of the present. Aligning with Grosz's depiction, 'communication, and connectedness at-a-distance', the delusion of an 'alternative or virtual existence that may bypass the gravity and weightiness of the body' bring a conception of future where the spheres of imaginary and lived representations collide. The cities of the future inherent these modes of operation, their technological accomplishments and requirements.³⁷⁴

Yoon is not alone in redefining the scope of immaterial technology. Chinese architect Catty Dan Zhang investigates the creation of dynamic environments at the intersection of architecture and digital media. Her approach to design offers intriguing combinations of two different senses of medium. What Zhang calls as medium hybrids correspond to the understanding of medium as an environ, as surrounding set of elements, milieu. She narrows this understanding down as atmospheric mediums; i.e. particles in the air and computational mediums, i.e. pixels, image and the dialogue between the two. On the other hand, both her approach to computational medium and her engagement of optics, the visual techniques in dealing with atmospheric mediums, evokes medium in the sense of communication channel, a tool that determines the nature and boundaries of communication. Zhang hybridizes two senses in her practice and redefines architecture as a series of

³⁷³ Grosz, *Architecture from the Outside*, p. 50

³⁷⁴ *Ibid.*, p. 52.

‘dynamic conditions that constantly adapt, react, mutate’, and challenges its fix and stable connotations.

Adding several new questions to Hans Hollein’s environmentally enclosed but visually permeable boundary of *Mobile Office* and Environment Society’s advancing of atmosphere over space, Zhang is preoccupied with the potential of air to create nonstationary conditions. Her projects explore this invisible medium via its ephemeral forms that glimpse a different modality of space. This interest can be traced back to her graduate studies; in fact, her following projects carry the memory of this strategy in different formats. Back in 2016, in her graduate years at Harvard Graduate School of Design, Zhang designs a wearable instrument to reflect the agency of unseen medium air. The project aims to visualize the invisible and simultaneously show the effect of one’s own movement in one’s dynamic perception. The instrument is composed of two parabolic mirrors and LED light sources. It is meticulously constructed and put together considering optical principles called lateral optics, which make the light ray deformations caused by the refractive index heterogeneities visible in a transparent material. Caused by temperature difference, airflow curvatures change by instant movements of the beholder and exhibits a dynamic play for perceiver. Via this work, instead of viewing space as a void and surfaces as limits, she suggests considering the built environment as one unified volume with differing material qualities.

This is only one side of Zhang’s hybrid understanding of medium, she discovers the ‘atmospheric forces around shapes of air’ in many other projects and at times curiously triggering new senses arising from the human body interacting with this air. For instance, in the installation called *The Moving Air*, she transforms the weather data collected from internet into colored droplets of air effect. Thus, transforms the exhibition space that is defined by walls and ceiling via transparent and less dense materiality of air. Zhang defines this work as ‘a practice of translating fixed object into synergistic systems that create profound, weird, useless, yet poetic

spatial interactions'.³⁷⁵ In creating this effect, Zhang uses ready-made materials with mechatronics and electronics. Her work transforms everyday things into performative and synergistic systems to display and alter ephemeral forms using atmospheric and computational mediums.

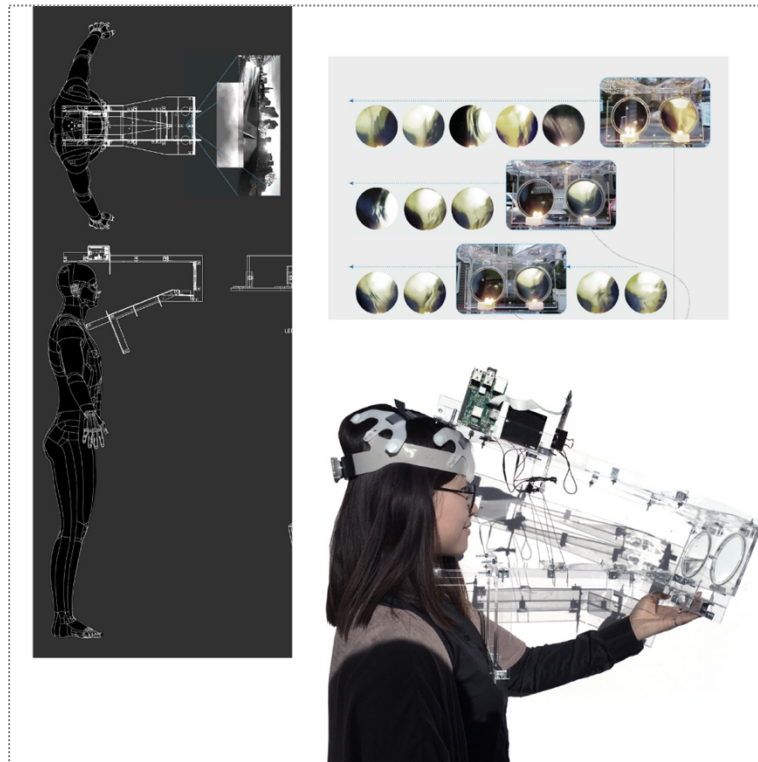


Figure 4.7 Medium Matters³⁷⁶ by Catty Dan Zhang

³⁷⁵ The Moving Air A Cultural-environmental Paradigm, Berkeley, CA, Solo Exhibition, 2020. The project was selected through the open call for Emerging Designers Competition, organized by UC Berkeley in October 2019. It was on view Jan21 - Feb 25, 2020. <https://www.cattydanzhang.com/the-moving-air>

³⁷⁶ Genome of the Built Environment: Measuring the Unseen, Spring 2016, Harvard GSD. <https://research.gsd.harvard.edu/real/portfolio/medium-matters/> (accessed July 2022)

Both being among founder members of Black Reconstruction Collective³⁷⁷, Felecia Davis and Mitchell McEwen aim to counteract the white hegemony and supremacy in academia, art, and design. In addition to the traces of this motive in their practice, they devise disparate materialities and pedagogies by engaging with digital infrastructures. At Princeton, McEwen is leading Black Box, a research team which investigates human-robotic hybrid designs and building methods as well as biomaterial production. In a similar fashion, Felecia Davis, who has been selected as one of the Emerging Voices³⁷⁸ of 2022, directs SoftLab at Pennsylvania State University, this is a research lab devoted to the development of soft computational materials and textiles.

Operating at the interstitial field in between art, science, engineering and design, Davis's primary exploration field is computational textiles. These textiles, which employ sensors and microcontrollers to respond to environmental stimuli, can also communicate with users through the material's malleable characteristics. As space defining elements they can be lightweight shelters. For Davis, these textiles can revolutionize the way humans interact with one another and with space. In essence, these two modalities form the two complementary research directions at the SoftLab.

³⁷⁷ Black Reconstruction Collective was founded by several individuals who come together for the exhibition called 'Reconstructions: Architecture and Blackness' organized by MoMA. The collective is denounced as the most important consequence of the exhibition. The collective freed the artists from the preconceptions that come with showing in a place like MoMA, which has had a significant effect on modern architecture but has traditionally excluded Black architects' work. Diana Budds, 'After MoMA, the Black Reconstruction Collective Plots Its Future', June 7, 2021, <https://www.curbed.com/2021/06/black-reconstruction-collective-moma-history.html>

³⁷⁸ The annual Emerging Voices award from the Architectural League recognizes North American designers with 'distinct design voices that have the potential to influence the disciplines of architecture, landscape architecture, and urban design. The jury evaluates accomplishments in design and academia as well as major bodies of accomplished work. Next to Felecia Davis, Emerging Voices of 2022 include: Azra Akšamija, Borderless Studio, Estudio MMX, JA Architecture Studio, Landing Studio, sekou cooke Studio, Tsz Yan Ng Design. <https://archleague.org/competition/emerging-voices-2022/>

While one is more architectural in a traditional sense, using textiles as shelters and shade structures; the other direction looks into the capacity of textiles in redefining the communication of bodies with their environment. Hence attempts to ‘rethink what architecture could be’ by elaborating ‘the augmented and sensing body and its environment’.³⁷⁹

The issues and problems addressed in Davis's work vary greatly. At first, it seems due to her double-sided research in the lab, but a close look reveals that this diversity is rather concerned with the way she incorporates her positionality within the confronted design problems. As ‘the preamble’, the beginning of her unique approach, she refers to her project *Memorial and Museum for the African Burial Ground*.³⁸⁰ As Davis explains, this thesis project forced her to look closely at the relationship between architecture and textiles, and initiated her passion for textile. However, it was also during this project that she realized her positionality stemming from her identity. The project had a personal drive by providing a link to her ancestors; it was a way of connecting with Africa that she was from but had not been to before. This led Davis to recognize the potential of her positionality to raise different questions.³⁸¹

I believe that the take away from this project and research was to understand my position in the world. Who am I? What is this place in relationship to me? What are appropriate methods to understand what's going on here? I felt at the end of this project, it was important to be able to say, ‘I,’ and not erase oneself.³⁸²

³⁷⁹ Felecia Davis, ‘Seams: Race, Architecture and Design Computing,’ YouTube Video, May 8, 2021, MIT Architecture, <https://www.youtube.com/watch?v=gt9mSLzoNW4&t=474s>

³⁸⁰ Ibid., 7:40 to 15:59.

³⁸¹ ‘I think what happens when you deal with positionality in work that it allows for a different way of asking questions, and it allows one to answer different types of questions.’ Ibid., 15:30 to 15:59.

³⁸² Ibid., 14:49 to 15:17.

Davis understands that trying to answer these questions were linked to who she was going to become as an architect. Therefore, despite the imposed canon in scientific writing which promotes the removal of ‘I’,³⁸³ she is inspired by bell hooks who restores the ‘I’ back into the academic writing.³⁸⁴ Ultimately, bringing her position conscious approach to computation forms the originality of Davis’ work. Such an understanding forms the basis of *Fabricating Networks*, a project that she developed as part of *Reconstruction, Blackness and Architecture in America* exhibition at MoMA in 2021.³⁸⁵ Calling attention to how local and state governments have used Black communities as ‘toolkits for racial discrimination’, Davis’s *Fabricating Networks* can be seen as a statement to this particular history of Pittsburgh, Pennsylvania.³⁸⁶

Fabricating Networks is composed of two different parts. The first one is a ‘*Black Antenna*’, a symbolic responsive structure, made up of 34 individual knitted cones. It is an elliptical-shaped flower, 21 feet (6.4m) long by 15 feet (4.5m) wide and includes a pink underbelly composed of conductive copper and cotton yarn. These materials are engineered into the fabrication itself, enabling the cones to sense electromagnetic radiation. Thereby ‘black flower’ serves as an antenna, it captures electromagnetic waves, transforms them into sounds and disseminates back to the installation space at MoMA. Via this project, Davis seeks to illuminate and reveal the functioning of an unobservable urbanism that hovers above the real metropolis. For her, this facet of urbanism is maintained and built by electromagnetic waves;

³⁸³ She refers to this situation particularly with reference to her research field computation with the following words: ‘It’s been made clear to me many times when writing, especially for computation, that one should not use the pronoun ‘I.’ Ibid.

³⁸⁴ Ibid.

³⁸⁵ This exhibition was open Feb 27–May 31, 2021. It is part of *Issues in Contemporary Architecture*. The link of the exhibition to the formation of Black Reconstruction Collective has been addressed earlier. See footnote

³⁸⁶ Arlette Hernandez, *How Do We Build a Better Future?*, May 13, 2021, <https://www.moma.org/magazine/articles/562> (Accessed August 11, 2022)

these intangible formations generate ‘a new global ocean’, allowing individuals to communicate via the internet.³⁸⁷ The use of electromagnetic waves as a medium is intended to draw the attention of visitors to this ‘invisible electromagnetic system that connects all of us’ through communication technologies that rely upon electromagnetic waves to work.³⁸⁸ This link to invisibility, aligns well with Davis’s suggestion to expand the definition of technology and portrays an interesting way to transpose the covert (im)materiality of information into matter via textile. But this invisibility also a metaphor for ‘the invisibility of Black people as an aftereffect of slavery’. The other metaphorical reference is to the concept of ‘the wake’. The electromagnetic ocean operates as ‘an invisible wake that we all live in’.³⁸⁹ Through its dramatic appearance, the black flower points to this wake.

The second part of the *Fabricated Networks* is a ‘touch-activated quilt’ with connected speakers. Photos from the 1950s and 1960s, many of which were taken in the Hill District by the photographer Charles Teenie Harris, are displayed on its surface. The quilt is thought to trigger a dialogue with people about ‘making’. This ‘repository of history’ is activated when touched, and tells the story of what happened in the interacted photograph on the quilt panel. The design is intended to be ‘emotionally and connected networking material’. Davis characterizes the way they intend to construct collaborative and progressively built communication via the softness of the material. For her, computational methods, tools, and designs for soft architectures is a way of emotional connection with people, they enable to ‘register their presence to provoke questions about the order of our society’, and in this sense

³⁸⁷ Felecia Davis, ‘Seams: Race, Architecture and Design Computing,’ YouTube Video, May 8, 2021, MIT Architecture, 46:27 to 53:08, <https://www.youtube.com/watch?v=gt9mSLzoNW4&t=474s>

³⁸⁸ Felecia Davis, Erin Lewis, Farzaneh Oghazian, Berfin Evrim. Tuning in: Reflecting in the Wake of Blackness through a Knitted Flower Antenna, *Possibilities*, 27th International Symposium on Electronic Art (ISEA), Barcelona, 10-16 June 2022.

³⁸⁹ Ibid.

softness appears as ‘a powerful quality to think about reconstructing’.³⁹⁰ The material quality of softness is activated via (im)material technics that rely on electronics and use of conducive materials, but more importantly, it evokes a new way of thinking about architecture that relates to the scale of the body. As Davis states ‘we often start by ‘making’ things like clothing’, but that gradually grows and evolves into large-scale of architecture.³⁹¹ By considering these projects as materials that one wears on one’s body or use the body as part of its systems, she positions the concept of body in her practice in an unusual way. Similar to Yoon’s *Defensible Dress*, or Chang’s prosthetic tool, Davis position architecture as the extension of body, via clothes. Reminding of the parallelism of ideas between Gottfried Semper and Marshall McLuhan, while the other two can be confined as mediatic side, Davis’ approach to clothing as the extension of body does not exclude the culturally defined meanings attached to these materials. Built on these meanings, she delves deep into the communicatory potentials of the fabric and redefines architecture within this perspective. As she suggests, ‘an elegant piece of clothing was a way to fight back, to take on other identities, to understand the world in a different way, and, most importantly, to dream’.³⁹² These practices at the lab strive to develop ‘a soft system’, which means ‘a technological place that registers a diversity of bodies’.³⁹³

³⁹⁰ Felecia Davis, ‘Seams: Race, Architecture and Design Computing’, YouTube Video, May 8, 2021, MIT Architecture.

³⁹¹ Felecia Davis, ‘Seams: Race, Architecture and Design Computing,’ YouTube Video, May 8, 2021, MIT Architecture, 46:27 to 53:08, <https://www.youtube.com/watch?v=gt9mSLzoNW4&t=474s>

³⁹² Ibid.

³⁹³ Ibid.

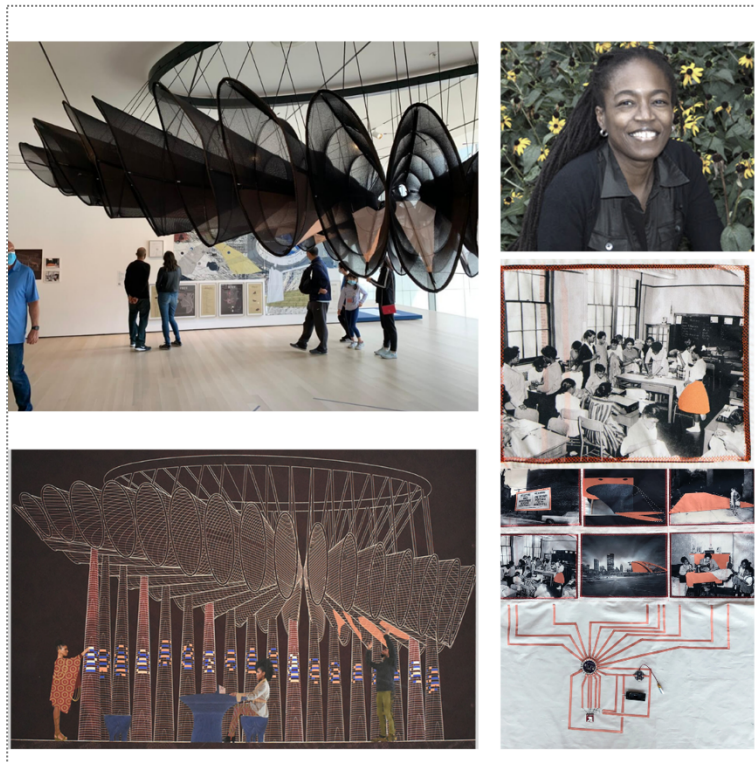


Figure 4.8 Fabricating Networks Exhibition by Felecia Davis
The Black Flower (left), touch-activated Quilt (right)

Through this and her other projects produced with similar motives, Davis invents new forms of collectivity and mutual aid that transcend the boundaries which are culturally constructed to keep people apart. The strength of her practices is in how she relates to her positionality and reconfigures the issue of communication using textiles' emerging potential. Davis operationalizes immaterial means within textiles as a technology of connecting and communicating, which creates ‘an opportunity to reimagine, to dream a new world order.’³⁹⁴ To her, the ways of thinking and doing that lead to innovative ways of approaching architecture and its practices are hidden

³⁹⁴ How Do We Build a Better Future? Arlette Hernandez, May 13, 2021, Available: <https://www.moma.org/magazine/articles/562> (accessed August 25, 2022).

in the material. Overall, Felecia Davis' practice touch upon a wide array of issues that include but cannot be confined to identity, race and communication. By deploying architecture authentically, she seeks ways of integrating non-similarities on an inclusive ground of design.

4.1.3 Architecture as Cultural Reparation Technology

How do we situate ourselves within the academy that simultaneously privileges us and excludes others and is therefore a form of oppression that subjugates other knowledges and peoples?

Lynda H. Schneekloth
Partial Utopian Visions³⁹⁵

If architecture is about people and not about buildings, the task of examining architecture's engagement with society necessitates to tackle issues and concerns that arise from deep-rooted inequalities. These imparities do not just pertain to gender difference. They can be caused by various discriminatory factors. Moreover, these characteristics that lead to exclusion intersect with one another and intensify the imposition of cultural inferiority. Subordination takes different forms by constructing new ways of dominance. This applies both to architects whose works have been systematically ignored, and to communities, whose place making practices are undervalued by pronounced as premodern. The so-called European superiority over the colonized lands has been critically examined by many scholars and it is identified as a phenomenon that has continuing effects.³⁹⁶ The theoretical

³⁹⁵ Lynda H. Schneekloth, 'Partial Utopian Visions,' in *Women and the Environment*, Human Behavior and Environment series J, Irwin Altman and Arza Churchman, eds. (New York: Plenum Press, 1994), 288-89.

³⁹⁶ After long years of research and reflection, postcolonial researchers have discovered that even after independence, institutions of domination and exploitation are frequently continued by new native elites. In this sense, the prefix 'post' in 'post(-)colonialism' has been regarded since the 1990s as an indicator of connection that marks the ongoing influence of colonialism on a former colony, rather than a chronological marker for a clear-cut shift after independence. See Shohat, Ella. (1992) Notes on the 'post-colonial'. *Social Text*, 31/32, 99–113. Also see

attacks to uncover and critically analyze these processes initially rise from literary studies in the late 1970s and find a coherent body under the rubric of postcolonial theory. As uncovered by postcolonial theorists, this ‘superiority’ is often performed via discursive, politic, economic and cultural oppression. Pioneered by the work of Edward Said and accompanied by others such as Homi Bhabha and Gayatri Spivak, postcolonial theory is at home in literary criticism with an emphasis on the use of language and discursive analysis³⁹⁷ to decipher the colonial construction of ‘othering’.

Postcolonial study frequently focuses on experiences in the Middle East, South Asia, and Africa. In effect, diasporic intellectuals from the Middle East and South Asia contributed to the development of postcolonialism; their studies largely pertain to those regions and its imperial neighbors (Europe and the West). In the case of architecture, these diasporic intellectuals who primarily uncover the impact of colonialism on architectural historiography, are as well immigrant scholars pursuing doctoral degrees in the US. In elaborating the emergence and projection of postcolonial theory in architecture, Itohan Osayimwese underlines the now neglected contribution of women scholars. Though it is possible to find key scholars that emerge from UK, Australia, Turkey, Belgium and others that deal with legacies of colonialism, she draws attention to two schools that take central stage for the development of postcolonial perspectives in architectural historiography. These are The University of California, Berkeley and Binghamton University in New York.

Michael Tsang’s article Decolonial? Postcolonial? What does it mean to ‘decolonise ourselves’? Decolonising modern Languages and Cultures School of Modern Languages, Newcastle University, 21.01.2021 Accessed 16 August, 2022
<https://blogs.ncl.ac.uk/decolonisesml/2021/01/21/decolonial-postcolonial-what-does-it-mean-to-decolonise-ourselves/>

³⁹⁷ According to the South African postcolonial scholar Benita Parry (2004), ‘postcolonial studies’ originally went by the name ‘colonial discourse analysis’ and had its beginnings in the late 1970s, particularly with the release of the seminal book *Orientalism* by the Palestinian-American critic Edward Said (1978).

Scholars who are trained in these institutions and in turn contributed to postcolonial analysis of architecture, experienced otherness and living in between cultures. This, Osayimwese comments, must have made them feel that 'identity is not essentialist'. In other words, postcolonial backgrounds of these women lead them to adopt theoretical frameworks that share certain commonalities.³⁹⁸

In terms of their context of emergence, 'postcolonial' and 'decolonial' are associated with different disciplines. Arised from sociology, decolonization on the one hand is traced to anticolonial movements of the mid-twentieth century, to the attempts of dismantling European colonial rule. Contrasting with postcolonialism whose roots in literary studies, the modernity/coloniality school emerges from the work of, among others, the sociologists Anibal Quijano and María Lugones, and the philosopher and semiotician, Walter D Mignolo.³⁹⁹ From the start, decoloniality was inextricably related to world-systems theory, scholarly work in development and underdevelopment theory as well as the Frankfurt School's critical social theory tradition.⁴⁰⁰

In addition to the discipline of origin, there is a difference of geographical origin and area of activity for postcolonial theory and decoloniality. This operation area, in British terms, 'remit' indicates the geographic regions from where the academics within the particular areas originate and the geographic field of their study; in the case of postcolonial and decolonial frameworks these differ from one another. In contrast to diasporic intellectuals from the Middle East and South Asia, and their work that refers to those areas and their imperial neighbors, decoloniality arose from

³⁹⁸ Osayimwese does not spell the names of these women but instead highlights the program directors at these institutions for the influential time period that she focuses on, which is 1980s. See Itohan Osayimwese, 'What is Decolonial Architectural History', YouTube Video, 2021, Gibbs College of Architecture, 17-22, <https://www.youtube.com/watch?v=bGoNjhy1pgM>

³⁹⁹ Gurminder K. Bhambra (2014) Postcolonial and decolonial dialogues, *Postcolonial Studies*, 17:2, 115-121, doi: 10.1080/13688790.2014.966414

⁴⁰⁰ Ibid.

the work of South American diasporic academics, it largely refers to Europe even if it covers a much longer time period and relates to those regions and their imperial interlocutors. Decoloniality begins with the earlier European assaults against the territories that fell under European control, whereas postcolonialism mostly relates to the nineteenth and twentieth centuries colonization.

In this sense, decolonization⁴⁰¹ was primarily termed as an effort of native people in Asia, Africa, and South America in the second part of the twentieth century to take authority of the state back. It refers to this process of withdrawal, which was not completely successful.⁴⁰² On the other hand, decoloniality encompass subtler and more intricate web of relations and it is more of an epistemological endeavor than a political one: it denotes to 'delink' from the West's knowledge framework, and then to 'reconstitute' precolonial methods of thinking, speaking, and living. As put by Mignolo, it is 'a praxis of undoing and redoing'⁴⁰³

From this vantage point, it appears that decoloniality aligns with a paradigm of repair and restitution of ignored histories and cultures. It is concerned with promoting, reasserting, rediscovering, and validating the diversity of indigenous and other neglected communities' lives, cultures, and knowledge as well as to decenter gender hierarchies, racial privilege and homogenizing effects of the global. By incorporating post-colonial concerns into its mechanism, decoloniality defines a broader framework to disrupt the colonial logic that endows racial capitalism in the form of natural development.

⁴⁰¹ Walter Mignolo who developed the idea of decoloniality clarifies the term and its difference from postcoloniality in an interview. Interview – Walter Mignolo/Part 2: Key Concepts, E-International Relations, January 21, 2017. Accessed June 10, 2022. Available online: <https://www.e-ir.info/2017/01/21/interview-walter-mignolopart-2-key-concepts/>.

⁴⁰² This is related to the domination of the native elites who succeeded the colonizers still adhered to and maintained the same mechanisms of privilege and exploitation. Ibid.

⁴⁰³ Walter D. Mignolo, Catherine E. Walsh, *On Decoloniality Concepts, Analytics, Praxis* (Duke University Press, 2018), p. 120

To architecture, postcolonial theory provides a critical lens to reclaim a decolonized architectural historiography and generates a wide range of analytical strategies. These diversify from place, space and cultural landscapes, the ideological construction of race, nationalism, cultural construction of identities. Compared with postcolonial theory, decoloniality is defined as a slight modification of this critical frameworks, decoloniality is often accompanied by a nuance that shifts the focus from analysis to action. Moreover, it collides with other critical theoretical approaches that aim to dismantle oppression. In that sense, though the post-colonial approaches have been already subsumed in feminist theory as postcolonial feminism, in this more action-based definition of decolonial understanding of architecture, the role of gender appears to be a new exploration for contemporary architectural discourse.

Feminist practices engage with micro-strategies as ‘localized resistances’ capable of responding to specific oppressions, allowing for a diversity of assertions and a ‘complexity of identities’.⁴⁰⁴ Rather than claiming a universalizing emphasis, these ‘micro-strategies of resistance’ denote a ‘difference in kind, not a in scale.’ In Stratford’s postulation, the ‘micro’ appears as a field of research, ‘a scattered framework through which to re-view space and spatial interactions.’⁴⁰⁵ These micro-strategies of resistance appear to be effective modes of operation for architecture to serve as a cultural reparation technology as well. In effect, many tactics that sought to outclass inequality in the built environment, share certain commonalities with this aspect of feminist practices as well as intersectionality of discriminations.

The contemporary architectural scene is home to many studies, initiatives, projects and works that seek to incorporate both postcolonial and decolonial endeavours. The works of different women in architecture that are addressed here seek to reform what it means to remove cultural inequalities established by colonial processes or other

⁴⁰⁴ Helen Stratford, ‘Micro-Strategies of Resistance’, in *Altering Practices*, p. 125-141.

⁴⁰⁵ Ibid.

constructed hierarchies. Culture here functions as an umbrella term that covers all differences stemming from religion, ethnicity, race, or other disparities. Taking different modalities such as design, research, pedagogical approach, writing, or curation, the practices examined here point to new directions for the discipline not only via their content but also by challenging conventional norms. Most critically they extract these concerns from architecture's medium, that is the larger field within which architecture exists.

It is interesting to see that many architectural institutions are rescripting their agendas drawing from the work of pioneering women architects. Furthermore, they support this integration in the form of new research environments or programs. Three research organizations, all run by women architects of minority groups, might be recognized in the context of cultural reparation. In addition to Global Africa Lab at Columbia University lead by Mabel O. Wilson, and The MIT Future Heritage Lab directed by Azra Akšamija. Indigenous Design Collaborative at Arizona State University is supervised by Wanda Dalla Costa.

Mabel O. Wilson is the Director of the Institute for Research in African American Studies (IRAAS) at Columbia University. At GSAPP she co-directs the Global Africa Lab, where 'spatial topologies of the African continent and its diaspora' are investigated; the research group grapples with political histories and impact of globalization on the built world, culture and ecologies of overlooked places. In the lab, new media technologies are effectively used to reask critical questions via unusual forms of representation.

Wilson's practice rearms architectural practice as a black study. In 2021, as one of several exhibits organized by MoMa under the theme of '*Issues in Contemporary Architecture*,' she co-curated *Reconstructions Architecture and Blackness in*

America with Sean Anderson⁴⁰⁶ and Arièle Dionne-Krosnick⁴⁰⁷. Aiming to realign both America's and architecture's history with blackness,⁴⁰⁸ the works at the exhibition give rise to questions for possible futures and provides opportunities to reimagine 'the oppressed' in new places. Essentially, the shared concerns continue to have reflections in the work of various architects. In this regard, being the co-founding members of The Black Reconstruction Collective to continue the agenda of the exhibition, Felecia Davis, Mitchell McEwen and Yolanda Daniels draw attention.⁴⁰⁹

In addition to curating this influential exhibition and directing Global Africa Lab, Wilson is a founding member of an advocacy project called Who Builds Your Architecture? (WBYA?). The group, which was named in the form of a question, aims to inform the architectural community about the issues of globalization and labor. This one question is intended to stimulate a discussion among different stakeholders and to provoke other questions with regard to ethics, new technologies, activism and education. Therefore, the issues that WBYA? deals include critical questions for architects' ethical duties to people who build their structures, the origin of the construction workers and architecture's demands from them, the transformation of construction methods by new technologies, manual labour, and workers' rights.

Through different modes of practice which includes, writing, teaching, research and design, Wilson's engagement with the anti-black racism on the built world, tackles

⁴⁰⁶ Associate Curator, Department of Architecture and Design, The Museum of Modern Art,

⁴⁰⁷ Curatorial Assistant, Department of Architecture and Design, The Museum of Modern Art.

⁴⁰⁸ <https://www.moma.org/calendar/exhibitions/5219>

⁴⁰⁹ For the Architecture and Blackness exhibitions, different architects come together to discuss issues around African Diaspora and its impact for the built environment. These meetings showed the need to collaborate to advance this ongoing and incomplete project of emancipation, in other words, decolonization of architecture. Out of these discussions, the need to create a common ground in the form of an institution raised and The Black Reconstruction Collective was founded.

how blackness produces places of creativity, refusal, and desire. Hence it connects the issues that are central to mainstream architectural discourse, such as space, politics, and cultural memory, with the perspective of black America. Furthermore, it extends into the discussions of race and modern architecture; new technologies and the social construction of space; and visual culture in various forms of media. The scope of the research and work at Global Africa Lab as well as the agenda of WBVA? demonstrate how Wilson's engagement with decolonial frameworks enable her to uncover disregarded histories of architecture and to stimulate discussion for neglected actors of the built environment.

The agenda of *The Architecture and Blackness* exhibited as part of *Issues in Contemporary Architecture* at MoMA, the foundation of The Black Reconstruction Collective and burgeoning of many similar initiatives indicate the rising interest around decolonial attempts in architecture which seek to uncover and reproduce alternative histories. In this regard, Itohan Osayimwese's contributions are noteworthy. Remolding different aspects of colonial processes into her pedagogical and research practice, Osayimwese looks into various contexts to unpack the results of colonialism on built environment. Her ongoing book project, *From Barbados to Boston*, deals with the impact of migration on the shifting social and architectural environments of the Anglo-Caribbean after emancipation. Furthermore, by extending her critical look to Europe she traces the impact of colonialism on the growth of modern architecture in Germany between the 1850s and the 1930s.⁴¹⁰

Next to her research and publishing, Osayimwese incorporates colonial, postcolonial, and global architectural history into her teaching curriculum. With this she aims to better students' comprehension for the way architecture is intertwined

⁴¹⁰ Colonialism and Modern Architecture in Germany. In addition to these, her another book project refreshes the established knowledge for the history of the study of African art by introducing English-speaking academics to the first German-language survey of African architecture published in 1894.

with wider social, political, and economic processes. Concomitantly, she directs graduate research on the issues of built environment in the Anglo-Caribbean and the afterlife of colonial dwellings in Sri Lanka and she supervises theses around the issues of memorialization, slavery, border structures.⁴¹¹

Osayimwese draws attention to architecture's simultaneous operations that work directly as space defining elements and siting; while indirectly via representations and texts. As mentioned, she highlights the contribution of non-Euro-American immigrant women scholars for the development of today's decolonial approach in architecture. With reference to their work Osayimwese claims that their engagement with postcolonial theory transformed architectural history from a study of style into a study of social processes. The work of Osayimwese is built on this ground.

As a critical position as well as conceptual frame, decoloniality enables to discuss various processes of culturally intensified inequality. Therefore, it interacts with intersectional concerns in feminism as well as the issue of difference as underscored in postcolonial feminist thought. The number of immigrant scholars that contribute to contemporary architectural discourse from this perspective, especially from the institutions in United States, appear to be increasing. Arguably, this, as exemplified both by the work and explanations of Osayimwese, is related to the continuing effect of diasporic women scholars who initially engaged with postcolonial analyses and taught this framework in influential institutions in the USA.

Samia Henni also work on colonization's different forms of existence that vary from physical invasion and occupation lands to more subtle ones emanating from global systems of accumulation by dispossession, the implicit or explicit alienation, as well as social, economic, and gender related inequalities. Born and raised in Algiers, she extensively writes on the processes of French colonization on Algiers. Problematizing the partial nature of European frame of reference for the production

⁴¹¹ <https://www.brown.edu/academics/art-history/people/itohan-osayimwese>

of architectural knowledge, she counterbalances this with her work that centralize around questions of colonization, wars, extraction, deserts, forced displacement, and gender. Moreover, Henni's research extends from teaching and publishing to exhibition where she inspects the potential of film medium. She is a co-organizer of the exhibition called *gta Films* at the gta Institute, which explores the use of motion picture to educate, promote, document and study architecture.

Restoring and revealing the histories of indigenous cultures is another facet for the attempts of reconstructing both current and historical knowledge in architecture. Wanda Della Costa and Eladia Smoke appear as important figures who incorporates this understanding into their practice. Being both the director and founder of the Indigenous Design Collaborative (IDC), which is a community-driven design and construction program at Arizona State University, Costa conducts research into the indigenous culture and specificities of their ways of making. Moreover, in this institution, she gathers representatives from Arizona's indigenous community, industry, and a diverse team of ASU students and faculty to jointly create and develop solutions for tribal communities.

In IDC, besides design projects, remarkable archival work is performed both to document and explore various forms of cultural meanings behind indigenous dwelling types. The cultural significance of every traditional form used in Arizona, including the Hogan, Pueblo, and Vato, is deeply ingrained in the building practice of the region. Creation of these forms with local materials such as the mesquite trees, cactus ribs are still in use and important to understand the Gila River Indian Community. By collecting original Arizonan houses, the project of *Indigenous Dwellings 3D Model* (2018) aims to provide a foundational base for the future generations who may study regional materials, construction methods, forms and their cultural significance. Within the project, the methods and tools that Phoenix⁴¹²

⁴¹² Phoenix is the capital and most populous city of the U.S. state of Arizona. The Hohokam were the earliest permanent Native American inhabitants of the Phoenix area.

residents created to make their lives easier are addressed as ‘vernacular design intelligence’. These techniques include a number of useful inventions developed in the face of Arizona's intense heat, such as vast shade covering, ‘high thermal mass walls, outdoor adaptive living spaces, and earth coupling’.⁴¹³ The models are presently being used in the lab's ‘Parametrics with Intent’ section, which combines analog and digital modeling for form generation. The idea of bringing vernacular and local knowledge with digital tools appears in other projects of the group as well. Furthermore, this research plans to inform long-term sustainable solutions that can be extracted from a re-examination of the underlying principles of local forms.

Intrigued by the complex role of culture in conflict environments, Azra Akšamija⁴¹⁴, the founder of The MIT Future Heritage Lab, explores the capacity of culture as a powerful tool to empower vulnerable. She postulates her personal experience of war as the seed of her curiosity. As she clarifies the need to understand the power of ideology and nationalism on people led her to question the instruments of power in manipulating the way people behave each other, as well as catastrophic processes of war that includes erasure of past, uprooting and humiliation of communities. Based on this personal experience, for her PhD at MIT, she decides to pursue the destruction of architecture during the Bosnian conflict with a special emphasis on the genocide against Bosnian Muslims. As she revealed, this act was planned and deliberate. Moreover, it was on massive scale; about 1,400 mosques were mostly or

After them came the Akimel O’odham (Pima), Maricopa, Yavapai, and Yaqui groups. The U.S. government sent many of these peoples to nearby reservations in the 19th century. Although only a fraction of the city’s population is Native American, Phoenix still has one of the largest urban concentrations of Native Americans in the country. African Americans, Hispanics, and Native Americans live primarily in the southern portion of the city, below the downtown district. People of Phoenix, Britannica Online Encyclopedia, <https://www.britannica.com/place/Phoenix-Arizona/People> (Accessed August 4, 2022).

⁴¹³ https://design.asu.edu/sites/default/files/idc_cutsheets-11.pdf

⁴¹⁴ Azra Akšamija has been listed as one of 8 Emerging Voices of 2022, for the Architectural League’s annual award. A Life Worth Living, May 24, 2022, <https://archleague.org/article/a-life-worth-living/>.

entirely destroyed, compared to 200 Catholic churches and a lesser number of other structures.

Defined as an art, education, and preservation lab the MIT Future Heritage Lab is where Akšamija continues to explore and aim to confront societal inequities by coordinating a group of researchers. She aims to enhance the lives of vulnerable groups, through ‘resistant infrastructures’⁴¹⁵ using textiles, photography, design, animation, and literature, which resonates with micro-strategies as ‘localized resistances’.

Akšamija, who also witnessed war in the 1990s, directs a research group for a project which is developed collaborating with residents of Al Azra Refugee Camp at Jordan. Out of this collaboration, lightweaver, a tool of lightening and kinetic sculpture emerges. This design is intended to personalize the anonymous space of refugee camp into a personalized environment. Lightweaver stands as ‘a cultural prosthetic for hope’, while also manifesting a creative solution to everyday life problems in a refugee camp. These lamps facilitate individual expressions as well as cultural preservation of values where the entire setting is transitory and amnesiac. Designed with references from punch cards of Jacquard looms, as well as Arabic lanterns, lightweaver translates stories from textiles and calligraphy into different light patterns.

⁴¹⁵ Ibid.

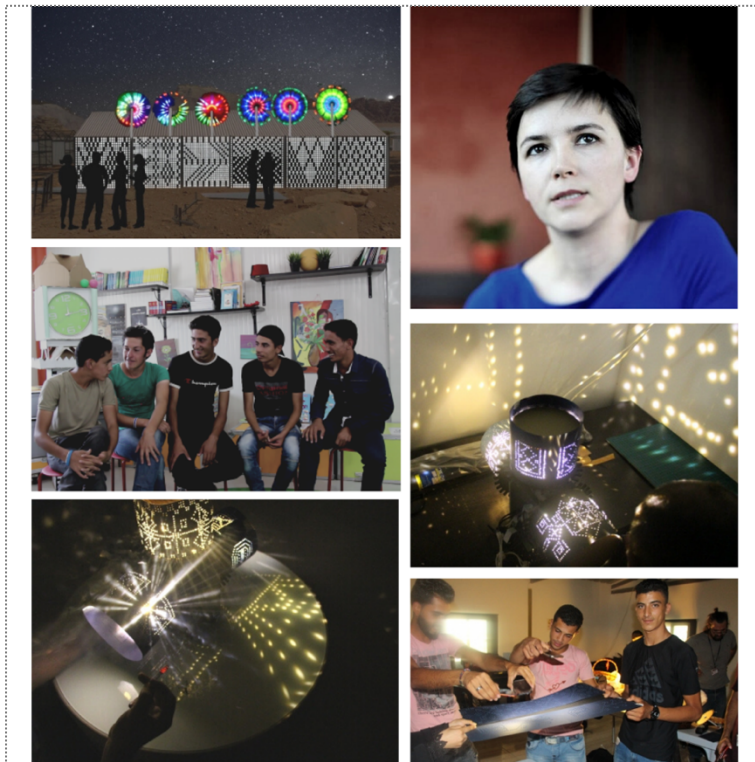


Figure 4.9 A collage of Lightweaver Project led by Azra Akšamija

This project generates an opportunity to reimagine shelter in terms other than its primary function of covering. Moreover, through this project, education is encouraged in this crisis zone; lectures on many specialties such as cultural history, textile weaving, calligraphy, and engineering are offered to residences in the camp. Overall the project allows people in refugee camps to have a say for their physical environment by involving them in creating immersive cultural spaces. This collaborative enterprise, which works on many directions, intends to promote hope through creative methods, nourish psychosocial support, and test experimental ways to cultural preservation.

It is possible to encounter works that focus on the cultural issues that Azra Aksamija addresses in different geographies with distinct perspectives and strategies. At this point, by locating traditionally disassociated subjects at the center of design,

Summayya Vally, co-founder and principal of CounterStudio, stands out. Summayya Vally, regards inclusivity, otherness and future as a field of potential rather than a problem. She constructs her design agenda by drawing from various cultural mobilities and multiple identities, including forced or voluntary migration. Vally's unorthodox work at her Johannesburg-based practice Counterspace has attracted international attention as well. In addition to being included in TIME100 Next list honoree as someone who will shape the future of architectural practice and canon, she has become the youngest architect who was commissioned for the design of Serpentine Pavillion in 2021.

Vally's multidisciplinary and multimodal work amalgamates various mediums of architectural practice including design, research, pedagogy, curation, and publishing. Within this diversity, her primary drive can be described as inventing designerly ways of expressing spatial experience of hybrid identities and contested territories, especially for African and Islamic context.

The intellectual formation of the design studio that Vally leads at the Graduate School of Architecture⁴¹⁶, Johannesburg demonstrates the reflections of this cultural identity-centred approach in education context. In collaboration with Thandi Loewenson, Nolan Dennis, Manijeh Verghese, Toniah Murray at the Unit 12, this design studio attempts to extricate the architectural potential of migratory and diasporic conditions by framing these as modern human experiences embodied both

⁴¹⁶ In partnership with the University of Johannesburg, the Graduate School of Architecture (GSA) is established in 2014/2015 by Lesley Lokko who also became the first director of School. Lokko was appointed as the curator of the 18th Venice Biennale of Architecture, set to open in 2023. Intersecting at the South African geography, Lokko and Vally extensively collaborates for various initiatives. Lokko was among the first list of selected women in this thesis. She was eliminated for close scrutiny in order not to prolong the discussion in this section, yet her approaches in decolonizing pedagogy is quite critical.

in space and substance. Thus, they aim to develop ‘new sets of architectural norms’ and provide material and spatial expression to these subjects.

∞

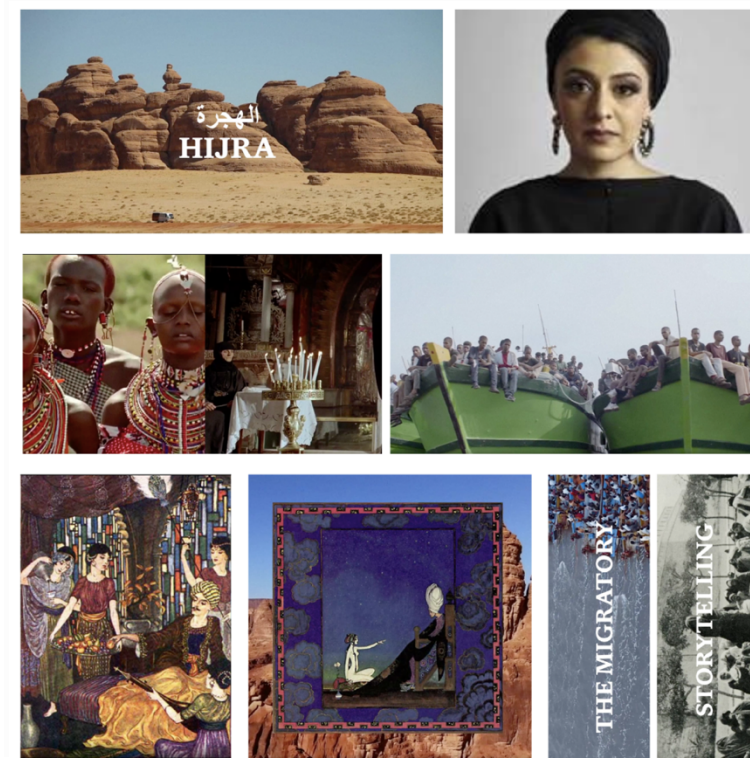


Figure 4.10 A collage of An African Almanac led by Sumayya Vally

Specifically, the design studio of 2019 *An African Almanac* deserves critical attention to better understand the pedagogical reflections of such an endeavor. Themed around the multi-layered Arabic term, Hijra, the semester seeks ways of expressing ‘the migratory, the diasporic, the mythological, the performative and the narrative’.⁴¹⁷ The juxtaposition of all these concerns can be exposed via digging the semantic layers with which the term has been associated. Referring to ‘emigrating,

⁴¹⁷ Counterspace Official Website, Hijra, <https://www.counterspace-studio.com/projects/hijra-alhjr/> (Accessed October, 2022)

passing’ or ‘coming’, the word has both Latin and Arabic roots and denotes Mohammed’s journey from Mecca to Medina. Etymologically, yet, Hijra is connected to the words ‘departure’ and ‘journey.’ Moreover, in Urdu it comes to mean ‘fluidity of identity’ or a ‘third’ identity, of gender and culture in particular.⁴¹⁸ In this definition, the body is understood to be ‘a literal site of transition’, a vessel through which culture and identity travel, a place where both are housed. By introducing this miscellaneous term in design curriculum, Vally aims to bring oppressed and silenced agendas to the view. Within the studio, archives of music, performance, languages, and digital allegories are considered as research sources in propelling learners to discover their representational instruments and to express their ‘own’ stories.

This design brief enables students to discover different contexts with novel approaches. Three examples can help explain this diverse formation. Gugulethu Mthembu seeks women’s expressions, which are traditionally confined with the domestic, by delving deep into the history of ‘representation of women in the public space’ and ‘public imagination’. For this, she looks into the pre-Islamic history of Morocco. As uncovered by this inquiry, the powerful position that Amazigh⁴¹⁹ women held in local communities leads to certain mythical narrations, influence of which is still felt in Morocco. As Mthembu remarks to describe her project, ‘Morocco’s eras of colonisation and even some of its current politics still carry these manifestations of fears and biases toward the power and representation of women’.⁴²⁰ Departing from this point, she reimagines ‘mashrabiya’, an architectural element that veils women in the home from the eye of the men. In this configuration she plays with both Arabic and Islamic codes as well as materialization of feminine identity.

⁴¹⁸ Ibid.

⁴¹⁹ Berbers, also called Amazigh or Imazighen are an ethnic group indigenous to the Maghreb region of North Africa.

⁴²⁰ Gugulethu Mthembu, The Port of Sihr, Unit 12, 2019, <https://www.unit12.africa/new-index#/gugulethu-mthembu-1/>

Chris Rojas's commitment to the design agenda takes place by a mobility of personas. Roja investigate the constantly changing landscape of animal species, rock formations, and cross-pollination and for this he assumes different personas, such as those of a zoologist, archaeologist, historian, or botanist. On the other hand, Roanna Moodley, aims to create a piece of architecture that undermines the one-sided, frequently heavily censored, and carefully curated 'democratic' political image of Morocco, which is spread by the Moroccan government in the media. To amend this, Moodley promotes a design intervention for greater participation and democratization in watching and reading the news via Makhzen: Radio Morocco. The initiative serves both as a source and a conduit for the dissemination of new narratives, terminology, settings, and forms that better capture the public's current political viewpoints. Spatially, it is a port of information and metaphorically it is conceived to be a linguascape, thus subsumes both 'cognitive (words / drawings / meanings) and physical (space / site / orientation) effects'. Both the siting of the project and its naming operationalize the critique of censorship that is developed in the project.⁴²¹

Enclosing and managing space, thus creating historical experiences and social relationships has been a role of architecture for centuries. As a result, translating the history of people whose primary experience is mobility rather than stability is difficult or indirect. Via both her pedagogical practice and design work, Vally operates within these difficulties, rather than despite them. She reverses long-lasting

⁴²¹ The project is located at the political underbelly of dar el Makhzen in Morocco's capital city, Rabat. Makhzen is the Arabic word for the King's authorities including the police, light brigade and army closest to him. It refers to both the physical site of the king's palace, mosque, and government buildings surrounding a public square, and the two thousand staff that live on the property. The word Makhzhen has connotations of censorship both historically and in present day Morocco. Roanne Moodley, Makhzen Radio Morocco, Unit 12, 2019, <https://www.unit12.africa/new-index#/roanne-moodley/>

impacts of cultural stigmatizations into productive tools to develop designs that communicate with their environment via underexplored values of these mediums.

4.1.4 Architecture as Collectivizing Technology

How can an architectural education that continues to define professional expertise in relation to the history of white, heterosexual, Euro-American male consciousness prepare students to function as effective professionals in pluralistic communities? How will students be sensitized to ‘difference’ when *they* are encouraged to suppress their own gender, race, and class identities in the process of becoming ‘professional’?

Leslie Kanes Weisman,
‘Diversity by Design:

Feminist Reflections on the Future of Architectural Education and Practice’

Collectivity is an organizational format that is alternative to top-down and hierarchical models of bureaucratic form. It promotes non-hierarchical distribution of power and responsibility. Therefore, it is a model based on participation and democracy. Though as directorial form collectivity appears to emerge independent of feminism, it becomes an important operational tool for feminists as evidenced in the history of feminist praxis. As opposed to earlier sections where feminist theories are elaborated with reference to certain concepts and concerns, this section pays close attention to feminist activism in elaborating collectivism. In its zenith, feminist activism has been also an experiment of collectivism in many senses. Current discussions and approaches to collectivism, though mostly without endorsing feminism, share some affinities with these earlier attempts.

Certainly, as exemplified by their activities at the late 20th century, the rise of collectivity has certain ties with the women’s disengagement from the New Left Movement in the late 1960s. These transitional periods between the New Left of the

1960s⁴²² and the burgeoning of collectivity in feminism of the 1970s via women's movement, or frequently termed as second wave feminism, offer valuable insights for the development of feminist mode of organization and action. In her thesis that focus on the relationship between 'the integrative function'⁴²³ in feminism and collectivity, Linda L. Light describes how the failures of the 1960s not necessarily led to but became catalyst for feminist movement in general, and feminist activism in 1970s.⁴²⁴ In effect, developing a sense of community was among the unmet goals of the New Left of the 1960s. Yet, despite its reaction to 'the impersonal bureaucracy of the larger society', a major portion of this movement was structured along its own bureaucratic lines, 'with small groups making decisions for large membership'.⁴²⁵ Therefore, egalitarianism and participatory democracy, which were within the ideological agenda of the New Left, could not turn into important organizational techniques in constructing even distribution of power.

⁴²² Not only the women's movement and alternative institutions grow out of the New Left, but this was part of a larger process of post-industrial, post-bureaucratic development, where the value of rationality is challenged via various ways from outside and from within the bureaucracies. (Simpson, 1972 as cited by Light, 1981). The radical activist movement of the 1960s, like many of the groups that followed in the 1970s, was organized in response to the vastness, the impersonality, the bureaucracy and the psychological and physical violence (real and potential) of the technocratic society. Theodor Roszak, *The Making of the Counterculture* (NY: Anchor Books, 1969).

⁴²³ For Light integrative function 'focuses on a synthesis of feminine and masculine polarities both in society and within individuals, on a re-definition and sharing of power, and on an emphasis on the feminine sphere in order to redress the present imbalance between the masculine and the feminine in Western society.' Though it overlap with radical feminism in many sense, it differs by including an emphasis 'on the integration of the so-called feminine and masculine in society and within individuals.' Hence, through its emphasis on democratization, collectivity shares many of the goals of integrative feminism. Linda Louise Light, 'Feminism and Collectivity: The Integrative Function' (unpublished master thesis, The University of British Columbia, 1981), p. 2.

⁴²⁴ This period is often identified as second wave feminism; therefore the history of feminist collectivity also provides an insight into second wave feminism.

⁴²⁵ Light, p. 6.

The most 'powerless' people experienced the movement's shortcomings most dramatically. Women discovered that they shared the same difficulties both in the movement and in their personal lives. These problems undermined the sense of community that the New Left aimed to create. As a result of their ongoing oppression and impotence, many women eventually began to doubt the ethics and efficacy of a movement aimed at attaining power for the people. Justified on the marginalization they experienced in the New Left, they looked for solidarity among other women. In addition to misdirecting the personal and not building egalitarian ways of performing, the organization, communication, and decision-making style were masculine, abstract, merely cerebral, aggressive, and indifferent to processual factors in the New Left.⁴²⁶ As Light claims, the movement 'emphasized the political and neglected the personal; it emphasized the intellectual and neglected the emotional'.⁴²⁷ These deficiencies in the New Left of the 60s led some people, notably women, to put their energies and hopes into the women's movement.

The practice of collectivity in the feminist activism in the 1970s, was actualized via important components and crucial among these was the construction of a sense of community. As the binder for women despite class and racial barriers, this sense is developed around 'a consciousness of sisterhood'. Meetings in small groups, consciousness-raising activities, and intimate personal interactions also helped achieve a feeling of community. In effect, by applying consensus for decision-making processes and highlighting process as much as the product, collectively run groups turn out to be more promising for the formation of community compared to hierarchical structures. On the other hand, the integration of women's lives in the

⁴²⁶ Patricia Armstrong, 'Marxism and Feminism', *Atlantis A Women's Studies Journal*, 4.2. (1979); Nancy Hartstock, 'Fundamental Feminism: Process and Perspectives', *Quest: A Feminist Quarterly*, 11:2, (Fall 1975), pp. 67-80; Shulamith Firestone, *The Dialectic of Sex* (New York: Bantam, 1970); Robin Morgan, ed., *Sisterhood is Powerful* (New York: Vintage Books, 1970).

⁴²⁷ Light, 1981, p. 8.

movement has been an important part for the development of community, which showed that collectivity functions both on societal and individual level.

While feminism provided a framework for women to unite, collectivity was one of the primary structures through which they organized. It helped feminism to achieve its goal of 'even distribution of power' and responsibility. Functioning on societal level, collectives do not lack structure, but they rely on more flexible structures over which members have some control. For this, they use certain techniques for equal distribution of power, responsibility and information. These strategies include a wide distribution of responsibility for the tasks among group members, individual accountability to the group for completion of specified work or for decision-making; redistribution of knowledge and skills through expert teaching of the unskilled, rotation of routine and leading jobs, and study groups. Additionally, meeting tactics are utilized to ensure that everyone is heard, and that the frequency and duration of each individual's speech are controlled.⁴²⁸

Collectivity resonates with inclusive aspirations of feminism. Interestingly, Linda found out that collectives are often all-women groups, and a high proportion of the written work on collectivity done by women.⁴²⁹ Though this demonstrate collectivity as a form of organization that women are predisposed to adopt, it is important yet to note that this inference is firmly tied to the historicity of the research. In other words, it concerns the fact that this research was conducted at a time when collectivity was a quite fundamental component of feminist activism in that geography and during that time period.

⁴²⁸ Light, p. 71.

⁴²⁹ This inference is made based on Light's study that she conducted in Canada. Half of the 40-odd collectives in the Vancouver-Lower Mainland area that Light examined were composed of all-women collectives, the other half including both women and men, and only two were all-men collectives. (Light: 1981, 15). It is important to note that Light's comments for the written work on collectivity comes from a period that is aftermath of women's movement in the 1970s.

The women's movement, or second wave feminism, had emphasized the importance of collectives and early feminist architectural organisations reproduced this commitment.⁴³⁰ Women's Design Service (WDS), The Feminist Design Collective, which later became the feminist architecture practice and discussion group Matrix are examples of important feminist design collectives of the late 1980s. These are followed by some other groups in the 1990s, among which London based muf and Australia based E1027 can be named. These groups collaborated and questioned traditional design philosophy because they believed that it ignored women's concerns in the built environment. In doing these, they explored strategies of collectivity.⁴³¹ For instance, Feminist Design Collective aimed to collapse the barriers between designers and builders. Having historical precedents in the Arts and Crafts movement, this goal had some success but it was and continues to be difficult to translate into the larger construction industry. Similarly, Matrix followed the policy of paying equal wages to all members without discriminating between architects and non-architects.

Both the history of feminist action and feminist design cooperatives suggest collectivity as a pivotal tool of operation. The insights resulting from feminist critiques can have various implications for architects. Collectively-derived approaches to design necessitates the inclusion of numerous players in different phases, and valuing process, as well as learning from others. Furthermore, it demonstrates intricate issues in planning decision-making processes, to distribute power information and responsibility equally. As these approaches extended from feminist circles into architecture culture, architects have begun balancing their responsibilities with the various parties involved in the planning and use of

⁴³⁰ Karen Burns, 'E1027: From Modernist House to Feminist Collective', in *The Design Collective: An Approach to Practice* Harriet Edquist, Şaurene Vaughan eds, New Castle: Cambridge Scholars Publishing, 2012), p. 69.

⁴³¹ Christine Wall, 'We don't have leaders! We're doing it ourselves!': Squatting, Feminism and Built Environment Activism in 1970s London. *Field Journal*, 7 (2017), p. 129.

structures. A feminist perspective to design fosters the blurred role distinctions between the designer and the client as well as the designer and the user.

An understanding of architecture that shifts building making into community making reverberates in the practice of many women in architecture.⁴³² By melting both the needs and means of communities in their practice, they portray different strategies that range from reinvigorating interventions to social innovation and tactics to achieve spatial justice. Operating within this diversity of approaches in rearming architecture as a collective endeavour, this section looks into the works of Rozana Montiel, Liz Ogbu, Patama Roonrakwit, Pelin Tan, and Noelia Monterio in detail.

Endorsing collectivity brings along valuing the sense of community, which have reflections in the built world as spaces that connects rather than separates. As Franck remarks closer spatial or visual connections between spaces help create a form of connectedness.⁴³³ The Mexican architect Rozanna Montiel scrutinizes this idea in *Comun Unidad*-Common Unity, a public space intervention project in Azcapotzalco, Mexico. Montiel observes the dividing function of the vertical separator structures which were built by the inhabitants to extend their private area. To create a commonality between the users of the surrounding housing settlement, she replaces the isolating function of verticality with the connecting potential of horizontally. To achieve this, some modules have been installed that are intended to function beyond covering. The facades of the modules are designed in a way to sustain different activities that can vary from climbing walls and playing nets to blackboards. Next to this module, Muriel suggests a multipurpose enclosed space which is now being occupied by children as a library. Thus, once separated cells have become a community space in the form of an extension of each individual housing unit. Hence,

⁴³² Rozana Montiel, Liz Ogbu, Patama Roonrakwit, Pelin Tan, Mariam Kamara, Noelia Monterio, Marina Tabassum, Michaele Pride, Tammy Eagle draw attention in this regard.

⁴³³ Frank, K. A. 'A Feminist Approach to Architecture: Acknowledging Women's Way of Knowing'. J. Rendell, B. Penner, I. Borden (Ed.), In *Gender Space Architecture* (London ve New York: Routledge, 2000) p. 295-305

the field which has been activated by acquiring a public character, manifests the power of design in bringing people together when operated with the idea of promoting a sense of community.

A collective approach to design practice and conceiving architecture as a product of community, rather than the specific artifact of a solo creative genius requires making room for the knowledges of other. At this point, the acceptance of subjectivity as a strategy for knowing allows personal experience and knowledge to be sources of information and design.⁴³⁴ Acting with such an understanding by acclaiming the knowledge of the *milieu* and the user, Brazilian architect and founding partner of Estudio Flume, Noelia Monteiro, deals with socio environmental projects in rural areas, around Brazil's Amazonas. Collaborating with her design partner, Monteiro develops a series of projects within which a close engagement with the community appears as the key. Critically, these projects aim to counter the pattern of vicious cycle caused by the forced immigration of local people to big cities for the opportunities of work. This economically forced displacement on the one hand creates the growth of slums in big cities; on the other hand, it results in deforestation in the region because community plays an essential role in protecting forests, their source of living. Moving from this, Estudio Flume's design strategies aim to create new opportunities for income generation by understanding the potential and daily life of these communities. Thus, to prevent immigration and deforestation.

The studio's engagement with collectivity is multifaceted. It includes design strategies, design methods and the design of spaces by prioritizing collective modes of thinking and creating. For instance, for the Cooperative of Women Cashew Producers where they transform a small house into an extension of workspace, the design process includes a workshop with the women workers. Thus, it gave the users the opportunity to produce their own designs and verbalize their needs. On the other

⁴³⁴ Ibid.

hand, as Monteiro explains, the workshop process enabled the design team to better comprehend the process and daily routine in the factory.⁴³⁵ Since small communities lack cultural structures, the designed extension was envisioned in a way to become a gathering area for the community. This is just a part of a series of projects Estúdio Flume developed for the small communities inside the states of Maranhao and Para, in Brazil. Based on the extent of their work, it can be claimed that Monteiro and her partner Christian Teshirogi redefine architecture, urbanisation, and the construction of resilient structures to add value to the lives of communities and improve their living and/or working conditions in rural areas.

In initiatives that embrace the strength of collective action, the role of the architect is often seen to be redefined. Within this expansion, Liz Ogbu's way of working with communities has interesting insights. Liz Ogbu, who describes herself as a designer, social innovator, spatial justice activist rather than an architect, create peculiar solutions to transform unequal environments across the world. By operating at the intersection of racial and spatial justice, she engages with underserved communities and operationalize design to spark long-lasting social change.

Collaborating with two other design teams⁴³⁶ and many other groups for the project called *Now Hunters Point*, Liz Ogbu provides design strategies to transform San Francisco's Bayview Hunters Point into an active and diverse community environment. The site to be revitalized has a industrially rooted history; it is the site of a former power plant, but now cleaned and removed. Yet, this disinfestation process has become so dominant that the future of the site was overlooked. It was the aim of *Now Hunters Point* to co-create this future by integrating the mixed community of the site which includes 'a historical African-American community, an

⁴³⁵ Case Study Webinar, Resilient Architecture, Respectful Urbanism with Estúdio Flume
<https://www.youtube.com/watch?v=iFNRxs5V1SQ&t=1859s>

⁴³⁶ These teams are a+d: a practice that describe themselves as a blend of architecture and activation, and RHAA: a landscape architecture, planning, and urban design practice.

artist community, a growing middle-class community and a still active industrial workforce among others.



Figure 4.11 Community activities - Now Hunter's Point Project by Liz Ogbu

What makes this project relevant to discuss the potential of design as a collectivizing technology is hidden in the way the 'site activators' has mediated the process. Different from synthetic and unproductive community meetings, the design team collaborated with another group called Storycorps. Thus, they have integrated and intrigued the community members to tell their stories. The storytelling event was curated to vibrate a cozy feeling to the storytellers who are thought as active creators of the site. It was also an attempt to provide a new layer of experience to the place that was strongly associated with the now-gone power plant. Hence, the mobile booth

where the storytelling activities took place designed in a way to frame the empty spot of former power plant and allowed the community to share not only their stories but also their dreams for the future of the site.

In addition to that, for the physical arrangements surrounding the mobile booth, local youth was hired. Working was combined with interviewing. The sharing of individual memories within the booth not only created a personal link with the site but it also helps Liz Ogbu to establish more close relations with some members of the community. The social gains of the listening booth were further reinforced with other activities, such as listening parties where the recorded stories were listened by other members of the community. These events made otherwise-silent group into an active mood. As Liz Ogbu explains, this triggers disavowal of some temporary and permanent arrangements for the site by the community and leads to the site's appropriation.

Originally trained in sociology, Pelin Tan's engagement with architecture takes place in different settings, mostly in educational and research contexts.⁴³⁷ Employing hybrid methodologies in research, her artistic and architectural projects center on labor, urban conflict and territorial politics. Tan's theoretical productions underpinned by 'communing practices' help better situate collectivity in relation to architecture. Through theoretical engagements, she constructs a new way to think about (re) production of architecture by employing the potential of collectivity. She explicates how the role of places, buildings and other structures can become the loci of communing practices. *Gardentopia* showcase an intriguing example of communing by activating 'forgotten and deserted areas in the suburbs'.⁴³⁸ The project is an effort to recover the 'commonality in gardening and cultivation'

⁴³⁷ Tan taught at architectural schools including Architecture, Culture, Technology Program at School of Architecture at MIT, The Hong Kong Polytechnic University, Akademie der Bildenden Künste Nürnberg.

⁴³⁸ Pelin Tan, *Gardentopia*, Materia 2019. <https://www.materia-basilicata2019.it/en/programme-2019/themes/utopias-and-dystopias/1411-gardentopia.html>

techniques, which involve ‘collaboration, belonging, and care’. Tan finds that these practices have the ability to strengthen local community.

Collectivity can be said to have an important function in design processes, which also extends to the appropriation in use. Patama Roonrakwit is a Thai architect, who has been working with the poor communities in Thailand for more than two decades. These communities are frequently from the developing countries in Asia and they live in slums. In Roonrakwit’s practice working with limitations is crucial but she conceives this as a potential to spark new ideas. The most critical aspect of her approach underlies on the emphasis she places on ‘understanding’; she remarks that ‘when you work with a community, what you see and what other people see is not the same’. With an example of a house built by using the cans she unravel the diversity of perspective that can be developed against any matter, as her story of the house makes one to understand this can be rubbish for some who define architecture as a high class enterprise, it can be an asset to sell for some who is struggling to find money, or an artwork for some who can appreciate the idea and impressed by the aesthetic quality of the detailed and precise construction of it. This diversity of perspectives hints at the Roonrakwit’s approach to design as a collective endeavour. Rather than dictating design decisions at later phases, she starts the process of collecting information right from the beginning. This is also a process where a mutual trust is built. Since working with communities, to defy their insecurities for the figure who seems to have power is not always easy. As Roonrakwit explains this unease requires her to develop some strategies to get involved in their socially protected fields. For one, she explains that she starts working with children who are less hesitant members of the community. As she clarifies, her active and effective communication with children becomes an important step for their parents to be included in the process with less hesitancy. Not only the physical but social information from children shapes her way of looking at the site and understand the milieu better. For another project that took three years, she had to work with a mixed community consists of both Muslim and Buddhist people, and the community had an intense classification based on the level of poorness. She expresses that it took 6

months for her to pass into a firm dialogue with community members and she has to proceed via engaging with grassroots within the grassroots.



Figure 4.12 A collage of Roonrakwit's Collective Design Process

Similar to starting the process by working with children, Roonrakwit develops different strategies to defy the challenges of working with poor communities. These challenges are primarily related to the belief that the built environment and housing are not basic needs for these people. Roonrakwit adopts it as a mission to encourage them in the way to show that they can be active shapers of their spaces. Through a 1:1 model, which the community embarks on to construct together, she aims to encourage them and uses the link between 'to build a structure and to build a

confidence'. This 'co-powering'⁴³⁹ helps trigger the community to transform their environment and improve their houses. It also creates an atmosphere where individuals are encouraged to be themselves and form their own perspectives, but still acting together with the collective.

The concept of collectivity lies at the heart of Roonrakwit's practice. She engages in building strength through collaboration and cooperation. In this processual approach, the role of designer shifts from decision maker to synthesizer. By being a part of the community, architect does not dictate but develops tools to understand the needs and the *milieu* better. Seen from this perspective, architecture appears as the product of a collaborative effort and rigorous negotiation, rather than imposition. Shaping the character of decision-making process, the requirements, modes of engagement, and most crucially the perspectives of the inhabitants are being shaped as well. Thus, design becomes a fluid process that keeps reverberating in the use of spaces.

4.2 Mediatized Practices of Online Collectives by Women in Architecture

Digital media generates new channels of communication where being involved in collaborative activities for broader groups of people becomes unprecedentedly practicable. This suggests a new condition for architecture where the drive of common values and aims enable an organization to be formed quite easily. Moreover, in some cases, digital media becomes the only environment conditioning the existence and activities of the organizations. In other words, including those that are formed around the discipline of architecture, organizations increasingly perform their initiatives and activities through digital media. Not only specific institutional or informal collectives, but more temporary mass organizations use the potential of

⁴³⁹ Architect Liz Ogbu uses this term to explain the mutual construction of the capacity of handling in the face of problems. Liz Ogbu, Guest Lecture: Liz Ogbu | Studio O. 2018. Youtube Video. University of Newcastle CESE. <https://www.youtube.com/watch?v=mT6Oow3eXKc>

these tools. In fact, this mobility is one of the most distinctive characteristics of the fourth wave feminism as exemplified in hashtag activism called #metoo. In this framework, digital media acts not only as a form of archive but becomes an environment *per se* that facilitate a certain way of engagement with a wider public, and thus expand these organizations' projection within the discipline. Nevertheless, the digital existence of architectural organizations cannot be taken for granted as virtualized online communities. Notably, the varying values behind these organizations, their media bounded practices and the way they publicize certain agendas deserve critical attention to better understand reflections of the fourth wave feminism for architecture. It is in this niche that this section aims to map out the online presence of various primarily non-Western organizations that focus on women in architecture.

Reproductive and circulatory formation of the digital media affects the discipline of architecture in various ways. As Colomina observes, it is with media that the audience of architecture enlarged; the user is not limited to people who use buildings no longer, the reader, the viewer, and the consumer are all included as users. In line with this, 'the ways architecture is 'produced, marketed, distributed and consumed' have a constituent role in the 'institution of architecture' and thus inevitably linked to the perception and definition of architecture's role in society.⁴⁴⁰ Still, this expansion is not limited to the architecture's consumption as object. Transformation of 'institution of architecture' with media brings about new territories for architect subjects and their manifold operations. As a catalyzer, digital media facilitates the formation of new groups of architect subjects with specific motives. Furthermore, by providing an arena of communication, it enables these groups to manipulate how they articulate their agendas to a wider architectural audience. Due to the intrinsic characteristics of the medium, digital media demands the analytical tools that would

⁴⁴⁰ Beatriz Colomina, 'Architectureproduction' in *This is Not Architecture*, ed. Kester Rattenbury (London-New York: Routledge, 2002) 207-221.

fit with its formation and potential. Hence, the present study links its own approach within meta theories on digital media via the concept of mediatization, which is explored in Chapter 2. Furthermore, it attempts to uncover diverse objectives and functions of these settings, as well as how they are structured.

Due to the interactive configuration of digital media, the transition from a viewer to a performer, from a reader to an author, is quite easy. For this reason, revealing these tactics and exhibiting their differences are essential to estimate the formation, sustention, and dissemination of certain ideas within the discipline. If each organization is a node, revealing these tactics enables to portray the expansion of the node; thus, its potential footprint in the discipline. The media practices of organizations for women in architecture are not merely a mediatic issue, 'what' is performed via media, namely the agendas that these organizations put forward deserve no less critical attention. Doubtlessly, there are certain links between the exhibited agendas and the intellectual accumulation of feminist scholarship.

Even though the main aim of these organizations/communities seems to bring women architects together, to increase their visibility, and reclaim the power of women architects, they focus on different groups, they follow different paths, and most importantly they have disparate values in attaining these goals. In other words, the underlying *code* differs from one organization or community to another. Based on their diverse theoretical positionings, these organizations can be said to function as autonomous sub-domains of architecture's social ecosystem. They operate as 'fields'⁴⁴¹, as intermediate environments in between organizational and societal levels. In dealing with this, the permeance of the 'field'; it uncovers the opportunity that is allowed for the audience/user/participant/performer to become an active agent in the formation of the field.

⁴⁴¹ Pierre Bourdieu, *The Field of Cultural Production*. Polity Press, 1993.

4.2.1 Social Networking Platforms

Social networking sites not only guarantee an ease of access to masses, but they enable interaction with a specific community without any upfront organization, corporate identity, and additional expenses. Nevertheless, some collectives use these online environments to provide an insight into their organization and to represent their offline events. For instance, important women in architecture collectives from Western context, such as ArchiteXX (America), Parlour (Australia) and Part W (UK), all actively use social networking sites Instagram and Twitter. In a similar fashion, UK-based group Afterparti, which tackle with urban space from the perspective of identity and race, remediate both their critical content and events to masses with Instagram. All these examples embrace social networking sites as back-up mechanisms or a pre-requisite for the fast dissemination of the calls and events. On the other hand, collectives from ‘peripheral’ geographies that do not have the institutional structures of these examples for various reasons, but still aim for solidarity, empowerment, visibility and support in the built environment for women, benefit from social networking platforms as the ‘main’ communication environment. In this context, six groups, which predominantly produce content in their own language, and one group which produces content in English, have been identified in the research.

Online communities that mainly address to specified groups of women in a certain geography tend to name themselves with this denoting character. Alternatively, they can gather via certain shared values such as religion. In that regard, Muslim Women in Architecture, whose three founders are all linked with the United Kingdom by their education and/or practice, differ from these geographically delimited groups both by its naming and by producing content in English.⁴⁴²

⁴⁴² In European context, specifically in United Kingdom, an increasing number of women collectives draw attention as exemplified by PartW, Afterparti, Women in Architecture United

Muslim Women in Architecture (MWA) is a networking and collective that is founded in 2020 by three young female architects: Tahin Khan, Zahra Mansoor, and Rim Kalsoum (fig. 4.13).⁴⁴³ The group has no relations with larger institutional bodies. Since they also do not have an official website, all their organizational existence depends on the tools and other interaction mechanisms enabled by social networking site: Instagram. Via this platform, they fuse the perspectives of Muslim women architects and the female spatial experience under compelling conditions. MWA is a fresh initiative which is active since May 2020; yet despite this short history, what and how they express silenced experiences of women are worthy of critical attention. In particular, the group's contribution to the London Festival of Architecture 2020, and their techniques of presenting this contribution require a more detailed elaboration for the scope of this study. For the *London Festival of Architecture*, MWA devises four different forums that would take place online.⁴⁴⁴

Kingdom, Women in Architecture Northern Ireland and many others. Among these, the study focuses on Muslim Women in Architecture due to hinterland of this collective in non-Western, predominantly Middle Eastern and Asian geographies. Yet, the founding members of the collective, are all linked with UK either via their education and/or practice. This concentration around the United Kingdom indicates a certain level of activation for the feminist issues for this society. This is not surprising when one recalls the feminist groups and architectural practices in the UK in the last decades of the 20th century; New Architecture Movement (1975), Matrix Feminist Design Co-operative (1980), Women's Design Service (1984).

⁴⁴³ Its founders are linked with the UK primarily via their education at the University of Westminster; two of them continue their architectural practice in the UK. One of the early posts of the community on the social networking site Instagram gives insights into the identities of the founders: 'Tahin Khan is a British Bangladeshi Part 2 Architectural Assistant at ArchitectureDoingPlace. She completed her Part 1 and 2 at the University of Westminster.'...'Zahra Mansoor is an independent architectural designer currently based in India. She met fellow co-founders Rim Kalsoum and Tahin Khan while doing her Part 1 at the University of Westminster'...'Rim Kalsoum is a British Syrian Architectural Assistant based in London. Having completed her RIBA PART II at the University of Westminster, she currently works for Golzari NG Architects.'. As of 2022, the collective has 3k followers on Instagram.

⁴⁴⁴ Majlis is Arabic and Persian term which denotes community gathering.

These forums are uttered as Majlis #1: Unsafe Spaces, Majlis #2: Safe Spaces, Majlis #3: Gender and Space, and Majlis #4: Future of Safe Space.



Figure 4.13 An illustration of MWA's Founders

The content of these meetings, Majlises, reverberates an intersectionality consciousness which seems to be at the core of the community. By pointing to the commonality of being Muslim, the group already draws attention to a particular group of female architects. The background of the founders, as well as the content that is being published, indicate a condition of being a minority within society.

To better understand the intersectional recognition within the broadcasted substance, the four forums envisioned as part of LFA can be scrutinized in detail. First of all, these forums focus on the issues around 'safety', a prerequisite for a healthy environment. Within the forums, MWA give voice to people from varying geographies and enable them to present projects that tackle social and environmental sensibility. Thus, the impact of inequalities on social fabric, the possibility of providing alternative experiences, and the potential of architectural interventions to overcome these inequalities constitute the core of all four forums.

While these meetings cover projects and research around the issues of ‘constructed boundaries’ by and within cultures, the method of introducing this intersectionality cognizant substance to a wider audience is thought-provoking. Each forum is consisted of three steps that are named as Research, Process, and Discuss. This structuring highly depends on the purposeful inclusion of the participants. First, the viewers are stimulated to engage with the theme of each Majlis on a deeper level; for this, the viewer/participants are invited to do research. By providing additional media, such as readings, podcasts and films selected for the theme to be explored, MWA implicitly guides the research. By this ‘pre-Majlis routine’, the viewers/participants are prepared for the topic of discussion. This is followed by what is called a Process, where the participants are asked to come up with questions upon the research and seek answers in the form of a sketch. By framing the process as ‘this question is yours’, the organizers open the process to the performance of *informed* participants. Lastly, in Majlis, all participants are invited to discuss the issues that are addressed after the presentation of the invited speaker.

In sum, from the substance to the process of its circulation the media presence of this community evokes what is referred to as ‘an intersectionality consciousness’. Constituted by discussions around safety, the substance takes different cultural settings into account; these vary from Newham/London to Karachi, to Bosnia and Herzegovina. Though it appears in differing nuances in other meetings, gender becomes the main topic of discussion on the third Majlis with the problems of disbelonging, woman as constructed particular social subject, and exclusion of women from public spaces. Yet, a close examination reveals that in-depth research for the experience of females of minority groups remains unaddressed within the projects and research-led practice presented in the meetings. Thus, even though, the community’s concerns are expanded in a way to highlight the experience of other forms of inequality, one expects to hear more about the role of architecture and the use of space in particular cases where gender intersects with other disparities related to race, ethnicity, sexuality or nation.

Though there are a surprising number of organizations and projects with the cognizance of gender disparity in South America, yet it is possible to come across with some other women architecture organizations on the social networking sites, particularly on Facebook. The community page of NGO *Mujer Arquitecta* (Women Architect) from Chile as well as *In_visibilidad De La MUJER* (WOMEN'S In_visibility) take central stage in this regard. Interestingly, it is possible to find certain commonalities between the disseminated content in these groups and the themes explored in the individual practices of women in architecture. For instance, *Mujer Arquitecta* announces the launch of '4MA: Integrative Ecosystem Architecture' alliance, which is made up of prominent Chilean architects Ana María Dávila, Patricia Durán, Paulina Villalobos and others. Even before that, they organize another online a conversation with the theme of 'Climate Change and Gender',⁴⁴⁵ developed around the questions of 'does climate change affect everyone equally? How does it affect women? What does a gender perspective contribute to fighting and adapting to climate change?'.⁴⁴⁶ In effect, from the early June to late October in 2021, all their posts are related to these environmentally ingrained contents. Furthermore, the collective called *In_visibilidad De La MUJER*, which is part of *Critica E Historia Da Arquitectura* (Criticism and History of Architecture) a course that is being taught at CAU Unila, Universidade Federal de Integração, Brazil. The work, analysis and other content broadcasted in the page form an archive of knowledge since 2015. It is possible to come across with the works of women in architecture that are examined in the present study. For instance, Mariam Kamara

⁴⁴⁵ The description of the invitation post as follows: 'This Friday, June 11 at 2:00 p.m. (Chile) we invite you to connect through our Facebook to our first #ConversatorioMA 2021, this time with the theme of 'Climate Change and Gender'. (translated by the author using google translate)' The post dates to June 8, 2021. Accessed October, 2022.

⁴⁴⁶<https://www.facebook.com/MujerArquitectA/photos/a.1673621152677058/4119373051435177/>

and Lesley Lokko can be mentioned as the overlapping names between the rich content archived in the page and the women addressed in here.

Two facebook pages from Middle East also draw attention. While (women and architecture) نساء و عمارة is a profile from Iraq, it disseminate content rather randomly and without a strict agenda. Similarly, the collective named IranianWomenArchitects regularly broadcast content in Persian on Instagram. In these posts, it is seen that the profiles of different Iranian women are promoted to increase their visibility. While the institutional structures do not exist, as the main communication space for specific groups social networking sites provide a convenient way for organization, empowerment, visibility and support. Though partially, this overview conveys the existence of such a potential.

4.2.2 Project Websites

Women Writing in Architecture is a project website that comes into existence as a result of a collaborative process among Helen Thomas, Sarah Handelman and the website's designer Lizzie Malcolm. The method of content collecting was framed and guided by an advisory board, and since then, both men and women have been invited to a number of round-table conversations and to recommend writings. The only requirement is that the piece itself be written by a woman. Though these women behind the project are not from the geographies delimited in this study, they do not take any stage on the project's website neither do the formation reflect any other further connection with their positionality. Moreover, the website includes the work of women in architecture from various geographies and is open to create new collections and annotations, thus portrays an all-encompassing outlook. Consists of three main compartments, Women Writing in Architecture anonymously and inclusively engages the user with a complex content. The landing page of the project, which is highlighted as Citations, provide a database of texts on architecture authored by women, this section constantly forms an ever-growing archive.

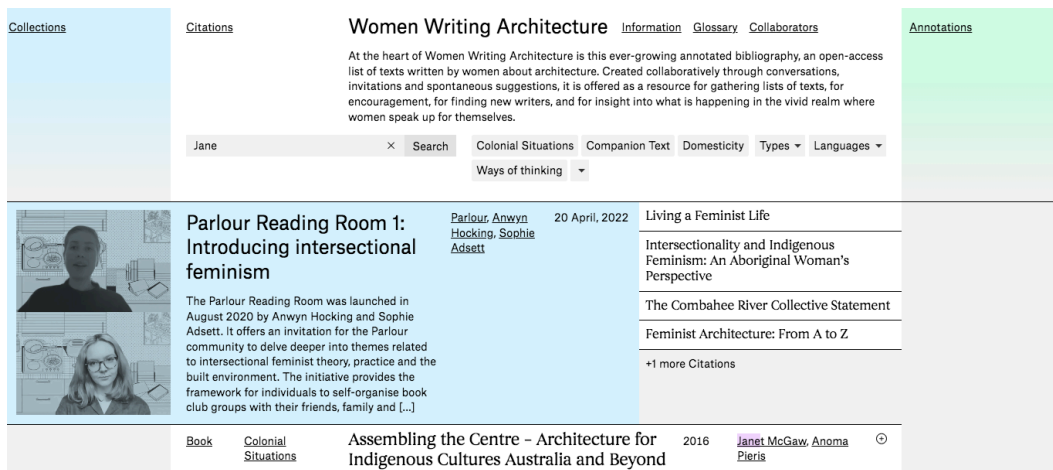


Figure 4.14 The homepage of Women Writing Architecture

The website structuring is intriguing; it enables different combination of connections and entanglements that could be created online. Compared to books and periodicals its design exploits the impulsive and accidental potentiality that digital media offers. Dynamic interweaving of texts, writers, and readers, made possible by effectively configuring the side bars, collections to the left and annotations to the right. the navigation in the website is idiosyncratic and the platform can be used in a variety of ways. While searches for certain authors, subjects, text kinds, or titles are possible on the bibliographical references of the landing page, all of the texts in the list are either included in a collection on the left in blue column or annotations on the right in green column. Thus, collections provide the contexts of the texts and annotations hint authors who read and reflect on them. In many ways, the project is reminiscent of ideas professed by Donna Haraway, who is a supporter of using multidisciplinary cross-references to think in order to produce knowledge that encompasses a wide variety of viewpoints.

Un dia Una Arquitecta - One Day One Architect is another project website that aims to assign visibility for the contribution of the largest possible number of orientations,

backgrounds, times and ideologies of women in architecture. In that regard, the contribution of women from diverse practices such as architectural, urban and landscape projects, technology, curatorship and publishing, artistic production, politics, management of the social habitat, theory and pedagogy are included.

In addition to its core writing team which is made up of Cecilia Kesman, Florencia Marciani, Inés Moisset, Gueni Ojeda (Argentina), Zaida Muxí (Spain), and Daniela Arias (Uruguay-Spain); the project's regular collaborators are mainly from South Africa, including women from countries as diverse as Argentina, Ecuador, Spain, Peru, El Salvador. The intersection of these various countries, Spanish is the native language of the content produced. The website provides the information of the highlighted women in chronological and alphabetical lists. In addition to this Index, with written work, offline events and web directories to related publications and similar web environments of interest, the platform functions as a crucial repository of knowledge.

After the first year of the website, the objective of presenting one woman profile per day has been turned into a project called 'Women Architects on the Web' by the editors and writing team of Un Dia Una Arquitecta. In 'Women Architects on the Web', the group cooperates with other organizations such as Wikimedia and Col.lectiu Punt6 (Barcelona, Spain).

The project relies on the synergy between this collection and the International Archive of Women in Architecture. Images and audiovisual materials provided by the archive support the outline of projects by the selected women and their bibliography. Moreover, by engaging different online platforms, such as Twitter, Facebook and Wordpress, the project strives to maximize its impact. As reported in the project book, in the first year of the Un Dia Una Arquitecta, 366 biographies were posted; the blog had 400,000 visits, and 11,000 followers on Facebook.

4.2.3 Support Systems

Apart from networking, inspiring and informing, one more critical function of online collectives can be identified, which is to provide support systems. Certainly, this requires a more formal organizational structure than social networking, so these communities often collaborate with other NGOs and institutions. Two projects from different geographies offer insight into these support systems.

Soy Arquitecta - I am Architect, is an organization aims to assist women in architecture by navigating their career paths with trainings, events, conferences and other modes of professional support. The group advocates for the inclusion of women in positions of leadership and decision-making. To this, they direct, support, and collaborate with network members to bring about positive shifts that advance gender equality and diversity.

Besides providing means of networking and encouraging visibility with awards, the group collect data by surveys and produces reports. Critical in using the potential of digital to media to reach masses, this survey is intended for all women who identify themselves as architects and thanks to the collection of a large amount of data, the situation in the sector is revealed by significant insights. Some of these insights are worthwhile in demonstrating the gender disparity in architecture in the context of Argentina.

According to this report⁴⁴⁷, in 42.6% of the spaces where women architects work, men dominate the overall population; while only in 15.1% of the cases women population is predominate. In this disproportionate structuring, the most masculinized sector appears as the private sector (42.6%) and the most feminized is

⁴⁴⁷ Soy Arquitecta, *Encuesta Arquitectas Argentinas: Documento de Trabajo*, 2022.

the third sector (31%)⁴⁴⁸ and the sector with the highest parity is the state (45.8%). This result is intriguing in many senses. Third sector, which is defined as the deployment of activities in the social, cultural and political field of private non-profit organizations, is a long-standing phenomenon in Argentine's history. Yet it still echoes many of the arguments presented in this study for how women in architecture care for their social, cultural and ecological environment.

As women's ideas on equal pay, the survey results suggest that only 22.2% of the female architects surveyed believe that everyone earns the same for the same work done and 49.2% believe that men earn more. Furthermore, more than half of the female architects consider that they have lost job opportunities due to preference for male persons in decision-making places. The issues of sexual harassment and violence also find place in the survey. Almost half of the female architects surveyed declare the cases of sexual harassment, mistreatment and/or workplace harassment at work. Again, almost half of them seems to suffer from discriminatory language at the work environment. Lastly, for the attempts to provide gender equality only 12% of the total architects state that there are equity policies of gender practiced fully in their work environment.

⁴⁴⁸ The deployment of activities in the social, cultural and political field of private non-profit organizations -what today is usually called the 'third sector'-, is a long-standing phenomenon in Argentine history.



Figure 4.15 The cover of Survey Report by Soy Arquitecta

Started in 2017, 400 Hundred Forward is a comprehensive program to introduce young girls to architecture. The program seeks to provide support with a strong sense of advocacy. The reactionary tone reflects from their heading which poses a critical question: ‘Did you know black women represent only .03% of licensed architects in the United States?’. The group claims their aim as reversing the system ‘that was designed to oppress’. For this, they primarily target at providing sources and support systems for underserved and underrepresented children groups to guide their career paths. In addition to involving children, the collective helps college students financially with scholarships and wrap-around services⁴⁴⁹. They also cover the

⁴⁴⁹ Wraparound is a strengths-based planning approach used in a team context to interact with children, youth, and their families, according to the California Department of Social Services (CDSS). Wraparound adopts a strengths-based, needs-driven approach to care as opposed to the conventional service-driven, problem-based approach. Source: California Wraparound. <https://www.cdss.ca.gov/inforesources/cdss-programs/foster-care/wraparound>

licensure and education material expenses for African American women in architecture.

In effect, the organization is part of a project that aims to change cities via youth, thus it received a grant with this proposal from the John S. and James L. Knight Foundation. The primary function of the website is to deliver resources in the form of a series of guides, which emerge in connection with other platforms and organizations. For instance, the guide that National Council of Architectural Registration Boards produced to help students to consider a career in architecture, a summer camp organized by NOMA, K-12 Pathway initiatives of American Institute of Architects are shared by 400 Hundred Forward under the section of resources.

Since the collective focuses on young girls and African American women in architecture, the advocacy for the community is one of their primary drives. The founder of the collective, Tiffany D. Brown, is also a board member and as of 2021, the Executive Director of Minority Architects NOMA, which is an organization that aims to minimize the effect of racism in architecture.⁴⁵⁰

The website of 400 Forward endorses a ‘theme pyramids’⁴⁵¹ structure, which goes from one general subject to more specific subtopics navigated by a menu bar on the upper right corner. In the menu, ‘About’ and ‘Resources’ options provide detailed information and important resources for career development. ‘The Media’ and ‘Sponsors+Partners’ show how the collective is connected with a wider public and other initiatives. Lastly, contact and donate on the navigation menu appear as the

⁴⁵⁰ ‘I want to give everything I have learned to girls who are walking my path. I want to make sure they know it’s up to them to advocate for our communities.’

⁴⁵¹ In this type of site architecture, the home page would be the top of the pyramid, the second row would represent subtopics that are linked from the main navigation, and the interlinked pages from those navigation pages would act as the remaining rows in the pyramid. This is the best site structure in 2020, according to Google by Iris Hearn.<https://www.impactplus.com/blog/best-site-structure-google> .

only possible interaction with the collective. It is either by filling in the form with a message guaranteed to be transmitted to the founder or donating via directed paypal address. The website of the collective functions as a medium that gather different resources for the target group. Though disseminating guides echoes the informative guides that Women's Design Service produced in the 1980s, their support seems to function primarily by offline mechanisms.

An interesting example of a website that reflects a support system is from Lebanon. Warchee is a Beirut based NGO with an intention to create an 'ecosystem where Lebanese women can thrive through learning a new skill'. The project aspires to provide women with income to encourage their financial independency and to heal them through community projects. Warch(ée) was established with the goal of integrating women into the construction industry and other fields that they may not otherwise have access to. This women-led workshop aims towards a more inclusive workplace in the fields of architecture, engineering, urbanism, landscaping and construction. The designs of Warch(ée), which include furniture, toys, and accessories, incorporate an ecological perspective. Therefore their work model is based on zero wood waste; they design from nature to nature: wood on wood joinery and detailing, without chemicals and metals. As a bussiness model, the group endorses sustainable social entrepreneurship.

The project's primary objective for the first year is to train 35 women into carpentry. These women are planned to build 100 prototypes to be donated to destructed houses in Beirut. Their goals for the second year include the selected women to start their own small businesses which would continue to receive support and guidance from Warchee. In addition to this, the group aims to reach 10000 homes via carpentry by offering crowdfunding. In the third year, the productions of first two years are planned to be sold through the platform, to increase the number of women trained in between 50-100 and to form 35 new women to be trained, and to optimize the process as they continue.

The online platform of Warchee provides stories of woodworkers as testimonials in the form of videos. Rather than completely organizing online, Warchee uses both their website and social media accounts as showcases where their work and vision can be disseminated to a wider public. In that regard, Warchee differs from 400 Forward in the way it lends support. This women oriented NGO demonstrate an interesting and hopeful way of organization that does not primarily act via media, but use it as the outlet to vibrate this hope to a larger community and as a place to meet their prototypes with interested contributors.

4.3 Situated Practices

This chapter discusses various architectural practices by women that question, confront, project, strengthen, empower, copower or propose alternative norms. Online and offline, in-situ and mediated, these practices transcend disciplinary boundaries and provide special interaction tactics and new ethical codes for the discipline. Discussions in this chapter demonstrate the position and performance of architecture in the face of various challenges that form a critical reflection in feminism as well. These reflections, which in turn create a plurality within the movement, are both discussed and revealed in relation to myriad architectural productions.

The significant practices examined in this chapter are claimed to be proactive due to two interrelated reasons. First, as reflected with reference to feminist thought and action, these practices function as architectural responses to critical frameworks developed to address long-standing problems. Second, they demonstrate the ability to act within or against forces that shape their effective milieu. In other words, these practices essentially contain techniques and strategies that tend to adapt to changing conditions. By organizing through process, embracing the flexible and inclusive

ways of being, which is provided by feminist frameworks⁴⁵², they are resistant to the future, that is, to different uses, possibilities and scenarios.

The chapter provides insight into how the shared concerns between feminist theory and problems of the century are embodied in the practices of women. These insights lead to the formation of four themes, which appear as coping mechanisms with the current condition. Beyond any doubt, practices under these four themes largely overlap with one another (Fig 4.12). These superimpositions occur to a greater extent between the ecological and technological and the cultural and collective. Moreover, as the extensive postcolonial and decolonial debates on the cultural reparation theme point out, some inferences are too fresh and exceed the scope of the present study. Similarly, the issue of collectivity resonates with other influential paradigms such as participatory design. In order not to lose sight of the study's main axis, these discussions are excluded. There are many other women who played an important role in the formation of categories though not included in the in-depth discussions in this chapter. While Figure 4.16 reflects this larger group, Figure 4.17 demonstrates the group that is examined in detail.

⁴⁵² As Petrescu furthers with reference to Brigid McLeer's words: 'The task of feminist reconstructions is to figure [this] unintelligibility as 'a method of invention a process, a 'rethinking', that reorders the social, political and material culture'. It is a method that acts from a feminine position understood as 'a remote position, necessarily outside and tangential, that mobilises that position as an alternative place, not separate from, but active upon, dominant sites and discourses'. Petrescu.

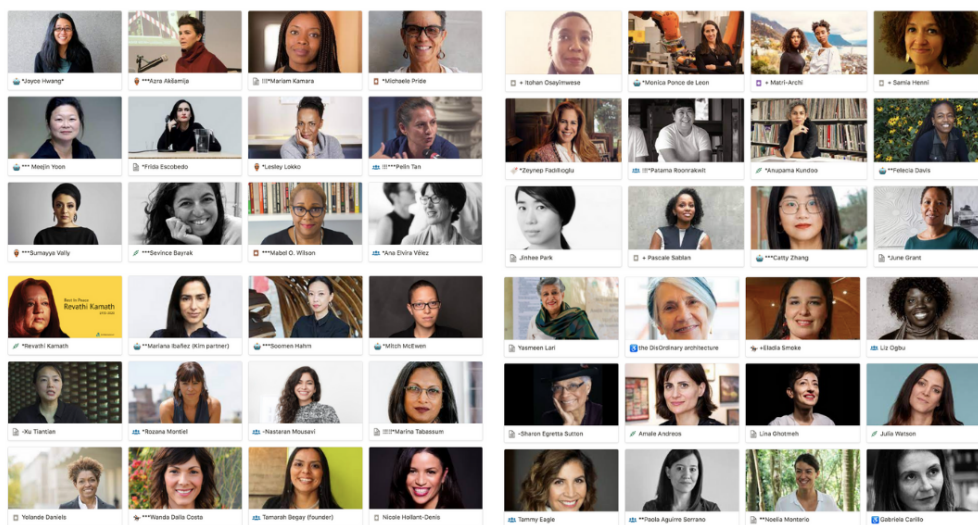


Figure 4.16 The initial group of women selected for close examination

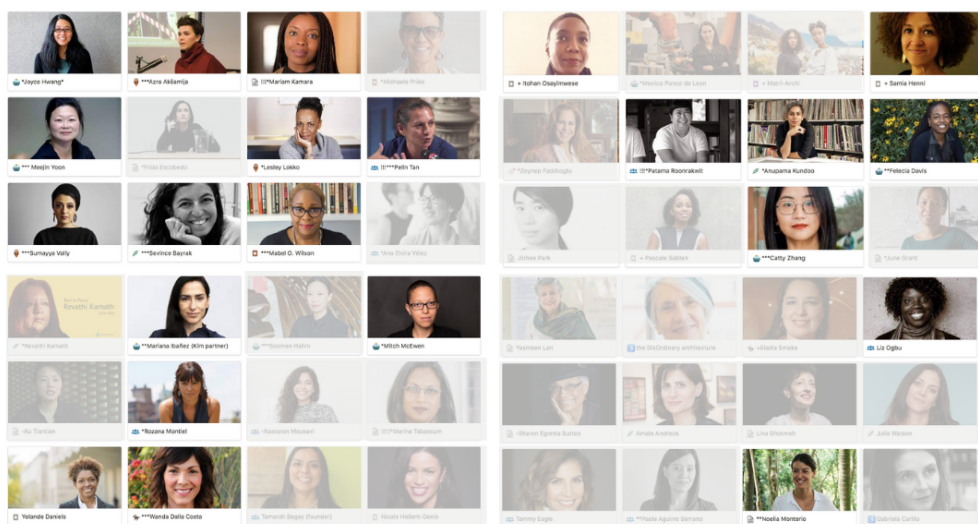


Figure 4.17 The group of women examined in detail

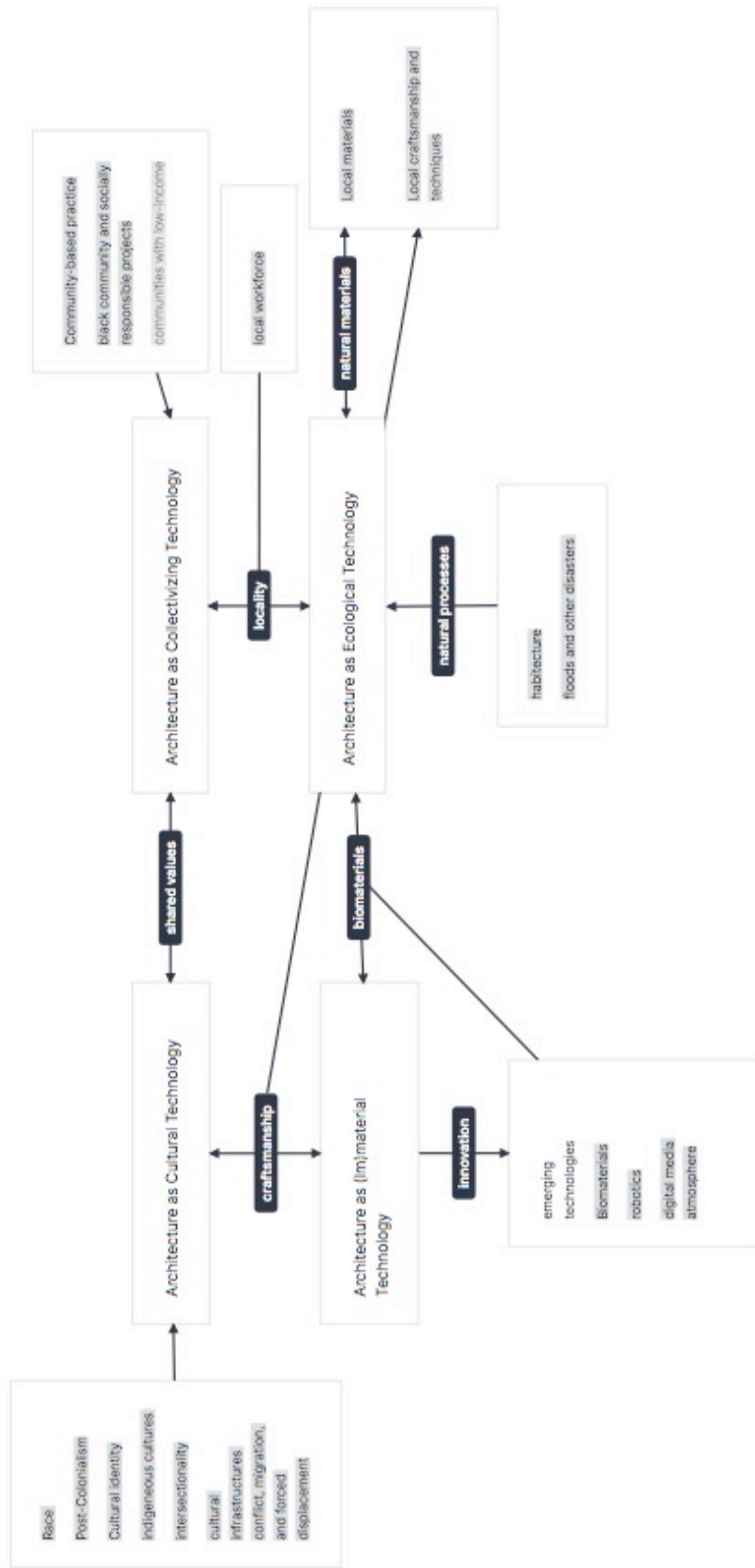


Figure 4.18 A diagram that demonstrates the connections among four themes

Interestingly, some of the discussions identified in the practices of Non-western women can be traced in the online collectives as well. While collectivity and action inevitably and undeniably integrated for the majority of these groups, the intersectionality of gender, race and identity is seen to be pronounced widely. At the same time, as can be seen from the contents disseminated by these collectives, ecological concerns are claimed to have gained a different status as a topic of discussion beyond the design agendas of women architects. Feminism posits organized strategies and triggers action against the problems that create imbalances of any kind. This seems to have been internalized very clearly and has found its place in architectural debates.

The other side of the coin, that is neoliberal and postfeminist positions do not have profound imprint in the examined groups. Although the validity of neoliberal feminism for architecture is an observable fact, these groups, unlike the groups covered in the research, are mainly located in Europe. This discrepancy can be explained by the specific position of equality in Europe. Compared to non-Western ones, feminism has achieved some, if not all, of its goals and that equality between women and men has a solid position in European political agenda. In short, although equality is not fully-achieved in the context of work environment in the profession, disparity of gender difference and initiatives that strive to overcome it are already in operation and there is a culture of awareness already present. Moreover, it is not surprising to see this pro-efficiency rhetoric in the European architectural market, where the design of prestigious works continues to circulate for the most part, even if their locations are far away. This can be an explanation why neoliberal forms of management disseminate under the disguise of equality by a discourse on productivity, work-family balance, and by presenting expectations of efficiency and

higher performance as part of ‘personal development’ in certain European collectives.⁴⁵³

⁴⁵³ This conclusion relies on the scope of present research. Different conclusions can be drawn from a more comprehensive examination of all groups producing content in their native language.

CHAPTER 5

CONCLUSION

The impact, contribution and distinctiveness of women in architecture in the current century as well as the alignments between their work and feminist thought form the central inquiry of the study. With this scrutinization and based on their capability of responding to ever-changing and evolving condition of the discipline, this thesis proposes a set of practices by women in architecture as future-defining and significant and qualifies them as proactive. To unfold this claim, the study provides a framework to explain the futurity and non-standard approach of these practices by introducing plural positions within feminism(s) and reactivating the concept of medium. The parallel investigation fostered by the contested meanings around medium offers a better understanding of the present-ness, which also accounts for architecture's response in the face of fast-paced technological developments, that is the ethos of the century. Furthermore, with this inquiry, medium is claimed to mean an environment that facilitates and enables communication along with its associated processes.

By visiting a series of discussions and the context of digital medium's emergence, the study defines the current function of medium for architecture on three interrelated levels. The first level is the impact of communication technologies on the concept of space. The excitement that new communication technologies created by bridging spatial separation engendered certain claims for the disappearance of space. Not entirely overlapping but referring to these, it is claimed that, on spatial level, medium functions to underscore the communicatory potential of a space. As opposed to the fixed identities connoted by place and the abstractness of space, medium subsumes the transitory, momentous and atmospheric qualities. It addresses to these spatial qualities that are open to change with environmental influences. In the study, this

aspect of medium has been highlighted with respect to related architectural productions but it would be wrong to assume that it applies to every examined practice and architectural production.

On intermediate level, medium clarifies the link between outside circumstances and how in reciprocal relation with these circumstances, architectural practices and productions are formed. Specifically, it helps frame the central question of the study, the nonstandard practices of women in architecture and how they acquire this character of alternativity and future resonance. Looking into the way women in architecture negotiate with medium help answer how they shape their practice and draw a path in between their work and larger concerns. On this level, medium is operationalized to uncover what these women filter in communicating with the problems and possibilities that surround them, what do they receive and in which form and with which agendas they transform this information into architectural productions.

This function of medium is quite urgent, and compared to the previous inference it takes up more space in the body of the text. While the practices of women are highlighted with respect to medium thinking, which layers of information they filter, select, and process address to critical agendas and point to certain commonalities. In effect, analyses on this level subsume connections with different issues in feminism. It is in these commonalities that, the study claims, the feminist encounters reside in. As revealed by a close scrutiny of the work of selected women, the shared agendas in between feminist thought and architecture are presented in the study as environmental concerns, emancipatory possibilities offered by technical innovations, the drive to recuperate cultural inferiorities, inequalities, silences of certain groups, and lastly, initiatives to cherish collective action. Architecture's response to these agendas are conceptualized as technologies, thus an alternative definition for architecture and the role of architect are claimed. Moreover, by signaling the discipline's responsive, dynamic and socially informed actions in responding to certain needs, technology enables anew and expeditious connection between thought and practice.

New communication channels not only affected the field of cultural transactions but they changed the medium of knowledge production. Undoubtedly the dissolution of disciplinary borders resulted with architecture's amplifying interaction with its surrounding 'influential circumstances'. Especially since the 1990s and with the impact of poststructuralist theory, architecture operates on a new milieu, which is defined by a network of relationships with other disciplines. These are indiscernibly linked to the integration of feminist modes of practice and theory production in architecture. Feminism has tested architecture's disciplinary boundaries via problematizations of body, labour, work, femininity, nature and binary thinking. Through these frameworks, architecture has become an interactive field tackling with a series of new problems and concerns. On the other hand, feminist spatial practices have helped to explore the potentials of interdisciplinarity via its challenging actions and contributed to the practical repertoire of architecture. The present research operates within this hyper-interrelated ground which is characterized as architecture's new disciplinary medium.

The study concludes that in order to remain integrated and adapt to this ever-changing medium which houses a constant dialogue among disciplines, architecture requires new networks of connections. These networks do not solely function as the appropriation of external tools to construct theory. As the practice-led research gain prominence, it has become more evident that the change of medium has critical reflections for architecture's ways of making, its production. This reconceptualization of disciplinary encounters via medium, disavows binary thinking of externality and internality. Instead, it demands focusing on the in-between. Therefore, at the last and the broadest level, medium operates among a series of concepts, theoretical formulations, epistemological positions, in other words, perpetual interactions amidst different parts of specialized knowledge sets. It defines the interstitial field between disciplines as a field of communication. Yet different from inter, multi, and trans-disciplinarity and not fixating on these prefixes, it foregrounds the interplay between concerns and concepts. This consideration

of medium on disciplinary level entails architecture's current practices of knowledge production.⁴⁵⁴

This claim for architecture's new disciplinary condition sets the basis of study in elaborating diverse encounters and engagements, but it is also embodied in the structure of the thesis through a hybrid framework comprised of feminist theory and contestation over medium. In brief, besides delineating contemporaneity, the conceptualization of medium provides a framework to understand these interdisciplinary encounters, changing conditions that surround the discipline and their reception and transformation into architectural means in the practices of particular women. The work of these non-western originated women, how they reflect on their practice, and the increasing international attention that they gain point to an alternative future for architecture. Furthermore, these concerns that set new agendas for architecture are intricately entwined with feminist thought and action. Basing on the altering potential of the examined practices, overlapping matters and desires between these and feminist thought as well as action, the study provides an explanation for what can be suggested as a feminist architectural production. This approach resonates with the activist nature of feminism that inherently seeks to make a change by altering orders. In that regard, the study engages in dialogue with Jane Rendell's 'critical spatial practices' and Donna Petrescu's 'altering practices', yet differs from them in several ways. To begin with, it does not specify its focus to women who self-identified as feminists or regard their work as feminist. On the contrary, the study tackles the intersections among various architectural practices, feminist positions and concerns. Though some of the examined women identify themselves as feminist, this has not been a sole criterion of their selection. Embracing plurality for different phases, the research forms a coherent whole by drawing from a diverse set of issues both within feminism and architecture. Thus, it differs from

⁴⁵⁴ The foundation of diverse labs and research centers that reflect the transdisciplinary agenda provided in this study can be seen as the justification of this claim.

these earlier studies by operating in a comparatively broader territory. Furthermore, architects from various non-Western geographies are studied; this again contrasts with action-based practices of Western feminist spatial practitioners. Due to this geographical focus, an intersectional understanding of feminism is integrated at the very heart of the investigation. Hence, the study contributes to the field by identifying architecture's prominent critical agendas for the current century and revealing their theoretical underpinnings in feminism. Thereby, contemporary positions within feminism are introduced into architecture. Lastly, with a conceptualization of medium that operates on three different levels, it proposes a model for the function of medium for the discipline.

Some limitations of the research should be noted. The primary constraint is related to language; the channels through which the research is conducted are predominantly English. Thus, the research cannot include women whose works are not internationally recognized, or women who communicate only in their own language. Nevertheless, certain translation tools are used to reflect non-English online practices in the scrutiny of women collectives.

Other constraint is related to the way the data are obtained. The women whose practices are studied were mostly accessed through online channels. In this process, detailed descriptions could be reached from women who had online lecture(s) or presentation(s). While important in reflecting the mediatic nature of this research and the potential of media to challenge the periphery and center, this procedure acts both as a limitation of selection and as a demonstration for a possibility of an alternative grouping. For instance, women whose work are not accessible through media channels can be considered for further research.

Another constraint is associated with the formulation of research which provides an overview rather than an in-depth reflection for these practices and the work of women in architecture. Although this research is somewhat limited in scope, its findings can provide a basis for future studies. Further studies can be undertaken to conduct comprehensive analysis within each theme, or the four categories provided

in this study can be expanded and revised. Most critically, it should be noted that these categories are formed based on certain inclinations and commonalities, which lead to the exclusion of the individuals and groups with a diversity and uniqueness that cannot be included in a group.⁴⁵⁵ This can be considered as a crucial gap that requires further attention for a different study.

Despite these limitations, the delicate framework developed in the study offers further implications for various historical and theoretical analyses. Viewing architecture with reference to its medium and the web of connections within it can lead to fresh insights for architectural theory and architectural historiography. By changing the focus from objects to interactions among different actors that affect and affected by these architectural objects provide a solid base to produce alternative histories and to uncover neglected narratives. Hence, the framework developed in the study can be utilized in various ways to analyze the relationship between external factors and how architectural techniques and products are created in response to them.

⁴⁵⁵ Zoe Partington and Jos Boys attempt highlighting the inequalities that lie at the intersection of gender and disability. Similarly, the collective called Matri-archi, and their efforts to bring African women together for the development of spatial education in African cities can be seen as unique examples that are not repeated within the selected group of women yet deserve critical attention.

REFERENCES

Acar, Zuhail, 'A Reconceptualization of the Production of Knowledge in Architecture Through Research Laboratories' (unpublished doctoral thesis, Middle East Technical University, 2022)

Adorno, Theodor W. and Horkheimer, Max, 'Culture Industry: Enlightenment as Mass Deception', in *Dialectic of Enlightenment* (Stanford: Stanford University Press, 2002)

Agrest, Diana, 'The Return of the Repressed: Nature' in *The Sex of Architecture*, ed. by Diana Agrest, Patricia Conway, Leslie Kanes Weisman, (Harry N. Abrams, Inc., Publishers. 1996)

Agrest, Diana, Conway, Patricia and Weisman, Kanes, eds, *The Sex of Architecture* (Harry N. Abrams Publishers: 1996)

Ahmed, Sara, *The Promise of Happiness*. Durham, (NC: Duke University Press, 2010)

Ahrentzen, Sherry, 'The F. Word in. Architecture', in *Reconstructing Architecture* ed. by Thomas Dutton and Lian Hurst Mann (Minneapolis-London: University of Minnesota Press, 1996)

Aksamija, Azra, A Life Worth Living, May 24, 2022, <https://archleague.org/article/a-life-worth-living/>.

Alvesson, Mats and Kaj Skoldberg, *Reflexive Methodology: New Vistas for Qualitative Research* (London, California, New Delhi: Sage, 2000)

Architecture Machine Group, 'Augmentation of Human Resources in Command and Control through Multiple Man- Machine Interaction: Proposal to ARPA', (Cambridge, MA: MIT Architecture Machine Group, 1976)

Arendt, Hannah, *The Human Condition*, (University of Chicago Press, 2013)

Arlette Hernandez, How Do We Build a Better Future?, May 13, 2021, <https://www.moma.org/magazine/articles/562> (Accessed August 11, 2022)

Armstrong, Patricia. 'Marxism and Feminism', *Atlantis A Women's Studies Journal*, 4.2. (1979)

Austin, Tricia, *Narrative Environments and Experience Design: Space as a Medium of Communication* (1st ed.). (Routledge, 2020).
<https://doi.org/10.4324/9780367138073>

Banet-Weiser, Sarah, *Empowered: Popular Feminism and Popular Misogyny*, (London: Duke University Press, 2018)

Banet-Weiser, Sarah, 'Postfeminism, popular feminism and neoliberal feminism? Sarah Banet-Weiser, Rosalind Gill and Catherine Rottenberg in conversation', *Feminist Theory*, 21 (2020)

Banham, Reyner, *Theory and Design in the First Machine Age* (New York-Washington: Praeger Publishers Architecture, 1960)

Barad, Karen, 'Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter', *Signs*, 3.28 (2003).
<https://www.jstor.org/stable/10.1086/345321>

Barad, Karen, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Duke University Press, 2007)

Barthes, Roland, *Image Music Text* (New York: The Noonday Press, 1977)

Barthes, Roland, *The Semiotic Challenge*, trans. R. Howard (New York: Hill and Wang, 1988)

Baudrillard, Jean, *Simulacra and Simulation* (University of Michigan Press, 1994)

Benjamin, Walter, 'The Work of Art in the Age of Mechanical Reproduction', in *Illuminations* (New York: Schocken Books, 1969)

Berkel, Ben van and Caroline Bos, 'Diagrams: Interactive Instruments in Operation' in *This is Not Architecture*, ed. by Kester Rattenbury (London-New York: Routledge, 2002)

Blacksell, Ruth, and Stephen Walker, 'Architecture and the Spaces of Information', *Architecture and Culture*, 4.1 (2016)

Bratton, Benjamin H., 'Further Trace Effects of the Post-Anthropocene'. *Architectural Design*, 89 (2019), <https://doi.org/10.1002/ad.2382>

Brown, James, *Mediated Space* (London: Riba Publishing, 2018)

Brown, Denise Scott, 'Room at the Top? Sexism and the Star System in Architecture,' Reading Design, <https://www.readingdesign.org/room-at-the-top>, Accessed Online, October 19, 2021.

Buchanan, Ian and Colebrook, Claire, *Deleuze and Feminist Theory* (Edinburgh University Press, 2018) <<https://doi.org/10.1515/9781474400527>>.

Buckley, Cheryl 'Made in Patriarchy: Toward a Feminist Analysis of Women and Design', *Design Issues*, 3. 2 (1986) <https://doi.org/10.2307/1511480>.

Burns, Karen, E1027: From Modernist House to Feminist Collective, in *The Design Collective: An Approach to Practice* Harriet Edquist, Şaurene Vaughan eds, New Castle: Cambridge Scholars Publishing, 2012)

Burns, Karen, 'Feminist theory and praxis, 1991–2003', *Architecture and Feminisms: Ecologies, Economies, Technologies*, ed. by Helene Frichot and others (Oxon and New York: Routledge, 2018)

Burns, Karen and Brown, Lori, 'Telling Transnational Histories of Women in Architecture 1960–2015', *Architectural Histories*, 8.1 (2020)

Campbell, Philip, 'The Height of the Kick: Designing Gameplay' in *This is Not Architecture*, ed. by Kester Rattenbury (London-New York: Routledge, 2002)

Cairns, Graham, *Visioning Technologies: The Architectures of Sight* (New York: Routledge, 2017)

Canguilhem, Georges, 'The Living and Its Milieu', *Grey Room*, 27, 2004, 53–53 <<https://doi.org/10.5840/tpm20042754>>

Carmo, Mario, *Architecture in the Age of Printing: Orality, Writing, Typography, and Printed Images in the History of Architectural Theory* (Cambridge-London, The MIT Press, 2001)

Carmo, Mario, *The Second Digital Turn: Design Beyond Intelligence* (Cambridge: The MIT Press, 2017)

Case Study Webinar, Resilient Architecture, Respectful Urbanism with Estúdio Flume
<https://www.youtube.com/watch?v=iFNRxs5V1SQ&t=1859s>

Castells, Manuel, *Communication Power*, (Oxford: Oxford University Press. 2009)

Caven, Valerie, 'Career building: women and non-standard employment in architecture, *Construction Management and Economics*', 24:5, (2006), DOI: 10.1080/01446190600601354

Chong, Doryun and others, *From Postwar to Postmodern, Art in Japan, 1945-1989: Primary Documents* (New York: The Museum of Modern Art, 2012)

Cho, Sumi, Kimberlé Williams Crenshaw, and Leslie McCall,, 'Toward a Field of Intersectionality Studies: Theory, Applications, and Praxis', *Signs* 38, No. 4, Intersectionality: Theorizing Power, Empowering Theory (Summer 2013)

Cohen, Shelly and Tovi Fenster, 'Architecture of Care: Social Architecture and Feminist Ethics.' *The Journal of Architecture* 26, no. 3 (April 3, 2021)

Colangelo, Dave, *The Building as Screen: A History, Theory, and Practice of Massive Media* (Amsterdam University Press, 2020)

Colebrook, Claire 'Introduction' in *Deleuze and Feminist Theory* ed. by Ian Buchanan and Claire Colebrook, (Edinburgh: Edinburgh University Press, 2000)

Coleman, Debra, 'Introduction', in *Architecture and Feminism* ed. by D. Coleman, E. Danze and C. Henderson (New York: Princeton Architectural Press, 1996)

Coleman, Debra, Elizabeth Danze, and Carol Henderson, eds, *Architecture and Feminism*, (NY: Princeton architectural press, 1996)

Colomina, Beatriz, ed, *Sexuality and Space*, (New York: Princeton Architectural Press, 1990)

Colomina, Beatriz, 'Domesticity at War', *Assemblage*, 16 (1991)

Colomina, Beatriz. 'Collaborations: The Private Life of Modern Architecture,' *Journal of the Society of Architectural Historians* 58, no. 3 (1999)

Colomina, Beatriz, 'Architectureproduction', in *This is Not Architecture*, ed. by Kester Rattenbury (London-New York: Routledge, 2002)

Colomina, Beatriz, 'Unclear Vision', in *Engineered Transparency: The Technical, Visual, and Spatial Effects of Glass* ed. by Michael Bell and Jeannie Kim (New York: Princeton Architectural Press, 2009)

Consalvo, Mia, 'Cyberfeminism' in *Encyclopedia of New Media*, Sage Reference, Transhackfeminism, <https://syllabus.pirate.care/topic/transhackfeminism/>

Couldry, Nick and Andreas Hepp, *The Mediated Construction of Reality* (Polity Press, 2017).

Counterspace, Projects Hijra, <https://www.counterspace-studio.com/projects/hijra-alhjr/> (Accessed October, 2022)

Craig, Buckley, 'Graphic Apparatuses: Architecture, Media, and the Reinvention of Assembly 1956-1973' (published doctoral dissertation, Princeton University, 2013)

Crenshaw, Kimberle' Williams, 'Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics', *University of Chicago Legal Forum* (1989)

Darroch, Michael, 'Giedion and Explorations: Confluences of Space and Media in Toronto School Theorization', in *Media Transatlantic: Developments in Media and Communication Studies between North American and German-speaking Europe*. Edited by Norm Friesen (Switzerland: Springer, 2016)

Davis, Felecia, 'Seams: Race, Architecture and Design Computing,' YouTube Video, May 8, 2021, MIT Architecture, <https://www.youtube.com/watch?v=gt9mSLzoNW4&t=474s>

Davis, Felecia, Lewis, Erin, Oghazian, Farzaneh, Evrim, Berfin, 'Tuning in: Reflecting in the Wake of Blackness Through a Knitted Flower Antenna', *Possibilities*, 27th International Symposium on Electronic Art (ISEA), Barcelona, 10-16 June 202

Dejtjar, Fabian (trans.by Amelia Pérez Bravo) 10 Architectural Opinions of 2021, Archdaily (January 10, 2022), <https://www.archdaily.com/974494/10-architectural-opinions-of-2021>

Deleuze, Gilles and Félix Guattari, *What is Philosophy?* trans. Hugh Tomlinson and Graham Burchill, (London: Verso, 1994)

Diana Budds, 'After MoMA, the Black Reconstruction Collective Plots Its Future', June 7, 2021, <https://www.curbed.com/2021/06/black-reconstruction-collective-moma-history.html>

Dorrian, Mark and Christos Kakalis, *The Place of Silence: Architecture / Media / Philosophy*, (Bloomsbury Visual Arts, 2020)

Doyle, Shelby and Leslie Forehand, 'Fabricating Architecture: Digital Craft as Feminist Practice.' *The Avery Review* 25 (2017).

Dwyer, Julia and Anne Thorne, 'Evaluating the Matrix, Notes from Inside the Collective, in *Altering Practices*, In Petrescu, Doina (ed.). *Altering practices: feminist politics and poetics of space* (London: Routledge, 2007)

Eames, Charles, *The Information Machine Creative Man and the Data Processor*, (1958)

Eames, Demetrios, *An Eames Primer Eames Designs* (New York: Universe Publishing, 2001)

Easterling, Keller, *Medium Design* (Strelka Press, 2018).

Ecofeminism Women, Culture, Nature, ed. by Karen J. Warren (Bloomington and Indianapolis: Indiana University Press, 1997).

Eliassen, Knut Ove and Y. Sandhei Jacobsen, 'Where were the media before the media', in *This Is Enlightenment* ed. by W. Siskin and C. Warner (Chicago; London: The University of Chicago Press, 2010)

Ellsworth, Elizabeth, *Places of Learning: Media Architecture Pedagogy*, (Routledge, 2004)

Ericson, Staffan and Riegert, Kristina, eds, *Media Houses: Architecture, Media and the Production of Centrality* (New York: Peter Lang, 2010)

Ewans, Margaret K., 'Muriel Cooper's Lasting Imprint', (2018) <https://www.media.mit.edu/posts/muriel-cooper-lasting-imprint/> (Accessed August, 2022)

FAT., 'Everything Counts in Large Amounts (the Sound of Geography Collapsing)', in *This is Not Architecture*, ed. Kester Rattenbury (London-New York: Routledge, 2002)

Feminist Environmental Philosophy. Stanford Encyclopedia of Philosophy. *Aug 29, 2014; revision Mon Apr 27, 2015.* <https://plato.stanford.edu/entries/feminism-environmental/#NatFemIss>

Figueiredo, Sergio M. Krishnamurthy, Sukanya and Schroeder, Torsten, 'What About Smartness?', *Architecture and Culture*, 7 (2019)

Firestone Shulamith, *The Dialectic of Sex* (New York: Bantam, 1970)

Flusser, Vilém, *The Shape of Things: A Philosophy of Design*, trans. Anthony Matthews (London: Reaktion Books, 1999)

Fonow, Mary M. and Cook, Judith A. 'Feminist Methodology: New Applications in the Academy and Public Policy', *Signs: Journal of Women in Culture and Society*, 30 (2005)

Foucault, Michel, 'Technologies of the Self', in *Technologies of the Self: A Seminar with Michel Foucault* ed. Luther H. Martin, Huck Gukman and Patrick H. Hutton, (The University of Massachusetts Press 1988)

Foucault, Michel, 'Of Other Spaces' trans. by Michiel Dehaene and Lieven de Caeter in *Heterotopia and The City* (London: Routledge, 2015)

Francis, Valerie, 'What influences professional women's career advancement in construction?', *Construction Management and Economics*, 35:5, (2017) DOI: 10.1080/01446193.2016.1277026

Frank, K. A. 'A Feminist Approach to Architecture: Acknowledging Women's Way of Knowing'. J. Rendell, B. Penner, I. Borden ed., in *Gender Space Architecture* (London-New York: Routledge, 2000)

Freedman, Des, 'Raymond Williams', in *Key Thinkers for the Information Society* ed. C. May (London and New York: Routledge, 2003)

Frichot, Helene, Gabrielsson, Catharina and Runting, Helen, eds, *Architecture and Feminisms: Ecologies, Economies, Technologies*, (New York and Oxon: Routledge, 2018)

Gaard, Greta, 'Ecofeminism Revisited: Rejecting Essentialism and Re-Placing Species in a Material Feminist Environmentalism', *Feminist Formations*, 23. 2, (2011)

Garland, David, 'What is a "history of the present"? On Foucault's genealogies and their critical preconditions', *Punishment & Society*, 16.4 (2014)

Gedalof, Irene, 'Identity in Transit: Nomads, Cyborg and Women', *The European Journal of Women's Studies*, 7 (2000)

Giedion, Sigfried, *Space, Time and Architecture* (Cambridge: Harvard University Press, 1959)

Gilles, Deleuze, *Difference and Repetition*, trans. Paul Patton, (New York: Columbia University Press, 1994)

Gill, Rosalind, 'Postfeminist Media Culture: Elements of a Sensibility', *European Journal of Cultural Studies*, 10 (2007)
<<https://doi.org/10.1177/1367549407075898>>

Gill, Rosalind, 'Postfeminism, popular feminism and neoliberal feminism? Sarah Banet-Weiser, Rosalind Gill and Catherine Rottenberg in conversation', *Feminist Theory*, 21 (2020)

Goldberg, Mackenzie, *Screen/Print #66: Hans Hollein's Mobile Office and the New Workers' Reality*, (2018) <https://archinect.com/features/article/150057955/screen-print-66-hans-hollein-s-mobile-office-and-the-new-workers-reality> (accessed June 2022)

Goodman, Nelson, 'How Buildings Mean?' *Critical Inquiry*, 11 (1985)

Gunster, Shane, 'Revisiting the Culture Industry Thesis: Mass Culture and the Commodity Form', *Cultural Critique*, 45 (2000)

Gurevich, Aroni I., *Categories of Medieval Culture* (London: Routledge and Kegan Paul, 1985)

Gurminder K. Bhambra (2014) Postcolonial and decolonial dialogues, *Postcolonial Studies*, 17:2, 115-121, doi: 10.1080/13688790.2014.966414

Gürel, Meltem Ö., and Kathryn H. Anthony, 'The Canon and the Void: Gender, Race, and Architectural History Texts', *Journal of Architectural Education*, 59.3 (2006), 66–76 <<https://doi.org/10.1111/j.1531-314X.2006.00036.x>>

Greene, David, 'Foto-graph, Foto-shop', in *This is Not Architecture*, ed. by Kester Rattenbury (London-New York: Routledge, 2002)

Grosz, Elizabeth, *Architecture from the Outside* (Cambridge- London: The MIT Press, 2001)

Grusin, Richard, *The Nonhuman Turn* (Minneapolis, London: University of Minnesota Press, 2015)

Hall, Elaine J. and Rodriguez, Marnie Salupo, 'The Myth of Postfeminism', *Gender and Society*, 17.6 (Dec. 2003)

Haraway, Donna, 'Situated Knowledges and Science Question in Feminism the Privilege of Partial Perspectives', *Feminist Studies*, 14 (1988)

Haraway, Donna, *A Cyborg Manifesto Science Technology and Socialist Feminism in the Late Twentieth Century* (1985, *Socialist Review*; repr. University of Minnesota Press, 2016)

Harding, Sandra, 'The Method Question', *Hypatia: A Journal of Feminist Philosophy*, 2.3, (1987)

Harding, Sandra, 'Gender, Development and Post-Enlightenment Philosophies', *Hypatia: A Journal of Feminist Philosophy*, 13 (1998)

Harding, Sandra, *The Science Question in Feminism* (Ithaca and London: Cornell University Press, 1990)

Hartstock, Nancy, 'Fundamental Feminism: Process and Perspectives', *Quest: A Feminist Quarterly*, 11:2 (Fall 1975)

Harwood, John, *The Interface: IBM and the Transformation of Corporate Design: 1945-1976* (Minneapolis-London: University of Minnesota Press, 2015)

Hassan, Ihab, 'Pluralism in Postmodern Perspective', *Critical Inquiry*, 12 (1986)

Hays, K. Michael. 'Architecture Theory, Media, and the Question of Audience', *Assemblage*, 27 (1995), 41–46 <<https://doi.org/10.2307/3171428>>.

Hepp, Andreas, *Cultures of Mediatization*, (Polity Press, 2013)

Higgot, Andrew, *Mediating Modernism: Architectural Cultures in Britain* (USA; Canada: Routledge, 2007)

Hjarvard, Stig, 'The Mediatization of Society: A Theory of the Media as Agents of Social and Cultural Change', *Nordicom Review* 29 (2008)

Hollein, Hans, 'Alles ist Architektur', *Bau*, 1/2 (1968)

Hoekema, Jim, 'Art Game: An Early Interactive Design from the Office of Charles and Ray Eames', *Interactions*, 24.3 (2017), 26–35 <<https://doi.org/10.1145/3064812>>

Horn, Eva, Editor's Introduction 'There are No Media', *Grey Room*, 29 (2008) <https://doi.org/10.1162/grey.2007.1.29.6>

Houghton, Elizabeth, 'Becoming a Neoliberal Subject', *Ephemera*, 19.3. (2019). <http://www.ephemerajournal.org/contribution/becoming-neoliberal-subject>

How Do We Build a Better Future? Arlette Hernandez, May 13, 2021, Available: <https://www.moma.org/magazine/articles/562> (accessed August 25, 2022)

Höweler + Yoon, White Noise White Light, <http://www.howeleryoon.com/work/157/white-noise-white-light>

Hughes, Christina, *Key Concepts in Feminist Theory and Research* (Sage, 2002)

Hughes, Francesca, ed, *The Architect: Reconstructing Her Practice* (London: The MIT Press, 1996)

Huhtamo, Erkki and Jussi Parikka, *Media Archaeology* (Los Angeles, London: University of California Press, 2011) <<https://doi.org/10.1017/CBO9781107415324.004>>.

Hwang, Joyce, 'My Neighbor', *The Bat* By Joyce Hwang, 07.2021

Ibanez Kim, Lithutopia, <https://www.ibanezkim.com/lithuania> (Accessed September 2022)

Ibanez Kim, APOC, <https://www.ibanezkim.com/work#/apoc/>(Accessed September 2022)

Its Liquid, 2022, Good News, Women In Architecture. Accessed Online June 18, <https://www.itsliquid.com/goodnewswomen-inarchitecture.html>
source: <https://arkt.space/en/good-news-women-in-architecture/>)

Iloniemi, Laura, ed, 'The Identity of Architect: Culture and Communication' [Special issue] *Architectural Design*, 89 (2019)

Jansson, André, 'The Mediatization of Consumption: Towards an Analytical Framework of Image Culture', *Journal of Consumer Culture*, 2 (2002)

Jencks, Charles and Baird, George, *Meaning in Architecture*, (New York: Braziller, 1970)

John Harwood, *The Interface: IBM and the Transformation of Corporate Design: 1945-1976* (Minneapolis-London: University of Minnesota Press, 2015)

Kaji-O'Grady, Sandra, 'Effete, Effeminate, Feminist: Feminizing Architecture Theory2, in *The Figure of Knowledge Conditioning Architectural Theory, 1960s - 1990s* ed. by Hilde Heynen. (Leuven University Press, 2020)

King, Roger J. H., 'Caring about Nature: Feminist Ethics and the Environment', *Hypatia*, 6.1, (1991)

Kittler, Friedrich A., *Discourse Networks: 1800/1900*, ed. by Michael Metteer and Chris Cullens (Stanford: Stanford University Press, 1990)
<<https://doi.org/10.1017/CBO9781107415324.004>>

Kittler, Friedrich A., and Matthew Griffin, 'The City Is a Medium', *New Literary History*, 27 (1996), 717–29.

Kundoo, Anupama *Volontariat Homes for Homeless Children*, 2008
<https://anupamakundoo.com/portfolio-item/volontariat/?utm_medium=website&utm_source=archdaily.com>

Kundoo, Anupama - *Building Knowledge | Building Community*, Engaging the World | 2018 ACSA Administrators Conference

Lampshire, Wendy L., 'Women Animals Machines: A Grammar for a Wittgensteinian Ecofeminism', in *Ecofeminism, Women, Culture, Nature* ed. by Karen J. Warren (Indiana University Press, 1997)

Lange, Torsten and Lucía C. Pérez-Moreno, 'Editorial Introduction to Architectural Historiography and Fourth Wave Feminism', *Architectural Histories*, 8 (2020)

Lazzarato, Maurizio, 'Neoliberalism in Action Inequality, Insecurity and the Reconstitution of the Social', *Theory, Culture & Society*, 26.6 (2009)

Leach, Neil, 'Wallpaper Person: Notes on the Behavior of a New Species', in *This is Not Architecture*, ed. by Kester Rattenbury (London-New York: Routledge, 2002)

Leutwyler, Kristin, 'The Guru of Cyberspace' in *Scientific American*, 273 (September, 1995)

Light, Linda Louise, 'Feminism and Collectivity: The Integrative Function' (unpublished master thesis, The University of British Columbia, 1981)

Linder, Mark, 'TRANSdisciplinarity', *Hunch: The Berlage Institute Report*, 9 (2005)

Liz Ogbu, Guest Lecture: Liz Ogbu | Studio O. 2018. Youtube Video. University of Newcastle CESE. <https://www.youtube.com/watch?v=mT6Oow3eXKc>

Lorenz-Meyer, Dogmar, Treusch, Pat and Liu, Xin, eds, *Feminist Technoecologies, Reimagining Matters of Care and Sustainability* (Routledge, 2019)

Löchke, Sandra K., 'Architecture is not About Buildings: Perspectives on People-centred Approaches in Architecture' in *Nonstandard Architectural Productions: Between Aesthetic Experience and Social Action* (Oxon and New York: Routledge, 2020)

Lynda H. Schneekloth, 'Partial Utopian Visions,' in *Women and the Environment, Human Behavior and Environment* series J, Irwin Altman and Arza Churchman, eds. (New York: Plenum Press, 1994)

Mainiero, L.A. and Sullivan, S., 'Kaleidoscope careers: an alternate explanation for the 'opt-out' revolution', *Academy of management executive*, 19, 2005.

Manovich, Lev, *The Language of New Media*, (The MIT Press, 2001)

Marina Tabassum, Columbia GSAPP, A lecture by Marina Tabassum with response by Columbia GSAPP Professor, Kenneth Frampton September 23, 2019.

<https://www.youtube.com/watch?v=Vt4uPzOd750&t=354s>

Martin, Reinhold, *The Organizational Complex* (The MIT Press, 2003)

Massey, Jonathan, 'Buckminster Fuller's Cybernetic Pastoral: The United States Pavilion at Expo 67', *The Journal of Architecture ISSN:*, 21.5 (2016)

Matrix, *Making Space: Women and the Man-Made Environment*, (London: Pluto Press Ltd, 1984)

Mattern, Shannon, *Deep Mapping the Media City*, (Minneapolis: University of Minnesota Press, 2015)

Mattern, Shannon Christine, *Code + Clay . . . Data + Dirt : Five Thousand Years of Urban Media* (London: University of Minnesota Press, 2017)

Meißner, Hanna, 'New Material Feminisms and Historical Materialism' in *Mattering* ed. by Victoria Pitts-Taylor (New York University Press, 2016)

Melhuish, Clare, 'From Dematerialisation to Depoliticisation in Architecture', in *This is Not Architecture*, ed. by Kester Rattenbury (London-New York: Routledge, 2002)

Meyrowitz, Joshua, *No Sense of Place: The Impact of Electronic Media on Social Behaviour* (New York: Oxford University Press, 1986)

McKim, Joel, *Architecture, Media, and Memory*, (Bloomsbury Visual Arts, 2018)

McLuhan, Marshall, *Gutenberg Galaxy: The Making of Typographic Man* (Canada: University of Toronto Press: 1962)

McLuhan, Marshall, *The Global Village: Transformations in World Life and Media in the 21st Century* (New York- Oxford: Oxford University Press, 1992)

McLuhan, Marshall, *Understanding Media* (London and New York: The MIT Press, 1994) <<https://doi.org/10.2307/2711172>>.

McLuhan, Marshall, *Understanding Media: The Extensions of Man, Critical Edition*, ed. by Terrence Gordon (China: Gingko Press, 2011).

McQuire, Scott. *The Media City* (Los Angeles, London, New Delhi, Singapore: SAGE, 2008) <<https://doi.org/10.1017/CBO9781107415324.004>>.

Micconi, Andrea and Serra, Marcella, 'On the Concept of Medium', *International Journal of Communication*, 13 (2019)

Mies, Maria and Shiva, Vandana, 'Introduction' in *Ecofeminism* (London - New York: Zed Books, 2014)

Mignolo, Walter, Interview – Walter Mignolo/Part 2: Key Concepts, E-International Relations, January 21, 2017. Accessed June 10, 2022. Available online: <https://www.e-ir.info/2017/01/21/interview-walter-mignolopart-2-key-concepts/>).

MoMoWo - 100 Works in 100 Years. European Women in architecture and Design, 1918-2018 / García, Ana María Fernández; Franchini, Caterina; Garda, Emilia Maria; Seražin, Helena. - STAMPA. - (2017), 1-374.

Morgan, Robin, ed., *Sisterhood is Powerful* (New York: Vintage Books, 1970).

Naples, Nancy 'Feminist Methodology' in *The Blackwell Encyclopedia of Sociology*, ed. by George Ritzer (John Wiley & Sons, 2017)

Negroponete, Nicholas, 'Books without Pages,' *Nicholas Negroponete Personal Papers* 8, (Cambridge, MA, 1996)

News Editor. Lesley Lokko Appointed Curator of the Venice Architecture Biennale. 15 Dec 2021. Biennial Foundation. <https://www.labiennale.org/en/news/lesley-lokko-appointed-curator-biennale-architettura-2023>

Ong, Walter J., *Orality and Literacy: The Technologizing of the Word*. (London: Methuen, 1982)

Osayimwese, Itohan, 'What is Decolonial Architectural History', YouTube Video, 2021, Gibbs College of Architecture, 17-22, <https://www.youtube.com/watch?v=bGoNjhy1pgM>

Paglen, Trevor, 'Invisible Images: Your Pictures Are Looking at You'. *Architectural Design*, 89 (2019) <https://doi.org/10.1002/ad.2383>

Parashar, Swati, 'Feminism and Postcolonialism: (En)Gendering Encounters', *Postcolonial Studies*, 19.4 (2016), 371-77 <<https://doi.org/10.1080/13688790.2016.1317388>>

People of Phoenix, Britannica Online Encyclopedia, <https://www.britannica.com/place/Phoenix-Arizona/People> (Accessed August 4, 2022)

Petrescu, Doina, ed., *Altering Practices: Feminist Politics and Poetics of Space* (London ; New York: Routledge, 2007)

Phyllis Tharenou, 'Going Up? Do Traits and Informal Social Processes Predict Advancing in Management?' *Academy of Management Journal*, 44.5 (2001) <https://doi.org/10.5465/3069444>.

Pierre Bourdieu, *The Field of Cultural Production*. (Polity Press, 1993)

Plant, Sadie, 'Babes in the Net', *New Statesman & Society*, 27 (January 1997)

Luckman, Susan, '(En) gendering the Digital Body: Feminism and the Internet.' *Hecate*, 25 (1999)

Plumwood, Val, *Feminism and Mastery of Nature* (London and New York: Routledge 1993)

Plumwood, Val, 'Introduction', in *Feminism and the Mastery of Nature*, (London: Routledge, 1993)

Poster, Mark, 'Introduction' to *Selected Writings of Jean Baudrillard* (Stanford University Press, 1988)

Rabie, Sara, *Crowd-Feminism: Crowdmapping as a Tool for Activism*, (unpublished master thesis, Goldsmiths University, 2013)

Rattenbury, Kester, ed, *This is Not Architecture*, (London-New York: Routledge, 2002)

Rattenbury Kester with contributions from Cooke, Catherine and Hill, Jonathan, 'Iconic Pictures' in *This is Not Architecture*, ed. by Kester Rattenbury (London-New York: Routledge, 2002)

Rattenbury, Kester, 'Naturally Biased: Architecture in The UK Nation Press', in *This is Not Architecture*, ed. by Kester Rattenbury (London-New York: Routledge, 2002)

Rattenbury, Kester, 'Think of it as a farm! Exhibitions, books, buildings: An Interview with Peter Smithson', in *This is Not Architecture*, ed. by Kester Rattenbury (London-New York: Routledge, 2002)

Reisinger, Karin and Schalk, Meike, eds. *Becoming a Feminist Architect, Field: A Free Journal for Architecture*, Special Issue, 7. 1 (2017)

Rendell, Jane, Penner, Barbara and Borden, Iain, 'Preface', in *Gender, Space, Architecture* ed. by J. Rendell, B. Penner and I. Borden (London and New York: Routledge, 2000)

Rendell, Jane, Penner, Barbara and Borden, Iain, eds, *Gender Space Architecture: An Interdisciplinary Introduction* (London: Routledge, 2000)

Rendell, Jane, 'Tendencies and Trajectories: Feminist Approaches in Architecture' in *SAGE Handbook of Architectural Theory* ed. by H. Heynen S. Cairns (2012)

Rendell, Jane, 'A Way with Words: Feminists Writing Architectural Design Research' in *Design Research in Architecture*. (Routledge, 2013)

Rendell, Jane, 'Critical Spatial Practices', in *Feminist Practices: Interdisciplinary Approaches to Women in Architecture* (New York: Routledge, 2016)

Ruedi, Katerina, McCorquodale, Duncan and Sarah Wigglesworth, eds, *Desiring Practices: Architecture, Gender and the Interdisciplinary*, (Black Dog Publishing, 1996)

Rivers, Nicola, 'Between 'Postfeminism(s)': Announcing the Arrival of Fourth Wave', in *Postfeminism(s) and the Arrival of the Fourth Wave* (Palgrave Macmillan, 2017) https://doi.org/10.1007/978-3-319-59812-3_2

Rottenberg, Catherine, 'Postfeminism, popular feminism and neoliberal feminism? Sarah Banet-Weiser, Rosalind Gill and Catherine Rottenberg in conversation', *Feminist Theory*, 21 (2020)

- Roszak, Theodor. *The Making of the Counterculture* (NY: Anchor Books, 1969)
- Sang, Kath J. C., Dainty, Andrew and Ison, Stephen, ‘Gender: a risk factor for occupational stress in the architectural profession?’, *Construction Management and Economics*, 25.12, (2007) DOI: 10.1080/01446190701546177
- Schalk, Meike, Ramia Mazé and Therese Kristiansson, Maryam Fanni, *Feminist Futures of Spatial Practice: Materialisms, Activisms, Dialogues, Pedagogies, Projections* (AADR, 2017).
- Schroeder, Ralph, ‘Towards a Theory of Digital Media’, *Information, Communication & Society*, 21 (2017)
- Schulz, Winfried, ‘Reconstructing Mediatization as an Analytical Concept’, *European Journal of Communication*, 19 (2004)
- Semper, Gottfried, *The Four Elements of Architecture* (New York; New Rochelle, Melbourne, Sydney: Cambridge University Press, 1989)
- Serraino, Pierluigi, ‘Framing Icons: Two Girls, Two Audiences. The photographing of Case Study House #22’, in *This is Not Architecture*, ed. by Kester Rattenbury (London-New York: Routledge, 2002)
- Shane Gunster, ‘Revisiting the Culture Industry Thesis: Mass Culture and the Commodity Form’, *Cultural Critique*, 45 (2000), 40–70.
- Shannon, Claude Elwood, ‘A Mathematical Theory of Communication’, *Bell System Technical Journal*, 27, (July 1948) [doi:10.1002/j.1538-7305.1948.tb01338.x](https://doi.org/10.1002/j.1538-7305.1948.tb01338.x)
- Shelden, Dennis, ed, “The disruptors: technology-driven architect-entrepreneurs” [Special issue] *Architectural Design*, 90 (2020)
- Simser, Duygu H. ‘Unfolding and Reframing the Concept of Heterotopia Within the Context of Peripheral Consumption Spaces’ (unpublished master thesis, Middle East Technical University, 2017)
- Smith, Dorothy, *The Everyday World as Problematic: A Feminist Sociology*, (North Eastern University Press, 1987)
- Shannon Christine Mattern, *Code + Clay . . . Data + Dirt : Five Thousand Years of Urban Media* (London: University of Minnesota Press, 2017).
- Shohat, Ella. (1992) Notes on the ‘post-colonial’. *Social Text*, 31/32.

Silvaggi, Vittoria ‘Good News. Women in Architecture’, *Arkt: Space to Architecture*, 28 March 2022 <<https://arkt.space/en/good-news-women-in-architecture/>>

Siskin, C. Warner, W., *This Is Enlightenment* (Chicago; London: The University of Chicago Press, 2010)

SO?, *Naturban* (Istanbul: SO? Architecture)

Social Media vs. Architectural Discourse: A Conversation, Nov 7, 2017 <https://archinect.com/news/article/150036865/social-media-vs-architectural-discourse-a-conversation> Accessed online June 8, 2022.

Soy Arquitecta, *Encuesta Arquitectas Argentinas: Documento de Trabajo*, 2022

Stenson, Molly Wright, ‘Architectures of Information: Christopher Alexander, Cedric Price, and Nicholas Negroponte & MIT’s Architecture Machine Group’ (unpublished doctoral thesis, Princeton University, 2014)

Stanford Encyclopedia of Philosophy, Feminist Environmental Philosophy, First published Fri Aug 29, 2014; substantive revision Mon Apr 27, 2015, Available online <https://plato.stanford.edu/entries/feminism-environmental/> (accessed August 15).

Stratford, Helen, ‘Micro-Strategies of Resistance’, in *Altering Practices*, ed. by Petrescu, Doina, (London: Routledge, 2007)

Tan, Pelin, Gardentopia, Materia 2019. <https://www.matera-basilicata2019.it/en/programme-2019/themes/utopias-and-dystopias/1411-gardentopia.html>

The Moving Air A Cultural-environmental Paradigm, Berkeley, CA, Solo Exhibition, 2020. The project was selected through the open call for Emerging Designers Competition,

organized by UC Berkeley in October 2019. It was on view Jan21 - Feb 25, 2020. <https://www.cattydanzhang.com/the-moving-air>

The ongoing project Houston | Urban Climate Risk, Alexander Kobald, Joe Ferdinando, Cait McCarthy, Jordan Young, <http://designacrossscales.org/coh/>

UABB Biennale Project description: <http://designacrossscales.org/uabb/>

Tuan, Yi-Fu, *Space and Place: The Perspective of Experience* (Minneapolis: University of Minnesota Press, 2001)

Troiani, Igea and Ewing, Suzanne, 'Inside Architecture from the Outside: Architecture's Disciplinary Practices', *Architecture and Culture*, 2.2 (2014)

Tsang, Michael, 'Decolonial? Postcolonial? What does it mean to 'decolonise ourselves'? Decolonising modern Languages and Cultures School of Modern Languages', Newcastle University, 21.01.2021 (Accessed 16 August, 2022) <https://blogs.ncl.ac.uk/decolonisesml/2021/01/21/decolonial-postcolonial-what-does-it-mean-to-decolonise-ourselves>

Tuin, Iris van der, *Generational Feminism New Materialist Introduction to a Generative Approach*, (Lexington Books, 2015)

Ulloa, Astrid, 'Feminist Political Ecologies in Latin American Context', in *Companion to Feminist Studies* ed. by Nancy Naples, (Wiley Blackwell, 2021)

Valdivia, Angharad N., 'Introduction' in *A Companion to Media Studies* ed. by A. N. Valdivia, (Oxford, UK: Blackwell, 2003)

Walker, Lynne. 'Women and Architecture', in *Gender Space Architecture* ed. by J. Rendell, B. Penner, I. Borden, (London: Routledge, 2000)

Wall, Christine, 'We don't have leaders! We're doing it ourselves!': Squatting, Feminism and Built Environment Activism in 1970s London. *Field Journal*, 7 (2017)

Walter D. Mignolo, Catherine E. Walsh, *On Decoloniality Concepts, Analytics, Praxis*, (Duke University Press, 2018)

Wajcman, Judy, 'Feminist Theories of Technology', *Cambridge Journal of Economics*, 34.1 (2010)

Warren, Karen J. 'Feminism and Ecology: Making Connections', *Environmental Ethics*, 9.3 (1987)

Weisman, Leslie Kanes, 'Diversity by Design: Feminist Reflections on the Future of Architectural Education and Practice', in *The Sex of Architecture*, ed. by D. Agrest, P. Conway, L. K. Weisman (New York: Harry N. Abrams, Inc. Publishers, 1996)

Wiesenberger, Robert, 'Print and Screen, Muriel Cooper at MIT' (unpublished doctoral thesis, Columbia University, 2018)

Wiener, Norbert, *Cybernetics: Or Control and Communication in the Animal and the Machine*. (Paris: Hermann and Cie); Camb. Mass.: MIT Press, 1948)

Wigley, Mark, 'Housing Gender' in *Sexuality and Space* ed. by Beatriz Colomina (New York: Princeton Architectural Press, 1990)

Wigley, Mark, 'Network Fever', *Grey Room*, No. 4. (2001)

Wiethoff, Alexander and Hussmann, Heinrich, eds, *Media Architecture: Using Information and Media as Construction Material* (Berlin/Boston: De Gruyter, 2017)

Women Design Service official website <https://www.wds.org.uk/history.html>
Accessed July, 2022

Yoon, Meejin, 'Public Works: Projects in Play,' YouTube Video, April 12, 2013, Syracuse University School of Architecture

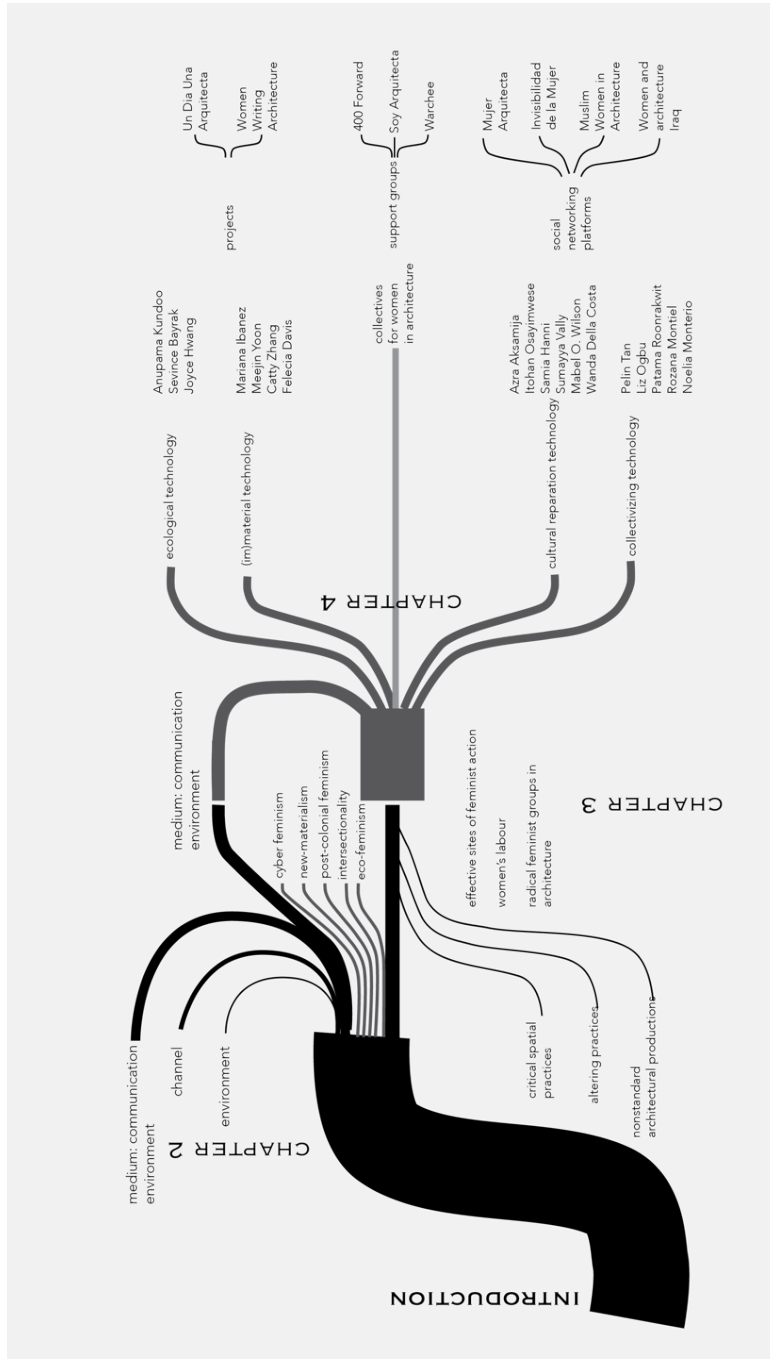
Yoshimoto, Midori, 'From Space to Environment: The Origins of *Kankyō* and the Emergence of Intermedia Art in Japan', *Art Journal*, 67 (2008)

Young, Liam, 'Calibration Camouflage', *Architectural Design*, 89 (2019) <https://doi.org/10.1002/ad.2384>

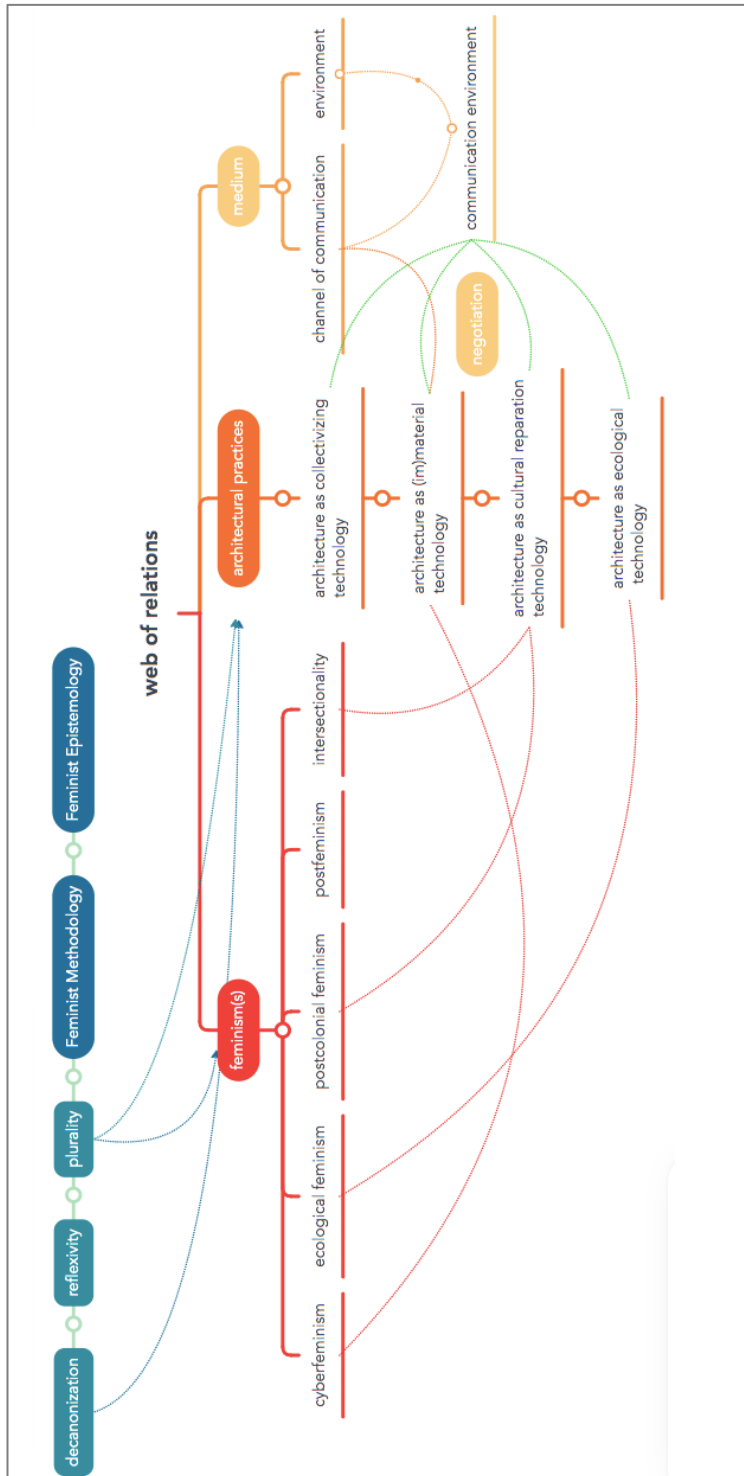
Zabinski, Catherine, 'Scientific Ecology and Ecological Feminism: The potential for Dialogue', in *Ecofeminism, Women, Culture, Nature* ed. by Karen J. Warren (Indiana University Press, 1997)

APPENDICES

A. Mapping of the Chapters



B. A Relation Diagram - Layers of the Research



C. Elaboration of Method – Steps of Selection



D. A Diagram of Categories in Chapter 4



E. The List of Women in Architecture Exhibited at Good News

NAME	SURNAME	BORN	DEAD	BIRTH COUNTRY
PLAUTILLA	BRICCI	1616	1705	ITALY
EMILY	WARREN ROEBLING	1843	1903	USA
LOUISE	BLANCHARD BETHUNE	1856	1915	USA
ALICE	CONSTANCE AUSTIN	1862	1955	USA
SIGNE	HORNBORG	1862	1916	FINLAND
SOPHIA	HAYDEN	1868	1953	CHILE
MARION	MAHONY GRIFFIN	1871	1961	USA
JULIA	MORGAN	1872	1957	USA
EILEEN	GRAY	1878	1976	IRELAND
EMMA	STRADA	1884	1970	ITALY
LILLY	REICH	1885	1947	GERMANY
ELEANOR	RAYMOND	1887	1989	USA
ADRIENNE	GÓRSKA	1889	1969	RUSSIA
MARIANNE	BRANDT	1893	1983	GERMANY
AINO	AALTO	1894	1949	FINLAND
CLARA	PORSET	1895	1981	CUBA
MARGARETE	SCHÜTTE-LIHOTZKY	1897	2000	AUSTRIA
ANNI	ALBERS	1899	1994	GERMANY
HELENA	SYRKUS	1900	1982	POLAND
ELENA	LUZZATO VALENTINI	1900	1983	ITALY
SIBYL	MOHOLY-NAGY	1902	1971	GERMANY
LOTTE	STAM-BEESE	1903	1988	GERMANY
CHARLOTTE	PERRIAND	1903	1999	FRANCE
MARIA TERESA	PARPAGLIOLO	1903	1974	ITALY
LIN	HUIYIN	1904	1955	CHINA
JAQUELINE	TYRWHITT	1905	1983	SOUTH AFRICA
STEFANIA	FILO SPEZIALE	1905	1988	ITALY
ADA	BURSI	1906	1996	ITALY
JANE	DREW	1911	1996	UK
RAY	EAMES	1912	1988	USA
SIGRUN	BÜLOW-HÜBE	1913	1994	SWEDEN
LINA	BO BARDI	1914	1992	ITALY
JANE	JACOBS	1916	2006	USA

MINETTE	DE SILVA	1918	1988	SRI LANKA
ANNA	FERRERI CASTELLI	1918	2006	ITALY
ANNE	GRIWOLD TYNG	1920	2011	CHINA
FRANCA	HELG	1920	1989	ITALY
PAOLA	SALMONI	1921	2003	ITALY
NATALIE	GRIFFIN DE BLOIS	1921	2013	USA
CORNELIA	HAHN OBERLANDER	1921	2021	GERMANY
ADA LOUISE	HUXTABLE	1921	2013	USA
BLANCHE	LEMCO VAN GINKEL	1923		UK
VITTORIA	CALZOLARI	1924	2017	ITALY
CINI	BOERI	1924	2020	ITALY
GEOGETTE	COTTIN EUZIOL	1926	2004	ALGERIA
ZENAIDE	ZANINI	1926	2010	ITALY
NORMA	MERRIK SKLAREK	1926	2012	USA
PHYLLIS	LAMBERT	1927		CANADA
GAE	AULENTI	1927	2012	ITALY
ALISON	SMITHSON	1928	1993	UK
BEVERLY	WILLIS	1928		USA
DENISE	SCOTT BROWN	1931		NORTHERN RHODESIA
DIANA	BALMORI	1932	2016	SPAIN
NANDA	VIGO	1936	2020	ITALY
FLORA	RUCHAT RONCATI	1937	2012	SWITZERLAND
ITSUKO	HASEGAWA	1941		JAPAN
PATTY	HOPKINS	1942		UK
LAURETTA	VINCIARELLI	1943	2011	ITALY
LAURA	THERMES	1943		ITALY
SUSANNA	TORRE	1944		ARGENTINA
DIANA	AGREST	1945		ARGENTINA
PIA	PASCALINO	1946		ITALY
MARIA GIUSEPPINA	GRASSO CANNIZZO	1948		ITALY
ÉDITH	GIRARD	1949	2014	FRANCE
ZAHA	HADID	1950	2016	IRAQ
SUSANNA	NOBILI	1951		ITALY
TOSHIKO	MORI	1951		JAPAN
YVONNE	FARREL (GRAFTON)	1951		IRELAND
SHELLEY	MCMAMARA (GRAFTON)	1952		IRELAND

CARMEN	ANDRIANI	1953	ITALY
ELIZABETH	DILLER	1954	USA
CARME	PINÓS	1954	SPAIN
DORIANA	MANDRELLI FUKSAS	1955	ITALY
ODILE	DECQ	1955	FRANCE
FRANCINE	HOUBEN	1955	NETHERLANDS
KAZUYO	SEJIMA	1956	JAPAN
MAYA	LIN TING	1959	USA
DORTE	MANDRUP-POULSEN	1961	DENMARK
ELISABETTA	TERRAGNI	1961	ITALY
PAOLA	VIGANÒ	1961	ITALY
CATHERINE	MOSBACH	1962	FRANCE
BENEDETTA	TAGLIABUE	1963	ITALY
JEANNE	GANG	1964	USA
LU	WENYU	1967	CHINA
MARIA CLAUDIA	CLEMENTE	1967	ITALY
ANUPAMA	KUNDOO	1967	INDIA
ALESSANDRA	CIANCHETTA	1971	ITALY
SANDY	ATTIA	1974	EGYPT
FRANCESCA	TORZO	1975	ITALY
SOFÍA	VON ELLRICHSHAUSEN	1976	ARGENTINA
NERI	OXMAN	1976	ISRAEL
FRIDA	ESCOBEDO	1979	MEXICO
MIRIAM	KAMARA	1979	NIGERIA
LINA	GHOTMEH	1980	LEBANON
LINA	MALFONA	1980	ITALY
MATILDE	CASSANI	1980	ITALY
SEVINCE	BAYRAK	1983	TURKEY
LUCY	STYLES	1984	UK

CURRICULUM VITAE

Surname, Name: Bezazođlu, Duygu Hazal

EDUCATION

Degree	Institution	Year of Graduation
M. Arch	METU, Department of Architecture	2017
B. Arch	ITU, Department of Architecture	2013
High School	Muđla Science High School 75th Year, Muđla	2008

WORK EXPERIENCE

Year	Institution	Position
2015-2020	METU, Department of Architecture	Research Assistant
2020-	MSKU, Department of Architecture	Research Assistant

FOREIGN LANGUAGES

Turkish: Native

English: Advanced (YDS: 97,5)

German: B1 (Sprachschule Aktiv- Mainz, Germany)

AWARDS

METU Performance Award | 2017

The most successful student in the M.A. Program of the Department of Architecture in the 2015-2016 Academic Year with CGPA of 4.00/4.00

PUBLICATIONS

Articles in refereed journals

Simser, Duygu Hazal, ‘The Fall of Arcades and the Exile of Flaneur, an Arcade in Ankara’, *Journal of Ankara Studies*, 8.1 (2020)
<https://doi.org/10.5505/jas.2020.30602>

Bezazoğlu, Duygu Hazal, ‘Arşiv İmgesinin Film Ortamında İnşası Üzerine Bir İnceleme’, *Moment Dergi*, Görsel Kültür (2022). doi:10.17572/mj2022.1.136152.

Chapters in a book

Simser, Duygu, ‘Medium In-between Material and Immaterial’ book chapter in; Abbas, GM.; Acar, S.; Bancı, S.; Çağlar, N.; Ruhi-Sipahioğlu, I.; Yılmaz, B. (eds.); MateriART: Architectural Design, Research, and Technology, Lisbon: Caleidoscopio (2022) (ISBN: 978-989-658-668-3)

Simser, Duygu, ‘Encounter: Architecture and the Nexus of Media-Communication’, in; E. Murat Çelik and Yaren Özgür (eds), *Multidisciplinary Debates on Aesthetics*, Ankara: SANART, 2021)

Editorship

Basa, İnci and Duygu H. Simser (editors), *Journal: İdealkent Kent Araştırmaları Dergisi (Dil ve Kent Üzerine Özel Sayısı)*
<https://dergipark.org.tr/tr/download/issue-full-file/58572>

İdealkent Kent Araştırmaları Dergisi, Editorial Board (July 2018-)

PROJECTS

Project Advisor: TÜBİTAK 2209-A, Gülten Nur Bilgiç and Cem Eroğlu
Muğla Sıtkı Koçman Üniversitesi Kampüs Sosyal Alanlarının Evrensel Tasarım İlkeleri Doğrultusunda Çözümlemesi (as of Fall 2021)

Project Advisor: TÜBİTAK 2209-A, Sinem Sevda Açıkkel, *Geleceğin Afet Kaynaklı Değişen Sınırlarında Sürdürülebilirlik: Acil Durum Ünitesi* (as of Spring 2022)

EXHIBITIONS

Curatorial Assistant Delft Research Week | Getty: Keeping It Modern METU, Travelling Exhibition at TU Delft (2019)