

**Designing for Gender Equality in the Developing Context:
Developing a Gender-Integrated Design Process
to Support Designers' Seeing, Process, and Space Making**

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Focusing on gender equality and women's empowerment has been established as a keystone strategy for addressing all major international development goals. While designers (architects, landscape architects, planners, engineers) are frequently called to serve in the developing world, they are rarely equipped to see and understand the unique challenges created by gender inequality. Without these tools, design interventions may not address these concerns; have the potential to further reinforce existing obstacles, discrimination, or influences of the built environment; and reduce the effectiveness of planned interventions. With this thesis, I examine five fields of expertise to inform a Gender-Integrated Design Process. These fields range from well-established academic frameworks to areas that have been less explored in traditional design practice: the field of Women in Development/Gender and Development; gender, space, and status literature; ergonomics; proxemics; and participatory design. All research reveals that no design is gender neutral and a gender neutral lens perpetuates women's inequality. To inform and reflect upon the research, I examine six precedents spanning four continents. Through this inquiry, I identify ways to discern, value, and integrate gender into all aspects of the design process, from initial engagement to post-occupancy evaluation. The result of this work is a proposed nine-step Gender-Integrated Design Process to support designers' seeing, process, and space making.

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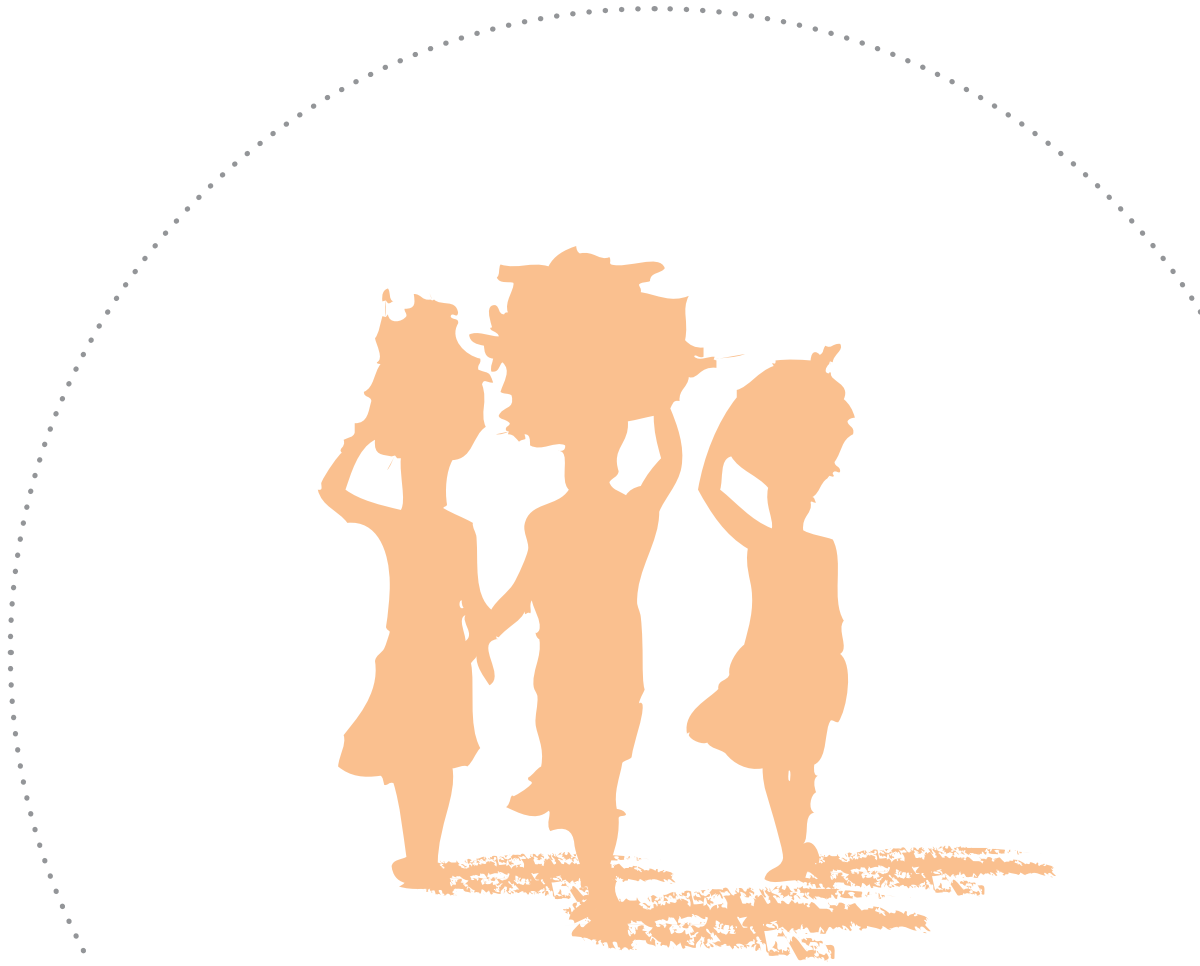
I offer a special nod of appreciation for the Bioneers network in integrating social justice and environmental justice, science and spirit, policy and poetry. Our future depends on holistic, interdependent, resilient, values-driven, seven-generation solutions. Thank you for charting this path – many of us in the field of landscape

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architecture hear your call.

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CHAPTER 1

INTRODUCTION

As designers of the built environment, we are invested in the idea that our design interventions will help to positively shape and link relationships to one another and to natural resources. We are also keenly aware that the built environment can concretize behavioral norms and resource allocation for generations that may be long outmoded or exclusive to various populations or technologies (e.g., women or carbon dependency). The process of design and the role of designer both offer the extraordinary potential and opportunity to address the biggest challenges of our day.

Addressing gender inequality is ranked universally high on the global agenda. Focusing on gender equality and women's empowerment has been established as a "breakthrough strategy" for addressing all major development goals (Lomoy and OECD 1) and as a "precondition for overcoming poverty, hunger and disease" (United Nations, "The Millennium Development Goals Report 2010" 4). While designers (architects, landscape architects, planners, engineers) are frequently called to serve in the developing world, they are not necessarily equipped to see and understand the unique challenges created by gender inequality. Without this lens, design interventions may not address these needs; have the potential to further reinforce existing obstacles, discrimination, or influences of the built environment; and reduce the effectiveness of planned interventions. I believe designers have a real opportunity and responsibility to elevate gender equality as a significant goal of our design interventions in developing communities in order to strategically impact all other critical issues.

How do we approach our design process to attend to these critical gender dynamics and opportunities? With this thesis, I examine five areas of expertise that inform a Gender-Integrated Design Process. By "integrated," I mean both that gender is fully brought into all aspects of the design process, as well as that the process holistically incorporates multiple fields of expertise. These fields range from well-established academic frameworks to areas that have been less explored in traditional design practice: the field of Women in Development/Gender and Development; gender, space, and status literature; ergonomics; proxemics; and participatory design. Through this research, I identify ways to discern, value, and integrate gender into all aspects of the design process, from initial engagement to post-occupancy

evaluation. To support this research, I examine a number of illuminating precedents to inform and reflect upon the research.

The result of this work is a proposed Gender-Integrated Design Process to support designers' seeing, process, and space making focused on the developing context – although arguably aspects are relevant to any context. This is intentionally noted as *proposed*, as this thesis acts as only a first step towards more in-depth research, testing, and revision, ideally with other invested partners. Not surprisingly, researching gender and design was like peeling an onion. Even before I began, there was a long list of related topics deserving additional research and attention, and that list has grown. In other words, this thesis does not intend to be comprehensive and it demands engaging more experts and a broad set of community stakeholders – this is the future work of a dissertation or professional partnerships. The ultimate vision for this is a well-vetted, graphically engaging, user-friendly gender toolkit to serve the design community. This thesis intends to summarize and synthesize major issues to be considered and serves as a launching pad for future research. I look forward to the conversations, challenges, and improvements to come.

Gender equality and the empowerment of women are at the heart of the Millennium Development Goals and are preconditions for overcoming poverty, hunger, and disease.

United Nations

[Investing in women and girls] constitutes a breakthrough strategy for achieving the Millennium Development Goals, and that almost any investment we make in women and girls will have multiplier effects across all Goals.

United Nations Development Program Administrator, Helen Clark



CHAPTER 2

THE CALL TO ACTION: WHY SHOULD DESIGNERS FOCUS ON GENDER EQUALITY IN THE DEVELOPING CONTEXT?

THE CALL TO ACTION: WHY SHOULD DESIGNERS FOCUS ON GENDER EQUALITY IN THE DEVELOPING CONTEXT?

In September 2000, building upon a decade of major United Nations conferences and summits, world leaders came together at United Nations Headquarters in New York to adopt the United Nations Millennium Declaration, committing their nations [187 member states] to a new global partnership to reduce extreme poverty and setting out a series of time-bound targets – with a deadline of 2015 – that have become known as the Millennium Development Goals.

(United Nations, “United Nations Millennium Development Goals”)



Image 1: www.un.org/millenniumgoals/

The United Nations Millennium Development Goals (MDGs) have become an organizing framework for all development work since 2000. Notably, women and gender are the main focus of two of the eight goals – number 3: Promote Gender Equality and Empower Women, and number 5: Improve Maternal Health. However, a closer look at specific targets and established baselines indicates that women, girls, and a gender-based lens are critical to achieving all the goals. For example, goal number 1: Eradicate Extreme Poverty and Hunger, calls out the need for women to achieve full, productive, and decent employment. Goal number 2: Achieve Universal Primary Education, specifically targets girls’ access to education, as school attendance is historically lower for girls, particularly at the secondary level. Number 4: Reduce

Child Mortality, is critically linked to the health of mothers. Number 6: Combat HIV/AIDS, Malaria and Other Diseases, specifically targets women's access to contraception and the ability to negotiate its use. Goal number 7: Environmental Sustainability, targets fuel sourcing, water access, and sanitation. On a household level, these tasks are generally assigned to women. (United Nations, "United Nations Millennium Development Goals")

As the 2010 report on the status of the MDGs states, "Gender equality and the empowerment of women are at the heart of the MDGs and are preconditions for overcoming poverty, hunger and disease" (United Nations, "The Millennium Development Goals Report 2010" 4). Helen Clark, United Nations Development Program Administrator, states investing in women and girls "constitutes a breakthrough strategy for achieving MDGs, and that almost any investment we make in women and girls will have multiplier effects across all Goals" (Lomoy and OECD 1).

The United Nations' imperative to address gender inequality and foster women's empowerment is a product of an established framework within the international development profession of Women in Development (WID) and Gender and Development (GAD) approaches (or WID/GAD). This framework requires development practitioners to be attentive to sex – the biological differences between men and women, and gender – the social relationships between men and women, in which women have been systematically subordinated in all project planning, implementation, and monitoring (Moser 3). This approach has unlocked real successes in combatting universal challenges. For example, the International Food Policy Research Institute has researched and published studies that prove that "reducing gender disparities promotes better food and nutrition security for all" (International Food Policy Research Institute). Its research finds:

1. Targeting women in agricultural technology dissemination can have a greater impact on poverty than targeting men.
2. Equalizing agricultural inputs between men and women results in significant gains in agricultural productivity.
3. Gender disparities in property rights threaten natural resource management.
4. Raising a woman's status dramatically improves the health, longevity, and productivity of her children.
5. Targeting programs to women benefits the whole household, but particularly girls.
6. The social and economic status of women is one of the most important factors affecting the spread of HIV and the ability of households and communities to withstand its impacts.

With a 10+ year background in international development, having served as a Peace Corps Volunteer in Guatemala, and as a board member of Architects Without Borders – Seattle, I am personally motivated to make design work in the developing context more effective. All studies point to addressing gender

as the real game changer; however, a typical design process seldom engages gender. Well-intentioned design professionals rarely have any training in gender and development or even gender and broader design issues, as design is often considered to be “gender-neutral.” Design assumptions and decisions may be blind to critical information ranging from basic facts on sex- and gender-based realities to deeply rooted gender dynamics within a given community. For example, many girls drop out of school when they start menstruating due to lack of access to hygienic or adequate bathroom facilities – an issue of the built environment (“World Toilet Day”). If only men are empowered to be spokespeople for a design project, women’s strategic needs may not be known or communicated and therefore not met (Bill and Melinda Gates Foundation). Subsequent chapters will share many more examples of where and how seeing and understanding gender inequality in the design process is critical, pivotal, and transformative.

The increase of design activism among professionals is heartening and bringing critical services to underserved communities all over the world. Organizations and firms like Architecture for Humanity, Architects Without Borders – Seattle, and MASS Design Group are great examples of nonprofits trying to fill this need. However, an informal audit of the acclaimed major design activism compendiums *Design Like You Give a Damn 1 and 2*, *Design for the Other 90%*, and *Design for the Other 90%: Cities*, reveals that the term “gender” is rarely mentioned in their pages. While there are a few model projects (some of which are used as precedents), less than 90 percent mention gender or women’s empowerment in any capacity as a driver or informer of their design interventions. Each of the books’ introductions, however, is a call to action for designers to use their skills to address poverty, hunger, and disease. While the books clearly do not provide all the background information and process of each project, there appears to be missed opportunities for projects to address gender inequality throughout the program development, participatory design, and space making process as an overarching strategy to achieve their goals. This is not to point fingers or lay blame, but instead to highlight the gap between the desired goals and the knowledge and strategic tools needed to meet them. If we are really listening to the experts, we should have gender equality as a primary driver for all of our design interventions and designing for gender equality tools on every drafting table.

Gender, gender inequality, and how gender plays out in the built environment are complex matters. As designers, we are required to look to multiple disciplines to analyze and understand the need, the challenges, and the possible solutions to support the design process. For this first draft of developing a gender-integrated design process, five diverse but highly relevant fields have been surveyed to bring a holistic approach to the undertaking. As mentioned earlier, the WID/GAD professionals have a host

of tools and are well trained to identify, research, and analyze gender in order to design programmatic interventions. What can designers learn and adapt from this successful work? Similarly, feminist geographers and designers have been researching gender, space, and status for over four decades. How can they illuminate the influences of the built environment on gender equality? What can we learn from the field of ergonomics, where designing for use and comfort is sex-based and much work in the developing context is gender-separated? How can the field of proxemics help designers understand gender and cultural space-based communication and preferences? What participatory and human-centered design tools succeed at deeply engaging gender differences and dynamics?

The following chapters intend to share and synthesize learnings across these five fields to develop a

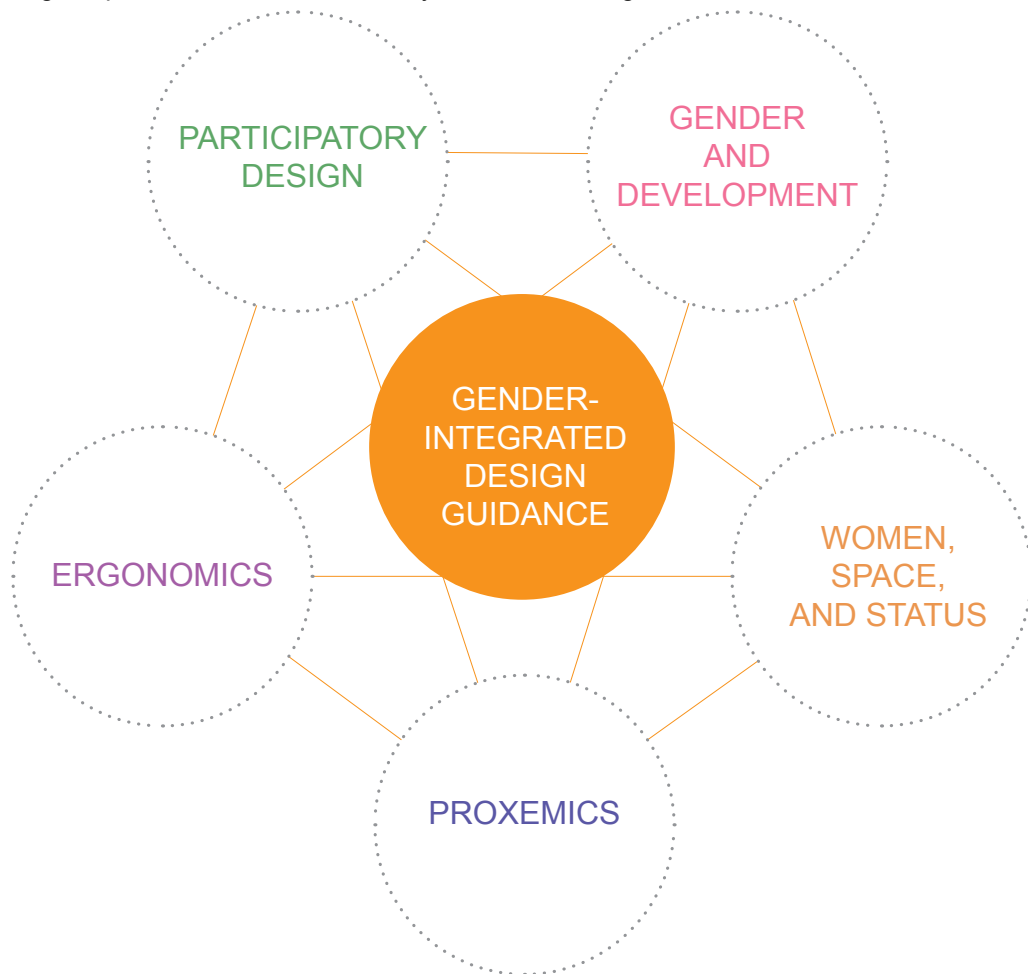
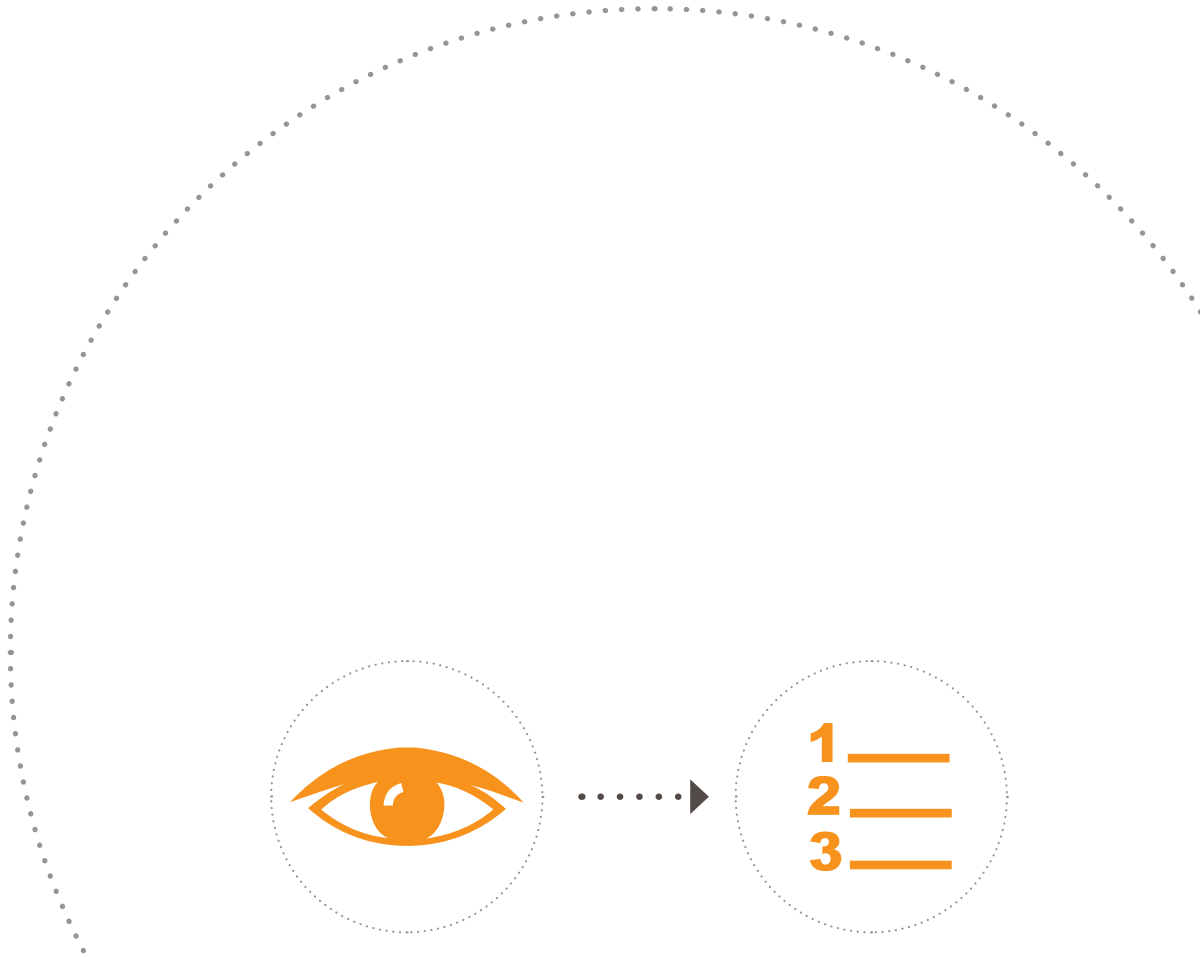


Image 2: Gender Integrated Design Guidance

The following chapters intend to share and synthesize learnings across these five fields to develop a gender-integrated design approach so when we are called, personally or professionally, to serve we are equipped with the tools we need: a toolkit to design for gender equality.

The call and work for gender equality is not a Western notion, but a rich, diverse, and global movement found in even the smallest of communities all over the world.



CHAPTER 3
SCOPE, POSITIONING + METHODOLOGY

Scope and Positioning

As mentioned in Chapter 1, this thesis is just the beginning of deeper research and professional partnerships that will be necessary to do this topic justice. In this case, five fields of expertise have been identified for initial learnings: the field of Women in Development/Gender and Development: gender, space, and status literature; ergonomics; proxemics; and participatory design. This work intentionally elevates gender as its focus, but this is not to dismiss other factors of inequality – ethnicity, class, ability, age, etc. – that are equally important to tend to in design work.

The global scale and scope of this inquiry creates a macro framing and shapes the research – it is often at a mile-high viewpoint and is therefore not able to responsibly attend to (nor is it trying to attend to) the multitude of cultural contexts that exist in the developing world. Site-specific research and inquiry is necessary to apply the work that is presented here.

Due to the scope and nature of the topic, as well as its author (a white, Western woman), the topic and research are inherently objectified. This is stated to be transparent, but also to offer that attempts have been made to check assumptions and biases. With a history of working within the gender and international development field, I have direct experience and exposure to the challenges gender inequality presents women and men in the developing context. I have also studied the complex and sophisticated work that is being done by gender-aware groups around the world. The call and work for gender equality is not a Western notion, but a rich, diverse global movement found in every corner of the world.

Simultaneously, a focus on gender equality and the design process in the *developing context* is also strategically objectifying. For Western designers, talking about designing for gender equality in his or her own context has proven to be a contentious and political subject, although some of the very same challenges are arguably present. By looking outside of our own cultural context, we are open to seeing and learning in ways that we cannot when working close to home. I believe there is an opportunity for this new gender-elevated lens to be turned on ourselves, once we are able to use it with others. Designing for gender

equality can and needs to be an everyday practice in all contexts. Unfortunately gender inequality persists at various levels in most cultures around the world.

The target audience, however, for this particular research is the Western-based design community that is called to serve, either personally or professionally, in the developing world. This frames both the content and language. While this work is not intended to be a toolkit – that will be for a later stage – the language is written to be accessible. When time permitted, I distilled learnings and tools to diagrams and summaries for quick comprehension and easier sharing. Most importantly, this research is to guide design inquiry, not prescriptive methods or forms.

Methodology and Format: Seeing | Process | Space Making

In order to establish a methodology for research, the five fields were initially surveyed for content and resources. As the chapters on Women in Development/Gender and Development and Gender, Space, and Status will outline, *seeing* gender and gender inequality is critical to being able to address gender inequality. However, literature across the fields reveals that gender inequality is often overlooked due to cultural norms and dominant frameworks that invisibilize gender or treat women as a special subgroup. To address this, the research first identifies approaches that help to unveil gender, gender roles, and gender inequality in order to assist the designer in *seeing*.

Seeing gender is only a first step and does not ensure that thoughtful approaches to addressing gender inequality have been integrated into the design process. This research also seeks to identify methods and tools that can be applied from the initiation of the project through the program development, conceptual and schematic design, construction phase, use, and long-term management. In other words, tools to support the design *process* to ensure that addressing gender inequality is fully integrated.

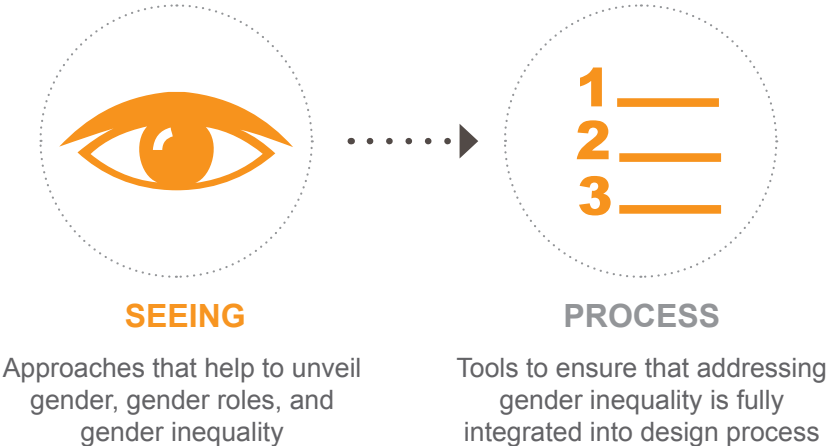


Image 3: Seeing and Process

These two aspects of designing for gender equality – *seeing* gender and methods and tools to support *process* – are investigated across the five fields of research. Each field is covered in a chapter that provides a summary of the field and discusses salient learnings that can inform a gender-integrated design process. When relevant, information between fields is cross-referenced. While some fields have a clear set of frameworks, methods, and tools specific to gender, others do not. For those that do not, I developed points based on the field’s expertise. These *seeing* and *process* discoveries are summarized in a graphic format for easy reference. These summaries are then synthesized to revise a typical design approach providing options for engaging different tools at different stages of the design process. This synthesis is covered in Chapter 9 and the proposed gender-integrated design process is in Chapter 11.

Space making is ultimately a culmination of strategic decision making and creative three-dimensional solutions to complex, multi-faceted problems and opportunities. The strategic decisions made are a product of the initial assessments (*seeing*) of problems and opportunities, as well as the methods used (*process*) that provide deeper insight into how to address those problems and opportunities. In other words, *seeing* and *process* shape *space making*. While the title of this thesis implies that this research might provide prescriptive forms to space making that address gender inequality, it does not. Unlike frameworks and tools that can be applied relatively universally to guide the inquiry and decision-making process (and some will be more relevant than others), the actual forms that result should be unique to each project and context. Instead, the emphasis of this research is based on what precedes the critical decision making. Space making is investigated through precedents that shed light on processes, decision making, or built forms that seek to address gender inequality. *Seeing* and *Process* discoveries are tapped to critique the projects and suggest opportunities for deeper gendered engagement.

As mentioned above, initial research quickly revealed that it is only the tip of the iceberg when working on such an all-encompassing topic. Conversations with allies in the Gender and Development field, as well as peers, advisors, and reviewers elicited many useful pathways to pursue to forward the research. These ideas are collected and outlined in the final chapter to serve as a roadmap for next steps.

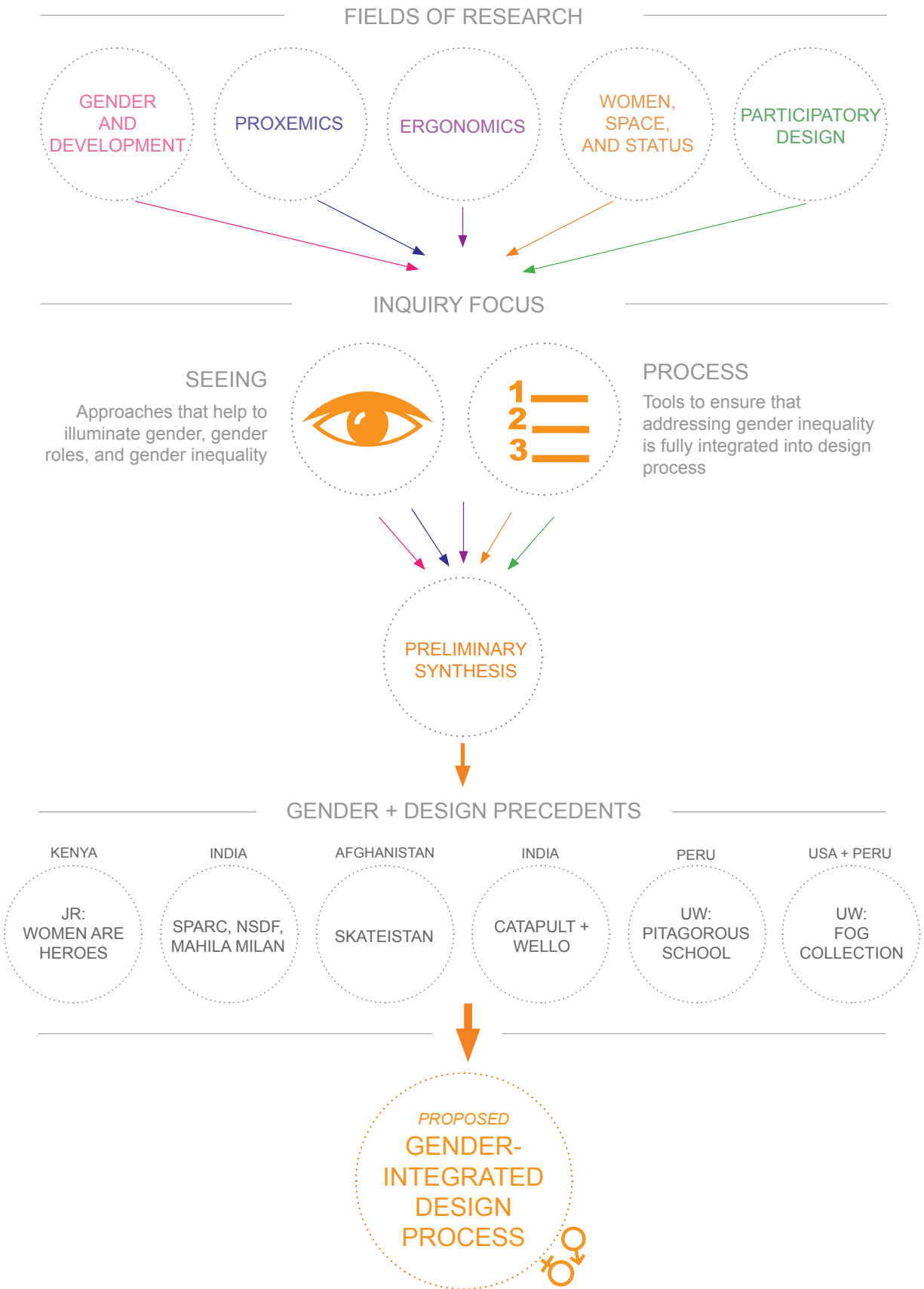
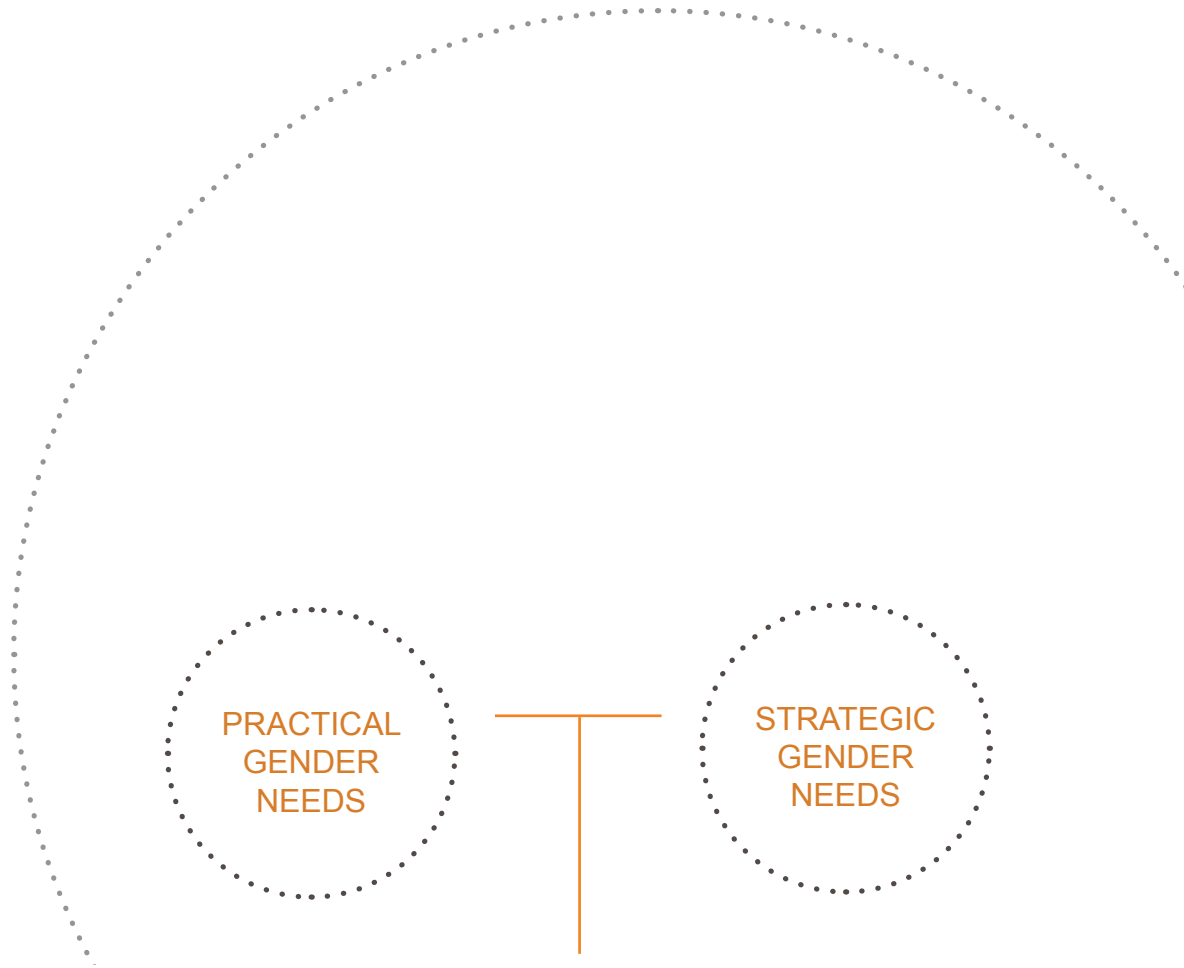


Image 4: Thesis Methodology

I posit that the design community can greatly benefit from taking heed and learning from the elevated gender focus and integration work of the international development field.



CHAPTER 4
WOMEN IN DEVELOPMENT
+ GENDER AND DEVELOPMENT:
LEARNING FROM THE EXPERTS

WOMEN IN DEVELOPMENT + GENDER AND DEVELOPMENT: LEARNING FROM THE EXPERTS

As mentioned in Chapter 1, Women in Development/Gender and Development (WID/GAD) is now a long-standing international development planning and programming area of expertise. In 1997, the United Nations adopted a policy mandate to integrate a gendered approach into all aspects of the United Nations system from the Secretariat to all branches of its work. The United Nations Entity for Gender Equality states:

Gender Mainstreaming is a globally accepted strategy for promoting gender equality. Mainstreaming is not an end in itself but a strategy, an approach, a means to achieve the goal of gender equality. Mainstreaming involves ensuring that gender perspectives and attention to the goal of gender equality are central to all activities – policy development, research, advocacy/dialogue, legislation, resource allocation, and planning, implementation and monitoring of programmes and projects. (UN Women)

The United Nations' championing of gender mainstreaming influenced other major international bodies (e.g., the World Bank and International Labour Office (ILO)). This process is taken very seriously, coming in the form of top-down and bottom-up gender auditing throughout the entire field. For example, the ILO produced *A Manual for Gender Audit Facilitators* that outlines a participatory gender audit methodology, including gender knowledge and awareness workshops, a SWOT analysis (strengths, weaknesses, opportunities and threats), an organizational policy review, and desk audits. In other words, incorporating gender into all aspects of development work is taken extremely seriously in order to achieve development goals.

I posit that the design community can greatly benefit from taking heed of this elevated gender focus and deep integration work the international development field has modeled. This chapter attempts to share underpinning frameworks and methodologies honed from the gender and international development community that can help to support designers when working in the developing context (and arguably closer to home). While sources for this chapter are varied, the majority of information comes from three significant texts within the field. The first is *Gender Planning and Development: Theory, Practice and Training* written by Caroline O.N. Moser. Her text is cited most often in all other resources and

training manuals, establishing key working definitions and frameworks that have shaped the field. She is still working today as an esteemed researcher and gender mainstreaming trainer for all of the major international development institutions. Because gender mainstreaming has become required throughout the field, thorough training manuals have been written to teach gender and development methodologies. Two training manuals from highly regarded development institutions have been heavily referenced. They are Oxfam's *A Guide to Gender Analysis Frameworks* and the Centre for Development and Population Activities (CEDPA) *Gender and Development Training Manual*.

Sex vs. Gender

Differentiating between sex and gender is a keystone to this work. Sex is defined as the biological differences between men and women, versus *gender*:

While one's sex does not change, gender roles are learned and change over time. They vary from culture to culture, and often from one social group to another within the same culture according to class, ethnicity, and race. Factors such as education, technology, economics, and sudden crises like war and famine cause gender roles to change. Gender is considered a social construct because it is socially determined and supported by societal structures. (Moser 2-3)

While gender is a neutral concept, different gender roles are not always valued equally. In almost all societies and cultures, women's roles are subordinate to men's (3).

Gender is a basic organizing principle of societies, particularly in the division of labor in families, communities, and the marketplace. Although gender roles limit both women and men, they generally have had a more repressive impact on women. (CEDPA ii–iii)

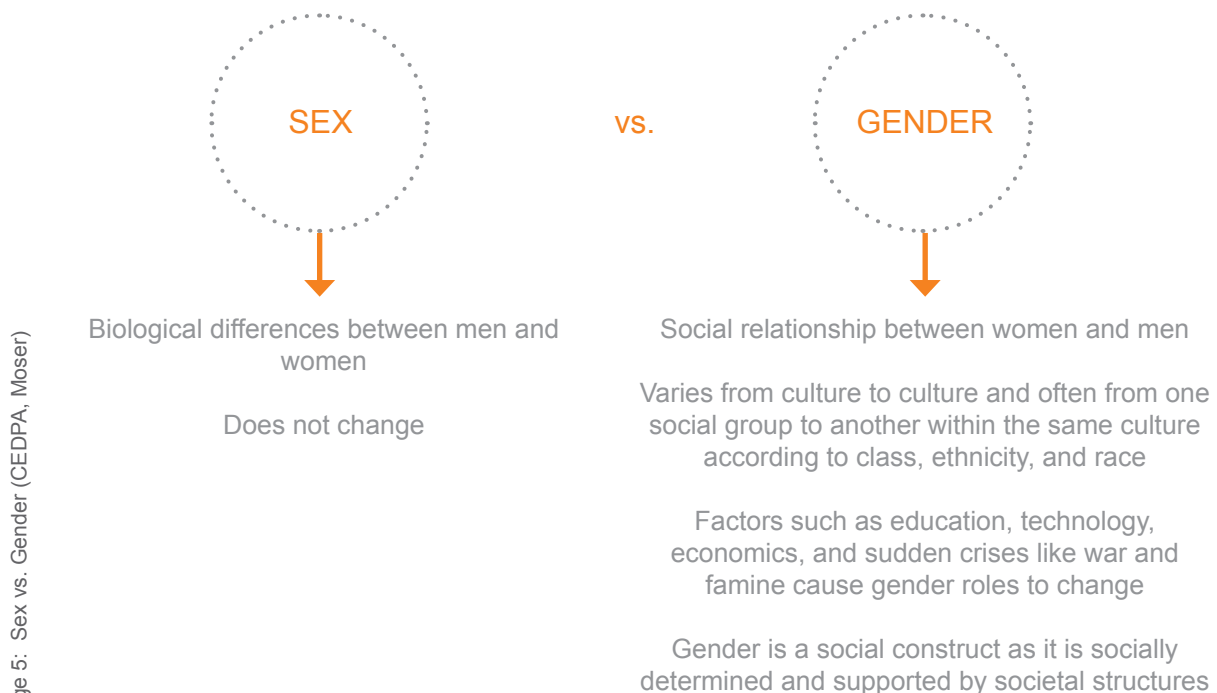


Image 5: Sex vs. Gender (CEDPA, Moser)

These differences in societal, cultural, and economic value of gender roles restrict women’s opportunities to positively impact their own quality of life, as well as those they care about – their family, their community, and the larger network of life. As discussed, the international development community has undertaken a large-scale gender prioritization focus to address this value imbalance in order to combat extreme poverty, hunger, and disease throughout the world.

Women in Development vs. Gender and Development

While commonly conflated, Women in Development (WID) and Gender and Development (GAD) frameworks are distinct approaches and reflect the evolution of thinking within the field. In the early 1970s, “women in development” was adopted, as women were identified as “untapped resources” for economic development. With this attention and additional research, it became clear that focusing on gender and not women in isolation was critical to engaging women and addressing equity and access issues. The WID approach is focused on efficiency of development by increasing women’s economic productivity, i.e., providing access to credit and employment. The GAD approach however, “maintains that to focus on women in isolation is to ignore the real problem, which remains their subordinate status to men.” Moser goes on to explain that a WID focus is ultimately an “add-on” to existing process or planning. A GAD approach, however, is integrative and more complicated, however critical for women’s empowerment, equality, and equity with men. (3-4)

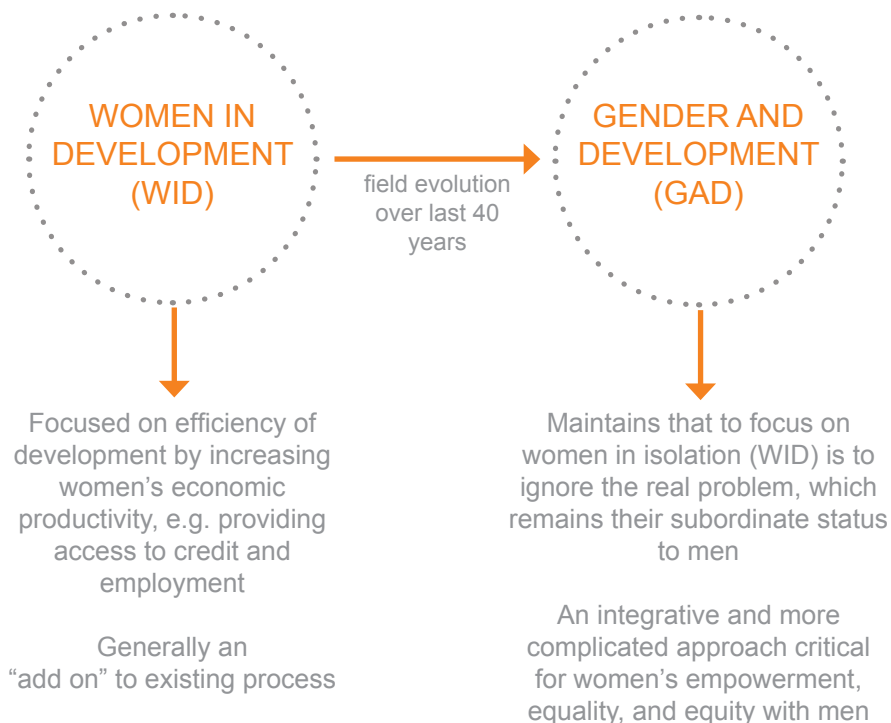


Image 6: Women in Development vs. Gender and Development (CEDPA, Moser)

Common Planning Assumptions

Traditionally, development planning has operated on generalized assumptions and stereotypes of the household unit, enabling planners to rationalize complex social, economic, and political decision making.

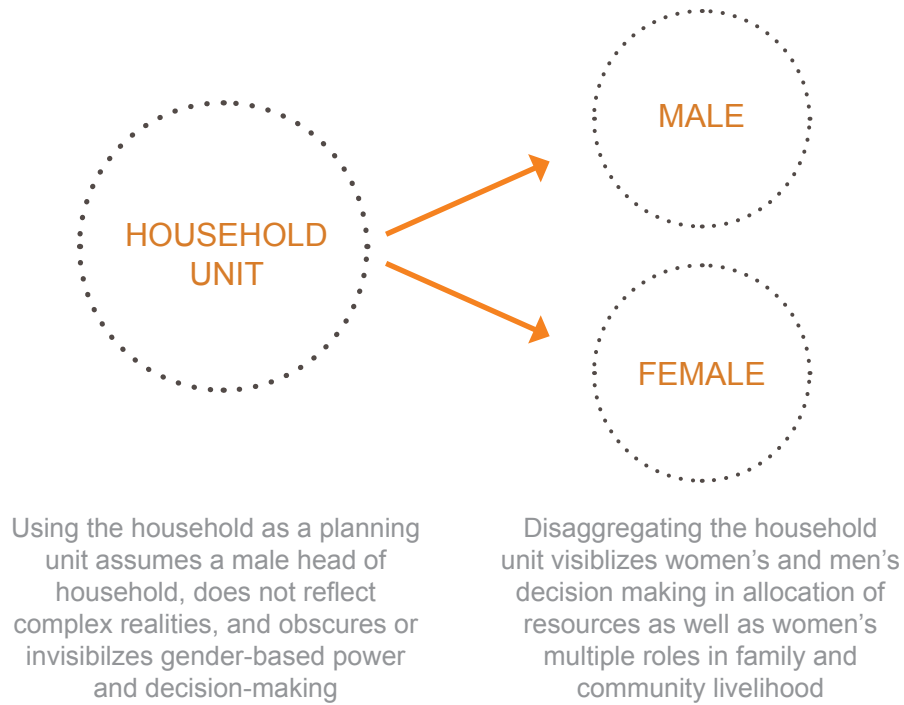
These assumptions have obscured or invisibilized the realities of women's lives. In Moser's *Gender*

Planning and Development: Theory, Practice and Training, she describes these three assumptions:

1. That the household consists of a nuclear family of husband, wife and two or three children [and that the husband is the "head of household"].
2. That the household functions as a socio-economic unit within which there is equal control over resources and power of decision making between all adult members in matters influencing the household's livelihood.
3. That within the household there is a clear division of labour based on gender. The man of the family, as the 'breadwinner', is primarily involved in productive work outside of the home, while the woman as the housewife and 'homemaker' takes overall responsibility for the reproductive and domestic work involved in the organization of the household. (15)

It has been proven that households, particularly those living in poverty, are often not traditional nuclear families and that over one-third of households are headed by women, usually due to abandonment or because the husband must seek work away from the home (17). Additionally, kinship and community networks are usually critical contributors to a household's livelihood. It would be an error to presume there is equal decision making between adult members of a household. This reductionist approach for the ease of planning assumes that the male head of household is altruistic or a "benevolent dictator" who is able to see and plan for the best interests of his family. However, Moser writes, "the male household head may not have any real understanding of the day-to-day problems associated with household welfare, since provisioning is a reproductive task [traditionally assumed] of women. Men frequently know little of their wives' coping strategies" (23). This approach also does not take into account that gender inequality is often not seen or challenged when the one in the dominant position is in a decision-making position, reinforcing the inequities in access, control, and distribution of resources within the household. The third assumption also supports the notion that women's work in all forms is relegated to a reproductive role, reducing the value of women's roles and contributions in other aspects of personal, family, and community livelihood (27).

Image 7: Disaggregating Household Data (Moser)



Gender Roles and The Triple Role of Women

While it is true that women often are most closely associated with domestic tasks or *reproductive* work, they are also engaged in other aspects of household and community management. The term “triple role” is one that has been established within the feminist community to visibilize and value women’s work, whether it be paid or unpaid. It is also meant to decouple work from something that is sexually determined and to highlight that typically/traditionally understood gender roles are neither rigid nor universal. The gender and development community has adopted the following categories to disaggregate roles and work that is often conflated or devalued:

Reproductive role:

Child-bearing/rearing responsibilities, and domestic tasks [almost always ascribed to women], required to guarantee the maintenance and reproduction of the labour force. It includes not only biological reproduction but also the care and maintenance of the workforce (male partner and working children) and the future workforce (infants and school-going children). (Moser 29)

While the reproductive role (withstanding childbearing) is *not* dictated by one’s sex, it is often equated with a “natural” role for women and not valued as work. Moser describes this using the example of rest: when men come home from work, they are tired and rest, while child rearing and domestic work has no beginning or end. Women often never rest except at night and are often the first to get up to prepare the household for the day. (30)

Productive role:

Work done by both women and men for pay in cash or kind. It includes both market production and with an exchange-value, and subsistence/home production with actual use-value, and also potential exchange-value. For women in agricultural production this includes work as independent farmers, peasant wives, and wage workers. (31)

Experts acknowledge that differentiating between “productive” and “reproductive” work and how it is valued is complex. Feminists would argue that reproductive work is productive work, as it contributes directly to a household economy. But because women are often only seen in a reproductive role and this role is consistently undervalued, gender and development planners have adopted these separate categories to ensure that women’s multiple roles are seen and valued. For example, it has been commonly stereotyped in rural African agricultural communities that women are subsistence farmers and men grow cash crops, while often the picture is far more complex. Women may tend their own small plot, work unremunerated in their husbands’ fields, and do seasonal remunerated agricultural work. (32–34)

While it is often assumed that only men are present in public community work, that is usually not the case.

Roles can often be divided as follows:

Community managing role:

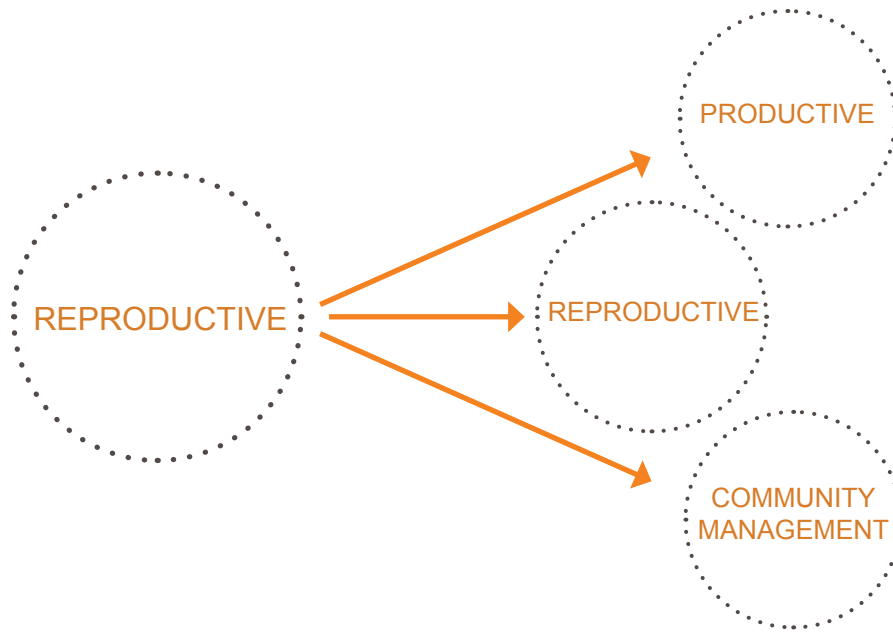
Activities undertaken primarily by women at the community level, primarily by women as an extension of their reproductive role, to ensure the provision and maintenance of scarce resources of collective consumption, such as water, health care and education. This is voluntary unpaid work, undertaken in “free” time. (34)

Community politics role:

Activities often only available to men at the community level, organizing at the formal political level, often within the framework of national politics. This is usually paid work, either directly or indirectly, through status or power. (230)

These two different roles are separated, as the community managing role of women is often, like productive work by women, seen to be an extension of their reproductive role. If conflated, community leadership would only be seen to be the role of men. While Chapter 5 will more thoroughly address gender, space, and status, it is worth noting how these roles are differentiated by space. “The spatial division between the public world of men, and the private world of women, means that for women the neighborhood is an extension of the domestic arena, while for men it is the public world of politics” (35). Women are often very effective and powerful in their community managing roles, but their success is based on organizing within their own sphere. If they wish to enter the (male-dominated) politics role, they can be met with much conflict and controversy, further reinforcing gender norms (36).

Image 8: Women's Triple Role (CEDPA, Moser)



Women are often only seen in their reproductive role - child rearing and domestic tasks

Women play a triple role including productive (cash, in-kind, subsistence) and community management (ensuring maintenance of community resources such as water, health care, education) as well as a reproductive role

Practical Gender Needs vs. Strategic Gender Needs

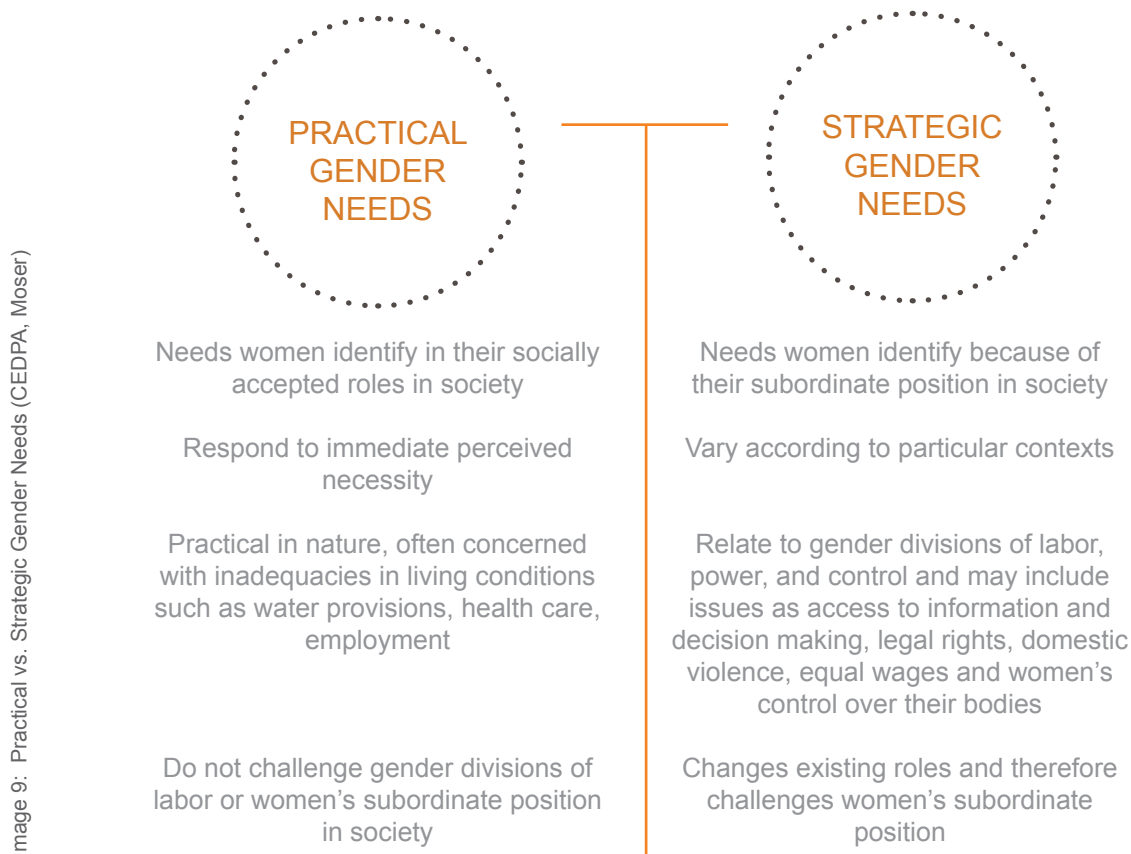
To achieve gender equality, it is necessary to shift and change gender norms and values. Gender and development planners have developed a framework to differentiate between *practical* versus *strategic* gender needs to better understand the types of interventions undertaken by development professionals and their impact on gender equality over the long term. While established by Moser, the CEDPA *Gender and Development Training Manual* defines these well:

Practical [gender] needs are immediate and material and arise from current conditions. Women's practical needs tend to focus on the domestic arena, income-earning activities, and housing and basic services, all identified as women's responsibilities. Child care services, maternal and child health care, subsistence crops marketing, and traditional employment opportunities are means to address these needs. While practical interventions can increase women's participation in the development process, they are unlikely to change gender relations and, in fact, may preserve and reinforce inequitable divisions of labor.

Strategic [gender] interests are long-term, related to equalizing gender-based disparities in wages, education, employment, and participation in decision-making bodies. Addressing strategic interests may challenge the prevailing balance of power between men and women. Actions to address women's strategic interests might include abolition of the gender division of labor, shared domestic labor and child care, elimination of institutionalized forms of discrimination (for example,

the right to own property and access to credit), promotion of political equality, freedom of choice over childbearing, and adequate measures against male violence. (CEDPA iii)

Meeting practical gender needs is often equated with a WID approach – approaching women in isolation, while addressing strategic gender needs is a GAD approach – looking at relationships between men and women, acknowledging persistent inequalities, and strategizing how to address these appropriately.



Like most development agencies, the Bill and Melinda Gates Foundation has prioritized amplifying women's voices and leadership through all of its programming. This can be found throughout the foundation's programmatic goals, as well as its grantmaking criteria. Materials for prospective grant applicants for agriculture work include the orientation manual "Creating a Gender Responsive Agricultural Development Program." This document underscores the importance of designing programs that focus on women as well as men, acknowledging that by focusing on women, household nutrition is improved, technology adoption rates are higher, and productivity is increased overall. The foundation requires all grantees to "Know her. Design for her. Be accountable to her." It outlines three different types of approaches – gender-neutral, gender-aware, and gender-transformative – and rejects gender-neutral

approaches as being effective. The manual describes a scenario whereby practitioners only consulted men in a project, assuming they would be able to speak for the community, but the project failed because the practitioners did not incorporate critical expertise and preferences of women. On the other hand, a gender-aware program is working to specifically understand the needs of both women and men, to ensure that they both benefit from the program and no harm is done. Furthermore, a gender-transformative project aims to address gender inequity directly as the main focus of its programming. These different ranges of approaches will also be discussed in the next section where WID/GAD methodologies are reviewed.

Visibilizing, Understanding, and Prioritizing Gender

Understanding and working with complex gender dynamics is challenging for many reasons outlined by the frameworks above: gender inequities are often ingrained as the status quo so that they are rarely seen. When seen, they are often stereotyped or simplified and miss, dismiss, or devalue critical roles of women. This process further exacerbates and perpetuates inequitable gender norms. Development and design professionals have a responsibility to employ methodologies that help them *see* gender. The gender and development field has developed a number of methodologies and tools to help do this.

Five tools that can serve designers' learning and process are summarized, and their applicability as well as proposed additions or adaptations for designers' use are discussed. The tools are found in the Appendix with brief notes to support the design community. It is important to emphasize that the baseline for all of these tools, and underscoring all the above-outlined frameworks, is that all data and project planning must be sex-disaggregated. This is key to seeing and addressing gender inequality. Designers will benefit from approaching all of their site analysis, design process, and interventions with this as a foundation.

Harvard Analytical Framework

One of the first developed and still used methodologies is the Harvard Analytical Framework established by the Harvard Institute for International Development and the WID office of the United States Agency for International Development. While criticized for its emphasis on efficiency versus equity, its methodology is acknowledged for providing a strong awareness tool to support seeing gender roles as well as resource allocation and control (Moser 154). The framework has four major components: Activity Profile, Access and Control Profile, Influencing Factors, and Project Cycle Analysis. The Activity Profile is disaggregated by gender as well as age and addresses reproductive and productive activities. It aims to identify who

does what, where, and how often throughout the community. This includes everything from fuel and water collection to agriculture, healthcare, and employment. The Access and Control Profile is also gender-disaggregated and addresses resources and benefits and whether men or women control them. These include such things as land, equipment, labor, and cash, as well as asset ownership, basic needs, education, and political power. Influencing Factors addresses larger dynamics at play, identifying the impact, opportunity, and constraints of political, economic, cultural, educational, environmental, legal, and international factors. The Project Analysis Cycle is gender-disaggregated and covers project planning, monitoring, and evaluation mechanisms. (CEDPA 57-60)

While it is likely unrealistic to imagine a design team having the time to undertake such a comprehensive analysis, this is an illuminating tool. The framework helps to open a designer's eyes to the gendered nature of critical roles, resources, and control that they may have otherwise been blind to. A designer might select a few aspects that seem particularly pertinent to his or her design intervention and investigate that over the course of all four components. Undoubtedly, various interconnections and relationships would be lost, but the process would be far more revealing than not exercising these gender-seeing muscles. I would suggest that a thorough reading of the framework before and throughout a project cycle would still be supportive, rather than not using the tool entirely due to time constraints.

Additionally, almost all aspects of the methodologies have a spatial component. Mapping these spatial relationships based on gender, as well as age, time of day, and seasonality would provide a rich human-centered site analysis to inform multiple aspects of the design process. From a planning perspective, this would be particularly useful if tasked with siting interconnected resources; from an architecture or landscape architecture perspective, it would help identify additional program opportunities a design intervention could meet; from a technology or product design perspective, it could reveal time constraints for adoption or gendered limitations to resource access or control, just to name a few. Chapter 5 will further discuss gender, space, and status where this multilayered, temporal gender roles spatial mapping would be a very useful tool. Spatial mapping tools will be discussed in Chapter 8, which covers participatory design methods.

Moser Framework

Developed by the authoritative expert on gender and development theory and practice, Moser's framework goes beyond identifying gender roles, which is the Harvard Analytical Framework's focus, to include tools to address practical and strategic gender needs. The framework has six components:

1) Gender roles identification – based on gender roles outlined above; 2) Gender needs assessment – based on practical gender needs versus strategic gender needs; 3) Disaggregating control of resources and decision making at the household level – in order to address traditional assumptions of the household unit; 4) Planning for balancing the triple role – in order to prevent unconsidered overlaps of gendered responsibilities; 5) Intervention options and performance measures; and 6) Involving women and gender-aware organizations into a participatory planning process. (Moser 91-107)

Unlike the Harvard framework, Moser's model outlines tools to directly address the subordination of women. By identifying gender needs and examining the reality of household resource allocation and decision making, planners and designers have more strategic information to work from. For a design team, I would suggest a key to the success of using this framework is found in component 6 – involving women and gender-aware organizations in a participatory process. Designers do not need to be the experts, nor should they be. Local women and gender-aware organizations are the leaders in accessing and interpreting this critical data in order to design with practical and strategic gender needs as a guiding framework. This is also highlighted as a strong participatory design tool in Chapter 8. Additionally, the emphasis on the balancing of roles – component 4 – reminds designers that in addressing one problem, they may create additional stresses, time requirements, or control issues in other spheres. Assuring that steps are taken to understand and anticipate the ripple effects of interventions is key.

Gender Analysis Matrix

The Gender Analysis Matrix was developed in order to meet the needs of grassroots development workers without the extensive data collection required of other methods. The tool is designed to be used with the community multiple times throughout project development in order to assess a project's impacts on gender roles. The project is assessed for women, men, the household, and the community by looking at four categories: labor, time, resources, and culture. Gender factors are first identified by both men and women and then they are assigned a "+" if consistent with project objectives, "-" if they challenge objectives, or "?" if uncertain. (CEDPA 61-63)

While best used in tandem with the initial site analysis and planning tools outlined above, I believe this matrix could be a powerful instrument to employ even when a design team has not had the time to implement the other tools thoroughly. Using the tool in an iterative manner holds the design team accountable to the effects it is having on the community and can support a transformative process. The matrix could be adapted to include other critical groups (e.g., ethnic groups or age ranges) depending on

the context and goals of the community and project.

I would suggest that the power of this tool lies as much in the affirmatives or negatives as in the question marks identified. While learning what is working and not working is useful and indicates areas of work, highlighting areas of unknown impact is a place for planners and designers to dig deeper into what is likely a complex dynamic at play. Investigating and learning more about this “unknown” could unveil additional layers of information that could help inform planning, programming, and/or design decisions. The tool then acts as a feedback loop as it is used throughout the process to determine how interventions are playing themselves out. This tool also helps to inform component 4 of Moser’s framework – balancing gender roles – revealing how and where offsets of work or time are being moved as a side effect of an intervention.

Longwe Framework or Women’s Empowerment Framework

This framework was developed to identify a development process’s full integration of gender awareness with a goal of women’s empowerment and equality. It is based on a hierarchical chart of five levels of equality with a focus on women: 1) Welfare – meeting women’s basic needs equally to men, such as food, income, and medical care; 2) Access – women’s access to land, credit, training, and benefits equal to those of men; 3) Conscientisation – belief in sexual equality where division of labor is fair, equal, and without subordination; 4) Participation – women’s participation in all levels of decision and policy making; and 5) Control – equality of control over all aspects of production and distribution of benefits. Project objectives that do not address women’s issues at all are assessed as negative; those that acknowledge women’s issues but are neutral about the project impact are assessed as neutral; and those that are focused on improving women’s position in relation to men are assessed as positive. Development workers are encouraged to act at the highest levels on the chart to address gender inequality and women’s empowerment. (ACDI/VOCA 12-13; CEDPA 64-65)

While ideological in nature, this tool can help planners and designers understand their interventions within a spectrum of empowerment, identifying a direction for growth. It is limited, however, by its focus on women and not on gender relations. Practitioners recommend that this tool be used within a larger gender analysis toolkit. As a stand-alone tool it could be too simplified, but it is still supported for revealing the “gap between rhetoric and reality” in development interventions (ACDI/VOCA 13). Designers and project planners could believe they are championing gender equality when they are really only addressing basic welfare issues. I would suggest that many design activism projects believe they are addressing women’s

empowerment and gender equality, but they are still operating on the lower levels of the Longwe chart.

CEDPA Project Checklist

The Centre for Development and Population Activities (CEDPA) Manual Series offers one of the most used gender and development training manuals for the United States development sector. In addition to covering the various tools summarized above, CEDPA provides a checklist to ensure that a gender framework and expertise isare included in all aspects of the project preparation, implementation and evaluation. This checklist teases out the gendered nature of areas of data collection, project leadership, and long-term planning for a project cycle.

For example, the Project Design and Preparation section asks “Are women involved at all levels in the planning and implementation of the project?” and “Have both men’s and women’s opinions been sought in the definition of objectives?” (66). I suggest that these are key questions for designers when working with their “clients.” Based on my experience, often most development projects are represented by a community leadership group – the “client” – composed entirely of men due to gender norms (and gender inequality). How does the design team ensure that women are involved in all aspects of the project and that their needs and goals for the project have been equally included in what the client is presenting? Perhaps the design team requires that a diverse steering committee be formed that has equal representation of men and women, knowing that its design interventions will be more powerful when the voices of both men and women are at the problem-identification and goal-setting table. This is discussed again in Chapter 8 on participatory design.

The Project Implementation portion of the checklist asks, “If approach by male staff is not culturally acceptable, will the project make provision for female staff intervention?” There is chance the design team is all male (or all female). How will the team leaders ensure that they are able to acquire valuable gender-based information from both men and women in the community? What alliances or partnerships can be built to make sure that the design team can access the information it needs appropriately? Perhaps the team could partner with a local women’s organization to help navigate and obtain the information it needs. Some of these factors are also questions of proxemics discussed in Chapter 7.

I believe the CEDPA project checklist is an extremely useful and powerful tool to help a design team stay focused on seeing gender throughout the entire process – from initial project identification to small design details that respond to multiple user needs and challenges. Checklists are a common format for

many sectors to ensure that critical ideas or requirements are not forgotten. Checklists also act as a quick and dirty training tool for overarching goals. Perhaps a design team wouldn't take the time to seek out guidance beyond the checklist, but an adapted gender-integrated design checklist would quickly reveal the goals, intentions, and methods needed to address gender inequality in a project without the weight of a training manual. This approach is so useful, a draft adapted checklist is developed and is found in Chapter 12.

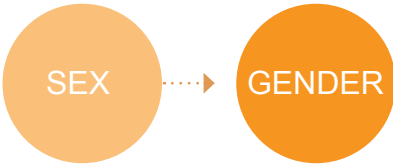
Summary

The WID/GAD field provides a well-developed lens for seeing and valuing gender that can greatly educate designers. Understanding the differences between sex and gender and the shift from WID to GAD provides an important grounding for all gender-based work. Disaggregating household data and valuing women's triple roles of reproductive, productive, and community management provide important frameworks to visiblize women's roles, access, and decision making. Understanding the difference between practical versus strategic gender needs is a key distinguishing factor for the potential for design interventions. The five WID/GAD tools identified are equally rich and can all be adapted to strongly support the design process. The following graphic summarizes the *seeing* and *process* discoveries of the field. The tools can be found in the Appendix with brief notes on use and adaptation possibilities.

GENDER AND DEVELOPMENT: SEEING

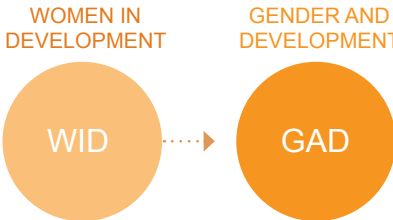


Biological differences between men and women
Does not change



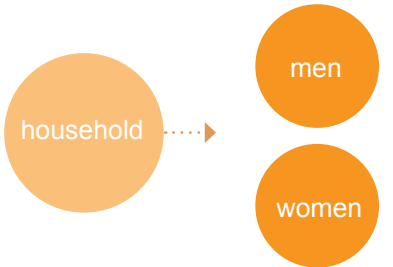
Socially constructed relationship between men + women. Varies from culture to culture.
Factors like education, technology, economics create change

Focused on efficiency of development by increasing women's productivity
Generally an "add on" to an existing process



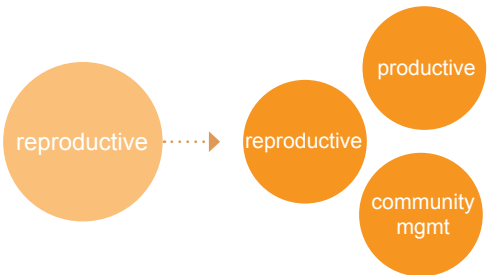
Asserts that focusing on women in isolation (WID) ignores women's subordinate status to men
An integrated approach to address gender equality

Using the household as a planning unit assumes a male head of household, does not reflect complex realities, and obscures or invisibilizes gender-based power and decision-making



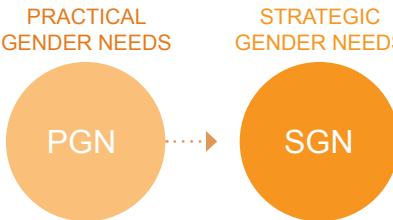
Disaggregating the household unit visibilizes women's and men's decision-making in allocation of resources as well as women's multiple roles in family and community livelihood

Women are often only seen in their reproductive role - child rearing and domestic tasks



Women play a triple role including productive (cash, in-kind, subsistence) and community management (ensuring maintenance of community resources such as water, health care, education) as well as a reproductive role

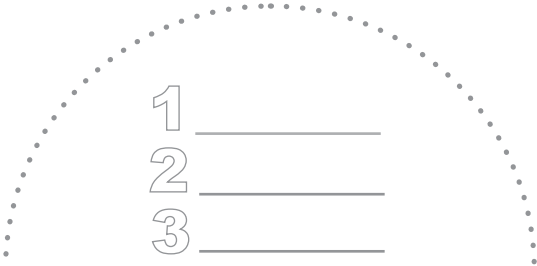
Needs that respond to socially accepted roles
Respond to immediate necessity
Do not challenge women's subordination



Needs women identify due to their subordinate position
Relate to gender divisions of labor, power and control
Intend to address gender inequality

Image 10: Gender and Development: Seeing Summary

GENDER AND DEVELOPMENT: PROCESS



HARVARD ANALYTICAL FRAMEWORK

Strong awareness tool to support seeing gender roles as well as resource allocation and control. Has four major components: Activity Profile, Access and Control Profile, Influencing Factors, and Project Cycle Analysis.

MOSER FRAMEWORK

Focused on equity, the framework has six component parts: gender roles identification, gender needs assessment, disaggregated resources on household level, planning for balancing women’s triple role, intervention options and performance measures, and involving gender-aware organizations into participatory planning processes.

GENDER ANALYSIS MATRIX

Developed to meet the needs of grassroots development workers without the capacity to collect extensive data, the matrix is designed to be used multiple times throughout the project development. The project is assessed for women, men, household, and community levels looking at four categories: labor, time, resources, and culture. Gender factors are assessed and assigned a positive, negative, or uncertain value based on project goals.

LONGWE FRAMEWORK

Developed to identify a development process’ full integration of gender awareness with a goal to women’s empowerment and equality. It is based on a hierarchical chart of five levels of focus on women: 1) welfare, 2) access, 3) conscientisation, 4) participation, and 5) control. Best to use in conjunction with other tools.

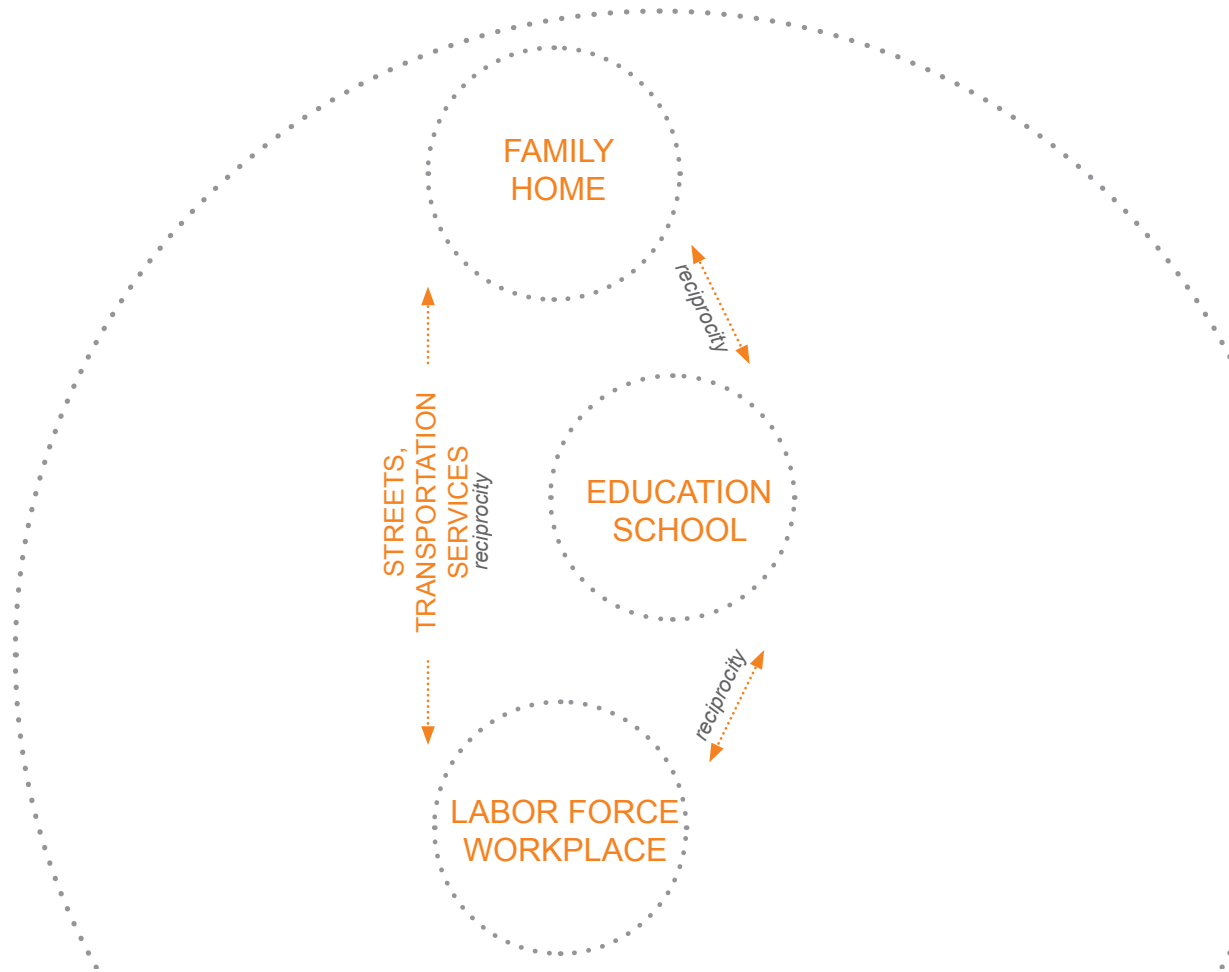
CEDPA PROJECT CHECKLIST

This checklist ensures that a gender framework and expertise is included in all aspects of the project preparation, implementation and evaluation. It teases out the gendered nature of data collection, project leadership, capacity, and long-term planning for a project cycle.

Image 11: Gender and Development: Process Summary

Space confers status and status is gendered, therefore men and women access, use and do not use, feel welcomed or uninvited, or safe or unsafe in different ways and for different reasons.

Due to women's subordinate status in most cultures, women's access, invitation, and sense of safety are often less than that of men's limiting movement, access to public amenities, productivity, and quality of life.



CHAPTER 5

GENDER, SPACE + STATUS: A LITERATURE REVIEW

GENDER, SPACE, + STATUS: A LITERATURE REVIEW

While previous chapters demonstrated that the international development field has mainstreamed a gender approach – a term used by that field to mean full integration – into all of its planning and programming, the design fields of architecture, landscape architecture, urban planning, and engineering have not. However, a literature review of the scholarship of gender, space, and status reveals a strong reciprocal relationship between gender, status, inequality, and the spaces people and cultures inhabit. The literature review also strongly advocates for the integration of gender in the seeing, process, and space making of planning and design. This review indicates that adopting or claiming a gender-“neutral” design approach is shortsighted and insufficient to meet the challenges of the Millennium Development Goals. It is by illuminating and understanding how space is gendered that designers are able to broaden their frame to understand how the built form impacts gender inequality and to deepen their inquiry and participatory process in addressing the challenge. Designers have the opportunity with this widened lens and deeper approach to positively address gender inequality and women’s empowerment issues that are critical to overcoming poverty, hunger, and disease (“Achieving Gender Equality at the Heart of MDGs | Data”).

Feminist Scholarship in Design and Planning

Feminist and post-modernist scholarship beginning in the latter part of the 20th century has provoked and offered significant insights into the ways gender presents itself in all aspects of human civilization as well as in academia. The book *Cities and Gender* attributes feminist scholarship to unsettling the notion that we have an omniscient understanding of the world; instead, our approach is “laden with personal values, encounters, experiences and expectations” inherently creating blind spots in how designers see and access information that is pertinent to all potential users (Jarvis, Cloke, and Kantor 11). In *Gendered Spaces*, feminist sociologist and urban planner Daphne Spain values feminist theory in revealing “how gender relations are constituted and experienced and how we think or, equally important, do not think about them” (*Gendered Spaces* 26). In *Discrimination by Design: A Feminist Critique of the Man-Made Environment*, architect, planning, and women’s studies professor Leslie Kane Weisman explains that it is “easy to accept unthinkingly the man-made landscape as a neutral background” (2). She argues that

gender-”neutral” language – man/he as the generic or universal – as well as a gender-”neutral” lens perpetuates women’s invisibility and inequality. Spain elaborates that those who benefit from this generic approach are particularly blind to gender differences or inequalities (*Gendered Spaces* 26).

Although scholarship on gender and design is rich, it remains marginalized, at best, in traditional planning and design approaches. Much of the literature reminds readers that the planning and design fields have been and continue to be dominated by male practitioners contributing to the androcentrism – centered or focused on men, often to the neglect or exclusion of women – of the field (Weisman, *Discrimination by Design*; Danze, *Architecture and Feminism*; Greed, *Women and Planning*). This has exacerbated the treatment of women as a “specialized subgroup” (Rothschild and Cheng 21) and diminished, if not invisibilized the role the built environment plays in both perpetuating and creating gender inequality.

A gender “neutral” lens perpetuates women’s inequality.

Critical to this discussion is the Eurocentrism and ethnocentrism that pervades most Western scholarship, including the fields of design and planning, as well as feminist academia. While the context of this research is the developing world, its author and target audience live in a developed, Western context. Available research and information is primarily from Western sources. Responsible attempts have been made to understand and question contexts and sources to illuminate and challenge biases in the scholarship and interpretation. Additionally, examples from a spectrum of cultures, classes, ethnicities, and geographies have been tapped for this literature review in an attempt to highlight gendered spaces as universal versus a subset of study. It should also be noted that inequalities based on class, ethnicity, caste, ability, etc., are not to be underestimated and are important influencers in gender and space dynamics. Elevating gender as the primary focus of this investigation, however, is intended to help identify unique and overarching trends and realities specifically related to gender.

Territoriality, Control, Belonging, and Access

Human civilization is built on a history of spatial control; the territoriality and contestation of national boundaries is a clear example on a global scale. Colonization and ghettos are methods in which control has been asserted over space and the built environment to exploit resources and/or exert dominion. On a less political level, the built environment affects our experience of space, for example feeling dwarfed by tall buildings or vulnerable in empty, wide spaces. People experience the feelings of being “out of place” in direct response to their surroundings (Jarvis, Cloke, and Kantor 19, 111). If they “fit in,” however, they

are less likely to see that their physical environment contributes to that sense of belonging. We have a sense of where we all “belong” in a community. Where people live, who has access to views or services is a result of control (or lack of control) of space. Land ownership directly impacts the purpose, quality, and access to space as well as community values (e.g., racial segregation). Perceived sense of spatial ownership equally translates into access and control – for example, territorial conflict in gang culture, or who feels safe at night in a particular place (19). This sense of belonging, access, and control is experienced differently through gender roles and status among other characteristics.

Gendered Space

Weisman describes how the dialectical relationship between our social space, physical space, and metaphysical space (moral and religious beliefs) structures our human experience and defines our reality. This relationship is played out within three scales of space – the human body, built space, and patterns of human settlement (*Discrimination by Design* 10). In her book *Gender, Identity and Place: Understanding*

On a body scale in many cultures, boys are raised to claim space through wide postures and are encouraged to be adventurous. Girls are trained to not take up space and sit in contained “lady-like” positions, are raised to accept spatial limitations and are “protected” by the homogenous environment of the home.

Weisman, Discrimination by Design, 24

Feminist Geographies, feminist geographer Linda McDowell outlines a similar framework. She describes that this belonging and access to space is found in all scales and is highly gendered from birth. On a body scale in many cultures, boys are raised to claim space through wide postures and are encouraged to be adventurous, to discover, and to explore their surroundings in a wide range of environmental settings. Girls are trained to not take up space and sit in contained “lady-like” positions, are raised to accept spatial limitations, and are “protected” by the homogenous environment of home and immediate

neighborhood (*Weisman, Discrimination by Design* 24). Discussions of literal bodily space – i.e., the vagina and womb – and who has access and control will not be a focus of this review, but it is important to understand it as part of a gender and space discussion. I believe this sheds light on some of the underlying politics and discomfort the conversation of gender and space elicits among many and results in a reluctance to investigate the topic.

Built space has similarly revealed gendered forms and values. Frequently cited are the “crude anatomical” references to phallic skyscrapers (Jarvis, Cloke, and Kantor 21) representing power, capitalism, and

production and womb-like interiors of dwellings, representing nurturing, isolated and reproductive spaces. Architects have directly made this correlation. Louis Sullivan, referred to as the “Father of the Skyscraper,” described a colleague’s building:

Here is a man for you to look at, a virile force, an entire male. It stands in physical fact, a monument to trade, to the organized commercial spirit, to the power and progress of the age, to the strength and resource of individuality and force of character. Therefore I have called it, in a world of barren pettiness, a male, for it sings the song of procreant power. (via Weisman, “Women’s Environmental Rights: A Manifesto” 1)

On a city-scale, a London atlas from the early 20th century identified only exclusively male-led places of “interest” including the police force and fire brigade, churches, government buildings, war memorials, and 68 all-male literary, sporting, and drinking societies (Jarvis, Cloke, and Kantor 20). A quick assessment of major cities reveals that the grand majority of public monuments represent male figures. Jarvis et al. (via Knox and Pinch) write that it is the “silences of architecture” or the “taken for granted infrastructures of daily life; of fetching, carrying and caring” that are revealing (21). This landscape (such as streets, transport) fluctuates in its gendered nature and experience based on a sense of belonging, control – perceived or real – as well. Patterns and understandings of who uses spaces, when, why, and why not expose highly gendered spaces. Studies have demonstrated that women’s fearfulness in public urban spaces and multiple influences of the built environment often limit their activities and engagement (Wekerle and Whitzman; Wimple).

Addressing the landscape, feminist landscape architecture historian and theorist Elizabeth Meyer challenges the hierarchical and gendered binaries that are so often used to describe nature and landscape, as well as to legitimize power: architecture and landscape, public and private, man and nature (Meyer 45). In “The Expanded Field of Landscape Architecture” she posits, “the juxtaposition of man with nature introduces a gendered nuance to this binary that associates culture with the male and nature with the female” (46). In Western societies, culture is associated with human development and therefore superior to and separate from nature (enabling the damaging exploitation of natural resources). Meyer and others credit feminist Simone de Beauvoir with recognizing women and nature as “the other” to dominant Western culture (46). In this light, it is not surprising that women, nature, and landscape are perceived to be hard to find in the shadows of their dominant binary.

Interdependence of Built Environment and Culture

The overarching questions of feminist and gender and space scholars are how do gender relations manifest in space and how do spatial forms influence or construct gender relations (Spain, *Gendered*

Spaces; Jarvis, Cloke, and Kantor; Rendell)? Geographers have long proven the importance of spatiality in culture making. “The discussion is more accurately about interdependence than approaching the questions in isolation.” (Jarvis, Cloke, and Kantor 5; Spain, *Gendered Spaces* 7). Jarvis writes:

Cities assume a semi-permanent spatial arrangement and material culture, filtered through the psychological architecture of belief systems in a constant state of flux. Over time these cultures sediment in the form of buildings, monuments, political and administrative systems, which in turn come to symbolize and reinforce powerful regulatory norms and stereotypes. (9)

With a gender lens to interdependence, Spain writes:

Gendered spaces themselves shape, and are shaped by, daily activities. Once in place, they become taken for granted, unexamined, and seemingly immutable. What *is* becomes what *ought* to be, which contributes to the maintenance of prevailing status. (*Gendered Spaces* 28)

The reciprocity of form and culture contributes to the invisibility or perceived neutrality of space, while shackling people physically and mentally to unequal access and control. If gendered spaces were always divided as simply and blatantly as East and West Germans were by the Berlin Wall, this discussion would be much simpler.

Gender Inequality: Spatial Institutions and Status

Daphne Spain’s pioneering research on gender, space, and status asserts that “throughout history and across cultures, architectural and geographic spatial arrangements have reinforced status differences between men and women” (*Gendered Spaces* 3). Cross-referencing qualitative and quantitative data from the Human Relations Area File, Spain investigates the role of three primary activities: family, education, and labor force that each have a primary spatial context – home, school, and workplace, respectively. Each of these constitutes a spatial institution which “sustain[s] status inequities when they regulate access to knowledge and resources differently by gender” (*Gendered Spaces* 28). Historically (and arguably still), masculine spaces generated and contained socially and economically valued knowledge in the workplace, while feminine spaces contained devalued knowledge in and of the home (*Gendered Spaces* 10–11). Girls and women were originally (and sometimes still) denied access to schools of valued knowledge, reducing their opportunity to gain status. These spatial institutions also overlap with the traditional dichotomy of public/outside (male sphere) and private/inside (female sphere) and the cultural understanding that the public

Spatial institutions (home, school, and workplace) sustain status inequities when they regulate access to knowledge and resources differently by gender.

Spain, Gendered Spaces 28

sphere is more important (Arendt). Similarly, we recognize these as the productive and reproductive roles identified in Chapter 4.

Through her research, Spain proposes three hypotheses as plausible explanations of gender stratification over time and across cultures:

1) Varying degrees of gender segregation characterize social institutions; 2) gender stratification is reinforced by spatial segregation; and 3) the greater distance between women and sources of valued knowledge, the greater the gender stratification in the society. (*Gendered Spaces* 26–27)

In order to analyze diverse examples from developing and developed contexts, I will use this framework to further investigate the gendered nature of space as well as its ubiquity. In some cases, the spatial institution is the focus; in other cases, design interventions are examined that shed light on the institution and gender status.

Family/Home: Private, Reproductive, Female

Spain's research reveals that there are some cultures where women nearly never leave their dwelling and play no role in what we describe as the public sphere. In a Berber house of Kabylia, Algeria, the house is divided both physically and symbolically into male and female. When a male visitor enters the house, he has to pay to compensate for the invasion of privacy (*Gendered Spaces* 41-42). While there is a spectrum of intensity of segregation, Spain correlates women's lower status to those communities whose living spaces are segregated by gender. Analyzing floor plans, when the home further reinforces knowledge separation between men and women and layers exposure to external influence, women's status is lower (59-60). However, a somewhat higher status inside the home does not necessarily translate to access to information and decision making outside of the home. For example, among the Masai, a traditional nomadic tribe in Kenya, women are the architects and builders of their homes. While this role is an expression of leadership within the home space, only men are allowed to sit on the village council and women are not allowed to participate in integrated public meetings outside of their community, reinforcing the gendered nature of institutions spatially (Rothschild and Cheng 175).

Women in many parts of the world in their reproductive role are responsible for sourcing the water and fuel their family needs for hygiene and cooking. This is a particularly time-consuming and laborious task due to the increasing shortage of natural resources and poor to non-existent infrastructure in the

developing world. In some African communities, women walk as many as 10 miles per day collecting water, usually carried on their head (“Water Woes - International Museum of Women”). The more children and dependents in the family, the more resources are needed. In many cases, girl children are kept from attending school to support the reproductive tasks, limiting the opportunity to gain access to valued knowledge outside of the dwelling and stunting their capacity to gain status (“UNICEF - Water, Sanitation and Hygiene - Water, Sanitation and Education”). In response to this challenge, development agencies and designers have introduced various types of water pumps to reduce this burden and multiple examples will be shared in this chapter. One of these innovative designs is the PlayPump, which is designed for kids’ play to pump the water. While adopted by many communities, it has not been adopted by all. Children’s play does not always pump the quantity of water needed, nor at the time of day needed, requiring adult women to “play” in order to operate the pump. In some communities in Mozambique and all in Zambia using the PlayPump, women were not comfortable being seen playing like a child in public, reducing the limited status she had. In some cases, women would pay children to play (pump) creating an additional household economic burden (UNICEF 10).

Not surprisingly, in cultures that are matrilocal – those where the husband moves to his wife’s home – women’s status is higher than in those that are patrilocal. Similarly, those where women have inheritance rights promote women’s higher status as well, as the connection to physical land combined with strong kinship networks are key indicators of status (Spain, *Gendered Spaces* 58, 61-62). However, as the movement to cities increases, these traditions are broken. Tight spaces and insecurities of urban contexts create additional pressures for control and safety, sometimes exacerbating gender status inequalities, limiting women’s behavior and movement (Rothschild and Cheng 180).

Labor Force/Workplace: Public, Productive, Male

Spain’s research on the workplace (in some non-industrialized cases, hunting is a family’s primary economic means) revealed that spatially segregated gendered work resulted in lower women’s status (*Gendered Spaces* 101). In the case of the labor force divided between hunting (male) and cooking and caring for the children (female), the spatial distance between the work also contributed to an inaccessibility to skills sharing and therefore an ability to improve status. Spain’s research indicates that men’s labor, as it is outside the dwelling, is more highly valued because men distribute excess goods to

those outside of their households, gaining them status, while women “only” provide for their families (14).

One could argue that this reflects a similar gendered spatial dynamic created and reinforced by suburbs. Championed under the universal and functional design tenants of modernism, suburbs have long been criticized by feminists. The segregated architecture of suburbs relegates women to being homebound in a non-valued, non-remunerated reproductive role due to the great distance between the home and the valued urban workplace. This distance eliminates nearly any transfer of the valued skills that are remunerated and afford status to men. Dolores Hayden, a feminist geographer, dedicates an entire book, *Redesigning the American Dream: Gender, Housing, and Family Life* to the ramifications of suburbs, naming the urban-suburban divide a gendered “prescriptive architecture” concretizing gender inequality (58).

The segregated architecture of suburbs relegates women to being homebound in a non-valued, non-remunerated reproductive role due to the great distance between the home and the valued urban workplace. The distance eliminates nearly any transfer of valued skills that are remunerated and afford status to men.

Hayden, Spain

Gender and spatial segregation is also evident in types of (remunerated) work and workplaces (Spain 14). The majority of nurses and teachers are women and hold less status than the related jobs of doctor and professor, the majority of which are men. When women have gained access to male-dominated professions, separate spaces were designed for them (e.g., female labor unions), still keeping women from accessing male knowledge and status (20). Spain writes:

Spatial segregation is one of the mechanisms by which a group with greater power can maintain its advantage over a group with less power. By controlling access to knowledge and resources through the control of space, the dominant group’s ability to retain and reinforce its position is enhanced. Thus, spatial boundaries contribute to the unequal status of women. (15)

The interior design of offices has been cited to reinforce gender segregation and therefore status access. Spain’s “The Contemporary Workplace” describes common layouts where the secretarial/support staff (almost always women) are grouped in open-floor plans surrounded by closed-door offices for managers (almost always men). This design segregates where valued knowledge is exchanged (behind closed doors) and who has access to it (men) that enables them to maintain or advance their status. Secretarial

staff are under surveillance due to their exposed and communal location, they lack privacy, are constantly interrupted, and are under pressure to maintain strict confidentiality of what limited knowledge they do have access to as a job duty. These spatial factors diminish opportunities to advance and work to reinforce women's lower status. (Spain, "Excerpts from 'The Contemporary Workplace'" 118-127)

In Africa, nearly two-thirds of women are employed in the agricultural sector, growing 90 percent of the food on the continent ("Women Farmers: Voiceless Pillars of African Agriculture | NEPAD"). While sometimes considered an extension of the reproductive sphere, particularly in the form of subsistence farming, agriculture is a workplace where women can be in an accepted and respected role in their family units and communities. There has been significant criticism of the development community's agricultural interventions that focus on men due to Eurocentric and gendered stereotypes that farmers are men. For years, interventions undermined women's critical roles, access to information and technology, and positions of status, diminishing returns on health and economic advancement (Rothschild 178). The Gates Foundation's orientation guide for "Creating Gender-Responsive Agricultural Development Programs" presents an example of a project that was intended to improve a staple crop. The development organization reached out to primarily male farmers that prioritized yield over other traits. While the seed they developed did have a higher yield, it was not highly adopted. It was revealed that women, who were not consulted, prioritized additional traits like pest resistance, cooking time and taste due to their multiple roles and gender-segregated knowledge base. The foundation highlights that the organization's blind spot created lost opportunity on multiple levels, reducing possible health and economic benefits and simultaneously undermining women's status (Bill and Melinda Gates Foundation 17).

Revisiting water pumps, the treadle pump has become a highly celebrated pump design used throughout farming communities in the developing world. Using leg power in a bicycle-type fashion, these pumps create significantly more water pressure than those that are hand-pumped, enabling more consistent and effective field irrigation in water-poor communities. Women, as mentioned before, are the primary farmers and responsible for water provisioning for their family and their work. However, the initial designs of treadle pumps were not appropriate for all communities, as the height and movement of the pumping were considered inappropriate for women in public, reducing access to a strategic technology. Designs have since taken this into account making the pumps lower and with shorter strides ("Pumping Prosperity | Stanford Social Innovation Review").

Education/School: Public, Productive, Male

Spain's research on the educational sphere focuses on the presence and role of a men's ceremonial hut in traditional cultures. She discovers that segregating access to this educational institution is an even stronger indicator for gender stratification than gender spaces in the home:

Education is important because it bridges the private sphere of the dwelling and the public sphere of the workplace. In other words, education is an intermediate or intervening institution facilitating passage from domestic to social status. Women have more control over labor when they are integrated with men into the skill-learning process... When the transmission of socially valued knowledge is institutionalized in a separate place, however, the degree of gender stratification is greatest. (78)

The history of gender-segregated educational institutions in the United States reflects this dynamic. While in the past, women had access to higher education, they were not offered the same programs as men. In most cases, women were trained for domestic or caregiver roles that have lesser status. It took decades for professional programs to be coeducational and the most valued educational institutions to open its doors to women. Without the necessary training for careers outside of the home, women had no way to participate equally within the public sphere of the workplace (18-21).

In many countries girls stay home during their menstruation days because of the absence of a safe and hygienic place to change and clean themselves. In India, recent research shows that 23 percent of girls drop out of school when they reach puberty.

World Toilet Day

As mentioned earlier, female children's educational prospects in the developing world are particularly vulnerable due to the gendered division of home and domestic work. Even when schooling is available to girls, the gendered pull of the home institution can be greater than that of education, and/or the spatial institution of education – the school – may not be deemed culturally appropriate or provide adequate facilities necessary for girls who are menstruating. In many countries, girls stay home during their menstruation days because of the absence of a safe place to change and clean themselves.

In India, recent research shows that 23 percent of girls drop out of school altogether when they reach puberty ("World Toilet Day").

As new technologies emerge and the move to cities dramatically increases, new job skills and new spaces and patterns of living are in demand. These challenges raise the questions, who will have access to new technical training required for new economies? Will access to this knowledge be gendered? How will this gendered knowledge shape space? How will it impact gender status? While much of the space shaping will be informal, when designers are invited to formalize space, attention to these dynamics is critical.

Reciprocity of Spatial Institutions, “Public” Space, and Connecting Space

The diverse examples and scholarship above indicate that these spatial institutions (home, workplace, education) strongly relate to and influence one another. They form a reciprocal relationship, reinforcing gender status gained (or denied) in one institution to be exercised in another. For example, while women may hold the majority of roles within the spatial family institution, men are still able to use their elevated status acquired by their access and participation in more valued activities (Spain, *Gendered Spaces* 15). This could be spatially expressed, for example, by an esteemed and reserved seat for the man at the head of the table or separate male-only entertainment spaces (Weisman, “Women’s Environmental Rights: A Manifesto” 2).

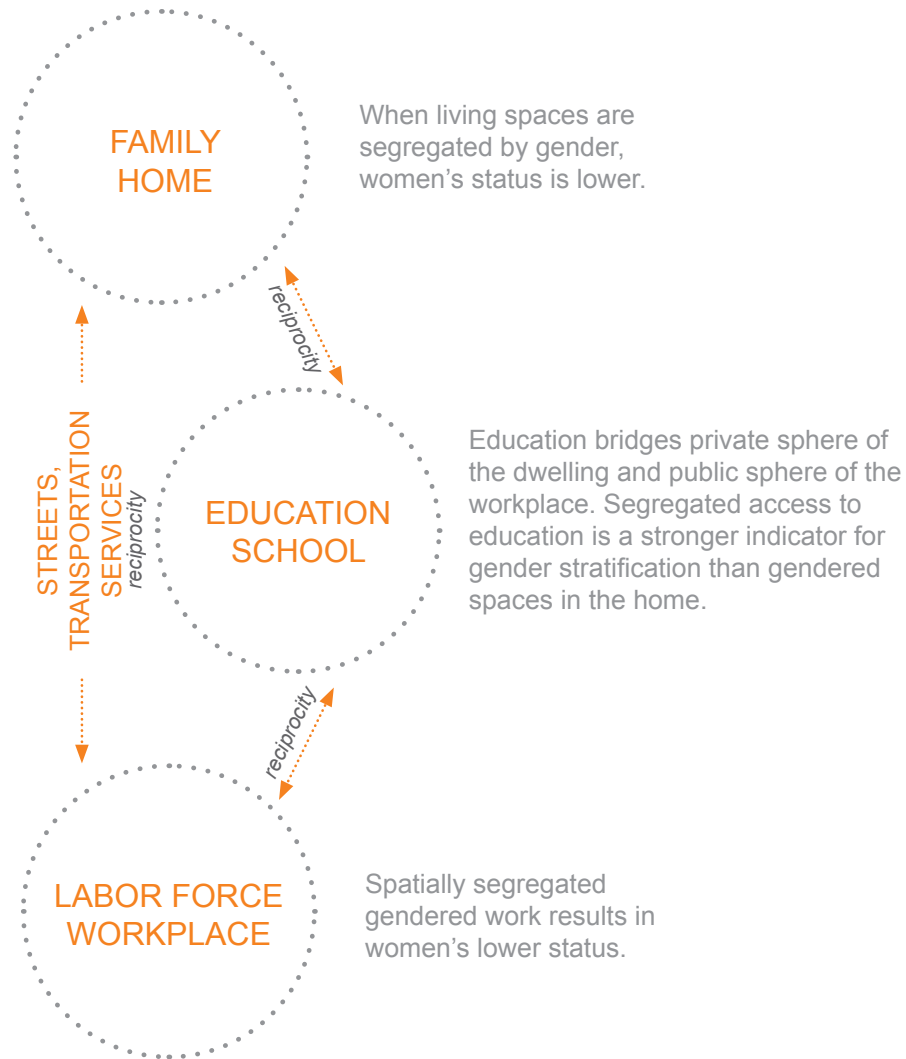
Spaces that are defined as “public” (owned and managed by public resources and representatives) do not fit neatly into Spain’s three spatial institutions; however, they reflect and reinforce status gained or denied in the other spheres. It was earlier argued that a gendered sense of space and belonging is defined at a young age. Motivated to keep young girls and women “safe”, they are encouraged to stay home or close to the house. This is particularly true after nightfall, as I experienced living in peri-urban Guatemala. Women and girls were not allowed to leave the house after dark (usually around 6 p.m.). This further reinforced the cultural norm that women could access public space only some of the time, but men had access at all hours. The lack of women on the streets proved that the streets are not for women and further reinforced women’s limited access. If any woman used the streets at night, she was perceived to be loose or a prostitute, relinquishing control over her bodily space and therefore susceptible to attack. Wimble’s work on inclusive streetscapes and Wekerle and Whitzman’s *Safe Cities* argue this is not only a product of social norms, but also one of street design.

Streets and transportation systems are the undervalued areas that connect spatial institutions, helping or hindering movement between them (and therefore influencing access to information, resources, and status). Multiple critiques speak to “micro-architectural barriers” that exclude women with strollers and young children, such as steep steps, narrow doors, turnstiles (Jarvis, Cloke, and Kantor 132; Weisman, “Women’s Environmental Rights: A Manifesto” 2). In her thesis “Gendered Intersections: Differencing Design for More Inclusive Streetscapes” Katherine Wimble argues that street planning and design does not take women’s needs into account. She writes, “The streetscape – the largest area of public space in North American cities – offers little to women in terms of safety and invitation” (4). Her research includes a detailed examination of the differences of men’s and women’s experiences and recommends concrete, tactical approaches to achieve an inclusive streetscape. The horrific rape and subsequent death of a female student on a bus in Delhi in December of 2012 garnered national attention, igniting a serious discussion on women, their safety, and mobility in public space and how it reflects upon larger issues of power, gender inequality, and who “controls” public space (Timmons and Gottipati).

Streets and transportation systems are the undervalued areas that connect spatial institutions, helping or hindering movement between them and therefore influence access to information, resources, and status.

Access to public toilets has become an important conversation globally. Rose George’s highly acclaimed *The Big Necessity* uncovers the real health and ethical crises presented by the lack of adequate sanitation around the world. But despite obvious biological differences – the gender-laden cultural norms that allow men in many cultures to urinate in public; the hygiene issues presented by menstruation; and many other gender- and sex-based differences in toilet availability, access, safety, and use – George’s approach to the subject is gender-“neutral”. She portrays Clara Greed, the esteemed feminist urban planner who wrote *Inclusive Urban Design: Public Design* as an excitable reactionary (George 145). Greed’s work, however, clearly describes the inequities in public toilet design and the lack of mobility and health issues women experience accordingly. Her work provides a critical understanding of this complex gender issue and detailed recommendations for planners and designers within a developed context (Greed, *Inclusive Urban Design*). The health and planning learnings are globally applicable.

Image 12: Gendered Spatial Institutions (Spain)



Valuing Segregated Spaces

While almost all of the above examples point to the need to desegregate spaces in order to increase access to information sharing, some suggest that creating segregated spaces for women helps to combat existing inequalities. Jarvis et al. writes, "There is disagreement whether women-only provisions and spaces empower women or trap them in a ghetto of special needs" (19). A 2010 exhibit and publication of the Huairou Commission, an outgrowth of the 1995 UN Women's Conference in Beijing titled *Our Spaces*, suggests that community spaces that are owned and run by women provide crucial visibility and formalization for women's productive caregiving work and offer a platform for community leadership. Organizers write, "yet gender stereotypes continue to undermine women's caregiving role as a natural extension of their reproductive role as a means to rationalize their subordination to men. As a result,

there is still reluctance on the part of the governments and international agencies to fully recognize and resource and provide formal roles to grassroots women in their community-development efforts” (1).

Focusing on twelve women’s community centers around the world, most in developing contexts, the authors demonstrate the diversity and leadership role these spaces play. “Access to physical space is, symbolically and literally, an important step towards greater social, economic and political roles and visibility for women as active citizens in the public sphere” (3).

Access to physical space is, symbolically and literally, an important step towards greater social, economic, and political roles and visibility for women as active citizens in the public sphere.
Huirou Commission, 3

Visiting the water pump again, there is an anecdote within the international development field that appears impossible to cite, but its message is a teaching one. It describes the introduction of a new pump in a community where women were originally walking for many hours a day to source water. When the pump was installed, it was assumed the women would be elated. Instead, they were upset: the time they spent transporting water was the only time they had away from the domestic area and were alone with other women. This gender-segregated space and time was welcomed. This likely indicates that this space and time, at the minimum, did not reduce their status. It also appeared to support a quality of life. While we do not have the facts in this example, research indicates that this space provided the opportunity to share skills and information that could increase their status (Yonder and Tamaki 3).

From Binaries to Blurred and Valued Realities

Feminist scholars seek to disrupt the binary and separate spheres women and men are generally relegated to: public/private, reproductive/productive, economy/family, work/home, paid/unpaid, urban/rural, etc., and caution a siloing of understandings, interpretations, and interventions (Jarvis, Cloke, and Kantor 10; Meyer 45-51; Rendell 103; Rothschild and Cheng 10). Not surprisingly, the examples above do not fit neatly into one spatial institution or on only three distinct locations on a map. In releasing the binary approach, Elizabeth Meyer describes the rich “space of hybrids, relationships, and tensions” (51).

Not typically branded as feminist, Jane Jacobs’ celebrated work *The Death and Life of Great American Cities* is attributed to shining a feminist lens onto the city that refuses a segregation of sexes and functions of the city (Danze 23; Rothschild and Cheng 18). Rothschild and Cheng write, “A domestic perspective is critical to Jacob’s development of mixed use. This proposal is not only an attack on modern

architecture’s functional segregation, but an implicit challenge to the traditional split between domestic and public life” (18). Similarly, scholars acknowledge Lefebvre’s role in elevating the ordinary in everyday life (Jarvis, Cloke, and Kantor 13-14; McLeod 189; Rendell 103). Jarvis argues that these activities gain meaning only if they are named, counted, researched and assigned valued (14). Valuing the gendered spatial experience of everyday life is a designer’s critical task.

Similarly economies, and therefore functions and spatial institutions, are messy and layered. Jarvis et al. writes, “A ‘whole’ economy comprises multiple interdependent assets and capabilities which have to be recorded across a spectrum of paid, unpaid, informal and non-financial activities” (25). This does not

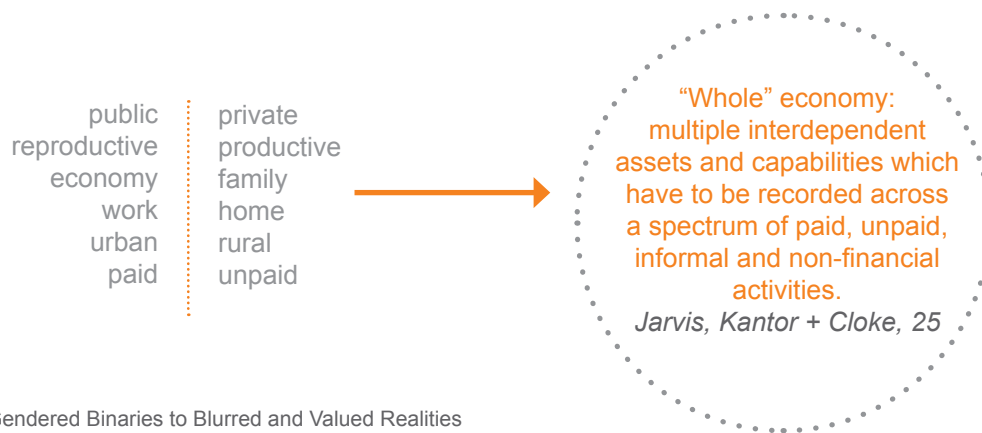


Image 13: Gendered Binaries to Blurred and Valued Realities

reflect a traditional economist’s perspective, which would only count monetary transactions (invisibilizing many activities considered to be women’s work), assets exchanged within kinship networks, or illegal activities. The authors argue we must shift from a household as a unit of analysis to a dynamic set of processes or “lens” through which to view the city (25). Mapping this “whole” economy is critical for a gender-inclusive design and planning approach.

Conclusion

Understanding the role the built environment plays in creating or perpetuating gender inequality is an attempt to understand the complex intersections of multiple disciplines and cultures over the course of time. Gender, shelter, and place making have been major, if not the most significant actors in our human development. A constant theme throughout the literature review is that by not elevating, examining, and valuing the relationship between gender, status, and space, we would miss a crucial piece in addressing gender inequality. Many of the examples reveal the disconnect between real, lived spatial experiences of “beneficiaries” of design and planning interventions and the unchecked assumptions by practitioners who

are untrained to see and value gender, yet are intrinsically gendered in their decision and form making. Practitioners in the built environments fields exercise powerful roles in shaping gender dynamics for years to come, whether they are conscious of it or not. Designers and planners have a responsibility to train and sensitize their eyes to see gender before designing begins and throughout the design process.

Unlike the field of Women in Development/Gender and Development, this field of inquiry does not have set frameworks or methodologies. However, it offers insightful ideas on what planners and designers should be tending to. The following pages seek to identify and frame the *seeing* and *process* discoveries of the field.



SEEING: GENDER, SPACE + STATUS

A gender “neutral” lens perpetuates women’s inequality.
Historically, women have been treated as a specialized sub-group in design.

Male and Western practitioners have dominated the planning and design fields.
Androcentrism, Eurocentrism and ethnocentrism inform (mis)understandings.

Gendered binaries (i.e. public and private, man and nature) create hierarchical relationships that legitimize power. Women and nature have been perceived as “the other” to dominant Western culture.

Human civilization is built on a history of spatial control.
A sense of belonging, access, and control is experienced differently through gender roles and status.

Gender plays itself out on three scales: the body, built space, and human patterns of settlement.
Space is highly gendered from a young age and is perpetuated on all scales.

The reciprocity of form and culture contributes to the invisibility or perceived neutrality of space.
What *is* becomes what *ought* to be, maintaining prevailing status.

The spatial institutions of home, education, and workplace sustain status inequities when they regulate access to knowledge and resources differently by gender.

Family/Home institution is often associated with women and reproductive roles. Usually characterized as “private” where the public sphere is considered more important.



Tasks undertaken in this space are unremunerated, unlike tasks done in the workplace, reinforcing a value hierarchy and a gender status inequity.

Labor Force/Workplace institution is often associated with men and productive roles. Usually characterized as “public” with a higher value than the home sphere.



Work is generally remunerated. Often work that is done by women (i.e. agricultural work) it is not perceived within the “workplace” institution devaluing women’s knowledge and leadership and limiting access to information and appropriate technology. Spatially segregated gendered work often results in women’s lower status.

Education/School institution is often associated with men and characterized by public and productive roles.



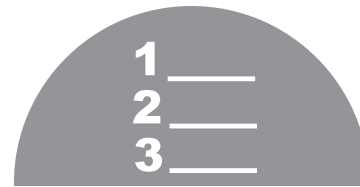
Education bridges the private sphere of the home with the public sphere of the workplace, enabling access to the more valued institution. Gender-based restrictions to education and/or limitations of the built environment reinforce gender stratification.

Often only activities that are remunerated are valued, invisibilizing much of women’s work as well as their movement and relationship to space. Whole economies are dependent on paid and unpaid work, as well as barter, trade, and illegal work. Visibilizing women is critical to understanding communities.

Because of women’s traditionally limited public ownership, access, and roles, women only/led spaces have shown to visibilize and value women’s leadership within communities. In some cases, segregated spaces for women help to combat existing inequalities.

Public space, streets and transportation are undervalued areas that connect spatial institutions. These spaces reflect and reinforce gender status gained or denied in other spheres.

PROCESS: GENDER, SPACE + STATUS



-> **Make gender visible: sex-disaggregate data.**
-> **Make knowledge accessible to all in design process.**
-> **Consult with men and women separately.**
-> **Increase gender and ethnicity diversity of community + design team**
-> **Learn what spaces women and men, boys and girls, respectively, do and do not use.**
-> **Find out why (i.e. access, invitation, fear, etc.).**
-> **What qualities of the designed space contribute to them being used or not, by whom, and why?**
-> **Do not assume or plan that existing forms and gender relationships must remain stagnant as design decisions could reinforce existing gender inequalities.**
-> **Find out what spaces are considered men's space or women's space, boy's or girl's.**
-> **What do these**
 - symbolize
 - offer
 - limit
 - perpetuate**for the particular community?**
 - Learn what information women and men wish they had access to.
 - Localize this access and identify social and built impediments. How can your design or design process support educational opportunities, particularly for those who are most limited?
-> **Visibilize and value all women's activities - paid and unpaid.**
-> **Learn about women-only spaces and how they may serve to visibilize and elevate women's decision-making status. Consider how this might impact design considerations.**
-> **Ensure public amenities are equally available, accessible, and comfortably used by all.**
-> **Acknowledge and value women users as equal users and design to accommodate her needs.**

Image 14: Gender, Space, and Status Seeing and Process Summary

Designing for inclusion *creates* opportunities, while designing for traditional gender norms necessarily *limits* opportunities.

Despite significant sex-based differences in anthropometry and bio-mechanics, ergonomics and other allied scientific fields have often used an average male for designing and design testing.

Ergonomics and Sex

The field of ergonomics is a confluence of anthropometry, biomechanics, and human engineering, studying how design can “fit” the human body and support its natural abilities. The field of anthropometry, or the study of the measurement of the human individual, has proven that there is not one universal body size. Differences in measurements exist for a multitude of reasons, from ethnicity to nutrition levels. A constant, however, is that within a certain grouping (e.g., ethnicity), there are significantly different averages for men and women (Disabled World). The field of biomechanics, or the study of the effects of internal and external forces on the human body, also reveals that men’s and women’s body mechanics are different. For example, men generally have the ability to lift more weight than women due to having more muscle mass. Additionally, women’s center of gravity is lower than men’s due to women’s wider hips and shorter torsos. These combined differences inform the amounts and ways women and men can lift; timing, displacement, velocity, acceleration, force, and power are different between sexes (Lindbeck and Kjellberg). Good design, ideally, responds to these differences.

Human Factors and Ergonomics is the applied science that supports equipment, device, and spatial design to enable people to use them most efficiently, safely, and comfortably – e.g., a conveyer belt, a seat belt, the size and scale of a room. While knowledge of anthropometry and biomechanics have been practiced for centuries, the field of “human factoring” or ergonomics became a more fully codified practice in the mid-20th century and is now a crucial aspect of industrial design, engineering, and architecture among others. Designer Henry Dreyfuss and his firm Henry Dreyfuss and Associates have been credited with translating the metrics of anthropometry and biomechanics into a design practice, and in 1960 published the first book, *The Measure of Man*, geared towards designers on the subject. Since then, the book has been updated a number of times, most recently in 2002 under the new name *The Measure of Man and Woman* (Tilley and Henry Dreyfuss Associates 3). I attempted to locate a first edition to learn if it included only measurements for men, but I was unable to obtain a copy.

The word ergonomics is derived from the Latin “work” and “natural laws” and its application is likely most

widely known about in workplaces where it is employed to ensure safety and comfort and to increase efficiency and productivity. In developed countries like the United States, ergonomic standards are required by law, notably the Occupation Safety and Health Act of 1970 and later the Americans With Disabilities Act of 1990 (Kearney 1). These regulations are sex-“neutral” despite the fact that scientific research proves that body mechanics are not. In the 2008 publication *Ergonomics Made Easy*, published by Government Institutes and written to support legal compliance with the laws above, there is not one mention of the words “women” or “men” in over 300 pages. Ergonomic standards are generally determined to support the 50th percentile of a sample population. *The Measure of Man and Woman* provides measurements for the one percentile, 50, and 99. Its drawings are telling in the great range of size and measurements, falling along sex-based differentiation.

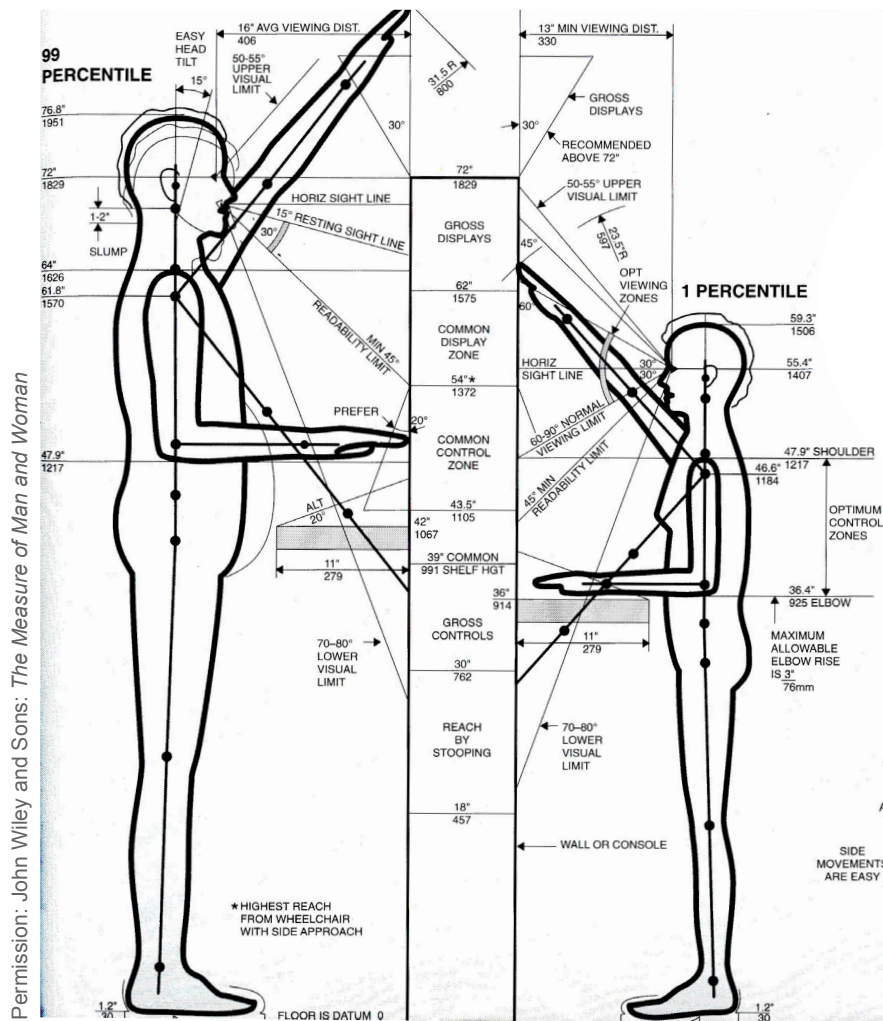


Image 15: Ergonomic Differences Between Women and Men

While the ideal of workplace comfort and safety is neutrally codified, these defaults for standards of measurement and production still create situations of discrimination. Despite significant sex-based differences in anthropometry and biomechanics, ergonomics and other allied scientific fields have often used an average male for designing and design testing (“Watch: Why We Need More Women in Science | VitaminW”). Because physical labor jobs have traditionally been performed by men due to gender roles and norms, many systems and workflows are designed for an average male. These male-specific designs or standards can limit women’s ability to perform as efficiently, perpetuating the idea that women aren’t able to do the job and/or causing injury. The February 2012 issue of *Ergonomics* was dedicated to gender, women’s work, and ergonomics. Edited by the Gender and Work Technical Committee of the International Ergonomics Association (IEA), it reveals that very limited attention has been paid to sex and gender in ergonomic studies and thus there have been real oversights in how sex and gender factor into workplace health and safety (Habib and Messing).

Sex, Gender, and Ergonomics in the Developing Context

As previous chapters stated, in many developing countries most jobs are based on assumed sex-based efficiencies and traditional gender norms. These assumptions are particularly limiting to gender equality and women’s empowerment, as women are often excluded from many labor-based forms of employment that are remunerated (or remunerated better), providing needed income as well as status. It is also evident from previous chapters that in many contexts, women are very much involved in manual, albeit unpaid, labor whether it be collecting wood or water or performing agricultural work. Many design projects rely upon (and benefit from) community members’ manual labor that often creates paid jobs (see SPARC, NSDF, and Mahila Milan precedent).

Designers have a real responsibility to create opportunities for women by ensuring that the design, construction, and maintenance planning is thoughtful to men *and* women’s ergonomic capabilities.

The CEDPA checklist tool covered in Chapter 4 asks project managers:

How will the project ensure that women have equitable access to, and control of, the space, material and technical resources, and technologies?

How will women participate in, and contribute to, the maintenance of the space or equipment?
Will training be provided? Will they be paid?

With these questions in mind, for designers I would insert:

Is the design responsive to both men’s and women’s ergonomic comfort and need?

Are women's and men's roles equally considered in all construction aspects of the project?

Are construction techniques responsive to ergonomic capabilities for both men and women?

Are both men's and women's roles remunerated within the context of the design project?

For example, if designers identify building materials, methods, and procedures that do not require heavy, above-waist lifting, this would potentially allow more

women to engage in building processes. The CEDPA questions also remind managers to be cognizant of the long-term maintenance of the project. Including both men *and* women throughout the design and construction phases will more likely create opportunities for women to contribute to the maintenance and management of the project than if they were not included, creating more possibilities for remunerated and valued work. The SPARC, NSDF, and Mahila Milan precedent investigation in Chapter 10 demonstrates the

importance of women's inclusion in all stages of the work. While there are socio-cultural gender norms of each community that will contribute to individual's involvement, designing for inclusion necessarily *creates* opportunities, while designing for traditional gender norms necessarily *limits* opportunities.

Including both men and women throughout the design and construction phases will create more opportunities for women to contribute to the maintenance and management of the project than if they were not included, creating more possibilities for remunerated and valued work.

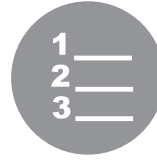
As for source data, ergonomic standards are required by law in most developed countries, and therefore data for these populations can be found fairly easily. But even the most inclusive designer will have a hard time finding relevant data in developing countries. An *Applied Ergonomics* article acknowledges that while there is a high demand for this data due to globalization and migration, there is a huge gap. In response, scientists developed complex equations to extrapolate race and gender ergonomic data from existing sets (Shan and Bohn). However, sophisticated data is likely not necessary for planning, architecture, and landscape architecture work, and its access – or lack thereof – need not be a limitation. This is an opportunity for observation and participatory learning with the community designers. Observing people working and playing, as well as interviewing both men and women about their experience with repetitive motion, lifting, and comfort can illuminate culturally rooted design opportunities. When possible, principles established in developed countries' sex-based ergonomic data can still act as a guide, but they need to be contextually tested to respond to ethnic and cultural differences (Spencer, "Interview with Ben Spencer:

Ergonomics in the Field”).

Investing time in observed, locally generated, culturally appropriate data can significantly influence the success of design interventions. Recalling the example of the treadle pump in Chapter 5, designers did not anticipate that women would not adopt the treadle pump, although its function was greatly needed and desired by women. It was only later that designers learned it was considered inappropriate for women to move their hips in public as required by the technology. This example is as much about ergonomics and designing for inclusion as it is about proxemics, which is covered in the next chapter. The following page seeks to identify and summarize the *seeing* and *process* discoveries of the field.

ERGONOMICS: SEEING + PROCESS

SEEING



PROCESS

Often the “average male” is used for design prototyping although there are biological differences between men and women that result in different ergonomic needs and comforts.

Proportional and ergonomic differences are also found between different ethnicities as well as sexes, although non-Western data is sometimes hard to find.

Sometimes women are unable to perform physical tasks due to a design that requires a strength more easily done by men. This can limit women’s access to paid and valued work, technical education, and diminishes their access to maintenance and management of such work.

Due to cultural norms, some communities limit women’s movements, considering some movements to be taboo in public.

Sex-disaggregate body data - do not assume one body size or sex.

Consult ergonomic data as available. When not available, observe biomechanics/ergonomics of activities.

Learn of women’s physical capabilities/potential and design construction and maintenance tasks for inclusion.

Learn of potential gendered taboos of movements.

The study of proxemics incites designers to be astute observers. This requires checking assumptions and biases not only of oneself, but also of community members to create opportunities where gendered norms may be limiting.



CHAPTER 7

PROXEMICS: THE ANTHROPOLOGY OF (GENDERED) SPACE

PROXEMICS: THE ANTHROPOLOGY OF (GENDERED) SPACE

Coined by anthropologist Edward T. Hall in his 1966 book *The Hidden Dimension*, proxemics is the study of how people socially and personally experience space as a reflection of unique cultures. His work challenges previously held notions that humans are unified by shared experiences, arguing that each human culture perceives experiences differently through different valuing of sensory experiences. This experience impacts and is reflected in personal interactions as well as the built environment. Hall's work is written in light of the trend of urbanization, the threat of overcrowding in cities, and the increasing interaction between diverse cultures. He writes,

There is a great need to revise and broaden our view of the human situation, a need to be both more comprehensive and more realistic, not only about others, but about ourselves as well. It is essential that we learn to read the silent communications as easily as the printed and spoken ones. Only by doing so can we also reach other people, both inside and outside our national boundaries, as we are increasingly required to do. (6)

Hall's seminal work is still relevant today and has been adopted by many anthropologists as a way of understanding cultural differences as expressed in space and spatial personal relationships. While proxemics is covered in a limited fashion within a built environments curriculum (at least at the University of Washington), its lens undeniably supports and informs the design professions.

Hall's treatise works to visibilize cultural relationships to space much as feminist geographers work to visibilize women in space. Often taken for granted, without an attentive eye and a framework for sensing and seeing, opportunities for cross-cultural communication and understanding can be unseen and/or misinterpreted. As an anthropologist, Hall is driven by the biological underpinnings that shape human behavior ("Introduction" x). In this vein, he reminds readers that what we know and experience about human relationship to one another and the spaces around us are informed by the senses. In American culture, visual and auditory senses are elevated, although olfactory, thermal, and tactile senses are of equal import to human and spatial relationships. For example, he describes that in Arab cultures, the olfactory sense is used to determine disposition, even using smell as an indicator of good marriage matches, while American culture finds the intensity of smell unsettling and overwhelming. Another well-used example is that while there are only few words in English that are used for various states of frozen

water (e.g., ice, slush, snow), the Eskimo-Aleut language has over 50 names, reflecting its different import; different cultures experience “the same” types of space differently (85).

In order to visibilize and analyze these spatial differences, Hall organizes proxemics into a classification system with three levels: the *infracultural*, or those relationships that stem from biological underpinnings of the animal kingdom; the *precultural*, or the physiological base of experience; and the *microcultural*, from which most proxemics observations are made and which is arguably the most relevant and most accessible for the design process. The microcultural has three aspects: fixed space, semi-fixed space, and informal space, operating on respective scales of the city/cultural spatial organization, moveable design, and personal space. These are similar scales that Weisman and McDowell identify as scales of gendered spaces as discussed in Chapter 5, illuminating that proxemics patterns are gendered as well.

Fixed-Feature Space

Fixed-feature space refers to buildings and the ways in which they are organized, externally and internally, that reflect cultural preferences. For example, the layouts of cities respond to cultural understanding – in Japan intersections are named, elevating the importance of the hubs, while the European systems name streets, elevating the importance of the route. On a gendered note, Hall describes an interior fixed space, an American kitchen, which at the time he was writing was specifically a woman’s domain. His interviews with women revealed that kitchens were often not designed for women (e.g., the height of cabinetry) nor organized for how they efficiently used the space, as they were designed by male architects who did not have experience operating in that space. He writes, “The size, shape, the arrangement, and the placing in the house all communicate to the women of the house how much or how little the architect and designer knew about fixed-feature details.” To take the point further, where and how people feel comfortable cooking is also dependent on culture. In Indian cultures, kitchens are often outside, explaining why many residents of Le Corbusier’s modernist Chandigarh converted their balconies to kitchens (98-101). Hall writes, “The important point about fixed-feature space is that it is the mold into which a great deal of behavior is cast” (100).

The size, shape, the arrangement, and the placing in the house all communicate to the women of the house how much or how little the architect and designer know about fixed-feature details.
Hall, 100

Semi-Fixed-Feature Space

Semi-fixed features refer to design elements that are easily moveable or adapted. Relaying an American hospital-based study where seating arrangements were systematically moved around to make conversations more frequent, Hall writes the objective of the experiment was to “demonstrate that the structuring of semi-fixed features can have a profound effect on behavior and that this effect is measurable.” In this case, chairs that were placed at a right angle to one another generated more patient interaction than when chairs were placed around the circumference of the room. Hall’s premise suggests that while there is a chance this is a universal design opportunity, it may also be one that is culturally specific, so site-based observation and/or study would be necessary to determine if this is an effective solution for another context. In previous chapters, I have suggested that how women and men use and experience these spaces would also differ depending on culture and context. Similarly, what is fixed space in one culture could be semi-fixed in another; for example, movable interior walls in Japan make what American’s understand as fixed to be adaptable and flexible accommodating different activities as needs change throughout the day. (104)

A contemporary of Hall, William H. Whyte wrote a study of fixed and semi-fixed urban spaces called “The Social Life of Small Urban Spaces.” Examining the usage patterns of urban plazas, he attempted to discover why some urban spaces are more successful than others, addressing everything from sun exposure to seating arrangements. On gender, he discovered that men and women choose different seats:

Men show a tendency to take the front row seats, and if there is a kind of gate, men will be the guardians of it. Women tend to favor places slightly secluded. If there are double-sided benches parallel to the street, the inner side will usually have a high proportion of women; the outer, of men. (18)

He also determined that the most-used places tend to have a higher proportion of women. He writes: Women are more discriminating than men as to where they will sit, more sensitive to annoyances, and women spend more time casting the various possibilities. If a plaza has a markedly lower than average proportion of women, something is wrong. Where there is a higher than average proportion of women, the plaza is probably a good one and has been chosen as such. (18)

This study is specifically for an American, urban plaza, but it reveals that there is a gendered difference in preferences and use of space. The fact that the more successful spaces have more women also suggests that understanding and disaggregating gendered uses and preferences of design and elevating those of women (at least in this case) could serve to make spaces more successful.

Informal Space

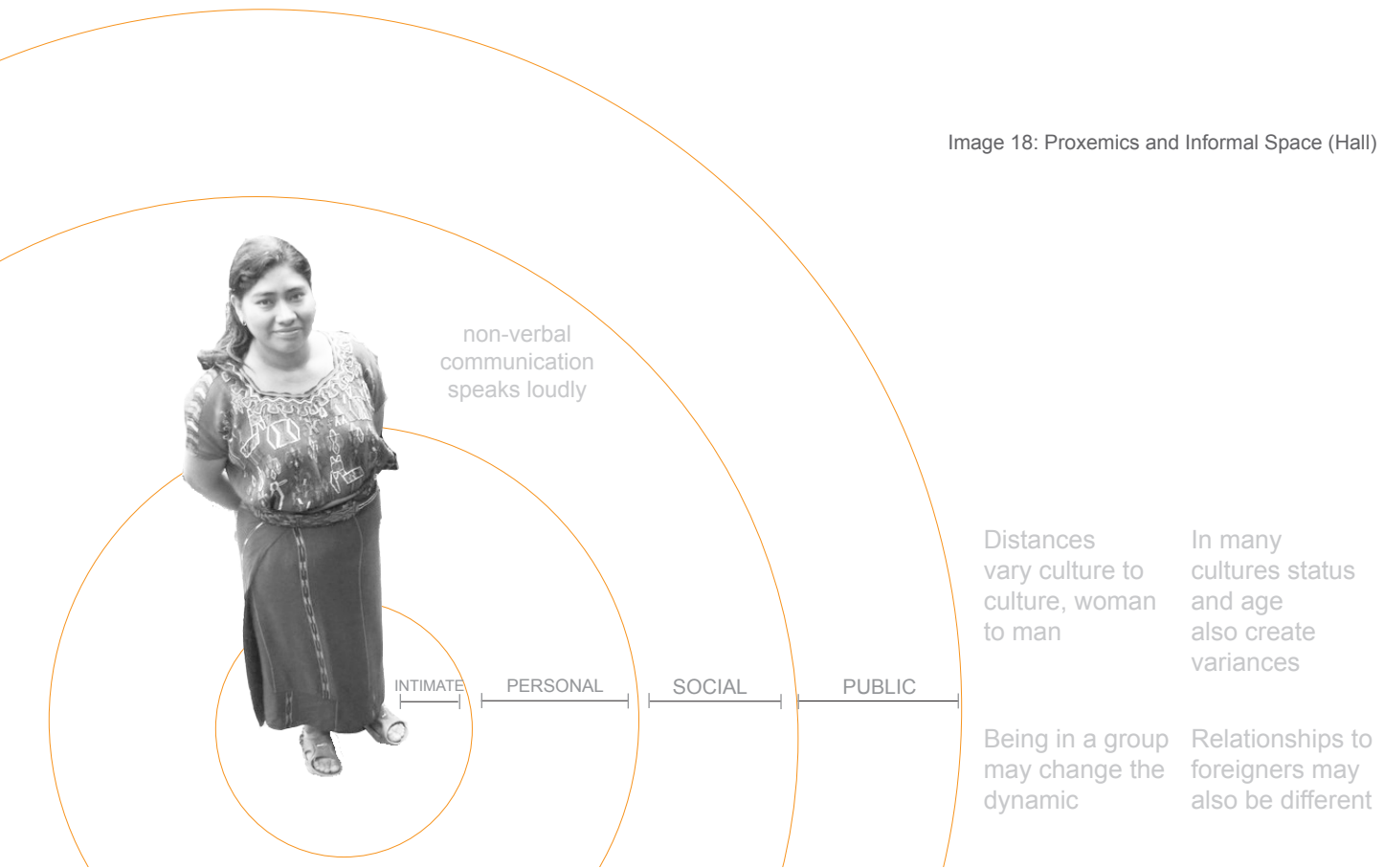
Hall defines informal space as the space around one's body, which has four dynamic spatial scales (at least in American culture). This informal space is defined by intimate, personal, social, and public-scale spaces. He writes that these spaces "have distinct bounds, and such deep, if unvoiced, significance that they form an essential part of the culture. To misunderstand this significance may invite disaster" (105). The table below indicates the different distances and scales by which American culture experiences informal space.

Image 17: Proxemics and Informal Space (Hall)

INTIMATE	PERSONAL	SOCIAL	PUBLIC
6 inches (close) 6-18 inches (not close)	1 - 2.5 feet (close) 2 - 4 feet (not close)	4 - 7 feet (close) 7 - 12 feet (close)	12 - 25 feet
Not considered proper to use in public by adult, middle-class Americans	Small protective bubble	For business and more formal interactions	Formal distance
i.e. In crowded areas this creates discomfort, no eye contact is made	i.e. A husband and wife can share this space	i.e. Desks of important people are large enough to hold people at far phase of social distance	i.e. The distance between an individual, like a President

It is important to note that this is Hall's analysis and classification for middle-class Americans. His work underscores that these distances and their impact on personal/spatial relationships are culturally unique. His cross-cultural studies focus primarily on Japanese and Arab cultures. For example, in Japan there is no word for privacy, although that is not to say there is no privacy, but this is also a reflection that Japanese are comfortable in and seek out crowded spaces, unlike Americans (142). Similarly, for Arab cultures, public space is public space – in other words, standing close, touching, and sharing what Americans perceive as intimate space is common among personal and formal interactions. As mentioned earlier, the olfactory sense is used to determine a friend, potential wife, or business partner's condition. Hall's studies of these two distinct cultures, however, make no mention of the different nuances of women's and men's personal space, although the reality that many women in Arab cultures are fully veiled indicates that there are likely significant differences between what is deemed culturally appropriate and comfortable for men and women in public and private spaces.

Image 18: Proxemics and Informal Space (Hall)



Gender, Proxemics, and the Design Process

Hall writes very little about gender, focusing almost entirely on male interactions, with the exceptions of highly gendered spaces of the time – like the kitchen. Based on previous chapters in this thesis and having worked with groups of women and men around the world, I identify this as a huge gap in his work and likely a product of scholarship of his time. Studies such as “The Effects of Sex of Subject, Sex of Approaching Person, and Angle of Approach upon Personal Space” demonstrate that there are real differences between the relative distance at which men and women feel comfortable being approached, as well as differences in comfort level based on the gender of the approaching person. Whyte’s research confirms these differences as well.

Within a design context, proxemics not only influences the form of a design intervention and its success, but the entire design process. Informal microcultural space preferences affect how men and women engage with one another and how they relate to an external design team, respectively. In Chapter 5, we learned that Masai women were not allowed to participate in integrated public meetings. In a case like this, design teams will benefit from having both men and women involved, and efforts could be made for a female design team member to meet with women from the community; ultimately, an appropriate

approach would need to be determined with the community. This is also where partnering with gender-aware organizations could help to anticipate or inform these challenges.

As I learned as a Peace Corps Volunteer in Guatemala, I observed that women were much less likely to speak in integrated groups than in women-only groups. In integrated public meetings, it could sometimes be assumed that women did not have unique opinions or that they agreed with male leaders. Speaking with women after these meetings usually proved otherwise. Often they had a very different take on a situation, which they readily offered to me or other women, but they did not feel comfortable or safe speaking in the sex-integrated group. For designers who may have limited time in the community, this situation could be deceiving. Working with men and women separately will likely elicit a more balanced understanding. In this same vein, it was commonly discussed among fellow Peace Corps volunteers that male volunteers were able to become more familiar with men, and therefore more knowledgeable about what their perspectives and challenges were. The converse was true for women. Gaining trust and entry into more candid conversations with community members will likely reveal more about gendered proxemics and norms in order to modify the engagement process to be more effective.

However, what communities may relay to a design team as preferred/acceptable gendered proxemics interactions may be more nuanced than expressed. In IDEO's Human Centered Design toolkit, the authors relay a complex story of gendered proxemics observations and the opportunities they presented: On a project in rural India, people said that cultural tradition prevented women from touching men who are not immediate family members. However, by spending several days in a village, the team observed that there were many instances in which trained or uniformed women doing specific jobs were able to touch men without any serious problems. These gaps between what people say and what they do are not bad. In fact, seeing these differences may highlight new opportunities; for example, designing a new medical service that could be provided by uniform women. (46)

The study of proxemics incites designers to be astute observers. This requires checking assumptions and biases not only of oneself but also of community members to create opportunities where gendered norms may have limited them.

Conclusion

In conclusion, how cultures perceive personal and physical space and what qualities of these spaces allow them to feel most comfortable are unique. Within these cultural norms, preferences of women and men differ as well as expectations of how women and men should behave spatially and interpersonally. Women's public participation and/or engagement with outsiders can be limited due to gender or cultural

norms in some communities. Sometimes their absence, minimal participation, or silent presence creates the assumption that they are disinterested, do not have an opinion, or tacitly agree.

It is critical that designers do not assume that their sense of personal and built space is interchangeable with another culture's. By identifying cultural (proxemics) spatial preferences on fixed, semi-fixed, and personal scales, design teams' engagement with the community as well as suggested spatial forms and relationships will likely be more welcomed and successful. Paying close attention to how gender dynamics play out in these scales is critical, as there is no gender-neutral experience. Design teams must inquire about them, and accommodate them in the design process. Similarly, learning what might restrict women's full participation in information contribution and decision making (e.g., proxemics, integrated spaces, male designer presence) is necessary to allow for women's full participation. The following page seeks to identify and summarize the *seeing* and *process* discoveries of the field.

PROXEMICS: SEEING + PROCESS

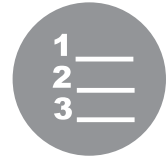


SEEING

How cultures perceive personal and physical space and what qualities of these spaces allow them to feel most comfortable are unique.

Within these cultural norms, preferences of women and men differ as well as expectations of how women and men should behave interpersonally and spatially.

PROCESS



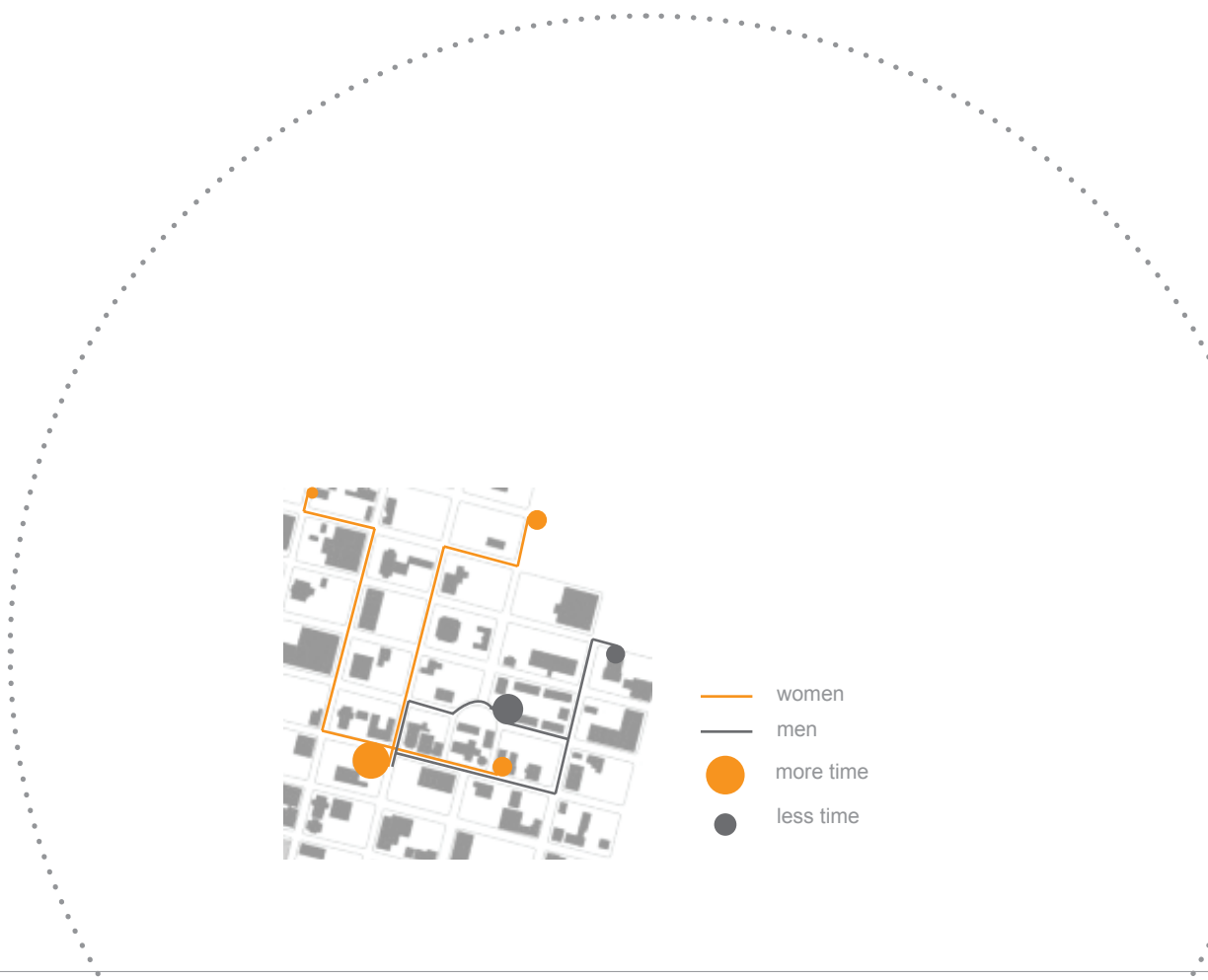
Do not assume that the design team's sense of personal and built space is interchangeable with another culture's.

Identify cultural (proxemic) spatial preferences on fixed, semi-fixed, and personal scales.

Pay close attention to how gender dynamics are played out in these scales, how to inquire about them, and accommodate them in your design process.

Learn what might restrict women's full participation in information contribution and decision-making (i.e. proxemics, integrated spaces, male designer presence, etc.) and accommodate for women's full participation.

By engaging all community members, rather than only an elite (often all-male) leadership group or working off designer's assumptions, participatory design methods hold the promise of visibilizing and engaging gender roles and dynamics that can positively affect the outcome of the project.



CHAPTER 8

PARTICIPATORY AND HUMAN CENTERED DESIGN: TOOLS TO SUPPORT THE VALUING OF GENDER

PARTICIPATORY AND HUMAN CENTERED DESIGN: TOOLS TO SUPPORT THE SEEING + VALUING OF GENDER

Similar to the field of Gender and Development, the Participatory Design field within the context of international development has a 30-plus-year history and has generated a large number of rich tools and resources to tap. While it would be impossible to cover them all for the scope of this thesis, overarching frameworks will be explored as well as particular tools that help to illuminate gender roles and inequality.

A response of more traditional top-down or outsider-driven design approaches, participatory design seeks to redress ownership and decision making of development decisions that are frequently “blue print” or one-size-fits-all. This traditional approach provides limited, if any, opportunities for communities to make their own decisions or control their resources. Simultaneously, it works to perpetuate power dynamics between the development agency/designer as well as the status quo of the community – such as the power of local, privileged elite and gender inequality (Kumar 29). Much of the participatory design movement credits Paulo Freire’s acclaimed 1970 work, *Pedagogy of the Oppressed*, which champions the rights of poor communities to lead and self-realize their own development needs. In its most evolved manifestation, participatory design puts problem identification, data collection and analysis, strategy, and decision making in the hands of an entire community – women and men, rich and poor – engaging outside practitioners and designers as listeners and learners to inform their interventions.

Somesh Kumar’s 2002 comprehensive *Methods for Community Participation: A Complete Guide for Practitioners* succinctly summarizes the advantages of participatory design including: *efficiency* by identifying and using available resources; *effectiveness* by engaging local communities in determining culturally appropriate objectives and strategies to meet bigger goals; more equitable *coverage* by engaging the broader community to disrupt elite/poor power dynamics; and *sustainability* by decisions and strategies being self-owned and therefore extend beyond outside intervention. Participatory design, however, can be challenging for development practitioners and design teams, as community engagement requires a long-term commitment, patience, and skill in deeply listening and learning from community members, and allows for unknown outcomes. Despite these challenges, participatory design has become overwhelmingly championed as a more effective development model, inspiring devoted practitioners to

develop tools, techniques, and approaches to work with communities. (27-29)

Rapid Rural Appraisal (RRA) to Participatory Rural Appraisal (PRA) and Participatory Learning and Action (PLA)

While various discipline-specific data collection tools were developed throughout the 1970s (e.g., the Agro Ecosystem Analysis in the agronomy field), Rapid Rural Appraisal

(RRA) was coined in 1983 as the overarching approach to gather data directly from the community to support development project delivery. Not a specific step-by-step methodology, it instead encompasses varying types of usually survey-based data collection led by the outside development agency/practitioners to form community-specific hypotheses of rural life. As these methods were employed, they evolved to be more participatory depending on the context and intention of the information needed. By the late 1980s, Participatory Rural Appraisal (PRA) was termed and was understood to be more focused on facilitating community-led data gathering, local empowerment, and community ownership. However, the terminology PRA was not/is not necessarily accurate, as the method is not only applicable in rural environments and the 'A' can also refer to assessment, analysis, and activity. Therefore, some practitioners adopted Participatory Learning and Action (PLA) to better represent the approach although RRA, PRA and PLA are all known and understood within the development field. (Kumar 38–39; Mikkelsen 62; Crawford)

PRA and PLA methods are based on the idea that the locals are experts. Methods range from types of spatial mapping like resource and mobility maps to time-related analyses like seasonal diagrams, daily activity schedules, and trend analysis. Information is collected in a participatory fashion using culturally and contextually appropriate materials. For example, techniques may include using the ground as a canvas for mapping the community, employing sticks and rocks for drawing and landmarking. In many cases, community members are engaged to facilitate this information gathering to support community ownership and analysis. While PRA techniques are often associated with mapping, interviews and observation are significant tools that are also employed, often in tandem with mapping to better understand specifics or trends that are revealed. (Kumar; Mikkelsen)

It is important to note that simply employing PRA/PLA techniques does not guarantee coverage – engaging and empowering a diverse group – as defined earlier, which is critical for addressing gender

Participatory design has become overwhelmingly championed as a more effective development model, inspiring practitioners to develop tools, techniques, and approaches to work with communities.

Kumar, 27-29

inequality. Skilled facilitation and dedicated work within the community is necessary to locate and engage the most marginalized in the community, which in many cases are women. Both Kumar and Mikkelsen convey that attitude and behavior of development practitioners is actually more important than the methodologies themselves. Kumar shares the following necessary attitudes for PRA:

- self-critical awareness of one's behavior, biases, and shortcomings;
- commitment to the poor, weaker, vulnerable;
- respecting others;
- not interrupting, not lecturing, but being a good, active listener;
- not hiding, but embracing error;
- 'handing over the stick', i.e., passing the initiative and responsibility to others;
- open-ended flexibility to make space for the priorities of the poor.

(Kumar 47, via Kumar 1996)

Many of these attitudes align closely with some of those suggested in previous chapters. Kumar's list reveals the personal and professional commitment practitioners (and designers) must make to engage responsibly and effectively with communities.

Participatory Analysis for Community Action (PACA) and a Gender Framework

The United States Peace Corps has developed the Participatory Analysis for Community Action (PACA) approach designed for building long-term community relationships. The Peace Corps trains and supports development practitioner volunteers to live in communities around the world for approximately two years. As a reflection of the growth and influence of a gender and development emphasis in the development field as well as its specific mandate of the institution, the PACA is explicitly rooted in addressing women's empowerment and gender equality. Much of the PACA is designed around an adapted Harvard Analytical Framework, as discussed in Chapter 4, and employs PRA/PLA techniques in order to identify how activities, resources, power, and constraints are gendered. Notably, like all the GAD tools reviewed, the PACA approach trains practitioners to gender-disaggregate all of its data collection as the key to unveiling gender roles and biases.

Human Centered Design Toolkit – Supporting a Design Cycle

Published in 2011, the Human Centered Design (HCD) Toolkit was developed by IDEO, the Gates Foundation, and International Center for Research on Women (ICRW). Serving design innovators in the developing context, its focus is on product and process design more than traditional development project design and therefore particularly useful for this thesis research. Its toolkit format acknowledges that not all designers have the opportunity to engage with the community for an extended period of time (like

many long-term development practitioners or Peace Corps volunteers). It provides recommendations for what types of tools can be employed quickly and deeply in short periods of time while leveraging community knowledge and maximizing community ownership. Many of the learning tools highlighted are observational and interview-based, such as shadowing and overnight stays, as product adoption is tied to individual use that is unique to different types of users. The toolkit also emphasizes a significant prototyping period in order to visibilize as many transactions, cultural-based decisions, potential beneficiaries, and unanticipated concerns that are part an entire life cycle of a product, its making, delivery, use, and management.

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differences and challenges. However, I would argue that an overarching goal or understanding of gender equality is missing. I envision a companion toolkit or guide that would provide a framework for understanding gender and the design process. Content from the four previous chapters here (summarized, adapted, and made pithy, of course) would serve as major content of that compendium. I will revisit this in the final chapter of this thesis.

Pomegranate Center – Diverse Community Leadership Model

The Seattle, Washington-based Pomegranate Center has received national-acclaim for its huge successes in building community through participatory-engagement methods. The organization facilitates the envisioning, design, and construction of community gathering spaces, and also employs its methodology for long-term community and strategic planning. The cornerstone of the Center's methodology is forming a diverse steering committee that provides community expertise and organizing throughout the process. This group is formed after an idea or need has been brought to Pomegranate, usually by a small group of like-minded leaders. The goal of forming a steering committee is to diversify the leadership so that its ultimate vision and manifestation creates "multiple victories" serving more community members and achieving more goals than originally identified. Steering committee members range from elected officials, to historical project naysayers, to those often overlooked in the community and have a role in inviting and organizing their personal communities to be part of the larger project. The job description for the steering committee is included in the Appendix with notes on how it can be adapted for diversifying community representation in the design process.

Gender and Participatory Design Practices

By engaging all community members, rather than only an elite (often all-male) leadership group or working off designer's assumptions and well-intentioned hopes, participatory design methods hold the promise of visibilizing and engaging gender roles and dynamics that will positively affect the outcome of the project. Ideally, these methods can unveil opportunities for designers to identify strategies that address gender inequality even if that was not the main intention of the project. Kumar also states that the process is as important as the product: by engaging women and men equally in the design and decision making, and elevating women's experiences as well as men's, the entire community is invited to see and value gender (49).

Learnings from previous chapters indicate that participatory design practices are key tools in shedding light on gender, gender equality, and project success. For example, a male head-of-household may not be the most knowledgeable of the many demands on household resources. Recall the Gates Foundation example, where women were not consulted on new seed development because their roles were "invisible" and not valued; in not seeing women's roles and their importance, the project was not successful. Or in Hall's example of kitchen design, primary users – women – were not consulted where they were the experts, resulting in subpar design. Or the treadle pump example that likely did not engage the community enough to learn before design implementation that it would not/could not be adopted by women.

As mentioned earlier, participatory design practices do not alone ensure that gender inequality is being seen or addressed. In Mikkelsen's *Methods for Development Work and Research*, she writes, "Participation is not the panacea many assume because there are limits to what participation alone (even if interactive) can achieve in terms of equity and efficiency, given pre-existing socio-economic inequalities and relations of power" (71). Historical gender inequality as well as proxemics norms can create hurdles for women's full participation. However, the tools identified below have the potential of revealing and engaging gender dynamics if gender-disaggregated and facilitated with critical inquiry and cultural competency. Because of the macro scope of this thesis, specific facilitation techniques will not be discussed, but they merit significant attention for future research.

Participatory Methods That Visibilize and Value Gender Dynamics

While all participatory methods are fair game for a project, practitioners and designers will select those that help to illuminate or gather the type of data they believe they need. For this first pass at developing a

gendered design methodology, I have culled through the above-mentioned resources to identify tools that specifically respond to needs found in previous chapters. Further research and exploration of particular tool types are very much warranted for future work. There are multiple books and manuals dedicated to participatory methods as well as critical guidance on facilitation methodology. The methods selected below represent families of tools that, when data is sex-disaggregated, work specifically to visibilize gender dynamics of community relationships and resources. I believe an effective gender-integrated design process is necessarily participatory and would include a number of the following tools in some, if not all families. Each family of tools will be briefly described below.

SEX-DISAGGREGATED DATA:

While not a “family” of tools, this is an overarching requirement of all the participatory methods below. As noted in previous chapters, it is imperative that data collection is sex-disaggregated in order to reveal and distinguish experiences, ideas, and visions by gender. In addition to the rich data this provides, it also helps reveal when data or decision-preferencing may be heavily skewed to men (or women). Depending on the context, data collection may benefit from being in sex-separated groups, potentially in different spaces, or at different times of day to ensure strong participation. Proxemics, culturally specific gender norms, and when meetings are scheduled are all major considerations. Partnering with the broader community and gender-aware organizations (see below) can help to navigate these challenges and cultural differences. As mentioned earlier, more culturally specific facilitation guidance should be examined for future iterations.

MAPPING:

Mapping methods excel at not only revealing rich information to practitioners and designers that would be difficult to obtain in other ways, but also act to educate community members about themselves. Participatory mapping invites multiple voices to be seen, heard, and valued. Mapping is particularly valuable to designers as it provides spatial dynamics of people’s realities, as well as their perceptions of space, providing critical insight into space making.

Spatial mapping can include mapping social relationships, resources, mobility, and access, as well as services and opportunities. All of these mapping exercises can work to support the Harvard Analysis Framework (identifying gendered access, services, ownership, opportunities). As discussed in the Gender, Space and Status chapter, women are often not visibilized or valued in their reproductive role, despite its importance to family and community well-being. Spatial mapping can put women “on the map”

and reveal their full participation and decision-making roles, as well as their limitations. Also, as all space is gendered, mapping also helps to identify spaces that are considered “men’s” spaces or “women’s” spaces, either officially segregated or culturally segregated. These exercises can reveal where women and men do and do not go, respectively. This invites inquiry of why women and men feel comfortable in one place and not another and what qualities of the space contribute to that comfort/discomfort/access/invitation. With inquiry, these exercises can also identify where women and men wish they could go.

Activities and roles mapping are particularly useful at engaging the dimension of time. These can be both spatial or more clock/calendar-oriented “maps” identifying gender roles and responsibilities throughout the course of a day or season. These types of exercises are also particularly useful in visibilizing and valuing women’s multiple roles – reproductive, productive, community management. Cross-referencing these maps with those that address mobility, access, and services can identify constraints and opportunities for addressing more equitable gender roles and access in project design.

Often maps are made within separate groups of men and women and then are analyzed together to share different perspectives and increase gender-sensitivity, as well as identify where divisions of labor or control of resources are working or not working to support community well-being.

OBSERVE:

As designers, we are trained to observe beyond what an average community member sees, but as previous chapters have shown, privilege, culture-based biases like gender inequality, and culture-based differences like proxemics challenge our ability to see beyond what we know or benefit from personally. Particularly in unfamiliar cultures, seeing beyond our own experience is critical to understanding. Structured space-based observation (i.e., observing a public space over the course of a day) can illuminate movement and activity patterns specific to the culture one is working with. Again, these observations must be sex-disaggregated into order to see and value gender differences. This observation work will unveil questions and assumptions that can then be addressed with community members. Observations can range across the fields of research discussed in this thesis: gender roles, movement, access, ergonomics, and proxemics.

Watching from afar, however, does not illuminate gendered decisions, limitations, or challenges within intimate spaces, reminding of us of the need to disaggregate data at a household level. Shadowing and overnight stays can be particularly useful in understanding the real spatial realities of women’s and

men's lives that would be difficult to communicate in other ways. Shadowing could be arranged for a portion of a day, or during a particular task, identifying proxemics, ergonomic preferences, gender roles and limitations. Overnight stays can be particularly illuminating in unveiling household dynamics and understanding the realities of gender roles and challenges that were identified in mapping exercises. For example, in many cultures, women rise early in the morning, hours before the rest of the household, to begin food and warmth provisioning. While this might be noted on an activities map, witnessing the step-by-step realities of this daily routine may reveal strategic design opportunities.

INTERVIEW:

While mapping and observations are useful, it can be difficult to truly understand and interpret what motivates people's actions and decisions. The analysis of the exercises mentioned above are likely to be richer and more accurate in meaning if coupled with personal and group interviews. Personal interviews and focus groups also have the potential of being safer spaces for women to share their real experiences and speak directly about how they experience gender inequality. Since it can be challenging for women to be fully seen and heard in public spaces, and therefore community-based participatory design processes, more intimate spaces for dialogue can be more conducive for learning and building trust between community members and the practitioner/design teams.

MODELING:

Modeling is a particularly useful approach to visibilize gender differences and preferences, as well as unforeseen opportunities to address gender inequality in the full life cycle of a product, form, or process. Often the ideal of the project is imagined and designed for, not the reality, nor the processes necessary to construct or maintain the project. Because women's activities are often invisible or undervalued, the impact on women is unaccounted for. Moser's framework calls for understanding the impact a project will have on gender roles in order to understand where additional work might fall on women or where they may be left out of critical decision making.

Modeling or prototyping proposed processes and forms works to identify where and how women and men are engaged (or not engaged), served (or not served) by the proposed intervention, respectively. These are important opportunities to address ergonomic limitations and preferences; proxemics-based preferences in space and spatial use; by-products of the intervention that are positive and negative and almost always gendered (such as opportunities for paid work in the construction process, new markets for newly-developed skills, unexpected offsets of work from men to women, or vice versa due to new

workload); long-term maintenance; management; and decision making. Prototyping can come in the form of full-scale modeling of built forms, prototyping processes and movement through space, and prototyping construction, maintenance, and management, among others (see Catapult precedent). All aspects of community life and work are gendered. Modeling and prototyping helps to reveal some the possible short- and long-term effects of interventions and their gender implications.

PARTNERING:

Often community leadership is all or mostly male, limiting women's voices in problem identification, vision setting, decision making, and project ownership. The Pomegranate Center provides a strong model for diversifying community expertise to be more representative of community need. Immediately identifying and engaging a broad group of community representatives, including women and other marginalized community members, can support broader project beneficiaries, serve more community members, and support full community stewardship. While this process may be more challenging for some projects than others, practitioner/design teams play a powerful role in setting the tone and values for their engagement and intervention. Prioritizing diversity of voices and leadership as criteria for the work at the beginning of a project creates the expectation for partnership and inclusion throughout the project cycle.

Understanding and navigating complex gender relationships is not easy, particularly with one's own biases and working within diverse cultures. As the Moser Framework suggests, partnering with local gender-aware organizations is a strong way to obtain an appropriate context for community gender dynamics. These groups can help identify and communicate the practical gender needs versus strategic gender needs within the community as well as short-term wins and long-term goals. "Partnering" can come in multiple forms – from a learning partnership between the design team and the gender-aware organization to a collaborative partnership with community leadership. The nature of this partnership will likely depend on the cultural context, scope, and scale of a project.

Conclusion

Participatory and human-centered design offers significant tools to see, understand, and engage gender dynamics that can provide exceptional amounts of information for programmatic, technical, and aesthetic design. As a general note, all of the above-mentioned methods are rife with nuances and challenges based on specific project conditions and cultural norms. When working within contexts of power and inequality, very few of these methods are straightforward. Each project and community will have very

specific dynamics at play among community leaders, men and women, etc. As mentioned earlier, a specific investigation of these dynamics is very much warranted to further support the design community. I believe, however, that an overview of participatory methods that particularly support the seeing and valuing of gender supports a designer's toolkit for engagement and informs an overall understanding of a gender-integrated design process.

The following page seeks to identify and summarize the *seeing* and *process* discoveries of the field.

SEEING



Often community leadership is all male or a majority male, limiting women's voices in problem identification, vision setting, decision-making and ownership.

Women are often not visible or valued beyond their productive reproductive role. Access, ownership, and opportunities are gendered and spaces and services are often unofficially gender segregated.

Particularly in unfamiliar cultures, deep seeing is critical to understanding. Watching from afar, however, does not reveal gendered decisions or challenges within intimate spaces.

While observations and generalizations are useful, it can be difficult to understand what motivates people's actions and decisions. Large community meetings may inhibit women's full and candid participation.

Women are often not considered in the construction, maintenance, and management of design projects limiting their access to remunerated work and future opportunities.

DIVERSIFY

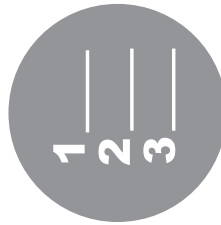
MAP

OBSERVE

INTERVIEW

PROTOTYPE

SEX DISAGGREGATE ALL DATA



PROCESS

Form diverse community leadership committee

Partner with gender-aware organizations

Facilitate spatial mapping

Facilitate activities + roles mapping

Space-base observation

Shadow

Overnight Stay

Focus Group

Personal

Prototype processes + movement through space

Prototype construction, maintenance + mgmt

DUE TO CULTURAL NORMS, MEN AND WOMEN MAY NEED TO BE IN SEPARATE GROUPS TO ENSURE EQUITABLE PARTICIPATION

PARTICIPATORY DESIGN: SEEING + PROCESS

Image 20: Participatory Design: Seeing and Process Summary



CHAPTER 9

SYNTHESIZING RESEARCH: CONNECTING THE DOTS TO INFORM A GENDER-INTEGRATED DESIGN PROCESS

SYNTHESIZING RESEARCH: CONNECTING THE DOTS TO INFORM A GENDER-INTEGRATED DESIGN PROCESS

Synthesizing findings across five diverse fields is challenging; however, the research clearly indicates there are many conceptual overlaps in addition to unique frameworks to address gender inequality in the design process. Together, these combined insights can help inform a more holistic, gender-integrated design process. While there are many ways this synthesis could have taken shape, I describe my process here.

Eager to have a tangible set of tools to apply to a design process, I cross-referenced the “processes” – or methods and tools from each field researched – that were summarized at the end of chapter. Acknowledging that these methods and tools range in scope and intent, it was useful to see how they related, where certain ones touched all fields and others were unique. Not surprisingly, “sex-disaggregated data” spans all five fields; however, “cross-reference ergonomic data” is more connected to prototyping processes (participatory design) and somewhat to semi-fixed spatial preferences (proxemics). Something like the design-adapted CEDPA checklist could augment many different methods and tools across all fields. I counted how many cross-references were made for each to better understand their relative connections.

This cross-referencing practice revealed that these “processes” do not all have the same intent and fall into two distinct categories: some of these are clearly *tools*, for example the “Gender Analysis Matrix” or “shadowing,” while others are *goals* of the process, for example “learn of potential gendered taboos of movements.” A *tool* or multiple tools could help achieve that *goal* in the design process. With this distinction made, I labeled them as such. The graphic on the next page represents this process. The following two pages list goals and tools respectively.

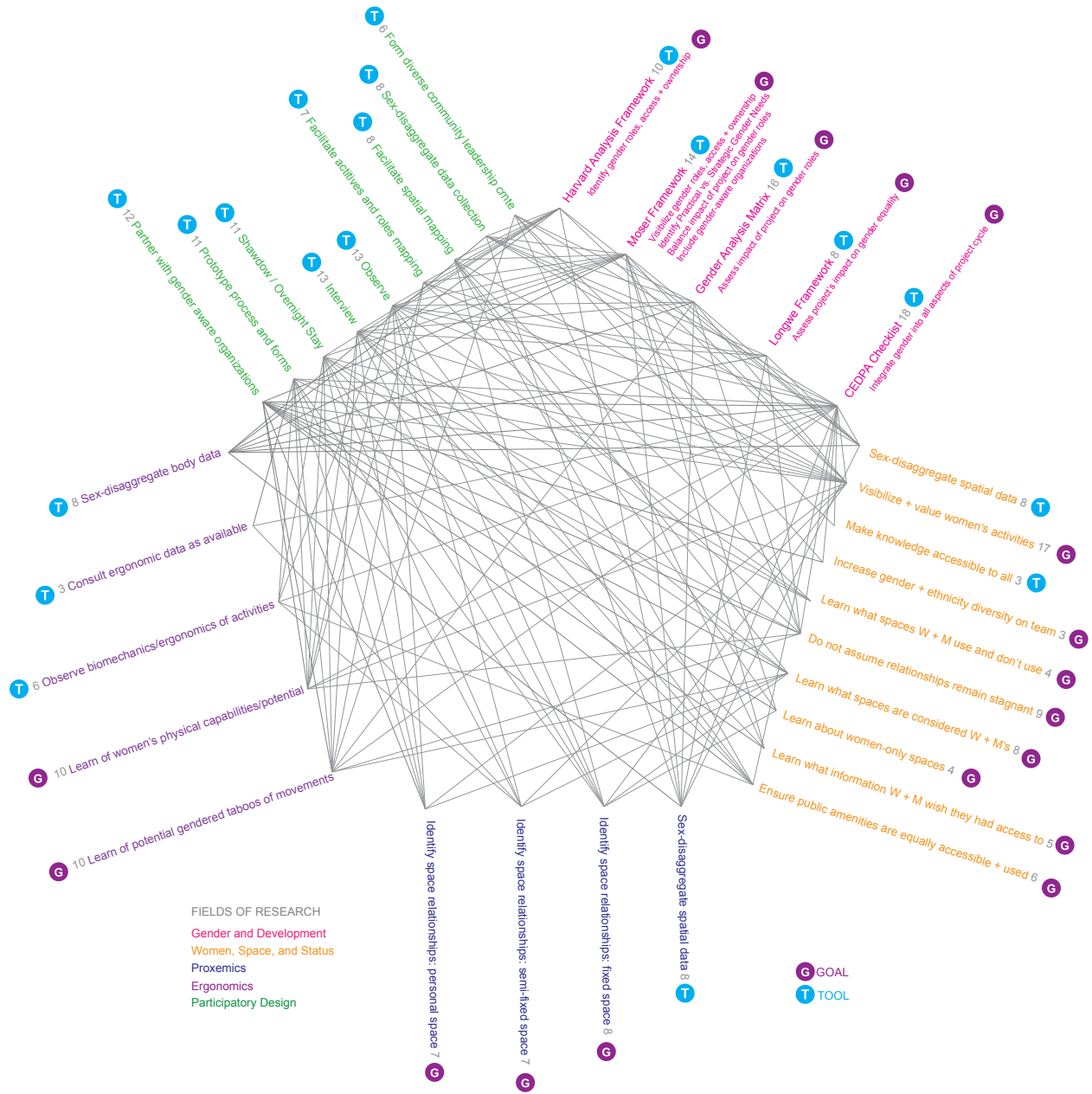
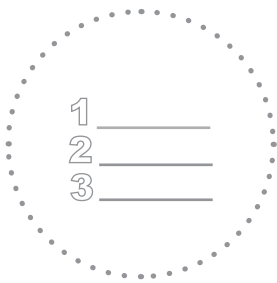


Image 21: CROSS-REFERENCING METHODS, DISTINGUISHING GOALS + TOOLS



Integrate gender into all aspects of project development, design + implementation.

Diversify community leadership and design team to be gender balanced.

Engage entire community as partner designers, not only receiving beneficiaries. Make design process accessible to all community members to allow for diverse and engaged participation, equitable contribution, and shared decision making.

Learn what might restrict women's full participation in information contribution and decision making (i.e. proxemics, integrated spaces, male designer presence, etc.) and accommodate for women's full participation.

Identify gender roles, access, and ownership to visibilize and value women's activities, as well as illuminate where gender inequalities are present.

Identify Practical Gender Needs vs. Strategic Gender Needs in order to ensure design decisions are taking both immediate and long-term needs into account. Assess impact of project on gender equality.

Do not assume gender relationships are stagnant as design decisions could reinforce existing gender inequalities.

Learn what spaces women and men use and do not use, respectively. Find out why (access, invitation, fear, etc.). What qualities of the designed space contribute to them being used or not, by whom, and why?

Learn what spaces are considered women's, men's, boy's, and girl's. What do these spaces symbolize, offer, limit, perpetuate? How can design considerations increase information access across gender lines?

Learn about women-only spaces and how they may serve to visibilize and elevate women's decision-making and status. Consider how this might impact design recommendations.

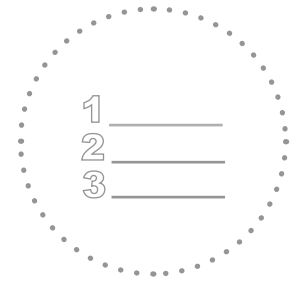
Learn what information women and men wish they had access to. Localize this knowledge and identify social and built impediments. How can your design or design process support educational opportunities, particularly for those that are currently most limited?

Ensure public amenities are equally available, accessible, and comfortably used by all. Acknowledge and value women users as equal users and design to accommodate her needs.

Do not assume that the design team's sense of personal and built space is interchangeable with another culture's. Identify cultural (proxemic) spatial preferences on fixed, semi-fixed, and personal scales. Pay close attention to how gender dynamics are played out in these interactions and how to inquire about them and accommodate them in your design process.

Learn of women's physical capabilities/potential and design for their inclusion in the construction and maintenance phase, which may have sex-based ergonomic considerations of material selection and assembly. Similarly, learn of gender taboos of movements.

Assess impact of project on gender roles throughout the design cycle and over the long term. Be particularly attentive to balancing the impact on women's roles, where often side effects of additional work or time is placed.



CEDPA Checklist adapted for design process

Gender Analysis Matrix

Moser Framework

Harvard Analysis Framework

Longwe Framework

Partner with gender-aware organizations

Form diverse community leadership committee

SPATIAL MAPPING

Roles and activities spatial mapping, temporal + seasonal

Resources, access + ownership

Where W/M/G/B go and do NOT go

Women's and men's segregated spaces, official and informal

FORMS OF OBSERVATION

Space-based observation

Shadow

Overnight Stay

Biomechanics of activities (consult ergonomic data as available)

INTERVIEW

Focus group

Personal

PROTOTYPE

Design intervention processes including community-scale movement

Design intervention forms including materials acquisition, construction + maintenance

SEX DISAGGREGATE DATA

I then connected goals to appropriate tools, counting how often the tools were used. Again, this count helped to identify relative connections. It also identified those tools that are able to address multiple goals, imagining that they are likely strong general tools a design team would benefit from adopting. For example, the CEDPA design-adapted checklist as well as partnering with gender-aware organizations addressed significantly more goals than other tools. Close seconds were the Gender Analysis Matrix, forming a diverse steering committee, and using personal and group interviews.

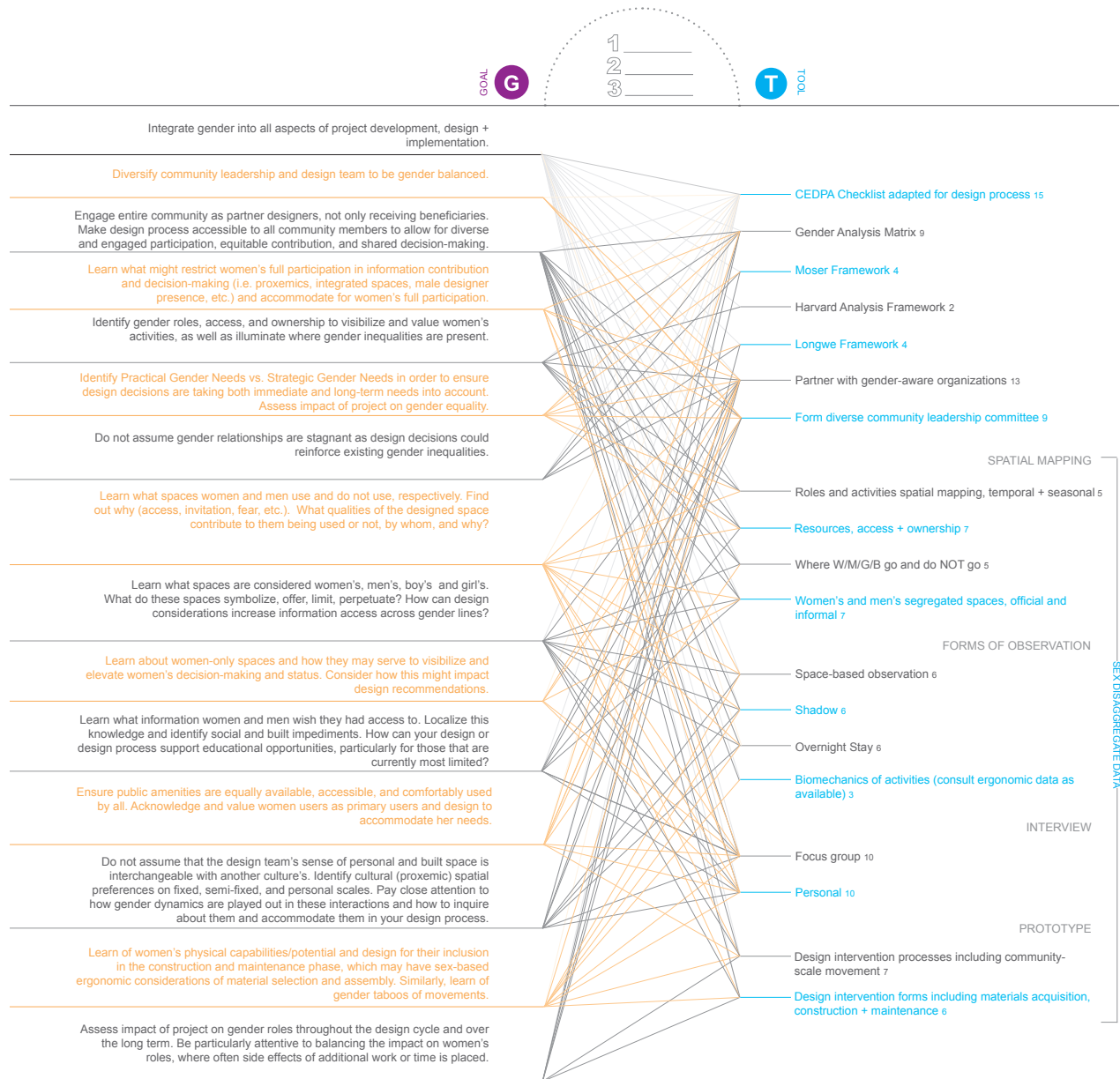


Image 24: CONNECTING GOALS TO TOOLS

From here, I outlined a typical design cycle in order to map and arrange the tools. I strategically selected a typical design cycle to work with and revise (as opposed to inventing an entirely new framework) for three reasons. First, using a typical design cycle helps to reveal how and where it often falls short of integrating gender. Often design processes are top down and only engage a select group of decision makers. This limited leadership – in the form of the client and design team – can inhibit site analysis, problem identification, and programmatic vision by embracing assumptions and hierarchies established by the normative. The research shared in this paper demonstrates how those limitations can further invisibilize the gendered nature of the built environment and its impact on gender equality. Second, a typical design cycle represents a designer’s reality: translating a need into a built form. Integrating gender into this cycle transforms the process, the built form, and its impact; what was typical is now new. And third, using a typical design cycle invites easier adoption of new tools. Providing ideas and tools that can “plug and play” into a well-known design cycle encourages design teams to try new thinking and frameworks without needing to adopt an entirely new and unfamiliar approach. As an advocate for integrating gender, I want the approach I offer to be understandable, user-friendly, and easily adoptable.

I then mapped tools to corresponding/appropriate steps in the design cycle. Not surprisingly, a number of the tools can be used throughout the design cycle – the CEDPA design-adapted checklist, diverse steering committee and partnering with gender-aware organizations continue to rise to the top as key resources.

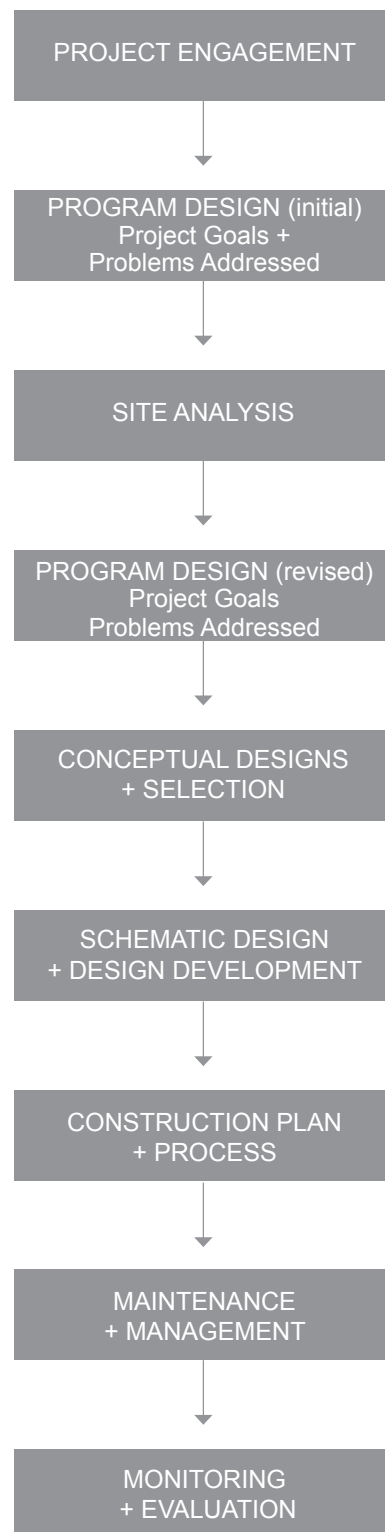


Image 25: TYPICAL DESIGN CYCLE

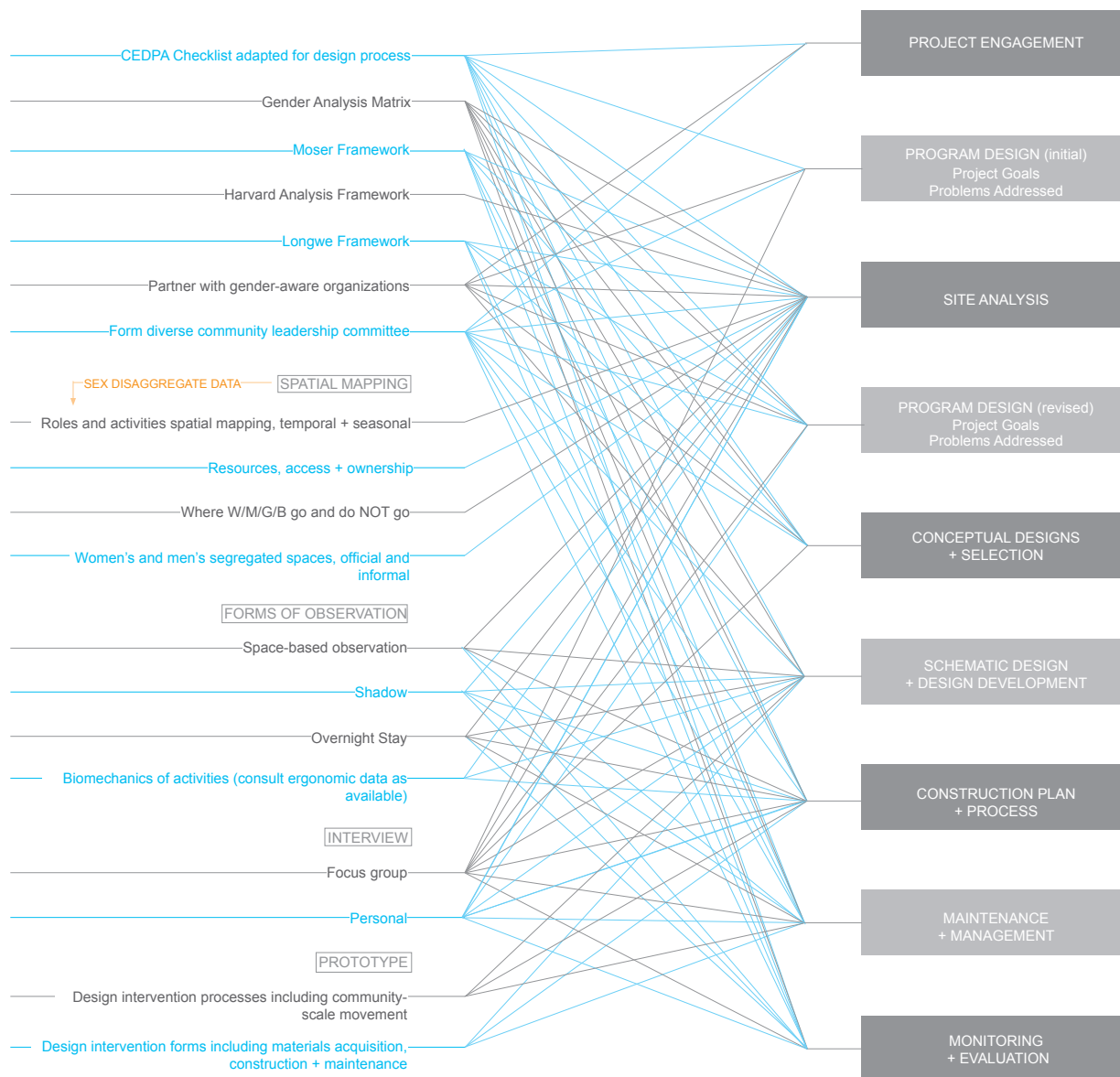


Image 26: CONNECTING TOOLS TO TYPICAL DESIGN CYCLE

The graphic to the left represents the “results” of how the identified gender-based tools, responding to critical goals, can be applied to a typical design cycle. The graphics are simplified, but each circle represents methods or tools that were explored in more detail in previous chapters. This provides the beginning outline of a gender-integrated design process.

Gender diversity tools like the adapted checklist, partnering with gender-aware organizations and form-

GENDER-INTEGRATED DESIGN PROCESS

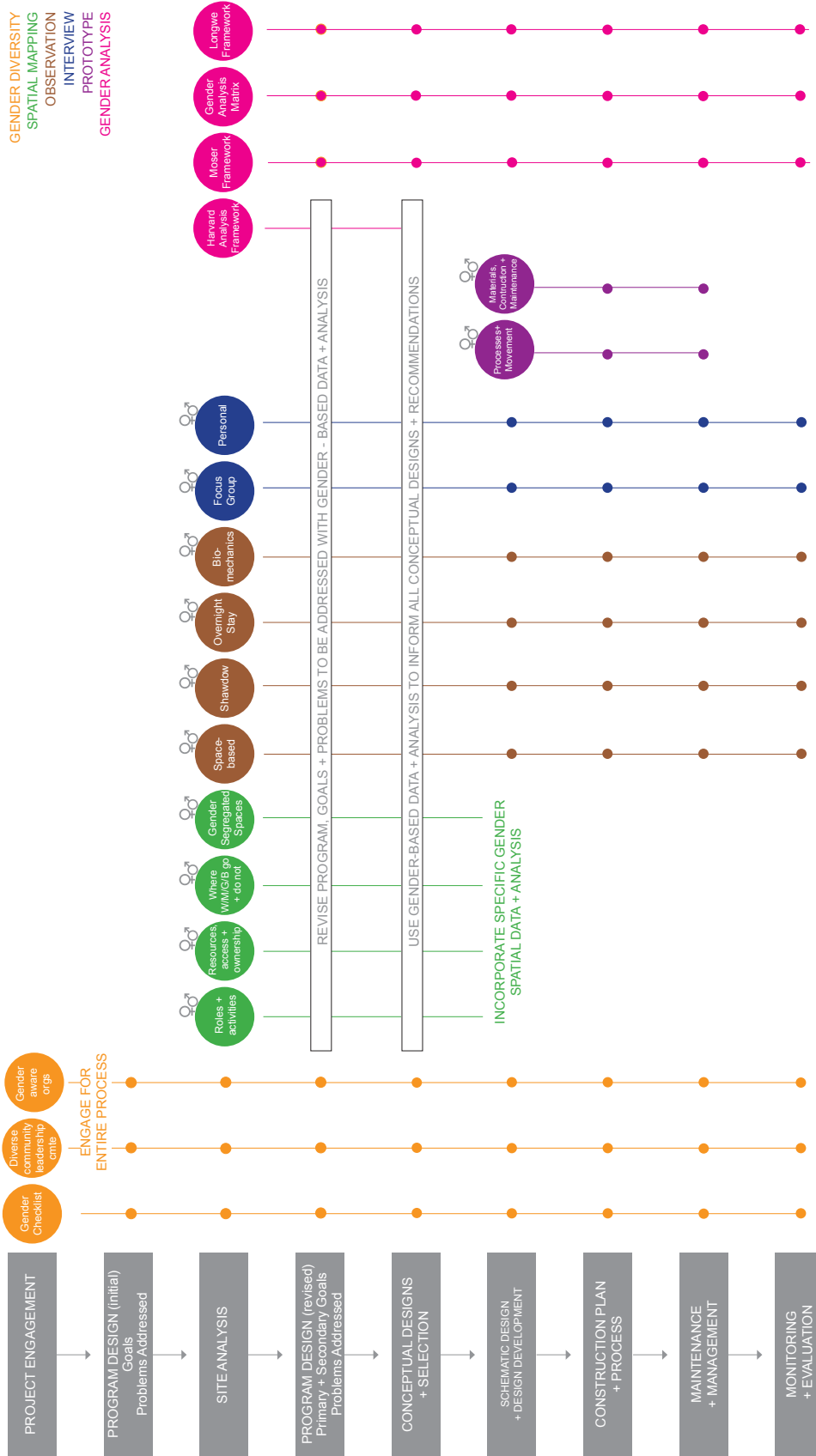


Image 27: GENDER-INTEGRATED DESIGN PROCESS OUTLINE

ing a diverse community leadership committee frame the entire design process from initial engagement through monitoring and evaluation. The site analysis phase engages an entire toolbox of sex-disaggregated data collection methods to visibilize and value gender. Partnered with gender analysis tools, like the Harvard Analysis Framework, Moser Framework, and the Gender Analysis Matrix, design teams are equipped to identify opportunities to address gender inequality, revise project goals, and adapt the program. These data and analysis tools are used throughout the conceptual design and selection phase as well as schematic design and development, creating a feedback loop as decisions are made. Prototyping tools are employed to test and tweak conceptual designs and to inform the gender inclusivity of the construction, maintenance, and management of the project. Monitoring and evaluation, while not always a priority of design teams, is key to understanding how and if the design is successfully adopted and its effect on gender relationships. Engaging diverse community expertise and a selection of sex-disaggregated data and analysis tools provide this insight to inform follow-up and additional design interventions.

The Bigger (and Now Visible) Lens

This outline represents the tools and strategies that can visibilize and value gender. I then returned to the *seeing* gender discoveries from the five fields of research to provide the lens to look through while employing these tools. These have been summarized into 15 points across the five fields over the next two pages.

Next Steps

Using this synthesis and reflecting on the research, the next chapter investigates six gender and design precedents and the realities and manifestations of the design process and space making. These examples help to inform, augment, and in many cases support the outlined methodology.



Women are often marginalized as a specialized sub-group to tend to, rather than valuing that gender relationships and inequality impact all aspects of personal and community life.

Community and design team leadership are often male due to historic gender inequality and traditional gender roles which can inadvertently contribute to marginalizing women's voices and needs.

Limiting design input to just the community leadership and design-office decision making can limit information sharing, obscure or invisibilize short and long-term gender-based side effects of design interventions, and diminish opportunities to address multiple challenges like gender inequality.

Women's public participation and/or engagement with outsiders can be limited due to gender or cultural norms in some communities. Sometimes their absence, minimal participation, or silent presence creates the assumption that they are disinterested, do not have an opinion, or they tacitly agree.

Roles that are publicly valued (i.e. remunerated or have decision-making function) are easier to see and are often venerated. These roles often fall along gender lines, diminishing, invisibilizing, or devaluing the importance of women's unpaid work and lack of access, ownership, and decision-making.

Often planners and designers think they are addressing gender inequality by meeting women's immediate needs within their current gender role (i.e. less time-consuming water collection), however this does not necessarily address larger needs to address gender equality.

Often what or how things are *currently* done are considered what *ought* to be. This is particularly true for those that are served well by current conditions, but also within entire communities. This can also be a pitfall for outside planners and designers being appropriately conscientious about their intervening role.

Space confers status and status is gendered, therefore men and women access, use and *do not* use, feel welcomed or uninvited, or safe or unsafe in different ways and for different reasons. Due to women's subordinate status in most cultures, women's access, invitation, and sense of safety are often less than that of men's limiting movement, access to public amenities, productivity, and quality of life. These experiences can vary spatially and temporally.

Within many cultures, spaces are sex-segregated (i.e. types of educational institutions and work environments) limiting access to information and status that is valued. While some spaces are officially segregated, others are informally segregated based gender norms that perpetuate gender inequality. Integrating spaces has proven to be a successful strategy to addressing gender inequality over time.

Simultaneously, because of women's traditionally limited public ownership, access, and roles, women only/led spaces have shown to visibilize and value women's leadership within communities.

Education is a key contributor to elevating one's status as well as one's ability to positively effect her family and community's development. Opportunity to access education is often different along gender lines due to cultural and physical impediments (i.e. lack of amenity such as a bathroom or the distance, route, or time required to travel when juggling other obligations).

In many cultures, public amenities are not designed to accommodate women's biological needs or traditional gender roles, naming these as "special needs" rather than ones that directly impact 50% of the community and indirectly support the entire community (i.e. public bathrooms, recreational facilities).

How cultures perceive personal and physical space and what qualities of these spaces allow them to feel most comfortable are unique. Within these cultural norms, preferences of women and men differ as well as expectations of how women and men should behave spatially and rationally.

Due to gender roles and cultural assumptions, often women are not considered in the construction and maintenance phases of design projects undermining women's access to valued and/or remunerated work, long-term decision-making, and ownership. When they are included, gender taboos of movement may not be known by designers, limiting participation and adoption rates.

Even with good analysis and planning it can be difficult to predict the effect your design process and built intervention is having/will have on the community and, in particular, gender roles. While you may be positively affecting gender roles in one aspect, you may be negatively impacting gender roles in another. Project interventions rarely have "neutral" effects, nor are they gender neutral.



SEEING GENDER



CHAPTER 10
**GENDER + DESIGN PRECEDENTS:
SPACE MAKING | MAKING SPACE**

GENDER + DESIGN PRECEDENTS: SPACE MAKING | MAKING SPACE

This thesis is inspired by the gap in precedents that integrate gender and the goal of gender equality fully into the design process. Thankfully, there are a few examples that help to reflect upon and inform a gender-integrated design process; however, the process of identifying precedents and pinning designers down on process proved to be complicated. When researching and inquiring about gender and design precedents, almost all that were uncovered or recommended were women-segregated spaces – girls' schools, girls' orphanages, or convents. While interesting in their own right, sex-segregated spaces do not have to contend with gender and power dynamics, nor serve a gender-diverse population in the same way that public, integrated spaces do. Also, with a short period of time, it is more realistic to work with precedents that have been written about and published – be it in traditional journals or more nimbly on the Internet. As a researcher, I was at the mercy of which designers, communities, allied organizations, and funders had the time and ability to share their work. In some cases, this could be just one photograph or one short paragraph description that inspired inquiry, but only supplied a thread of information.

Once a number of examples were identified – in most cases for only aspects of their design process or built form – engaging designers or organizations to discuss their work was extremely challenging. Whether due to cash-strapped nonprofits and time-strapped professors, international connection issues of opposing time-zones or lack of Internet connections in the field, or miscommunications, understanding the big picture and details of these projects proved to be difficult. This underscored the fact that designers rarely have the time to effectively document their process work at all, much less do it well. While some designers had diligently taken pictures of participatory design workshops, they often were disorganized and incomplete as well or not annotated to reflect the conversations that they elicited and influenced design decisions. While many designers noted or reflected that participatory groups were divided by men and women, often the outcome differences between those groups were not documented and were only recalled by fading memories. Gender and power dynamics of how men and women participated in integrated public meetings were vaguely remembered, but rarely concretely focused on.

These challenges represented a learning opportunity to reflect on the messiness of the design process.

Proposing a methodology is one thing; following it is another. In the same vein, saying that you are addressing gender and gender inequality is different from actually doing it. It was evident that concrete tools to help designers be attentive to gender dynamics are needed. These challenges also suggested that for future research and testing this design methodology, time and money needs to be invested in strong documentation to be able to understand processes and their impact, and to be able to share those learnings after the fact.

The six precedents shared here responded to at least one, if not a number of the learnings or tools that were discussed in previous chapters. These examples help to inform, augment, and in many cases reinforce the proposed methodology. They span five continents and represent learning on diverse scales -- from snapshots of design processes to manifestations of built forms, from large multi-organizational work to a design university studio. Their settings range from urban slums to a rural community, a war-torn city to a North American design-oriented metropolis.

Beginning in the slums of Kibera, Kenya, we look at the “Women Are Heroes” work of street artist JR. While not a traditional designer, JR’s large-scale photography work engages and transforms communities



Image 29: Precedent Map

spatially with gender issues at its core. In Mumbai, India, we explore the model partnership of Society for the Promotion of Area Resource Centres (SPARC), National Slum Dwellers Federation (NSDF), and Mahila Milan that successfully organizes to upgrade and formalize slums with a gender-prioritized design approach. In Kabul, Afghanistan, we briefly look at an indoor skate park whose design prioritized ensuring that both boys and girls could learn to skate. In Rajasthan, India, we take a gendered lens to the prototyping process of a water delivery mechanism led by the San Francisco-based design nonprofit, Catapult. In Lomas de Zapallal, a slum community outside of Lima, Peru, we look at the participatory design process of the award-winning school park design work of the University Washington. And finally, we look at opportunities to integrate gender and critical thinking into the design education process through a studio project at the University of Washington in Seattle, Washington.

RESEARCH THEME	PRECEDENT	PROJECT	LOCATION
VISIBILIZING WOMEN	Women Are Heroes, JR	City-scale Installation	Kibera, Kenya
PRIORITIZING GENDER	Skateistan	Indoor Skatepark	Kabul, Afghanistan
PARTNERING WITH GENDER-AWARE ORGANIZATIONS	SPARC, NSDF + Mahila Milan	Community Toilets	Mumbai, India
GENDER + PROTOTYPING PROCESSES	Catapult + Wello	Water Delivery (water wheel)	Rajasthan, India
PARTICIPATORY DESIGN + DESIGN SELECTION	Pitagoras School	School Park	Lomas de Zapallal, Peru
INTEGRATING GENDER INTO STUDIO ENVIRONMENT	Fog Collection Studio Seattle, USA	Community Park	University of Washington Seattle, United States Lomas de Zapallal, Peru

Image 30: Research Themes and Precedents



VISIBILIZING WOMEN

WOMEN ARE HEROES - JR

Kibera, Kenya

Designer

JR is a French artist known for his large format photographs that are projected or canvased across public spaces, transforming streets into art galleries. Working in this format since 2004, his projects are usually illegal or initially unpermitted, yet are so successful that they are made “official” by municipalities. In 2007, he partnered with the artist Marco on the illegal project *Face 2 Face*, pasting building-sized portraits of Israelis and Palestinians “face to face” in eight Israeli and Palestinian cities. The project *Wrinkles of the City* unveiled photographs of older city residents in Cartagena, Colombia; Shanghai, China; Havana, Cuba; and Los Angeles, United States, inviting their wrinkles to tell the memory and history of the city. JR’s work has garnered international attention and accolades, include winning the 2011 TED prize. (JR)

JR refers to himself as an “urban activist” using art to give others a means of expression (Caujolle 11). His art has been deemed Art 2.0 or Participative Art. “Armed with his camera, he seeks remote places, defines his project in partnership with the people, chooses the models in the streets or at their workplaces, completes the installation with the support of locals, and publishes his work in books and on the Internet.” (JR and Berrebi 9)

Project

From 2007-2011, JR embarked on the international project *Women Are Heroes*, photographing over 100 women and installing space-transforming, city-scale photographs in communities across Sierra Leone, Liberia, Sudan, Kenya, Brazil, India, and Cambodia. His personal statement declares,

“JR’s intention is to highlight the dignity of women who occupy crucial roles in societies, and find themselves victims of wartime, street crime, sexual assault, as well as religious and political extremism.” In each community he photographed and interviewed women, inviting them to share their stories. After the interview and photo shoot, he asked the women if they wanted to make a face; some photos are contemplative, others are filled with laughter and light. He created books specifically for the communities (they are not publicly available) chronicling the interviews and photographs.

He then returned to the communities to install building-sized portraits of the women, transforming usually bleak spaces with the faces of women. In a favela outside of Rio de Janeiro perched precariously on a hillside, canvases of women’s eyes covered the sides of houses so that when looking at the community from below or from adjacent communities, observers saw hundreds of women’s eyes looking at them. Taking advantage of the topography, a woman’s portrait covered the vertical faces of a busy, steep staircase, each staircase a small strip of her face (JR and Berrebi 188). The documentation of the moving interviews and portraits as well as the city-scale interventions are published in the book *Women Are Heroes*.

Looking specifically at his intervention in Kibera, Kenya, JR’s use of topography and public space is creative and playful and simultaneously strategic, providing necessary improvements to poor housing conditions. Kibera, a shantytown of Nairobi, is one of the largest slum communities in East Africa. JR’s selection of the particular site within the sprawling city was symbolic due to the central focus of the railway line, as the Nairobi railroad was the first in Africa. After his interviews and photo shoot with the community, however, the work was disrupted by the contested Kenyan elections in December of 2007, during which violence erupted throughout the country, including in Kibera. The railway line became a target for demonstration and violence in the community and some of the violence included gender-based assault and rape. JR had to postpone his installation and wait for the political situation to settle to determine next steps. In January 2009, he returned to Kibera to determine whether his intervention was appropriate, whether the women still lived there (as many had fled the violence), and if it would be safe to use their portraits. Based on his design, he also needed permission of the railway company. He was able to get the consent of the women, the larger community, and railway and to move forward. (JR and Berrebi 83)

The image below shows the city-scale intervention and the annotated image provides additional

details. A key part of his design was covering the train cars with images of women's eyes that would line up with their respective faces on the hillside below the train. Marco writes, "Every morning, the eyes of the women of Kibera linger on the train, into which men of the shantytown are crammed as they go to work in the capital. The women remain; the men leave. But today it is the eyes of the women of Kibera that scan the skies, the towns, and the landscapes of Kenya." The design also included covering the roofs of the houses with images that could be seen by the railway perched high above the town. Working with the community on the design revealed the strategy of covering the roofs and spaces in between with vinyl to reduce leaks and provided desired shade. This was the first time JR had used vinyl instead of paper for his work. (83)

The railroad track sits on a spine of land high above the community. Taking advantage of the topography, canvases on rooftops can be seen from above by train goers.

Entire train cars are covered with women's eyes. When the train passes, the eyes line up with three building-size faces on the hillside below the train. For a brief moment, the faces are complete and then transformed by new eyes.



Images were printed on enormous canvases that stretched over entire blocks of housing, addressing leaky roofs and limited shade.

Image 31: Women Are Heroes, Kibera, Kenya
Permission: Aurora Photos

The interviews with the women of Kibera tell of the extremely challenging daily lives they lead to meet basic food needs for themselves and their families as well as the gender-based discrimination and violence they experience daily. In particular, many were raped during the post-election violence and many have HIV, both of which carry significant personal and societal stigma. Many expressed pride in being part of the project as a way to honor the role women play in the community and to be a role model for other women. Many of the women were also grateful for the vinyl roofs that prevent leaks.

Oliver Anyika, who is HIV positive and was raped by three policeman during the violence, shares:

There is nothing wrong about telling your story. If it is telling something so that you can heal somebody or can change somebody's life, that is good. There are many women who were raped, and they are still hiding the fact that they are HIV positive. The project is good because most people are not writing about exactly what happened. They have showed pictures of what was happening, and you can't actually know something from the pictures. You will know people were rioting, but who knows what happened in the interior of Kibera? Women should come out and state their problems, especially when we talk about raped women hiding. It has really affected them, and they don't go for medication or testing. My role as a woman is to improve my health, my children's health, and the health of my environment. (JR and Berrebi 118)

Agnes Mark, a widow, was gang-raped during the violence. She shares:

I think that women are very important in the community because they stabilize everything and families depend on them very much in the house. Men also have a role to play, as they are also the security for women. If I were not a widow, then I would have protection against men coming into my house to attack me. (84)

Jane Auma reflects on the role of men and women in Kibera:

I think that both men and women are important in Kibera. If there were no women in Kibera, then the men would not survive, as most of them are drunkards! But life would also be impossible for the women if there were no men here, as many women are supported by their husbands. (94)

Zippy Vigutsa, who is HIV-positive and counsels other HIV-positive women, says:

My role appearing in JR's book will help other women who are in denial to accept themselves after reading the book. Even though there will be misconceptions about me, I don't care. I know my photo in the book will enable other women to accept themselves. I am not scared; I am comfortable about being in this book. (110)

Jecina Achieng was injured during childbirth and can no longer work. Her parents depend on her to send them money and she can barely feed herself. She states:

The women in Kibera are very hardworking, and we were very happy when JR came to Kibera and told us that he wanted to do a project all about women. We think that the project will help us, and I am very proud to be involved because a lot of people are seeing my face. Already the project has helped me because the canvas on my roof helps to stop the rain from getting inside the house! (98)

Judith Anyango shares:

I need my photo to be on that train so that everyone in this world or even in our country will want to know about me. Even if someone is passing by he will like to know: 'Who is she and what is she doing in her life.?' That's what I am happy about." She continues, "I need to strengthen the message for women who just sit and wait for their husband...If you are waiting for your husband to come back home, when your husband dies, you start from nowhere, you find your life very difficult. And when you get used to what you are doing, you understand that life is so simple with or without a husband. That's why I am happy. (122)

Phoebe Adhiambo describes a common scenario of young girls who are seduced by older men and drop out of school, only to become pregnant or infected with HIV. She declares:

I am very happy that this project shows how the women here are suffering and how they carry on their daily lives despite their problems. I think that this project will help the women of Kibera. (126)

Grace Akoth, who was pregnant during the post-election violence was affected by the tear gas used by police. She shares:

I was very happy to be involved in the project. The canvas that is on my roof helps to keep the rain out of my house, which is good. Before I had the canvas, I had a problem with leaks when it rained! (90)

These moving interviews testify to the harsh gender dynamics and gender inequality that are driving forces in within women's lives. They illuminate the overwhelming hardships many women in Kibera live with and yet their voices and photos convey power and resolve. The interviews indicate that having their stories heard and their faces seen is unusual – and important to healing and receiving the respect their lives deserve. Between the book that was circulated and within the community and the design intervention itself, JR's project elevated women and gender issues in ways that other forms of storytelling do not (e.g., news coverage during the post-election violence). Public space can be an extremely powerful landscape to visibilize and address gender inequality.

Research Reflection:

While not a traditional architect, landscape architect, or planner, JR's work is specifically tied to space and expressed spatially, dramatically transforming buildings, landscapes, and the experience of place. In this case, his work also provided a necessary component of basic shelter. Most importantly, however, his work is an important design precedent for elevating the visibility and valuing of women in a culture where they are often not. A metaphorical mapping of women, his design tangibly visibilizes and values women and their individuality through both the process of the

design (interviews, photo shoots, a community book), and the community-scale intervention itself. The photos reveal vibrant personalities and allude to powerful voices, emotions, and thoughts. Employing the movement of the train brings these women alive in ways static portraits cannot.

Reviewing previous chapters, this project responds to the call of Jane Jacobs and feminist geographers in multiple ways. This work values the everyday experience of women, while also transforming everyday spaces to visibilize women. Creating opportunities for women to be seen and heard is the work of one-on-one interviews and participatory-design practices. And while not a gender-specific facet, the participatory nature of the design process allowed for new opportunities for the design to address: i.e., leaking roofs. Without working directly with the community, this need and its ultimate solution could have potentially not been integrated into the designer's work.

While the interviews clearly indicate that the project was successful at the time, I was unable to learn about the longer-term impacts. What kind of in-community discussions did the work inspire? What did men think of the project? Did the project inspire any behavioral changes? How long did the canvas "roofs" last? What would the interviewed women say one year after the project? This points to many design projects where there is little information, if any, on the impact of the project. Integrating monitoring and evaluation into design interventions is a necessary tool for knowing what was successful, what was not, and why. This feedback loop provides critical information for learning and future work that is rarely available when studying precedents.



PRIORITIZING GENDER

Skateistan
Kabul, Afghanistan

Organization

Skateistan was founded in 2007 by Australian Skaters Oliver Percovich and Sharna Nolan in Kabul, Afghanistan. With just three skateboards to share, they started teaching youth in a neighborhood fountain park empty of water, but with rounded walls good for skating. War torn and impoverished, the city is home to many street children underserved by development and emergency aid (“About Us | Skateistan”). Through an e-mail interview, Percovich shared, “It seemed then that skateboarding gave a unique opportunity to engage the children that are left behind in one of the poorest countries in the world.” It also provided a unique opportunity to engage girls, who due to strict gender norms, were excluded from many recreational and public activities (e.g. girls are not allowed to ride bikes). Percovich discovered, “since skateboarding was so new, there was also a loophole that meant it was also acceptable for girls to do.” (Percovich)

Establishing Afghanistan’s first skateboarding school, the organization’s mission is to use skateboarding as a tool for empowering youth. They use skateboarding as an entry for providing access to education and focus specifically on girls and working children. Over 40% of their students are girls in a country where girls’ access to education is often obstructed and recreational opportunities are limited at best. Their mission has been so successful that they have expanded their work to Mazar-e-Sharif, Afghanistan, and have facilities in Pakistan and Cambodia. (“About Us | Skateistan”)

Project

In 2009, Skateistan opened its first skatepark in Kabul. Notably the park is an indoors facility which

includes a skate ramps, a climbing wall, and classrooms. Percovich writes:

The fact that Afghan girls have essentially no safe space to do sports drove the project to build an indoor facility for skateboarding. ...Skateboarding was identified as culturally acceptable for girls, but beyond a certain age they could not participate in public anymore. ...Of course to build an outdoor concrete park would likely be cheaper, but it would not be possible to use it year-round, due to the cold winters in Kabul. It would also not be private enough for most girls to be allowed to use it.

To specifically accommodate girls, he describes:

The facility is located in a fenced area, to ensure that people are not looking in the windows of the building. This means that the girls can do sports privately in all-girls classes, with female teachers. Aside from that, there is a large women's washroom with a separate changing room included.



Permission: Skateistan

Image 32: Girls skating in indoor skatepark.

Raising money for the facility was challenging, as skateboarding programs did not fit a typical development project. Percovich writes, "This meant that I had to go around to many, many embassies and meetings to convince people that this crazy idea was actually something with a lot of potential to give children opportunities and build a community of hope." (Percovich) Persistence prevailed and Percovich and his team designed and built the nearly 20,000 square foot facility with cross-cutting partnerships including the Afghan National Olympic Committee that donated the land and IOU Ramps who built the indoor section ("About Us | Skateistan").

The organization is currently raising funds to build the first concrete skatepark in Kabul adjacent to

the indoor facility. The high-wall design and security fencing will enable older girls to skate outside who are otherwise unable to due to cultural gender restrictions (“Help Raise \$5,000 for DIY Concrete Park | Skateistan”).



Permission: Skateistan

Image 33: Conceptual rendering of outdoor concrete skatepark.

Research Reflection

Skateistan organizers consistently were attuned to the role gender played in the built environment and its ability to either limit or create opportunities for gender equality in their mission. By elevating gender equality to be a component of their work they specifically designed and built a physical structure for gender inclusion, creating unprecedented options for girls in what many would perceive as an unyielding strictly gendered culture. The indoor skatepark facility as well as the planned outdoor high-walled park is strong precedents for designers as they approach new projects. If limiting gender norms were not an obstacle, what could be possible? Would you design differently? What design interventions would enable those same visions to be a reality?

PARTNERING WITH GENDER-AWARE ORGANIZATIONS

Society for the Promotion of Area
Resource Centers (SPARC),
National Slum Dwellers
Federation (NSDF)
+ Mahila Milan
Mumbai, India



Alliance

The alliance of SPARC, NSDF and Mahila Milan is a unique and highly effective partnership that serves slum-dweller communities throughout India and acts as a model for other alliances around the world. Their combined mission is to provide housing for the poorest of the poor in India's cities; however, the process and collaboration in which they do their work is as important as their goal and is what makes them so effective (SPARC). Books could be written on the work of these three allied groups, as they have been tremendously successful organizing the voices and needs of the poor to manifest in forms of negotiating power and concrete sanitation and housing solutions for nearly 30 years. Their emphasis on participatory process and training has created a ripple effect of success throughout India and other allied coalitions all over the world. This precedent addresses how allying with gender-based organizations has improved their effectiveness and uses the building of community toilet blocks as a design example.

SPARC, or the Society for the Promotion of Area Resource Centres is a Mumbai-based nonprofit established in 1984 that serves 21 communities throughout India. Lead by Sheela Patel, it works with slum and pavement-dweller communities to lobby for their rights; uses participatory research to establish dialogue and make change on local, municipal, and national levels; and promotes women's equal rights in community improvement and decision making (SPARC 1). Patel also leads Slum Dwellers International (SDI), a coalition of slum dwellers' federations all over the globe.

The National Slum Dwellers Federation, founded in the mid-1970s by Jockin Arputham, is a political

advocacy group that works to increase access to resources on the local, state, and national level. Formerly an all-male group, it partnered with SPARC and Mahila Milan in 1986. It is composed of member communities – or local slum-dweller federations – that represent more than 750,000 households. Slum/Shack Dwellers International, or SDI, was formed in 1992 and supports the federation model in 34 countries (Smith 33-34).

Mahila Milan, or “women together” in Hindi, was formed in 1986 when pavement-dweller women organized to not be imminently evicted. With their success, they organized women’s savings collectives for crisis loans and to purchase land. The federation of collectives provides training and support for women, most of whom are illiterate, to engage effectively with local and municipal officials. This model has grown to be enormously successful, with Mahila Milan groups all over India, composed of more than 300,000 women (d’Cruz and Satterthwaite 7).

The alliance of the three organizations came together in 1986 based on their shared missions to be able to more effectively negotiate and lobby for improved living conditions in the slums across India. While each is still independently run, they organize together to leverage each other’s strengths. SPARC leads the alliance in the form of organizational and managerial capacity, although all decisions within the alliance are made together. The alliance allows Mahila Milan to be a strong voice in the mainstream slum-dwellers movement and gives it weight in the national federation. Mahila Milan, in turn, provides NSDF with the strategic perspective and skills of women that enable the federation to be more effective (SPARC 2-3).

Role and Influence of Gender-Aware Organizations

The SPARC, NSDF, Mahila Milan model was one of the only gender-focused examples covered in the major design activism compendiums, in particular *Design with the Other 90%: Cities*, published in 2011. Its coverage immediately got to the heart of the role gender-aware organizations play in meeting critical development goals, particularly when strategies were initially male-dominated.

When asked why the male-dominated NSDF decided to partner with women’s rights groups to improve the built environment, Jockin Arputham declares:

We had been a male-dominated organization, but in 1984, we realized that we were not delivering anything. That is when we changed the whole concept to women’s leadership. If you want to bring any quality to change in life, you need to include women’s leadership to bring a change in values.

It started with all of our demonstrations for access to water. Who takes care of supplying and carrying the water? It's the women. Men do not care if there is water or not. From day one, at any demonstration, it was mostly women. But they were not yet the leaders. Then I thought, who has the money at the lower levels, among the urban poor? Who runs the home and the family? I realized it was very clearly the women who ran the household from morning to evening. They are the ones responsible for the money, who take out the loans; they collect because they are responsible for repaying the loan....women can affect real change if you give them the means to do so. (36)

He continues:

I traveled widely in India from 1967-1975, trying to gather support for my movement. Mostly men attend the community meetings. When they went home, they did not tell their wives about the meetings and it was hard to build momentum. But when women attended the meetings, they would communicate what had been discussed to other women, adding and articulating information as necessary. This is what brought about the growth of our movement. (36)

These are powerful statements coming from a once male-only organization. In working with NSDF, Sheela Patel, director of SPARC and SDI states:

Male members of the federation acknowledge that the issues of habilitation, land, and amenities require patience and perseverance. In our experience, many more women than men have shown these qualities because they seek these for their families. This persistence and energy are channeled to seek ongoing and persistent pressure on city and state agencies to address their needs. SDI's women members also ensure that when resources come they are equitably distributed. (35)

Assuming that one gender or the other can tackle large-scale problems on behalf of all limits potential. By not only including women, but acknowledging, valuing, and elevating the importance of gender and leadership, an entire movement to address large-scale challenges is more successful. This is an important model for how design teams engage with community leadership and build a diverse and gender-aware group to analyze and assess how to strategically meet their biggest challenges.

Gender and Design Impact: Community Toilet Blocks in Pune, India

While the alliance has become well known for negotiating, financing, and constructing affordable housing for slum communities on their own terms, in many cases community toilet blocks served as the initial organizing and learning tool for successful housing projects. Patel writes, "The demands for sanitation by urban poor organizations are less threatening than any demand for land or for land tenure. Of all the basic services that the poor have begun to demand, sanitation has begun to be less contested than others" (126). Between one-quarter and one-half of Indian city dwellers do not have adequate sanitation (Un-Habitat). Sanitation infrastructure, provision, construction, and maintenance in urban slums in India is rife with political, financial, and cultural biases preventing

slum communities from having adequate services, if any. While some municipalities have money set aside for this infrastructure, it is often not used. When the money is used, facilities are often poorly designed and necessary maintenance is limited at best. In other cases, there is no money available, as communities are on land that refuses to legitimize their presence. In all cases, this creates immense health problems, where residents must defecate in the open, contributing to the spread of disease as well as infant and child mortality (Burra, Patel, and Kerr 14).

As discussed in Chapter 5, it is widely acknowledged that women are most impacted from the lack of toilets and sanitation on the basis of biological realities and cultural norms. “To protect their modesty, they often wait until nightfall to defecate in the open – but this need to wait until dark also causes widespread gastric disorders” (13). Women menstruate an average of 3,000 days in their lifetime, requiring facilities where often there are none. Safety is also a real concern, as going out at night and being in a vulnerable position can put women at risk for harassment. Women are also the primary caretakers of children. Due to lack of adequate facilities both in availability, cleanliness, and location, they often encourage their children to defecate outside, perpetuating the problem (22).

In the mid-1980s, with women’s research and leadership, the SPARC/NSDF/Mahila Milan alliance proposed an alternative to failing or nonexistent municipal designed, constructed, and maintained community toilets. Using community assessment and participatory mapping tools, the alliance envisioned community-owned, -built, and -managed toilet blocks that would serve up to 20 households. Municipalities were resistant to the idea, as this challenged the power they hold over slum communities and reduced their ability to pass along contracts and bribes within entrenched systems. International funding organizations viewed toilet blocks – as opposed to individual toilets for each household – as inappropriate, although infrastructural and economic realities make individual toilets an impossibility. Initially municipalities refused to accept that poor communities were capable of designing or delivering any better services and donors did not know how to fund such small-budget projects that did not require their highly paid development workers. The alliance of SPARC, NSDF, and Mahila Milan persisted, found small donors, and took out loans to try out a more effective model to meet this most basic, and critical, of needs (Burra, Patel, and Kerr 15-16; SPARC 16).

The alliance’s perseverance ultimately developed a precedent of highly successful community-designed, -constructed, and -managed toilet blocks. These toilet blocks were unusual for

international donors, as they were also designed to provide community gatherings spaces and homes for the caretakers. The caretaking function is necessary and also provides paid work for both women and men. With limited real estate in slum communities, toilet blocks and the vertical space above them are valuable public spaces. “The social interaction also begins to transform the way people relate to the toilet structure, generating a desire to keep it clean” (Burra, Patel, and Kerr 23-24).

Between 1999-2001, more than 400 community toilets were planned in Pune, a city with 2.8 million people, over 500 slums, and very few functioning sanitation facilities (and where only 22 had been built within the previous seven years). With the leadership of a newly elected city commissioner, the municipal government and nonprofit organizations funded the effort. The contracts were for construction *and* maintenance and were awarded to eight NGOs. With the alliance’s track record and long-time presence in the area, SPARC, with NSDF, and Mahila Milan were awarded one of the largest contracts for 114 toilet blocks. This effort represented a huge shift of roles as communities and NGOs became partners with the municipality rather than poor beneficiaries; communities could now design and develop their own vision. (Burra, Patel, and Kerr 19)

With SPARC’s technical assistance and the alliance’s long-term relationships, women, often illiterate, took on construction contracts and managed the process. One leader reported, “In the beginning, we did not know what a drawing or plinth was. We did not understand what a foundation was or how to do the plastering. But as we went along, we learnt more and more and now we can build toilets with our eyes closed” (Burra, Patel, and Kerr 20). In all cases, women, through their integrated and valued role within the alliance, were at the center of the design strategy, construction, and maintenance processes, ensuring that the design served women’s needs and supported their safety. Key design features included:

- Toilet blocks built in central locations, increasing safety, access, and enabling caretaking of children, the disabled and elderly;
- Separate entrances designed for men and women – an innovation from municipal toilets where men and women stand in the same line and men privilege their own use, pushing women out of the line;
- Separate facilities – also an innovation where men’s and women’s toilets faced each other (apparently in a shared space) and women were harassed;
- Large storage tanks of clean water for hand washing and maintenance;
- Children’s toilets with smaller squat plates and holes – many children are frightened by dark and dirty latrines, encouraging them to defecate in the open;

The image on the left shows two different entrances for men and women - a new design feature of the alliance's design.

Three-story community toilet blocks take advantage of valuable vertical space while providing public space and often housing for block caretakers.

These caretaker positions provide remunerated work for men and women and ensure the block is well maintained and managed.



Image 36+37: Community Toilet Blocks

Permissions: Ratna Gill



Image 38: Community Toilet Block Residents and Caretakers

- A room for a caretaker and family, creating jobs and increasing incentive for maintaining the facility.
- Additional innovations included doors that swing both ways for cleaning ease, back-to-back toilets using one central pipe, and pour-flush toilets that use only half the water of flushing and dirty water can be used. (Burra, Patel, and Kerr 22-24)

In addition to managing many of the projects, women were part of the construction work. "SPARC have targeted women construction workers living in the settlements to be involved in working on the

model toilet blocks. Experience on the first sites has shown that women can learn the techniques fully after participating in the construction process of three blocks. The skills they learn enable them to obtain a 200 percent increase in their wages” (SPARC 16). However, it should be noted that women’s involvement in the managing and construction was not without controversy. In some cases, gender discrimination presented itself, where during materials provisioning shopkeepers would only negotiate with women’s husbands or preferred to work with contractors from whom they could receive bribes (Burra, Patel, and Kerr 20). Engaging women in all aspects of the work is key to building skills and creating a network of trained community stewards. “Understanding and participating in the construction enhances their ability to manage and maintain and, eventually, these women can go out and train others. The community construction of toilets also develops skill they can use later in house-building projects” (32).

Since 1987, the alliance has built more than 500 community toilet blocks. In addition to the obvious benefits from having a safe and clean place to meet the most basic of needs, these toilets represent strategic steps towards housing and land tenure. Patel writes, “Opening each community toilet block is a celebration to which local government staff and politicians can be invited. This also creates a chance for dialogue over other issues such as water supply, electricity, paved roads, and secure tenure” (Patel 125). The skills of men and women developed in envisioning, building, constructing, maintaining and managing these community toilet blocks have helped the alliance to build more than seven housing projects in Mumbai alone, representing over 20,000 households, and many more are in the planning stages (d’Cruz and Satterthwaite 7). With the successful alliance of SPARC, NSDF, and Mahila Milan, both men *and* women are the designers and builders of their own future and are extremely effectively working together.

Research Reflection

This macro-level alliance plays out on very local scales and impacts design engagement and long-term effectiveness. While it is understood that the alliance is not a traditional design team, its emphasis on community participation, community decision making, and partnering with gender-aware organizations should serve as a strong model for design teams working with developing communities. By engaging women when they were once not, the impact is holistic, potential is increased, more needs are met, and opportunities are created for future success. By training an entire community – men *and* women – of skilled organizers, leaders, and builders, communities seeking improvements in their built environment are well positioned for success.



GENDER + PROTOTYPING PROCESSES

Catapult + Wello
Rajasthan, India

Designers

Catapult, a nonprofit design organization based in San Francisco, California, develops user-centered products to support basic needs of people in the developing world. Its founders originally worked at for-profit companies, leading pro bono Engineers Without Borders projects on the side. They were dedicated to putting their talents to serve the greater good full time and are one of the few nonprofit design groups in the United States. An outspoken advocate for participatory design, its mission is:

To make design methodology accessible to all. We believe systems-level thinking and a focus on the needs and wants of a community can help shape new approaches and new ideas to old problems. By flexing your empathy muscles, interacting with end-users, digging for insights, and adopting a culture of prototyping and iteration, we can build better solutions with greater potential for social impact. (“Learning Labs | Catapult Design”)

Catapult’s clients range from nonprofits to foundations and social entrepreneurs; its work focuses on water delivery, energy generation, healthcare, and sanitation, among other life-needed services. Catapult’s projects have included a rain water harvesting prototyping guide in Kenya, small scale wind turbines in Guatemala, and a clean delivery birth kit in India. As product designers (and a review of their client work underscores this) they are experts in prototyping both use and the processes to support the design, construction, and adoption of the project (“By Industry | Catapult Design”). This precedent investigation seeks to better understand a prototyping process in the field and how gender dynamics are a part a design team’s ability to get the information it needs.

Project

Catapult was asked by its client Wello to research and prototype human-powered water transportation methods in rural and urban areas of India. Wello is hybrid nonprofit/for-profit company that works to deliver water and water infrastructure, including water wheel transport mechanisms for those living on \$2-4/day in India. Catapult designer Karin Carter presented the Wello research and prototyping process at the “Design Like You Give a Damn Live!” November 2012 conference, organized by Architecture for Humanity. The presentation, a narrated set of over 30 photos, walked through Catapult’s site analysis and prototyping process, providing an insider’s lens into a design process. While little mention was made of gender issues during the presentation, analyzing the photos stimulated multiple questions about the gender dynamics of the process that would have been missed if pictures were not used or only the final design solution was shared.

As already mentioned, water collection is usually a woman’s task and in many parts of the world and is a time-consuming and laborious process. In India, as in other regions, water is carried in a vessel balanced on a woman’s head. Not only does this create health problems, its capacity and efficiency is limited. Through Catapult’s prototyping and design process, Wello wanted to identify healthier, more efficient, and higher volume options that would be adopted within communities’ cultural preferences.



In Rajasthan, water is traditionally carried in vessels balanced on women’s heads. This method not only limits capacity and efficiency, but also presents health problems.

Image 37: Permission Catapult + Wello

The Catapult team went on location to Rajasthan, India, to investigate, design, and prototype culturally appropriate and viable options. The team's process began with benchmarking existing water delivery technologies that were available and getting feedback from community members on their experience. The designers then stepped back to look at where the water was coming from, what were current carrying procedures, and the various modes of carrying. They put their attention to terrain as well as the most extreme conditions communities were operating in. And they also looked at where the vessel lived between gathering times: a preferred vessel of the region is an elegant urn that has a special resting place in the house.



Image 38: Permission Catapult + Wello

Water vessels have a special resting place in the house - an important piece of information when designing a replacement.

From here, the team went about prototyping designs, which included learning what types of materials were locally available and engaging craftspeople (all men according to the pictures) in the local markets to strategize, troubleshoot, and co-design various options. A blog entry written by Catapult designer Noel Wilson describes the role of a prototype this way:

The value of a prototype is in what it can test. It isn't always necessary to make it pretty, nor to make it function, it totally depends on what you are trying to learn from it. On a frugal budget, be it of time or funds, one prototype can be made to test many things, and then adapted again to test even more...but really prototypes were made to be broken, and if they last too long it is a sign you're either not testing them hard enough or you've become too attached.

This is a useful reminder that prototypes can be down and dirty: they do not need to be perfect, they need to stimulate a discussion. In an interview with designer Karin Carter, she advocates strongly for prototyping processes or situations as well as products. For example, she created a skit when working with women in Rwanda to find out what types of transactional situations would be more effective in accessing clean water. She acted out various types of scenarios where she played the person selling the water and women responded to her accordingly. These skits provided a closer-to-real-life situation than trying to describe it and the responses she received were candid, revealing, and very helpful in discovering cultural dynamics and potential adoption rates or new delivery mechanisms (Carter, “Interview with Karin Carter”).

Returning to the Wello project in India, a question of gender comes up when looking at the photos documenting the process of getting feedback on the prototype. In all the pictures shared, local men were at the center of the conversations engaging with the designer or taking the lead to share the design with women, despite the fact that women will be the primary users of the technology. The real benefit of prototyping is that it allows designers to get more specific feedback on what would or would not allow the design to be effective and widely accepted. Adoption would need to be community-wide, but it is interesting to note that the main users of the product – women – seem to be in the background or in recipient positions, instead of equal or lead partners in the design review process.

Most of the pictures showed men discussing and using the prototypes.



Image 39: Permission Catapult + Wello



Photos show men demonstrating and teaching women and girls about the prototype, acting in positions of authority and leadership even though they will not be the primary users of the wheel.



A photo of a community meeting shows men in the center of the circle with the design team and women looking on from the outside.

Images 40-42 - Permissions: Catapult + Welio

I was able to connect with Cynthia Koenig, the Director of Wello and a participant of the prototyping process about these gender dynamics. She shared interesting insight on the approach Wello takes to gender and the realities of working within this particular cultural context: At Wello, we don't assume anything – yes, women are the primary water collectors in many places where we work, but we purposely refrain from targeting women as primary users of the WaterWheel because we discovered early on that men were interested in using the tool as well. So we strive to remain as inclusive as possible in all things related to design, testing and marketing. On a related note, gender and cultural norms played a big role in how we work on the ground - it's the norm to meet with male community leaders first, do a demonstration, take photos etc., but these are rarely the people who end up using/needing the WaterWheel. So it's later on – informally – that we get the best feedback. This is often in people's homes and in situations where it isn't appropriate to document (women in India tend to be shy about photos), so the photos you see are not truly representative.

Without Koenig's information, it would be difficult to understand women's valued role in the process. As discussed in previous chapters, what is documented is what is valued, however in this case gender-based proxemics did not allow for easy-to-share documentation: photography. I believe the presentation images as well as Koenig's insight bring up critical gender-based questions that designers face in the field and merit significant attention for further research. In this case specifically, I would like to better understand the community-leadership dynamics. What successes (and failures) have contributed to Wello's gender-based approach with the community? How did the design team integrate the desires/demands of the male leadership while elevating informal conversations with women? What facilitation techniques did they use to ensure that they were able to get candid input and feedback from women? Wilson's blog mentions that the community was not afraid to critique the prototype – how was feedback from men different from that of women? Were their concerns and desires different? On the community side, who had the most influence in the design decisions? Did the design team explicitly sex-disaggregate their data? If so, how did that help their process? If not, how might that have helped meet user needs better? A number of these questions and influential dynamics will also be explored in the Pitagoras School precedent.

The Wello website announces its new design of the WaterWheel 2.0 highlighting five key aspects: convenience, hygiene, quality, aesthetics, and affordability. While there are various water wheel designs out there, this particular design appears to pay more attention to aesthetic attributes – notably the shape and the zig-zag motif running around the middle. How do these design decisions relate to the feedback from the field? And, most importantly, does the community like –

and actually use – the WaterWheel? Do women have different opinions from men?



Permission - Cynthia Koenig, Wello

Image 43: Wello WaterWheel 2.0

Research Reflection

Even the most experienced field designers will be working with new and challenging gender dynamics if they are working outside their home culture (and even then there may be misunderstood gender dynamics). How teams work to learn, understand, and navigate these dynamics is critical. While it may seem necessary to work within traditional gender and power norms, a design team has a real opportunity – and responsibility – to collect and engage input from all community members. As mentioned earlier, learning successful facilitation techniques, which will undoubtedly differ from culture to culture, and community to community – merits additional research.

In the Catapult presentation, the images shared did not appear to include women in the prototyping design development – all pictures showed only male craftspeople in the markets and Wilson’s blog

made no mention of women. Perhaps for speed and availability, engaging along traditional gender roles was appropriate for the task at hand. For the product manufacturing, however, engaging both men and women in their construction and maintenance could be key. As the work with the alliance of SPARC, NSDF, and Mahila Milan demonstrates, creating opportunities for women to gain new skills, access paid work, and long-term management and maintenance of the product are key benchmarks for addressing gender inequality.

My conversations with Carter demonstrated that Catapult has a strong commitment to empowering women and addressing gender issues, although they do not have any processes or specific tools in place to help ensure this. She was very interested in learning what tools I found and enthusiastically encouraged my work, agreeing that there is a huge gap in the resources available for the design community on how to integrate gender responsibly and successfully (Carter, “Interview with Karin Carter, Catapult Design”).



PARTICIPATORY DESIGN + DESIGN SELECTION

Pitagoras School
Lomas de Zapallal, Peru

Every participatory design process is uniquely shaped by culture, proxemics, facilitation, and gender, just to name a few of the dynamics at play. This learning precedent is just a snapshot of the power dynamics, gendered nature, and relative chaos of a participatory design process that influences and informs design teams and built designs.

Site

Lomas de Zapallal is a water-poor slum perched on a steep hillside on the outskirts of Lima, Peru. Founded in 1995, it is composed of 19 neighborhoods which are home to 360,000 people. Like many slum and squatter communities, extreme poverty, inadequate housing and sanitation, poor nutrition, and minimal access to clean water challenge residents' lives. Over the last four years, the University of Washington's departments of Landscape Architecture, Environmental and Forest Sciences, and Global Health have partnered with Architects Without Borders – Seattle and Fundación San Marcos to build a long-term relationship with the community to help tackle some of these crippling problems (Spencer, "2013 503 Syllabus EPA P3 Competition"; LARC 503 Students and Spencer).



Image 44: Lomas de Zapallal Site Conditions

Permission: Leann Andrews

Project Background

In the summer of 2011, eight University of Washington landscape architecture and humanities students joined Professors Ben Spencer and Susan Bolton for three weeks to design and build a project of the community's choosing. Participatory workshops in previous years had identified the Pitagoras Primaria school that serves 2,000 students as a focal point for improvements; a preliminary master plan was developed. New classrooms were prioritized and modular, ecologically sensitive classrooms were designed through participatory workshops in 2010. The new classrooms are in the process of being built as funding becomes available. In 2011, school administrators and parents were asked to identify a tangible intervention that University Washington students could design and build within a three-week timeframe that would respond to the master plan. Overwhelmingly, the community voted for a green space to replace the dry and dusty side yard of the school property (Spencer, "2013 503 Syllabus EPA P3 Competition"; Spencer, "Pitagoras Submission: SEED Award"). The participatory design process, community investment, innovative irrigation system, and overall design have garnered international accolades, including winning the 2011 SEED Award. The project was covered in a short film that can be found at <http://www.seedocs.org/projects/escuela-ecologica/>.



Image 45: Pitagoras School Existing Conditions

Permission: Ben Spencer

Gender, Participatory Design, and Decision Making

Dedicated to a participatory design approach, Spencer, Bolton and the students organized a number of community meetings to identify the needs and desires for the new park space. Community members were broken into small groups for amenity prioritization and design charrette work. School administrators and teachers, parents, and students were represented in the small groups. While not specifically broken down by gender, they fell along gender lines, as school administrators and teachers were predominantly men and parents present were all women. I interviewed Professor Spencer and a participating University of Washington student,

Leann Andrews, about the community meeting that voted on the primary design features to better understand what types of gender dynamics were at play, how they might have influenced the design, and how decisions were made about the final design.

Groups were asked to identify five settings, places, or constructed elements to include in the design. According to Andrews, her group, as well as other parents' (women's) groups overwhelmingly advocated for pathways as a primary design feature in addition to a play area and turf areas. Male-dominated groups overwhelmingly advocated for the renovation and upgrade of a concrete sports field. Andrews recalls that this created some contention between the groups.

Andrews was unclear as to why "pathways" were given such a high priority, as she did not see these as a critical design element, but they continued to come up in the small-group discussions as well as the larger group. She finally asked for clarification and the women said it was to keep the kids cleaner. The dirt the kids constantly played in created more time and work for them to keep their kids and their clothes clean. In a water-poor community, stone pathways could help to reduce this time-consuming and water-intensive chore (Andrews).

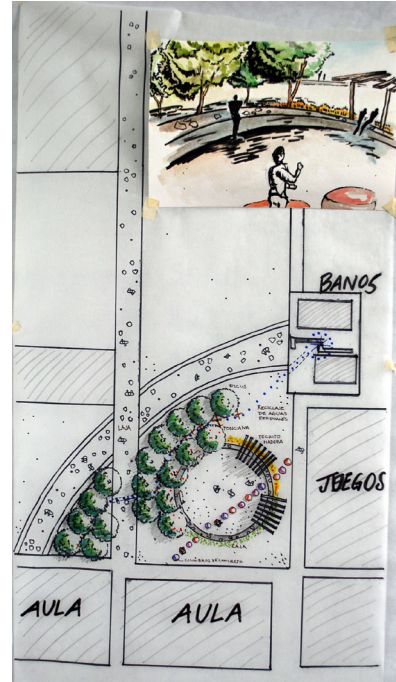
Spencer and Andrews suspected that the men's desire for a soccer field was also gender-based – school administrators and teachers would be able to use the space for their own games, and soccer is a primary recreational activity for boys and men in the community. A renovated soccer field could be a status symbol for the community. Spencer also suspected that some male leaders involved saw the sports field renovation as an opportunity to get a (financial) passthrough for the construction (Andrews; Spencer, "Interview with Ben Spencer: Gender and Design in Lomas de Zapallal"). The desire for pathways to keep children clean was not a motivator for men, likely because they are not responsible for those reproductive roles (as defined in previous chapters). When put to a democratic vote, the play area and pathways won with a slim margin.

Interestingly, Spencer was not present for the conversations about the dirty clothing as a motivation for pathways because he was out of the room asking a dominating male community leader to refrain from trying to influence the other groups to select a sportsfield. (This intervention likely allowed the other option – championed by the women – to be selected.) While Spencer was aware that pathways were a desired element for other reasons, he did not know the gendered reasoning. With multiple working groups and various power dynamics, community meetings can be chaotic.

It may be hard, if not impossible, to know what is going on within each group. Explanations or preferences could be missed and never shared even between design team members, which was the case in this situation (Spencer, “Interview with Ben Spencer: Gender and Design in Lomas de Zapallal”).

Ultimately, all three designs presented to the community for a vote highlighted pathways in some manner (see images to the right and below). In this situation, navigating between and designing for gendered preferences became less challenging, although this potentially could have been an area of tension and necessary negotiation. The final design – a hybrid of various elements of the three design proposals – features multiple stone pathways and a stone gathering area encircled by a seating wall. According to Andrews, however, the circular seating wall became a point of gendered discussion about who the park was for, as one design team member wanted to make the area inside the seat wall a sandbox area for the kids to play in – prioritizing what they believed to be kids’ desires over those of the mothers. Ultimately, the team

Image 46: Design Proposal 1



PITAGORAS SCHOOL PARK DESIGN PROPOSALS



Image 47: Design Proposal 2



Image 48: Design Proposal 3

Permissions: Ben Spencer

decided to design for what the women requested. The constructed design can be seen below.



Image 49: Final Pitagoras School Built Design

Permission: Leann Andrews

Research Reflection

It is not surprising that none of this backstory is part of the video or found in other documentation of the project. Participatory design processes can be messy even when final designs present as clear and concise. What played out in these workshops and the ultimate design selection revealed numerous gendered power dynamics and design interests of both the community members and the outside design team. While the workshops were documented (i.e., pictures of group priorities, designs, and voting), conversations within groups that explain process thinking were not. Similarly, side conversations with community leaders, organizers, and between team members were also not captured. In many cases, these conversations greatly influenced the direction of the design.

I have spoken with many designers who say this level of documentation is challenging, if solely due to exhaustion after extremely long days when working on-site with communities. Attempting to learn from previous design processes and decision making is a kaleidoscopic undertaking, requiring the piecing together of various lenses and sources of information. The example above demonstrates

that much of the insight of design decisions came from the memory of the design team, not the documentation, and even then some of the memories were different or in conflict with one another. As mentioned earlier, space making is a culmination of seeing, valuing, prioritizing, and decision making. Each of these processes is gendered, whether design teams are cognizant of that or not. Assessing and documenting the gendered nature of each of these steps would invite and enable the design team to be more thoughtful and strategic in addressing gender inequality in the design process. This underscores the need to sex-disaggregate all data collection and advocates for stronger documentation of gender-based conversations, reflections, and influencers throughout the messier participatory design process.



INTEGRATING GENDER INTO THE STUDIO ENVIRONMENT

University of Washington
Seattle, USA

As a graduate student at the University of Washington, I had the excellent opportunity to introduce a gender-integrated design approach in Professor Ben Spencer's annual design activism studio focusing on Lomas de Zapallal, Peru (the community introduced in the previous precedent). Not only did this help me explore how gender could be integrated on multiple scales of work in the community, but it also enabled me and the students to reflect upon how/if/where gender is addressed in the design school curriculum.

The Project

The 2013 Lomas de Zapallal winter quarter studio was focused on developing fog collection prototypes for the Environmental Protection Agency's P3 competition, or People, Prosperity and Planet, taking place on the National Mall in Washington, DC, in April 2013. In the first cycle of the competition, Professors Spencer and Bolton had been awarded a \$15,000 grant to prototype a fog collection system with a university-level studio. Competing among 40 other studios nationwide, a small number of teams will be awarded up to \$90,000 to bring to scale and install the new technology in the community. As of the writing of this thesis, winners were not yet announced.

Perched on the deforested foothills of the Andes outside of Lima, Peru, Lomas de Zapallal receives very little rainfall. Water is currently trucked in and purchased by the municipality. In most cases, this is a costly endeavor for already cash-strapped slum communities. It also means that water is only used for basic necessities – cultivating vegetables to address food scarcity and irrigating precious green space is cost-prohibitive or challenging at best. In addition, water supply for the

entire western side of the Andes is endangered by climate change and multiplying population demands. Lomas de Zapallal, however, sits only meters below the fog production line. Fog collection holds the promise of providing enough water to support a community's additional water needs (i.e., irrigation) if not its complete water needs as water becomes even scarcer (Spencer, "2013 503 Syllabus EPA P3 Competition"; Spencer, Bolton, and Feld).

The studio's objective was to design a holistic, community-based fog collection system on multiple scales – a variety of small-scale fog collection and storage devices, their spatial installation supporting public space amenities, projected community management, and a long-term self-sustaining system. While students were all located in Seattle, a number of Internet-based community meetings were arranged to provide a feedback loop on aspects of the designs.

It is worth noting that in most informal settlements and slum communities around the world, there are more women-headed households due to husbands seeking more profitable work elsewhere or, more often, due to abandonment. Women hold the disproportionate burden of reproductive roles made extremely challenging in water-poor and unsanitary conditions while also needing to support their families financially. Globally, women have played strategic roles in developing and organizing to meet these challenges. This is the case in Lomas de Zapallal, where the majority of households are women-led and make up nearly 75 percent of active members in the community (Jarvis, Cloke, and Kantor; Spencer, "Interview with Ben Spencer: Gender and Design in Lomas de Zapallal").

Integrating Gender Into the Studio

The studio had high demands to explore and deliver on numerous global challenges. Gender was certainly not the primary focus, although Professor Spencer affirmed and welcomed its lens and provided time for students' learning alongside that of cultural and historical research, fog collection technologies, and climate-change expertise. I delivered two lectures, covering the role and importance of gender in development and design as well ideas on how to conduct gender-based site analysis and participatory design. Due to the clipped pace of the quarter system, there was little additional time to discuss gender integration on a class-wide level. The studio eventually broke into two separate groups, one working on prototype testing, the other working with public space design and fog collection integration. I worked with the latter group, although addressing gender implications was also highly relevant for the other group (such as ergonomics, construction, maintenance, and system management).

Within the group working on spatial design, there were three subgroups: one focused on the larger ecological framework and footprint; another working on the integration of fog collection devices and green space in the cemetery; and a third working on a neighborhood park, integrating play spaces and a nursery fed by the fog collection devices.

I engaged in important gender-based conversations and critiques with all three groups; however, the group working on the neighborhood park illuminated an important decision-making and problem-solving moment within the design process that could be highly influenced and informed by gender. The site is a challenging one, being steeply sloped and constrained between two steep hills (see conditions of the site below). The flatter, upper area is already used for a soccer field, although



Image 50: Park Site Conditions - Looking north towards flatter playfield area (net catches runaway soccer balls).



Permissions: Ben Spencer

Image 51: Park Site Conditions - Flat upper area bounded by steep hillsides used as soccer field.

through participatory workshops with the community, multiple desires were identified for the park. Groups were divided between men and women and there were many shared visions which included a sports field of some sort, jungle gyms and green space. However, the pictures drawn by the groups show different forms and hierarchies of interests. In all of the men's pictures, a soccer field was the central feature of the design – soccer is the primary sport boys play in the community and is a venerated hobby for men. In a few of the women's designs, however, volleyball courts shared the space equally with the soccer field, elevating their desire for a space for volleyball, the primary sport girls play.



Image 51: Group 2 - Men
Stadium-like soccer field is the main design feature.

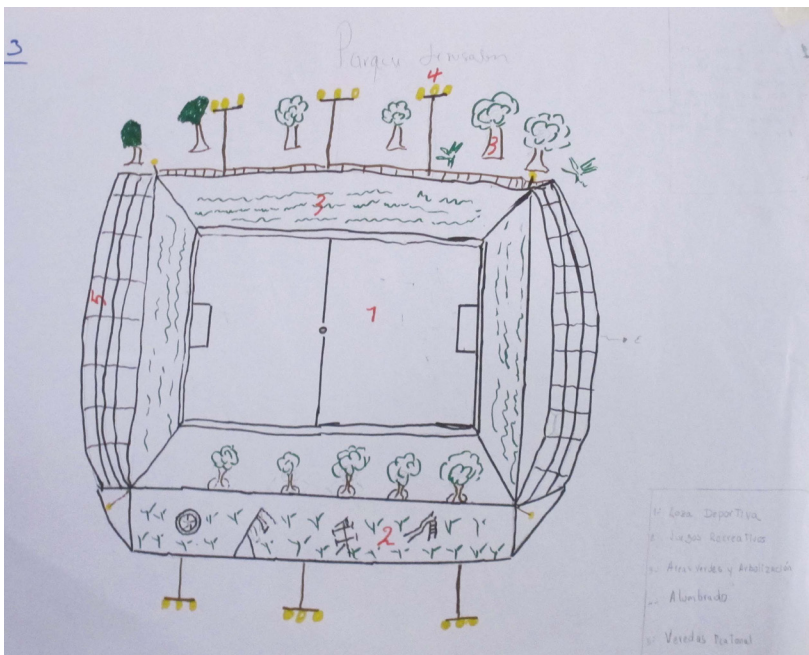


Image 52: Group 3 - Men
Similarly stadium-like soccer field is main design feature.

Permissions: Ben Spencer



Permissions: Ben Spencer

Image 53:
Group 5 - Women

Design features a shared soccer and volleyball field and equally highlights other design features.



Image 54:
Group 7 - Women

Volleyball and soccer fields are separated. Additional play spaces are equally highlighted.

Initially, the student design team took the compromise approach of group five, designing a soccer field with two holes for a volleyball net to be lifted into place when girls wanted to play. In spirit, this was meeting the needs of both men and women. However, based on my research, this was still a preferencing of public space for men’s hobbies – the built infrastructure programmed soccer to be the dominant activity and the most important. Girls, on the other hand, would be required to negotiate the *temporary* transition of the soccer field to a volleyball court whenever they wanted to play. If designing for gender equality, what were other options the design team could consider? The

students agreed that these issues would likely not have surfaced if there had not been an emphasis on gender in the studio.

With this in mind, the design team diligently went back to the drawing board and worked to fit a volleyball court on the second terrace of the space, adjacent to the soccer field. The space, however, was simply too small to fit a volleyball court as well as other programming needs, like the nursery space, toilets, and a small children’s play area. (Unfortunately, they did not save their trace and CAD explorations of this work). The team discussed the situation with Professor Spencer, who is intimately familiar with the site, and he reminded the design team of the community center just down the street from the park. The team decided that a volleyball court could be put there to serve the needs of the girls. Whether this is actually feasible in the space available at the community center or whether there would be money to build a volleyball field was not part of this discussion. The final design provides a space for a large, flexible playfield, leaving a new viewer entirely unaware of this backstory (see below).

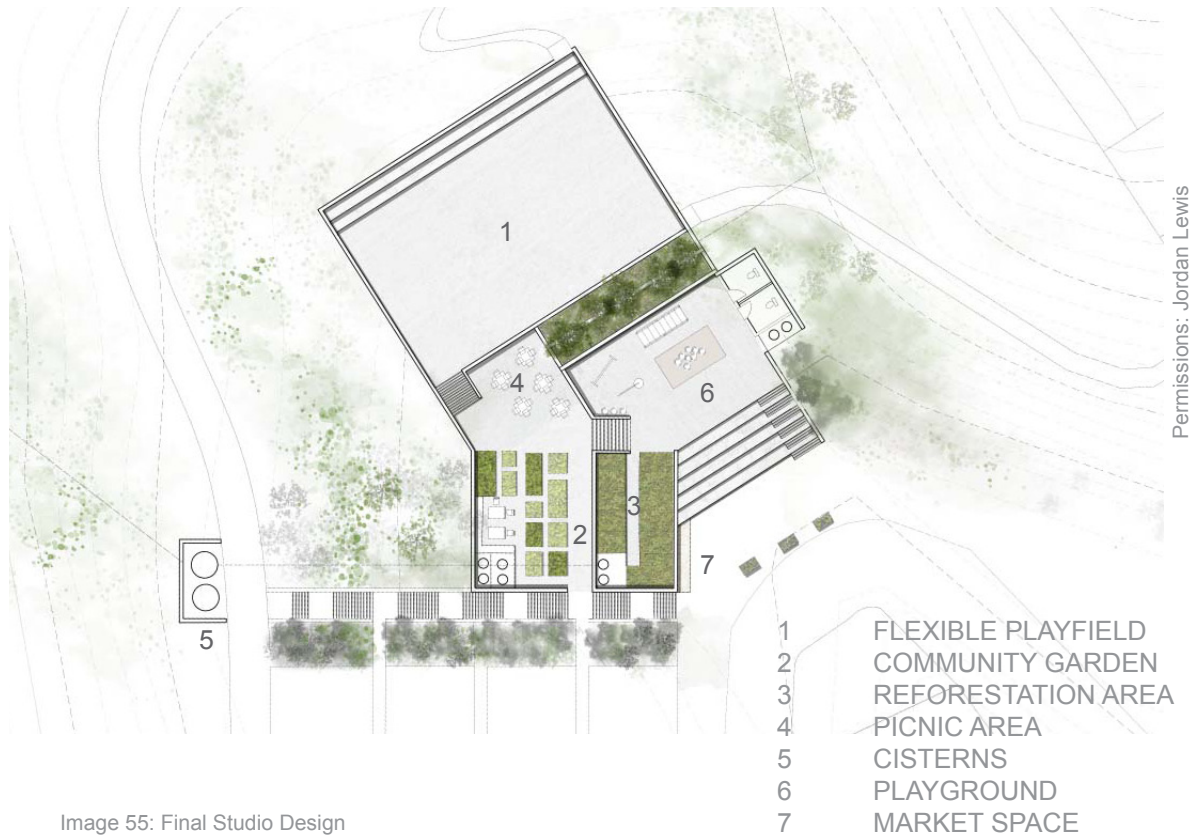


Image 55: Final Studio Design

This seemingly innocuous moment on the drawing table demonstrates how easy it is for gender inequality to be tacitly overlooked or inadequately addressed due to biases, assumptions, or the desire to keep things simple. Research presented in earlier chapters reveals the quiet buildup of these decisions that have concretized gender inequality in the built environment. With just this example, how many playfields with soccer nets have been designed to serve “kids” play, when they ultimately preference boys and girls are left without a thoughtful play area (assuming they have a different game preference)? Why should this be acceptable? Is there is an assumption that the girls don’t have as much time to play anyway because they have to help their mothers with reproductive tasks? These assumptions and design decisions further perpetuate gender inequality in the built environment, reinforcing unequal behavioral norms. Design teams have a responsibility to consciously and conscientiously consider the subtle gender implications and long-term ramifications of their design decisions.

If this design were part of a real community process, the design team could take the opportunity to address the conversation directly, learning if the soccer field realistically would ever be ceded for girls’ regular use and determining the feasibility of building a volleyball court elsewhere, elevating girls’ desires to be of equal importance to those of the boys. In this case, the team was not able to get this type of feedback. Unlike the messiness of real participatory design work, a studio environment is divorced from real constraints and garnering feedback from end users. However, challenging students to design for equitable provisioning for public amenities develops and practices important critical-thinking skills that are necessary to address gender inequality in their future built interventions. And as this thesis suggests, it is not only about the designing of gender-equal spaces, but also about using design as a vehicle for social transformation (Hou).

Reflections of Students: Gender in the Design Curriculum

At the end of the studio, I surveyed students to learn what they thought about integrating gender into their design work and if they had had any exposure to the importance of gender and design through other classes. Only one respondent said he had been introduced to the idea and that was specific to thermal comfort in building systems. Another student wrote:

Despite the fact that gender is arguably at the root of most societal and cultural practice – largely defining individual residency within shared space – though other stakeholder divisions such as ethnicity, social status, and age are, as matters of course, deemed indicative design meters, gender seldom enters the site analysis dialogue.

One student made a similar comment, comparing a gender lens to one that addresses ADA (American with Disabilities Act) guidelines: “I think gender-based thinking could be more integrated into the design profession. I think design addresses ADA, but guidelines for gender aren’t often discussed.”

Other students commented on how using a gender approach invited them to have the end user in mind. One student wrote, “It kept me more realistic in considering the real user of the designed space and product... Gender considerations seem to be one more critical analysis component to projects and a filter for keeping design reality-based.” Another shared:

Thanks to your lectures, gender served a structural function in our design process. Our fog collection prototypes attempted to physically and functionally serve each demographic of the LDZ community. This constant attention served to entrench our design in the community, validating systems that would otherwise have remained disengaged.

All respondents were appreciative of the introduction, with one writing, “I think gender thinking should become integrated into designers’ approach to make designs that are people-responsive. [This] requires tackling gender issues or at least being aware of the implication of one’s design on gender.”

While it was frustrating to learn that the majority of students had not been exposed to the critical role gender plays within the design process, it was affirming to learn how supportive and eager students were to include gender in their design thinking. The design education community plays an important role – if not the most important role – in developing critical thinking into design practices. There is a huge gap in design education: gender is not visibilized, valued, nor integrated into the learning and design process. A gender-integrated design model, additional precedents, and toolkit could be a strong start to equip students and professors alike.

1

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TOPICS FOR FUTURE GENDER TOOLKIT

Additional to be me | available



Steps to undertake to achieve the goal



Possible p based on research.

The phase(s) the goal is applicable:



CHAPTER 11 PROPOSED GENDER-INTEGRATED DESIGN PROCESS TO SUPPORT DESIGNERS' SEEING, PROCESS + SPACE MAKING



PROPOSED GENDER-INTEGRATED DESIGN PROCESS TO SUPPORT DESIGNERS' SEEING, PROCESS + SPACE MAKING

This proposed Gender-Integrated Design Process represents a summary and culmination of the research in this paper reviewing the expertise from five fields of research – Women in Development/Gender and Development, Gender, Space, and Status literature, Ergonomics, Proxemics, and Participatory Design; using the synthesis in Chapter 9 as a beginning outline; and augmenting research with precedent learnings in Chapter 10. This research is neither comprehensive nor exhaustive. A topic like gender equality in design practice requires and deserves the attention, research, and dedication of many. However, it has identified important baseline tools and an emerging approach to integrate gender into the design process.

In most cases, designers experience a privileged role as outsider experts and have a responsibility to use and eschew this power appropriately. Precedents like the alliance of SPARC, NSDF, and Mahila Milan demonstrate that the design process offers significant opportunities for leadership development and direct agency. This should be the goal of designers' engagement with communities – discerning when to lead, listen, facilitate, and step aside for the community to do so – and this approach underscores all aspects of this proposed process.

As mentioned in the introduction, this research and proposal is developed from a mile-high perspective and is therefore not able to responsibly attend to the multitude of cultural contexts that exist in the developing world or the specific focus of a design project. Site-specific and project-specific research and inquiry is necessary to apply the methodology that is presented here. Importantly, however, this proposed process provides a platform for conversations with designers, partner communities, development practitioners, and gender-aware organizations to vet, test, and adapt this methodology to enable it to serve both the design community and the communities it serves responsibly.

The Gender-Integrated Design Process is broken into nine cumulative steps, many of which are to be used throughout the process. While written and formatted to be easily digested, these next few pages do not represent a final iteration, nor do they stand alone. Each step is supported by a number of tools that

have been researched and reviewed throughout this paper. In its final form, this methodology would be part of a larger Gender and Design Toolkit that would summarize the larger frameworks found throughout the research, outline and provide guidance on specific tools, and provide illustrative precedents for application.

Each step offers at least five pieces of guidance: 1) the overall goal; 2) why it is important to see or value gender (in)equality with regard to this step; 3) steps to achieve the goal, 4) tools designers can use to achieve the goal; and 5) the phase(s) the goal is applicable. Some of the steps include additional notes or potential precedents, although these will need to be augmented with additional research. Notably, some of the steps have a callout for “Topics for Future Gender Toolkit”. This acknowledges the supporting frameworks or guidance that would be offered when designed for wider use and begins an outline for the future toolkit. Below you will find a key to the layout and definitions of the icons.

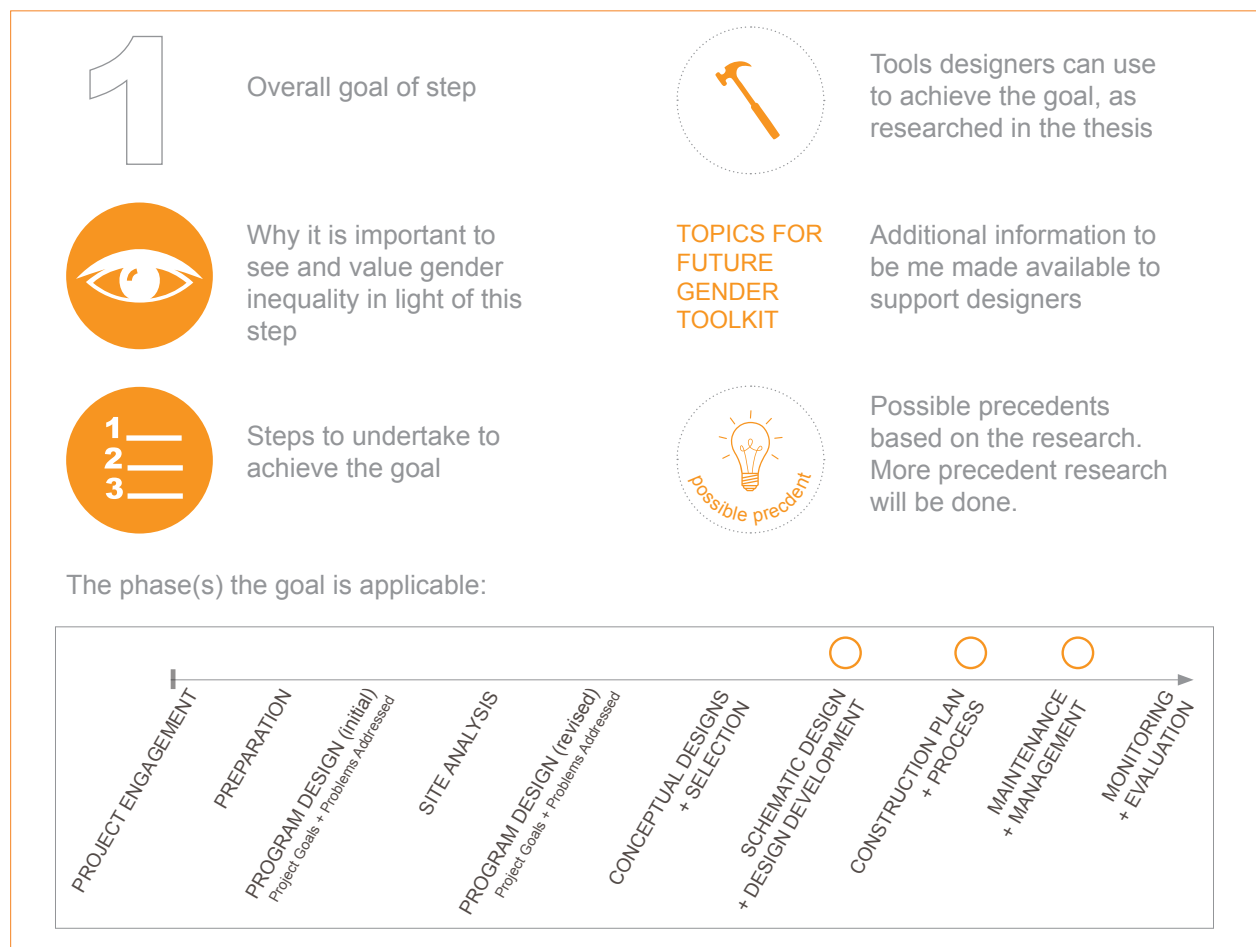


Image 57: Key to Gender-Integrated Design Process

A number of the tools referenced have been outlined throughout the research and can be found in the

Appendix, annotated for designers. These are:

- Harvard Analysis Framework

- Moser Framework

- Gender Analysis Matrix

- Longwe Framework or Women's Empowerment Framework

- CEDPA Original Checklist (the Revised Gender-Integrated Checklist is in Chapter 12)

- Pomegranate Center Steering Committee Job Description

Because the CEDPA checklist proved to be particularly useful reference tool that could be used throughout the design process, I have drafted a Gender-Integrated Design Checklist that can be found in the next chapter. This checklist also acts as a quick overview of steps to take over the course of the design process to integrate gender for designers who cannot wait for the Gender and Design Toolkit to be available or don't have the time to review it once available.

The following pages are just a first step; Chapter 13 will outline a number of directions a larger Gender and Design Toolkit and this process could take to serve diverse designer audiences as well as development sector goals. In the meantime, I believe this proposed Gender-Integrated Design Process is a strong offering to begin an important conversation to fill a critical gap that the design community and the communities it serves will greatly benefit from.



PROPOSED
GENDER-INTEGRATED DESIGN PROCESS

- 1 Ensure that your design team is gender diverse and familiar with gender-based issues.
- 2 Do your (gender) homework.
- 3 Diversify community representation to be gender-balanced.
- 4 Identify *draft* project goals and program with diverse community representation acknowledging they will be revised.
- 5 Engage community in participatory research that visibilizes and values gender. Look beyond immediate project scope to see the bigger (gendered) picture.
- 6 Sex-disaggregate and document all data, including conversations and observations.
- 7 Analyze sex-disaggregated data to revise your project goals and program to develop design solutions that address gender inequality.
- 8 Consider gender in all aspects of project construction, manufacturing, maintenance, and management. Design for women's inclusion and opportunity.
- 9 Monitor and evaluate your design's impact on gender roles and opportunities over time.

Ensure that your design team is gender diverse and familiar with gender-based issues.

1



No design interventions are gender “neutral.” Seeing and valuing gender are critical skills for designers to address gender inequality and all major development goals.

Historically, women have been marginalized as a special subgroup to tend to rather than valuing that gender relationships and inequality impact all aspects of community and personal life for women, men, girls, and boys.

Due to gender inequality world-wide, unintentional biases and assumptions can limit designers’ vision, particularly those designers that have been in a place of gender and/or development privilege.

In some communities, traditional gender norms will dictate that female community members cannot work with foreign men or vice-a-versa.



- Familiarize team on gender frameworks and gender and design precedents.
- Review Gender-Integrated Design Checklist to plan for entire design process.
- Ensure that the design team is gender diverse to provide multiple perspectives and to work with the community more flexibly and strategically.



- Review Gender-Integrated Design Checklist
- Future Gender and Design Toolkit

TOPICS FOR FUTURE GENDER TOOLKIT:

- Millennium Development Goals + Gender
- Sex vs. Gender
- WID vs. GAD
- Gender Roles and the Triple Role of Women
- Disaggregate Household Data
- Practical Gender Needs vs. Strategic Gender Needs
- Gender, Space, and Status findings
- Proxemics and Gender
- Gender and Design Precedents

Women Are Heroes, JR



Do your (gender) homework.

2



Like historical, cultural, and environmental information, gender issues can and should be researched.

Gender and international development case studies and data are numerous. Women's human rights and gender-aware groups exist in every country in the world and even in the smallest of communities.



- Leverage secondary research to provide a gendered understanding for your work.
- Identify and contact gender-aware organizations in the region of your work.
- Learn about potential practical gender needs and strategic gender needs in the community.
- Discuss proxemics and culture-based challenges for engaging gender issues.



"Partnering" can come in multiple forms - from a learning partnership between the design team and the gender-aware organization to a collaborative partnership with community leadership. The nature of this partnership will likely be dependent on the cultural context, scope, and scale of your project.



- Partner with gender-aware organizations
- Investigate secondary source data - international development case studies, journal articles, local newspapers
- Consult Gender-Integrated Design Checklist
- Future Gender and Design Toolkit



SPARC, NSDF, and Mahila Milan, India

TOPICS FOR FUTURE GENDER TOOLKIT:

- Resources on how to locate gender-aware organizations around the globe
- Best sources for case studies and data
- Precedent snapshots



Diversify community representation to be gender-balanced.

3



Community leadership is often male due to historic gender inequality and traditional gender roles. This can inadvertently contribute to marginalizing women’s voices and needs.

Women’s public participation and/or engagement can be limited due to gender or cultural norms in some communities. Sometimes their absence, minimal participation, or silent presence creates the assumption that they are disinterested, do not have an opinion, or tacitly agree.



- Be proactive and set the stage for inclusion - bring women’s voices into the project as soon as possible.
- Learn what might restrict women’s full participation in information contribution and decision-making (i.e. proxemics, integrated spaces, etc.) and accommodate for women’s full participation.



Design teams can play a powerful role in setting the tone and values for their engagement and intervention. Setting diversity of voices and gender balance as criteria for your work at the beginning of a project creates the expectation for inclusion throughout the design process. Explain that designs are more successful and meet more strategic community needs with a gender-balanced lens. Depending on the cultural context, community leadership may be resistant to sharing “leadership”, but they may be open to forming a Community Representatives Team that can help organize participatory research and design workshops.



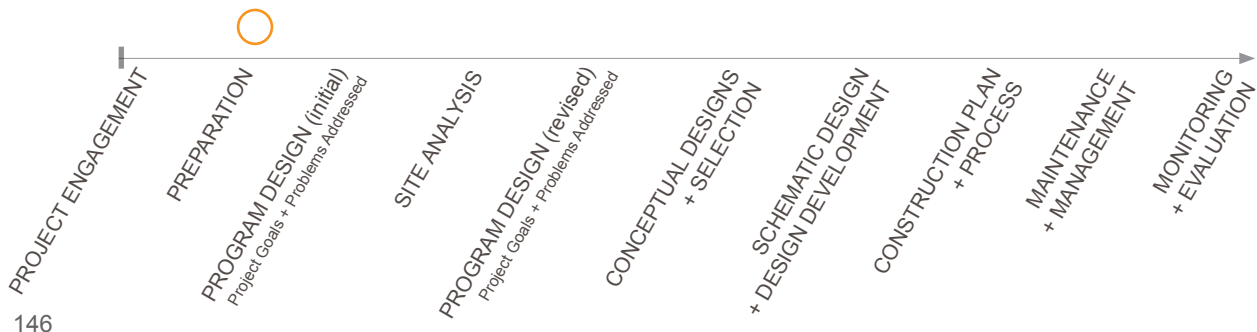
- Form a diverse Community Representatives Team
- Work with previously identified gender-aware organizations
- Consult Gender-Integrated Design Checklist
- Future Gender and Design Toolkit

TOPICS FOR FUTURE GENDER TOOLKIT:

- How to form Community Representatives Team
- Precedent snapshots



Pomegranate Center, USA



Identify *draft* project goals and program with diverse community representation acknowledging they will be revised.

4



Usually community leadership, and sometimes even the design team, already has a vision or scope for a project which may limit what is possible including its impact on gender equality.

Often what or how things are *currently* done are considered what *ought* to be. This is particularly true for gender roles and norms, both by those served well by current conditions as well as within entire communities. This approach could reinforce gender inequalities.

Hesitancy to offer alternatives that address gender norms can be a pitfall for outside planners and designers being appropriately conscientious about their intervening role. Planning for the goals and program to be revised creates opportunities to meet more needs in unanticipated ways.

Gender-sensitive, participatory community research and design often unveils unanticipated gender dynamics that impact all aspects of community life, presenting opportunities for designers.



- Do not assume that gender relationships are stagnant, as design decisions could reinforce existing inequalities.
- Identify goals and problems to be addressed, not just the design program, as this can help to illuminate broader needs that likely have gender implications.



- Work with Community Representatives Team
- Consult with gender-aware organizations as needed
- Consult Gender-Integrated Design Checklist



Engage community in participatory research that visibilizes and values gender.

5



Limiting design input to just the community leadership and design team can limit gender diverse information sharing, obscure or invisibilize short-term and long-term gender based side effects of design interventions, and diminish opportunities to address multiple challenges like gender inequality.

Roles that are publicly valued (i.e. remunerated or have decision-making function) are easier to see and are often venerated. Those roles usually fall along gender lines, diminishing, invisibilizing, or devaluing the importance of women's unpaid work and lack of access, ownership, and decision-making.

Space confers status and status is gendered, therefore men and women access, use and do not use, feel welcomed or uninvited, or safe or unsafe in different ways and for different reasons. Due to women's subordinate status in most cultures, women's access, invitation, and sense of safety are often less than that of men's, limiting movement, access to public amenities, productivity, and quality of life. These experiences can vary spatially and temporally.

Within many cultures, spaces are sex-segregated (i.e. types of educational institutions or work environments) limiting access to information and status that is valued. While some spaces are officially segregated, others are informally segregated based on gender norms that perpetuate gender inequality. Integrating spaces has proven to be a successful strategy to addressing gender inequality over time.

Simultaneously, because of women's traditionally limited public ownership, access, and roles, women only/led public spaces have shown to visibilize and value women's leadership within communities.

Education is a key contributor to elevating one's status as well as one's ability to positively effect his/her family and community's development. Opportunity to access education is often different along gender lines due to cultural norms, discrimination, and physical impediments (i.e. lack of amenity such as a bathroom or the distance, route, or time required to travel when juggling other obligations).

In many cultures, public amenities are not designed to accommodate women's biological needs or gender roles, naming these as "special needs" rather than ones that directly impact 50% of the community and indirectly support the entire community (i.e. public bathrooms, recreational areas).

How cultures perceive physical space and what qualities of these spaces allow them to feel most comfortable are unique. Within these cultural norms, preferences of men and women differ.



Look beyond immediate project scope to see the bigger (gendered) picture.



- Engage entire community as partner designers. Make design process accessible to all community members to allow for diverse and engaged participation, equitable contribution, and shared decision making.
- Identify gender roles, access, and ownership to visibilize and value women’s activities, as well as illuminate where gender inequalities are present.
- Identify practical gender needs vs. strategic gender needs in order to ensure design decisions will take both immediate and long-term needs into account.
- Learn what spaces men and women use and do not use, respectively. Find out why (access, invitation, fear, etc.). What qualities of the designed space contribute to them being used or not, by whom and why?
- Learn what spaces are considered women’s, men’s, girls’, boys’. What do these spaces symbolize, offer, limit, and perpetuate?
- Learn about women-only spaces and how they may serve to visibilize and elevate women’s decision-making status.
- Learn what information women and men wish they had access to. Localize this knowledge and identify social and built impediments.
- Identify and determine if public amenities are equally available, accessible, and comfortably used by all.
- Identify cultural (proxemic) spatial preferences on fixed, semi-fixed, and personal scales paying close attention to gender.



FRAMEWORKS FOR DATA COLLECTION

- Gender Roles: Harvard Analysis Framework
- Gender Roles, Practical vs. Strategic Gender Needs, Household Data: Moser Framework

OBSERVATION

- Space-based
- Shadow
- Overnight Stay

INTERVIEW

- One-on-one
- Focus Groups

SPATIAL MAPPING

- Gender Roles and Activities: Spatially and Temporally
- Resources, Access, + Ownership
- Where Women, Men, Girls, and Boys Go and Do Not Go
- Gender-Segregated Spaces - Official and Assumed
- Work with Community Representatives Team
- Work with gender-aware organizations
- Consult Gender-Integrated Design Checklist
- Future Gender and Design Toolkit

TOPICS FOR FUTURE GENDER TOOLKIT:

- Guidance on each tool: explanation and example
- Precedent snapshots

Sex-disaggregate and document all data, including conversations and observations.

6



What is counted is what is valued, considered, and planned for. For example, national budgets and GNP do not account for unpaid work, although most women's work is not remunerated invisibilizing and devaluing women's contributions. Sex-disaggregating all data illuminates and values gender when it might otherwise be invisible.

Participatory processes and site-based work can be messy and chaotic. It is easy to think you will remember influential comments or observations - particularly those around gender - once you are at the drafting table. Memories are not good data and are hard to validate when making decisions that can be life-changing for a community.



- Make sure that all participatory processes have a way of capturing sex-disaggregated data. In many cases, groups will benefit from being sex-separated to glean more candid information.
- Taking photos of community design flipcharts is typical. Annotate them to note the gender breakdown of the groups. Take sex-disaggregated notes on the back of each to capture influential discussion points at the end of each meeting.
- Carry a notebook around. Draw a line down the middle of each page - one side for women, one side for men - and capture reflections and observations throughout the day.
- When staying in the field, take five minutes each evening to capture gender-based observations and influencers.



University of Washington,
Lomas de Zapallal

TOPICS FOR FUTURE GENDER TOOLKIT:

- Guidance on documenting data
- Precedent snapshots



Analyze sex-disaggregated data to revise your project goals and program to develop design solutions that address gender inequality.

7



Often planners and designers think they are addressing gender inequality by meeting women’s immediate needs within their current gender role (i.e. less time consuming water collection), however this does not necessarily address larger strategic needs to address gender inequality.

Often what or how things are currently done are considered what ought to be. Do not assume gender roles and relationships are stagnant.



- Using data, highlight key gaps in gender equality of gender roles, access to information and resources, decision-making, paid work, spatial access and comfort, public amenities.
- How can design considerations increase information access across gender lines?
- How can design interventions support educational and economic opportunities for both men and women?
- How might women-only public spaces serve to visibilize and elevate women’s status?
- Acknowledge and value women and girls as primary users of all spaces and design to accomodate their needs - use, quality, safety, comfort, access, management
- Identify opportunities to address both practical and strategic gender needs through design project without limitations of previously drafted project goals.
- How will the project affect women’s time? Will their workload increase/ decrease?



GENDER ANALYSIS TOOLS

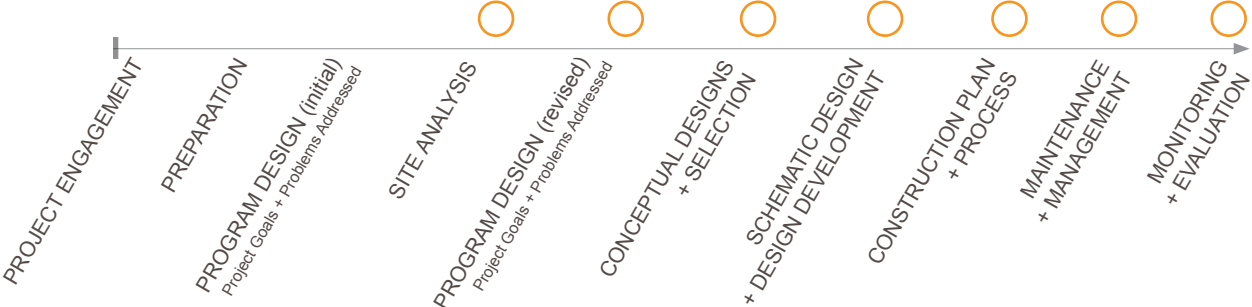
- Harvard Analysis Framework
- Moser Framework
- Gender Analysis Matrix
- Women’s Empowerment Tool
- Work with diverse community representation
- Consult with gender-aware organizations
- Consult Gender-Integrated Design Checklist
- Future Gender and Design Toolkit



Skateistan, Afghanistan

TOPICS FOR FUTURE GENDER TOOLKIT:

- Guidance on each tool: explanation and example
- Precedent snapshots



Consider gender in all aspects of project construction, manufacturing, maintenance, and management. Design for women's inclusion and opportunity.



Due to gender roles and cultural assumptions, often women are not considered in the construction, manufacturing, and maintenance phases of design projects undermining women's access to valued and/or remunerated work in construction and management of the project, as well as long-term decision making and ownership of the resource.

There may be gendered taboos of movement that may not be known by designers, limiting participation and adoption rates of designs.



- Learn of women's physical capabilities and design for their inclusion in the construction and maintenance phases.
- Learn if there are activities women are not allowed to do in public that would limit their participation or involvement.
- Be aware of ergonomic considerations of material selection and assembly.
- Prototype processes - from construction through maintenance and management, ensuring that gender roles, dynamics, and opportunities are addressed.
- Prototype forms - from construction through use and manufacturing, ensuring that gender roles, dynamics, and opportunities are addressed.
- If job skills, training, or paid work are part of the construction, maintenance, or management of the project, ensure that both men *and* women can access those benefits.



- | | |
|--|---|
| <ul style="list-style-type: none"> <input type="checkbox"/> Prototype Processes <input type="checkbox"/> Prototype Forms <input type="checkbox"/> Consult Ergonomic Data and/or Observe <input type="checkbox"/> Employ Gender Analysis Matrix <input type="checkbox"/> Consult Women's Empowerment Framework | <ul style="list-style-type: none"> <input type="checkbox"/> Work with Community Representatives Team <input type="checkbox"/> Consult with gender-aware organizations <input type="checkbox"/> Consult Gender-Integrated Design Checklist <input type="checkbox"/> Future Gender and Design Toolkit |
|--|---|



Catapult Design
Treadle Pump
SPARC, NSDF, + Mahila Milan

TOPICS FOR FUTURE GENDER TOOLKIT:

- Guidance on each tool: explanation and example
- Precedent Snapshots



Monitor and evaluate your design's impact on gender roles and opportunities over time.

9



Even with good analysis and planning, it can be difficult to predict the effect the design process and built intervention will have on the community and, in particular, gender roles. While gender roles may be positively effected in one aspect, they may be negatively impacted in another. Project interventions do not have “neutral” effects, nor are they gender neutral.

Learning what worked and did not work makes design interventions better in the future and provides critical knowledge for others. Communities already suffering from huge challenges do not need unsuccessful processes and forms replicated.

There are too few precedents to tap when working to address gender equality with design process and form. Communities (design and beneficiary) need more to learn from.



- Assess impact of project on gender roles throughout the design cycle.
- Be particularly attentive to balancing the impact on women's roles, where often side effects of additional work or time is placed.
- Sex-disaggregate your data and design processes (per number 6).
- Conduct a sex-disaggregated post-occupancy evaluation in at least one and five years.



GENDER ANALYSIS TOOLS

- | | |
|---|---|
| <input type="checkbox"/> Harvard Analysis Framework | <input type="checkbox"/> Work with diverse community representation |
| <input type="checkbox"/> Moser Framework | <input type="checkbox"/> Consult with gender-aware organizations |
| <input type="checkbox"/> Gender Analysis Matrix | <input type="checkbox"/> Consult Gender-Integrated Design Checklist |
| <input type="checkbox"/> Women's Empowerment Tool | <input type="checkbox"/> Future Gender and Design Toolkit |

TOPICS FOR FUTURE GENDER TOOLKIT:

- Post-occupancy example
- Precedent snapshots



The gender-integrated checklist is strategic as it serves as a quick yet substantive overview and training tool for design teams. This checklist can help designers plan before a project begins, as well as act as a reminder of important considerations throughout the design process.



CHAPTER 12
A CHECKLIST FOR
INTEGRATING GENDER
INTO THE DESIGN PROCESS

A CHECKLIST FOR INTEGRATING GENDER INTO THE DESIGN PROCESS

The following Gender-Integrated Design Checklist was inspired by and adapted from the CEDPA Gender Checklist reviewed in Chapter 4. Because of its comprehensive scope of an entire project cycle, it emerged as a particularly useful tool throughout the research synthesis process and helped to shape the proposed process. I believe this format is strategic as it serves as a quick yet still substantive overview and training tool for design teams. This checklist can help teams plan before a project begins, as well as act as a reminder of important considerations throughout the design process. Perhaps more importantly, a checklist of this nature can serve designers and design teams who do not have the time or choose not to seek additional information (like a future Gender and Design Toolkit). Additional discussion on the merits of checklists and metrics can be found in Chapter 13.

The checklist on the next two pages summarizes, in question form, the proposed Gender-Integrated Design Process. Like the proposed process, this checklist requires additional vetting and consideration after more research is done on the overarching process. Until then, I believe this serves to summarize and capture the intent of the proposed process and could be used by design teams in the interim.



GENDER-INTEGRATED DESIGN CHECKLIST

DIVERSITY OF DESIGN TEAM

1. Is the design team familiar with gender issues and frameworks?
2. Is the design team familiar with gender and design precedents?
3. Are there both men and women on the design team?
4. Is the design team prepared to advocate for women's full inclusion in the project even if that is not the norm?
5. Is the design team prepared to divide along gender lines to obtain or facilitate site data if gender norms require it?

PREPARATION

1. What information is already available about the population groups you are serving and women and gender in particular?
2. What gender-aware organizations exist in the region that can help you understand gender issues of the particular community you are serving?
3. From this research, what are potential practical and strategic gender needs within the community?
4. What social, legal, and cultural obstacles could prevent women from participating in the project?

DIVERSITY OF COMMUNITY LEADERSHIP

1. Are women involved at all levels in the planning and implementation of the project?
2. What plans have been developed to address the obstacles that prevent women's full participation?
3. Have you consulted with people whose lives will be affected by the project, and what attention has been given to women in this process?

DEFINING DESIGN GOALS + PROGRAM

1. What are the goals of the project?
2. Are the goals flexible enough to include new opportunities discovered during data collection and site analysis?
3. Have both men's and women's opinions been sought in the definition of goals and program?
4. Are women's and men's roles reflected in the goals and program?
5. How do the goals and program address the needs and concerns of women and men?
6. Have the goals and program been revisited after gender-aware participatory data collection and analysis?
7. What goals and programmatic features does the project have to ensure that both practical gender needs and strategic gender needs are met?

DATA COLLECTION + SITE ANALYSIS

1. Is all data collected sex-disaggregated?
2. Is there a system for documenting sex-disaggregated data as well as gender-based observations and conversations?
3. Has information on women's and men's work – paid and unpaid – in the household and community been collected? Is it adequate for the purposes of the project?
4. Has information been collected on what spaces men and women, boys and girls use, why or why not? (Access, ownership, invitation, safety, comfort, qualities of space, etc.)
5. Has information been collected on gender-segregated spaces – official or unofficial? What do they symbolize, offer, limit, and perpetuate?
6. How can design considerations increase information access across gender lines?
7. How can design considerations support educational and economic opportunities for both women and men?
8. Have women been valued as equal users of all public spaces? Do public amenities accommodate women and men adequately and equally?
9. How can the design address both practical and strategic gender needs?
10. How will the project affect women's time? Will their workload increase/decrease as a result of innovations or changes?
11. Is the project likely to have adverse effects for women?

CONSTRUCTION, MAINTENANCE + MANAGEMENT

1. Is the design responsive to both men's and women's ergonomic comfort and need?
2. Are women's and men's roles equally considered in all construction aspects of the project?
3. Are construction techniques responsive to ergonomic capabilities for both men and women?
4. Are both men's and women's roles remunerated within the context of the construction, maintenance, and management of the project?
5. How will the project ensure that women have equitable access to, and control of, any training resources and technologies in the project?
6. How will women participate in, and contribute to, the maintenance and management of the project? Will training be provided?

MONITORING + EVALUATION

1. Are separate data collected on women and men over the course of the project?
2. Does the project have an information system to detect and evaluate the effects of the project on women and men separately?
3. Is the team prepared to do a sex-disaggregated post-occupancy evaluation?



CHAPTER 13 **REFLECTION + NEXT STEPS**

REFLECTION + NEXT STEPS

Tackling gender inequality in any form is a challenging undertaking. As this research demonstrates, our built environment is not gender-neutral, nor are our design interventions. In a few cases this is clear to many, but in most cases inequalities are only recognized by those who do not benefit from gender privilege. In some cases economic and educational opportunities can soften these impacts as well. All of the research indicated that as designers we must invest ourselves in formative work: seeing gender and understanding where gender equality is impacted by the built environment and our design decisions. From the precedent investigations, I was struck by how our seemingly micro decisions at the drafting table can create macro results. For example, calling a play space “flexible” while building its infrastructure to serve a specific sport can create unspoken gender hierarchy in the built environment that is passed on to the boys, girls, men, and women who use and do not use the space. Even designers who pride themselves on inclusion have to learn to see and think anew, taking off the veil of privilege and the normative in order to more deeply see and, therefore, design more deeply. I am hopeful that this is a challenge designers – male and female alike – are ready for, as the world requires our impact.

Approaching such an overarching and all-encompassing issue was daunting and at times frustrating. A flexible, scalable Gender-Integrated Design Process requires a mile-high view, which is divorced from cultural contexts and design details. The research examples and precedent investigations help to ground the research and provide a mini-testing ground for the larger concepts and frameworks. Further research will require much more of this grounding for the work to be tangible and applicable.

Simultaneously, leaning on allied fields for their hard-earned expertise was rewarding and inspiring. We are not starting from scratch; the frameworks and tools are already available. We need to make new alliances, rally new partnerships, and dive in. The groundwork is laid, we only need to translate and adapt it to the design community and practice it in our own language. We are extremely well poised to do this work if we are willing to rise to the challenge.

Next Steps

Writing this thesis was an exercise in patience, as a full, vetted, and published Gender and Design Toolkit

was not feasible for the timeframe. Many topics covered in this paper merit significantly deeper research and in some cases new research areas were identified. More gender process and design precedents need to be identified and culled for relevant learnings. The proposed Gender-Integrated Design Process must be tested, altered, critiqued, and shaped to respond to more specific needs. The toolkit would provide a comprehensive overview of all of the above, include high quality photos, be pithy and entertaining to read, and be so inspiring that designers would be clamoring to put it to use. A website could be developed to provide a clearinghouse of information for designers working to integrate gender equality in different cultures, contexts, and scopes of design work. Partnerships need to be formed.

In order to begin the next phase of work, the topics and ideas that surfaced over the course of this project – offered through professors, reviewers, colleagues in the gender and development field, peers at the University of Washington, and personal reflection – are captured here. There are undoubtedly many more issues to engage and flesh out for a Gender and Design Toolkit to truly serve. Hopefully that can become the work of many in these next stages.

Additional and New Research

As demonstrated, the gender and development field has spent the last three decades tweaking and testing various models and approaches to address gender inequality in the developing context. Working closely with gender and development field practitioners would help to illuminate how tools like the Gender Analysis Matrix has been applied and adapted for different contexts. While the GAD field does not use the term “built environment,” many of its interventions have resulted in a built form (schools, hospitals, infrastructure, refugee camps, etc.). The GAD field has numerous precedents that would be highly relevant to design work, even though “designers” were not part of these projects. This requires deeper peer-to-peer conversations and translation between fields to share learnings.

While there are not many design community precedents that have elevated gender equality as a primary goal, there are many design activism projects that have engaged gender on some level. Some that were not tapped for this thesis include the SPARC, NSDF and Mahila Milan alliances’s slum resettlement work, and Boston-based MASS Build’s hospital design work in Rwanda. There are likely many more to be identified through a systematic inventory of design activism firms’ work. Additionally, the University of Washington’s long-term commitment in Lomas de Zapallal, Peru, offers strong opportunities to test and engage these various tools and approaches and monitor them over the long term.

It became obvious that participatory design methods are only as good as their facilitation. Research indicated that gender issues can make facilitation challenging, whether it be from gendered proxemics or gender inequality in public engagement. Researching facilitation skills and guidance on how to specifically apply the tools recommended (e.g., spatial mapping, prototyping, shadowing) in light of different gender norms is necessary. In the same vein, precedents providing “walkthroughs” of a particularly challenging, but successful gender and facilitation experience would be useful.

Similarly, more granular level recommendations can be shared. Books written by the Matrix collective in London, for example, or on public toilet design (Greed) offer specific suggestions on how to design inclusively for gender. While suggestions should not be prescriptive, more detailed guidance would be welcomed. This level of detail may be more strategically shared through a website with links to these resources (discussed below).

Research and reviewers both suggested looking into the Universal Design Approach and what lessons can be learned from not only the technical approach, but also the advocacy work that movement has done to inspire its adoption. Seattle-based Mithun’s integrated design approach was suggested as a model to compare to participatory design.

A unique and crucial aspect of design is the role aesthetics and beauty play in design adoption, appreciation, enjoyment, and stewardship. Design has the potential to be an act of beauty, a respect of cultural aesthetics, and an honoring of the user that many argue are rights all should enjoy, not just those that can afford them. Due to budget limitations or in the name of more “serious” goals, beauty and aesthetics are often sidelined in traditional development programming or building projects. The design community has a valuable skill to share in engaging aesthetics to support larger development goals. Research on the role of aesthetics and how they are gendered would be an important addition to the toolkit.

On a related note, this conversation would be served by articulating to the development community how design can further its goals. We not only want to bring gender into design, but to bring design into gender-focused development to make it more effective. While the audience for this thesis is for designers, the toolkit could serve designers, development professionals, and grantmakers alike. The role of design is not yet well known or accepted as a strategic approach – this is an opportunity to “sell” design to non-designers.

Framing Goals, Framing Design Interventions

The proposed Gender-Integrated Design Process is currently topic- and scope-“neutral”. Designers know this is never the case. Shaping or augmenting the process to be tailored to more specific design interventions will be necessary. These could come in at least two different forms: development challenge goals or design project focus. For example, specific recommendations and design inquiry questions could be formed along the Millennium Development Goal (MDG) lines, while projects could be along professional distinctions:

DEVELOPMENT CHALLENGE (MDGS)

Hunger and Poverty
Primary Education
Child Mortality
HIV/AIDs, Malaria, and Disease Reduction
Environmental Sustainability

DESIGN PROJECT FOCUS

Building
Landscape
Product
Infrastructure
Master Planning

A website clearinghouse could more nimbly offer specific design precedents and recommendations with topics like water access, refugee camps, potty parity, schools, and recreational facilities. A website could also connect designers to multiple allied fields and their research for the ease of background research and doing their “gender” homework.

Process and Checklist Frameworks

Reviewers were particularly interested in how the proposed methodology and Gender-Integrated Design Checklist related to checklist-type models in the design community. There have been significant criticisms of LEED and the Sustainable Sites Initiative, arguing that its checklist metrics approach does not effectively meet the real challenges and sea change required to be truly sustainable. SEED certification, while not yet widely adopted, works to integrate more qualitative data and approaches into its framework, but it is perceived as not having much teeth and not providing any real incentive to designers. The Living Building Challenge offers a more holistic model and requires real performance over time, although its performance metrics are largely scientifically or mathematically based, which would be hard to translate to gender.

The discussion of frameworks and checklists, however, merits more attention. I believe a Gender-Integrated Design Checklist with no particular “metrics” can be valuable training tool for some designers who otherwise would not read a training manual or toolkit. A 2-page well-circulated checklist could inspire more action than a glossy toolkit in some circumstances. When I set out to fill the gap, I did not imagine a

metrics-based approach and I still do not, but there is something to learn about the sharing and packaging of values-driven design.

Gender and Design Toolkit

IDEO's Human Centered Design (HCD) Toolkit is a great resource for designing in the developing context, but it falls short on gender. Written for a design audience, it is sophisticated, easy to understand, and inspiring to read. Co-written with the Gates Foundation and the International Center for Research on Women, it flags a number of important gender issues throughout the design process. However, it fails to educate designers on overarching gender challenges and frameworks that could support a more comprehensive approach addressing gender inequality in design processes. I imagine developing a standalone Gender and Design Toolkit that could also serve as a necessary companion to the HCD Toolkit.

My research and proposed Gender-Integrated Design Process frames a beginning outline of a toolkit that would include the following:

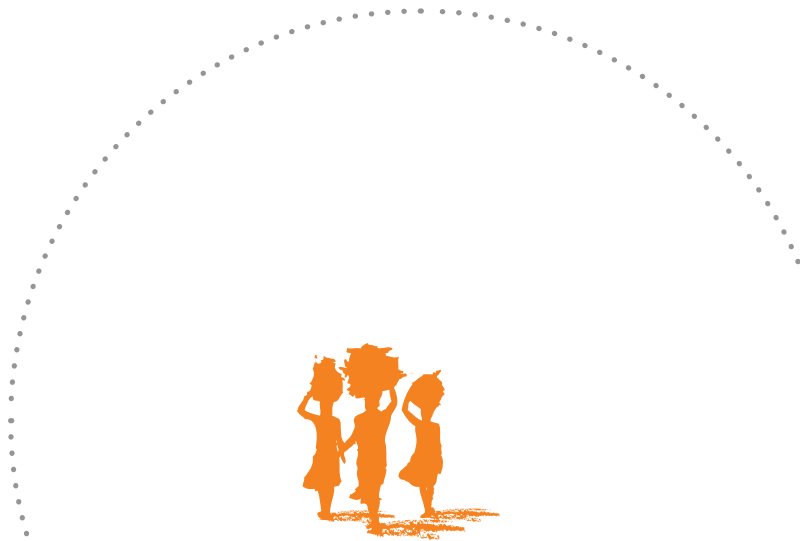
CHAPTER	RESOURCES
A Call to Action	Millennium Development Goals (or whatever comes after 2015) Gender Mainstreaming Data on Gender and Built Environment What Can Designers Do? Why Should Designers Be Involved? Gender and Design Activism Precedents
Frameworks to See and Understand Gender Inequality	Sex vs. Gender WID vs. GAD Gender Roles and Women's Triple Role Sex-Disaggregating Households Practical Gender Needs vs. Strategic Gender Needs Gender, Space, and Status Findings Proxemics and Gender
How to Integrate Gender Into Design Process	Gender-Integrated Design Process
Gender Analysis Tools + How to Use Them	Harvard Analysis Framework Moser Framework Gender Analysis Matrix Longwe Framework
Gender-Aware Participatory Design Tools + How to Use Them	Community Representatives Team Mapping: Spatial, Resources, etc. Observing: Space-based, Shadow, Overnight Interviewing: One-on-One, Focus Groups Prototyping: Forms and Processes

CHAPTER	RESOURCES
Sex-Disaggregated Data	Collection and Documentation Guidance
Monitoring + Evaluation	Post-Occupancy Evaluation Guidance
Precedent Snapshots	At least one for each Step of Gender-Integrated Design Process “Walk Throughs” of Challenging Gender Facilitation Situations
Additional Resources	To be determined: <i>CEDPA Gender Training Manual, Oxfam Guide to Gender Analysis Frameworks, Cities and Gender, HCD Toolkit, etc.</i>

Potential Collaborators

There are many organizations throughout the international development field and the foundation world that are deeply committed to gender equality as a strategy to meet development goals, and have elevated gender to be a primary focus of their work. They would be excellent partners to fund and share this work. Women’s human rights and gender-aware organizations are powerful resources for frameworks and processes that support gender equality. They are also well equipped to provide sound guidance on understanding practical and strategic gender needs. And the design activism community is the real agent in this approach, collaborating with designers on the ground and understanding their challenges and resource needs to integrate gender into their work is the keystone of all future research. The following table provides an initial list of those that merit strong partnership, although there are certainly more.

<p>DESIGN ACTIVISM ORGANIZATIONS</p> <ul style="list-style-type: none"> Architecture for Humanity Catapult Design MASS Design Structures for Inclusion (SEED) Habitat for Humanity 	<p>GENDER-AWARE ORGANIZATIONS</p> <ul style="list-style-type: none"> International Center for Research on Women CEDPA Global Fund for Women Women Thrive
<p>FOUNDATIONS</p> <ul style="list-style-type: none"> Gates Foundation IDEO Clinton Foundation Clinton Global Initiative 	<p>GOVERNMENTAL INSTITUTIONS</p> <ul style="list-style-type: none"> USAID Peace Corps World Bank United Nations



**WORKS CITED
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WORKS CITED

- “About Us | Skateistan.” Web. 10 June 2013.
- ACDI/VOCA. “Gender Frameworks for Program Design.” Web. 16 Mar. 2013.
- Andrews, Leann. Interview with Leann Andrews: Gender and Design in Lomas de Zapallal. 2 Apr. 2013.
- Arendt, Hannah. *The Human Condition*. Chicago: University of Chicago Press, 1958. Print.
- Bill and Melinda Gates Foundation. *Creating Gender-Responsive Agricultural Development Programs*. Seattle, WA: Bill and Melinda Gates Foundation, 2012. Print.
- Burra, Sundar, Sheela Patel, and Thomas Kerr. “Community-designed, Built and Managed Toilet Blocks in Indian Cities.” *Environment and Urbanization* 15.2 (2003): 11-32. *eau.sagepub.com*. Web. 10 May 2013.
- “By Industry | Catapult Design.” Web. 12 May 2013.
- Carter, Karin. Interview with Karin Carter, Catapult Design. 7 May 2013.
- . Interview with Karin Carter, Catapult Design. 11 Jan. 2013. Skype.
- Caujolle, Christian. “A Word to the Wise!” *Women Are Heroes*. New York: Abrams, 2012. Print.
- CEDPA. *Gender and Development: The CEDPA Training Manual Series, Volume III*. Washington, DC: Center for Development and Population Activities, 1996. Print.
- Crawford, I.M. *Marketing Research and Information Systems*. Rome: Food and Agriculture Organization of the United Nations, 1997. Print.
- D’Cruz, Celine, and David Satterthwaite. “The Role of Urban Grassroots Organizations and Their National Federations in Reducing Poverty and Achieving the Millennium Development Goals.” *Global Urban Development Magazine* 2.1 (2006): Web. 12 May 2013.
- Danze, Elizabeth. *Architecture and Feminism*. 1st ed. Eds. Debra Coleman & Carol Henderson. New York: Princeton Architectural Press, 1997. Print.
- Disabled World. “Height Chart of Men and Women in Different Countries.” 13 Oct. 2008. Web. 20 Mar. 2013.
- George, Rose. *The Big Necessity: The Unmentionable World of Human Waste and Why It Matters*. New York: Metropolitan Books, 2008. Print.
- Greed, Clara. *Inclusive Urban Design: Public Toilets*. Amsterdam; Boston: Architectural Press, 2003. Print.
- . *Women and Planning: Creating Gendered Realities*. London; New York: Routledge, 1994. Print.
- Habib, Rima R., and Karen Messing. “Gender, Women’s Work and Ergonomics.” *Ergonomics* 55.2 (2012):

- 129-132. *CrossRef*. Web. 13 Dec. 2012.
- Hall, Edward T. *The Hidden Dimension*. New York: Doubleday & Company, Inc., 1966. Print.
- Hayden, Dolores. *Redesigning the American Dream: Gender, Housing, and Family Life*. 2nd ed. Norton: W. W. Norton & Company, 2002. Print.
- "Help Raise \$5,000 for DIY Concrete Park | Skateistan." Web. 10 June 2013.
- Hou, Jeffrey. E-mail Comments on Thesis Final Draft. 31 May 2013.
- IDEO. *Human-Centered Design Toolkit: An Open-Source Toolkit To Inspire New Solutions in the Developing World*. 2nd ed. Canada: IDEO, 2011. Print.
- International Food Policy Research Institute. "Women: Still the Key to Food and Nutrition Security." 2005. Web. 30 Apr. 2013.
- Jarvis, Helen, Jonathan Cloke, and Paula Kantor. *Cities and Gender*. New York: Routledge, 2009. Print.
- JR. "JR: CV and Personal Statement 2004-2012." 2012. Web. 20 Apr. 2013.
- JR, and Marco Berrebi. *Women Are Heroes: a Global Project*. New York: Abrams, 2012. Print.
- Kearney, Deborah S. *Ergonomics Made Easy: a Checklist Approach*. Lanham, Md.: Government Institutes, 2008. Print.
- Koenig, Cynthia. E-mail with Cynthia Koenig, Wello. 21 May 2013.
- Kumar, Somesh. *Methods for Community Participation: a Complete Guide for Practitioners*. New Delhi: Vistaar Publications, 2002. Print.
- LARC 503 Students, and Ben Spencer. "2011-2012 LARC 503 Lomas de Zapallal Site Primer." n. pag. Print.
- "Learning Labs | Catapult Design." Web. 12 May 2013.
- Lindbeck, L., and K. Kjellberg. "Gender Differences in Lifting Technique." *Ergonomics* 44.2 (2001): 202-214. *NCBI PubMed*. Web.
- Lomoy, Jon, and OECD. "Investing in Women and Girls: The Breakthrough Strategy for Achieving All MDGs." 4 June 2010 : Print.
- Matanovic, Milenko, and Matanovic, Katya. "Pomegranate Center Toolkit." 2013 : Print.
- McLeod, Mary. "'Everyday and 'Other' Spaces'." *Gender Space Architecture: an Interdisciplinary Reader*. Eds. Jane Rendell, Barbara Penner, & Iain Borden. New York: Routledge, 2000. 182-202. Print.
- Meyer, Elizabeth. "The Expanded Field of Landscape Architecture." *Ecological Design and Planning*. New York: John Wiley & Sons, 1997. 45-79. Print.
- Mikkelsen, Britha. *Methods for Development Work and Research: a New Guide for Practitioners*. 2nd ed. New Delhi ; Thousand Oaks, Calif: SAGE Publications, 2005. Print.

- Moser, Caroline O. N. *Gender Planning and Development : Theory, Practice, and Training*. London; New York: Routledge, 1993. Print.
- Patel, Sheela. "Tools and Methods for Empowerment Developed by Slum and Pavement Dwellers' Federations in India." *Participatory Learning and Action* (2004): 117-129. Print.
- Percovich, Oliver. Skateistan and Prioritizing Gender. 17 May 2013.
- "Pumping Prosperity | Stanford Social Innovation Review." Web. 11 Mar. 2013.
- Rendell, Jane. "Introduction: 'Gender, Space'." *Gender Space Architecture: an Interdisciplinary Reader*. Eds. Jane Rendell, Barbara Penner, & Iain Borden. New York: Routledge, 2000. 101-111. Print.
- Rothschild, Joan, and Alethea Cheng. *Design and Feminism : Re-visioning Spaces, Places, and Everyday Things*. New Brunswick, N.J.: Rutgers University Press, 1999. Print.
- Shan, Gongbing, and Christiane Bohn. "Anthropometrical Data and Coefficients of Regression Related to Gender and Race." *Applied Ergonomics* 34.4 (2003): 327-337. *ScienceDirect*. Web. 1 Feb. 2013.
- Smith, Cynthia E. *Design with the Other 90%: Cities*. New York: Cooper-Hewitt, National Design Museum, Smithsonian Institution, 2011. Print.
- Spain, Daphne. "Excerpts from 'The Contemporary Workplace'." *Gender Space Architecture: An Interdisciplinary Reader*. Eds. Jane Rendell, Barbara Penner, & Iain Borden. New York: Routledge, 2000. 118-127. Print.
- . *Gendered Spaces*. Chapel Hill: University of North Carolina Press, 1992. Print.
- SPARC. "SPARC and Its Work with the National Slum Dwellers Federation." 23 Feb. 2012. Web. 12 May 2013.
- Spencer, Ben. "2013 503 Syllabus EPA P3 Competition." 7 Jan. 2013. Print.
- . Interview with Ben Spencer: Ergonomics in the Field. 16 Jan. 2013.
- . Interview with Ben Spencer: Gender and Design in Lomas de Zapallal. 4 Apr. 2013.
- . "Pitagoras Submission: SEED Award." 8 May 2012. Print.
- Spencer, Ben, Susan Bolton, and Shara Feld. *EPA P3 Submission: SQWater: Atmospheric Water Resources in the Slums of Lima, Peru*. Seattle, Wash.: University of Washington, 2013. Print.
- Tilley, Alvin R, and Henry Dreyfuss Associates. *The Measure of Man and Woman: Human Factors in Design*. New York: Wiley, 2002. Print.
- Timmons, Heather, and Sruthi Gottipati. "Victim of Gang Rape in India Dies at Hospital in Singapore." *The New York Times* 28 Dec. 2012. *NYTimes.com*. Web. 19 Feb. 2013.
- UN Women. "OSAGI Gender Mainstreaming." Web. 14 Mar. 2013.
- Un-Habitat. *Water and Sanitation in the World's Cities: Local Action for Global Goals*. New York: Routledge, 2003. Print.

- UNICEF. *An Evaluation of the PlayPump® Water System as an Appropriate Technology for Water, Sanitation and Hygiene Programmes*. New York: United Nations Children's Fund, 2007. Print.
- "UNICEF – Water, Sanitation and Hygiene – Water, Sanitation and Education." *UNICEF*. Web. 19 Feb. 2013.
- United Nations. "The Millennium Development Goals Report 2010." 15 May 2010. Print.
- . "United Nations Millennium Development Goals." Web. 12 Dec. 2012.
- "Watch: Why We Need More Women in Science | VitaminW." Web. 20 Mar. 2013.
- "Water Woes – International Museum of Women." Web. 11 Mar. 2013.
- Weisman, Leslie K. *Discrimination by Design: a Feminist Critique of the Man-Made Environment*. Champaign, Ill.: University of Illinois Press, 1994. Print.
- . "'Women's Environmental Rights: A Manifesto'." *Gender Space Architecture: an Interdisciplinary Reader*. Eds. Jane Rendell, Barbara Penner, & Iain Borden. New York: Routledge, 2000. 1-5. Print.
- Wekerle, Gerda R., and Carolyn Whitzman. *Safe Cities : Guidelines for Planning, Design, and Management*. New York: Van Nostrand Reinhold, 1995. Print.
- Whyte, William Hollingsworth. *The Social Life of Small Urban Spaces*. Washington, D.C.: Conservation Foundation, 1980. Print.
- Wilson, Noel. "In-the-Field Prototyping With Jugaad, MacGyver & Me | Catapult Design." *Catapult Design Blog*. 30 Apr. 2012. Web. 12 May 2013.
- Wimble, Katherine. "Gendered Intersections : Differencing Design for More Inclusive Streetscapes." 2010 : Print.
- "Women Farmers: Voiceless Pillars of African Agriculture | NEPAD." Web. 1 Mar. 2013.
- World Bank. "Achieving Gender Equality at the Heart of MDGs | Data." Web. 12 Mar. 2013.
- "World Toilet Day." Web. 1 Mar. 2013.
- Yonder, Ayse, and Marnie Tamaki. *Our Spaces: Grassroots Women Formalize Their Leadership and Access to Essential Services*. New York: Huairou Commission, 2010. Print.



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Image 15: Ergonomic Differences Between Men and Women

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Image 31: Women Are Heroes, JR: Kibera, Kenya

Skateistan

Image 32: Indoor Skatepark: Kabul, Afghanistan

Image 33: Proposed Walled Outdoor Skatepark: Kabul, Afghanistan

Ratna Gill

Image 34: Community Toilet Block: Mumbai, India

Image 35: Community Toilet Block: Mumbai, India

Image 36: Community Toilet Block Residents and Caretakers: Mumbai, India

Catapult Design + Wello

Image 37: Typical Water Carrying: Rajasthan, India

Image 38: Water Resting Place: Rajasthan, India

Image 39: Male Leadership Using Mini-prototype: Rajasthan, India

Image 40: Male Leadership Sharing Mini-prototype with Girl: Rajasthan, India

Image 41: Male Leadership Sharing Prototype with Women: Rajasthan, India

Image 42: Community Meeting Discussing Mini-Prototype: Rajasthan, India

Wello

Image 43: Wello WaterWheel 2.0

Leann Andrews

Image 44: Community Site Conditions: Lomas de Zapallal, Peru

Image 49: Pitagoras Park Final Design: Lomas de Zapallal, Peru

Ben Spencer

Image 45: Pitagoras School Existing Conditions: Lomas de Zapallal, Peru

Image 46: Pitagoras Park Design Proposal 1: Lomas de Zapallal, Peru

Image 47: Pitagoras Park Design Proposal 2: Lomas de Zapallal, Peru

Image 48: Pitagoras Park Design Proposal 3: Lomas de Zapallal, Peru

Image 50: Park Site Existing Conditions: Lomas de Zapallal, Peru

Image 51: Park Site Existing Conditions: Lomas de Zapallal, Peru

Image 52: Park Site Design Group #2 – Men: Lomas de Zapallal, Peru

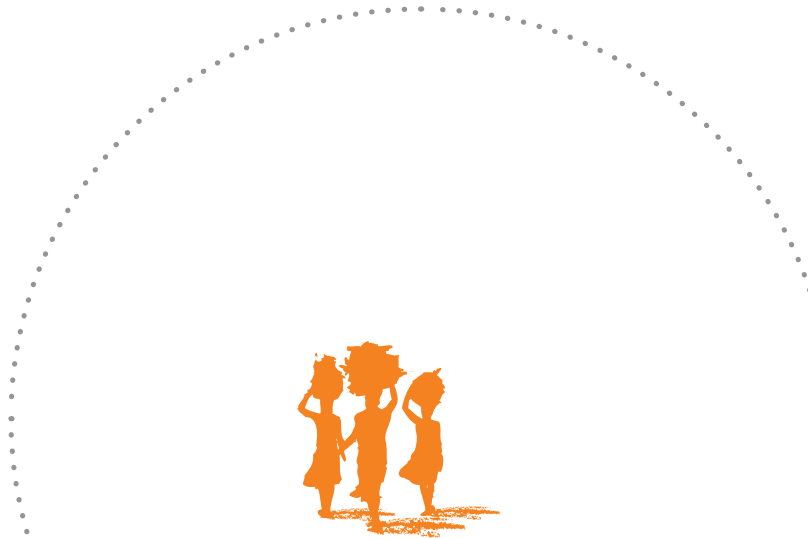
Image 53: Park Site Design Group #3 – Men: Lomas de Zapallal, Peru

Image 54: Park Site Design Group #5 – Women: Lomas de Zapallal, Peru

Image 55: Park Site Design Group #7 – Women: Lomas de Zapallal, Peru

Jordan Lewis

Image 56: Final Studio Design: Lomas de Zapallal, Peru



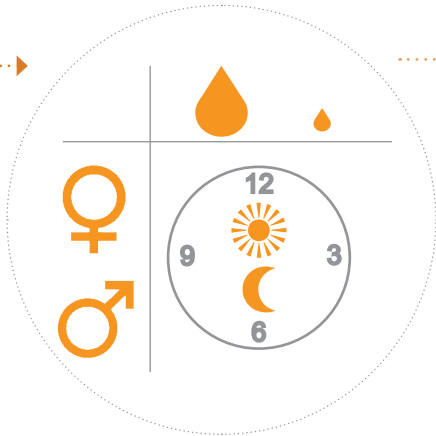
APPENDIX

HARVARD ANALYTICAL FRAMEWORK

1 ACTIVITY PROFILE	WOMEN GIRLS	MEN BOYS	
	REPRODUCTIVE ACTIVITIES Water-related Fuel-related Food preparation Child care Health-related Other PRODUCTIVE ACTIVITIES Agriculture Income generating Employment Other Include: RECREATIONAL ACTIVITIES		
2 ACCESS + CONTROL PROFILE	ACCESS WOMEN MEN	CONTROL WOMEN MEN	
	RESOURCES Land Equipment Labor Cash Other BENEFITS Outside income Asset ownership Basic needs Education Political power Other		
3 INFLUENCING FACTORS	IMPACT	OPPORTUNITY	CONSTRAINTS
	Political Economic Cultural Educational Environmental Legal International Other		
4 PROJECT CYCLE ANALYSIS	WOMEN GIRLS	MEN BOYS	
	Project Planning Monitoring + Evaluation Mechanisms		Used with permission from CEDPA <i>Gender and Development: The CEDPA Training Manual Series Volume III.</i> Washington, DC: 1996. pages 58-60



SEX DISAGGREGATE ALL DATA



Identify activities based on gender as well as time of day and seasonality.

SPATIALIZE DATA

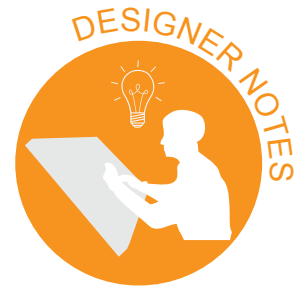
Map spatial relationships of activities based on gender to identify overlaps, gender-specific spaces.



- women
- men
- more time
- less time

Map and spatialize resources based on gender access and control

ENGAGE PARTICIPATORY DESIGN TECHNIQUES AND FIELD TOOLS TO OBTAIN DATA



Strong awareness tool to support seeing gender roles as well as resource control and allocations.

Likely unrealistic for a design team to undertake all analysis

A thorough reading of Framework before and throughout the a project cycle could still help to open designer's eyes.

If time limited, select a few key aspects that are particularly pertinent to the design intervention

Particularly useful for siting interconnected resources and identifying additional program



Supports Moser Framework

Benefits from Participatory Design field tools

MOSER FRAMEWORK

	TOOL	TECHNIQUE	PURPOSE
1	GENDER ROLES IDENTIFICATION	Identification of P/R/CM/CP roles of men and women + equal allocation of resources for work done in these roles	To ensure equal value for women and men's work within the existing GDOL
2	GENDER NEEDS ASSESSMENT	Assesment of different practical and strategic gender needs	To assess those needs relating to male-female subordination
3	DISAGGREGATED DATA AT THE HOUSEHOLD LEVEL	Gender disaggregated data	To ensure indentification of control over resources and power of decision-making within the household
4	INTERSECTORALLY LINKED PLANNING	Mechanisms for insectoral linkages between economic, social, spatial, development planning	To ensure better balancing of tasks within the existing gender division of labor
5	WID/GAD POLICY MATRIX	Range of policy approaches: welfare; equity; anti-poverty; efficiency; empowerment	Performance indicator to measure how far interventions reach PGNs and SGNs
6	GENDER PARTICIPATORY PLANNING	Mechanisms to incorporate women and representative gender-aware organizations into the planning process	Ensure SGNs are incorporated into the planning process

GENDER ROLES P - Productive
R - Reproductive
CM - Community Management
CP - Community Politics

GDOL Gender Division of Laobr

REFER TO HARVARD ANALYSIS FRAMEWORK

SEX DISAGGREGATE ALL DATA



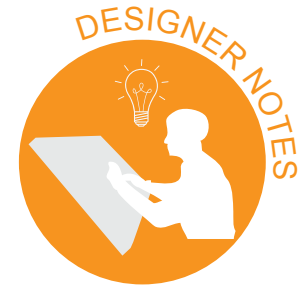
PLAN FOR IMPACT


Understanding the impact your design interventions will have on the division of labor is **KEY**. While benefits or efficiencies may be gained, they may be offset by additional work often heavily weighted on women due to their multiple roles.


CONSULT EXPERTS


Looking to local gender-aware organizations will be necessary to understand women's strategic needs and what type of indicators are appropriate for monitoring success.


GENDER NEEDS PGN - Practical Gender Needs
SGN - Strategic Gender Needs



 Directly addresses the subordination of women, requiring an analysis of Practical and Strategic Gender Needs

 Goes much farther and deeper than Harvard Analysis Framework

 Lengthy in scope, a design team may not be able to complete all aspects thoroughly

 Calls on local gender-aware organizations to inform and support the project

 Design team will benefit from engaging gender-aware organizations in the beginning of any project to provide critical framing and data









Works off of Harvard Analysis Framework

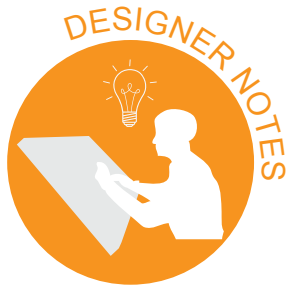
Benefits from Participatory Design field tools

Moser, Caroline O. N. *Gender, Planning, and Development: Theory, Practice, and Training*. London; New York: Routledge, 1993. pages 91-107

GENDER ANALYSIS MATRIX

	WOMEN	MEN	HOUSEHOLD	COMMUNITY
LABOR				
TIME				
RESOURCES				
CULTURE				

Used with permission from CEDPA
*Gender and Development: The
 CEDPA Training Manual Series
 Volume III.* Washington, DC: 1996.
 page 63



👍 Does not require extensive data collection required of other methods

👍 Can (and should) be used multiple times throughout the project to gauge impact

👍 “?” Help reveal unknowns that should be tended to as the design process unfolds

👍 Holds team accountable to effects they are having. Supports gender transformative process.

SAMPLE MATRIX

PROJECT:
Trained women as community-based distributors (CBDs) of family planning.

PROJECT PURPOSE:
to increase women’s access to contraception and to enhance status and decision-making



Works off of Harvard Analysis Framework and Moser Framework

Benefits from Participatory Design field tools

Supports Longwe Framework

	WOMEN	MEN	HOUSEHOLD	COMMUNITY
LABOR	<ul style="list-style-type: none"> ? new employment responsibilities (CBDs) 	<ul style="list-style-type: none"> ? increased work at home for husbands of CBDs? 	<ul style="list-style-type: none"> ? customary chores of CBDs may be neglected or shifted to other family members 	<ul style="list-style-type: none"> + women have more time available to contribute to community projects
TIME	CBD Workers: <ul style="list-style-type: none"> - time taken by training - time needed for new activity Clients: <ul style="list-style-type: none"> + time saved from waiting at FP clinic 	<ul style="list-style-type: none"> ? spend more time on household tasks 	<ul style="list-style-type: none"> - CBDs have less time for home-based work + other women in the community have more time for household, other activities because less time spent at FP clinic 	<ul style="list-style-type: none"> - CBDs have less time available for community projects
RESOURCES	<ul style="list-style-type: none"> + new income from sale of commodities (CBDs) ? commodities from CBDs less expensive than from commercial locations, more expensive from public clinics 	<ul style="list-style-type: none"> ? more financial resources 	<ul style="list-style-type: none"> + better health because spacing between pregnancies + more resources available for education, clothing, food because of better spacing 	<ul style="list-style-type: none"> + better access to family planning commodities
CULTURE	<ul style="list-style-type: none"> + empowerment because of ability to control fertility + increased status in community (CBDs) 	<ul style="list-style-type: none"> - uneasy about women having easy access to FG methods such as pills - opposition to women making decisions about FP 	<ul style="list-style-type: none"> + better access to family planning commodities 	<ul style="list-style-type: none"> ? traditional roles and responsibilities challenged

Used with permission from CEDPA
Gender and Development: The CEDPA Training Manual Series Volume III. Washington, DC: 1996.
page 62

POMEGRANATE CENTER STEERING COMMITTEE

The Pomegranate Center champions an effective model of community leadership to expand ownership and project work beyond the core group of project drivers. The following roles are specific to their work designing and constructing community gathering places in the United States. While not specifically focused on diversity, this broadening of leadership is a strong model for building a diverse Community Representatives Team to ensure a gender-balanced approach

LEADERSHIP TEAM

The leaders of the project. They facilitate community meetings, lead design session, and manage the construction. They provide ongoing leadership and coordination from beginning to end, working closely with the project grant recipient.

GRANT RECIPIENTS' TEAM

The project's long-term 'owners'. They will coordinate with the Leadership Team to: help shape project criteria, assist with Steering Group and Community Meetings, recruit and coordinate with local volunteers, help with outreach and inform the project's neighbors, coordinate volunteer activities during the 4-day construction, and help organize a Friends of the Gathering Place group to ensure the project's long term success.

STEERING COMMITTEE

A team of community members (approximately 12 individuals) who agree to co-convene the project, assisting the leadership team with local knowledge and guidance. This group consists of individuals who are community-minded, government, business, and non-profit leaders. Steering group members are also responsible for community outreach, assisting with project logistics, PR coordination and being active advocates for the project

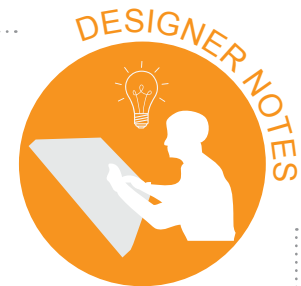
Steering Committee Job Description

Goal: To support a successful community project

- Attend up to 6 Steering Group meetings
- Participate in ad-hoc small groups to accomplish strategic tasks between the regular meetings
- Develop and implement outreach methods
- Personally invite community residents to community meetings and attend those meetings
- Provide timely and constructive feedback and help evaluate pros and cons of different proposals
- Commit to working with the basic ground rules of mutual respect, willingness to work with new information, and a constructive attitude
- Agree to project criteria
- Provide the project with adequate volunteers
- Coordinate in-kind donations of materials, equipment, expertise, food, etc.
- Serve as an advocate for the project

Used with permission from
Pomegranate Center:
Pomegranate Center Toolkit.
Seattle: 2013

ADAPTING FOR DEVELOPING A DIVERSE COMMUNITY REPRESENTATIVES TEAM FOR A GENDER-BALANCED DESIGN PROCESS



▶ In this context, this is the **DESIGN TEAM**. As outside experts, they share leadership and coordination with the



▶ **COMMUNITY LEADERSHIP TEAM** who are the project's "owners". They assist with Community Representatives Team and Community Meetings, recruit and coordinate local volunteers. They shape the draft goals and program with the



▶ **DIVERSE COMMUNITY REPRESENTATIVES TEAM** who are gender-balanced and represent diverse and underrepresented sectors of the community.



POTENTIAL MEMBERS:
Gender-aware organization
Parents group leadership
Cafe or market stall owner
Ethnicity and age diverse representation



Potential Roles

Goal: To set the stage for a successful design [by addressing gender inequality] through ensuring gender-balanced participation throughout the design process

- Help to draft initial goals and program elements that include gender sensitivity
- Participate in ad-hoc small groups to accomplish strategic tasks between community meetings
- Personally invite community residents to community meetings and attend those meetings
- Provide guidance on best times and locations for community meetings to ensure broadest participation
- Revise goals and design program with Community Leadership Team and Design Team to reflect broader gender needs and opportunities as revealed in community meetings (participatory site analysis and design)
- Provide the project with adequate volunteers as needed
- Help coordinate in-kind donations of materials, equipment, expertise, food, etc. as needed
- Serve as an advocate for the project
- Commit to working with basic ground rules of mutual respect, willingness to work with new information, and a constructive attitude

CEDPA CHECKLIST FOR BUILDING GENDER EQUITY INTO PROJECT DESIGN + IMPLEMENTATION

PROJECT DESIGN + PREPARATION

PREPARATION

1. Which population groups are served by the project (women only, men only, men and women, other groups)?
2. What information is already available about each population group and women in particular?
3. Has information on women's and men's work in the household and community been collected? Is it adequate for the purposes of the project?
4. Has there been consultation with people whose lives will be affected by the project, and what attention has been given to women in this process?
5. Are women involved at all levels in the planning and implementation of the project?

OBJECTIVES + ACTIVITIES

1. What are the objectives of the project?
2. Have both men's and women's opinions been sought in the definition of objectives?
3. Are women's and men's roles reflected in the project's objectives?
4. How do the objectives address the needs and concerns of women and men?
5. What programs, activities, and services does the project have to ensure that gender needs and concerns will be addressed?
6. How will the inclusion of women help to achieve the objectives?
7. How will the activities and services include women's participation?
8. In what ways will the activities and services benefit women?
9. How will women have access to the opportunities and services which the project provides (training, agricultural extension, new allocation of land rights, credit arrangements, membership in cooperatives, employment during construction and operation, etc.)?
10. Are project resources adequate to provide these services for women?
11. Is the project likely to have adverse effects for women?
12. What social, legal, and cultural obstacles could prevent women from participating in the project?
13. What plans have been developed to address these obstacles?

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See Chapter 12 for a revised Checklist for Integrating Gender into the Design Process

PROJECT IMPLEMENTATION

PROJECT PERSONNEL

1. Are project personnel familiar with gender issues?
2. Are project personnel willing to seek women's participation in implementing the project?
3. To what extent are the female personnel experienced in delivering services to men?
4. To what extent are the male personnel experienced in delivering services to women?
5. If approach by male staff is not culturally acceptable, will the project make provision for female staff intervention?
6. Are female personnel available for technical staff positions?

OPERATIONS + MAINTENANCE

1. How will the project ensure that women have equitable access to, and control of, material and technical resources and technologies?
2. How will women participate in, and contribute to, the maintenance of equipment? Will training be provided?
3. Through what organization(s) will the women be involved?
4. How will the project affect women's time?
 - (a) Will their workload increase/decrease as a result of innovation or changes, (mechanization, new agricultural inputs and cropping patterns, withdrawals of labor by other household members, changes in distance to farms, workplaces, water supply, firewood supply, etc.)?
 - (b) If their workload is decreased, does this involve loss of income for women?
5. Do the technologies introduced by the project require changes in women's work patterns?



INSTITUTIONAL FRAMEWORK

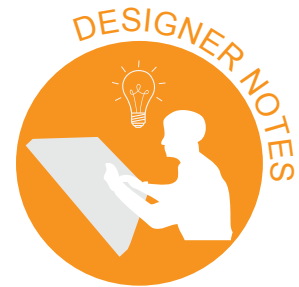
1. Does the executing agency demonstrate gender sensitivity?
2. Does the executing agency have adequate power to obtain resources from its own and other institutions to enhance women's participation in the project activities?
3. Can the executing agency support and protect women if the project has a harmful or negative impact?


MONITORING + EVALUATION


1. Are separate data collected on women and men?
2. Does the project have an information system to detect and evaluate the effects of the project on women and men separately?


LONGWE FRAMEWORK | WOMEN'S EMPOWERMENT FRAMEWORK

	LEVEL OF RECOGNITION	-	N	+	
 	CONTROL	Equality of control over factors of production and distribution of benefits, without dominance or subordination.			
	PARTICIPATION	Women's equal participation in decision- and policy-making at every stage of program development and at every locus of program - from the community to the highest policy level.			
	CONSCIENTISATION	Belief in sexual equality: that gender roles can be changed and that the division of labor should be equal, fair, and agreeable, without domination.			
	ACCESS	Women's access to factors of production such as land, labor, credit, training, marketing facilities, public services, and benefits on an equal basis with men. Reforms of law and practice may be prerequisites for such access.			
	WELFARE	Meeting women's material needs, such as food, income, and medical care equal to those of men. This does not include the process of empowering women to meet these needs.			



 Focuses on goal of intervention (not process). Useful for goal and program definition.

 Defines goals of women's empowerment to be much greater than meeting basic welfare needs

 Limited by focus on women and not gender relations, but can be adapted.



Best used in tandem with process-based Frameworks: Harvard Analysis Framework, Moser Framework, and Gender Analysis Framework

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