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Women’s Work: An Eco-Feminist Approach to Environmental Design

Women spend an average of 260 minutes on unpaid domestic labor daily (as compared to 80 minutes for men)—an imbalance that grows more pronounced in developing nations. [1] These daily tasks and accompanying decisions (such as cooking, cleaning, and caretaking) are often overlooked and undervalued in societies worldwide; however, what we choose to eat, how we clean our homes, and the lessons we teach our children can have significant impacts on greenhouse gas emissions, infrastructure performance, and overall environmental health and sustainability. The full import of domestic decisions on sustainability is evidenced in studies on the relationship between diet and climate change, which have demonstrated that the action with the single greatest impact on our environmental footprint is to eliminate beef from our diet, more so than reducing vehicle miles traveled or even long-distance flights. [2] Such findings demonstrate the power of an informed approach to daily “housekeeping.”

Historically, the links between domestic practices and sustainability were better known. US propaganda during the Second World War firmly planted domestic responsibilities on women to support wartime efficiency efforts, including the management of household resources such as food and fuel. During the war, the government declared “home production and consumption to be political activities” and described “the Wartime Homemaker as a pivotal component not only of World War II but also of the development of the United

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[1] Data from the Organization for Economic Co-operation and Development (OECD), [link](#).

[2] Gidon Eshel, Alon Shepon, Tamar Makov, Ron Milo, “Land, Irrigation Water, Greenhouse Gas, and Reactive Nitrogen Burdens of Meat, Eggs, and Dairy Production in the United States,” *Proceedings of the National Academy of Sciences of the United States of America*, vol. 111, no. 33 (August 19, 2014): 11,996–12,001.



Brett Snyder and N. Claire Napawan, “Garbagification,” 2014. Courtesy of the artists.

States into a superpower.” [3] Even today, the United States Social Security Administration’s threshold for poverty relies on an assumption that each household has a wife who is “a careful shopper, a skillful cook, and a good manager who will prepare all the family’s meals at home.” [4] Because these domestic activities represent undervalued (and predominantly unpaid) contributions to society, they also highlight persistent gender inequities in the United States.

Following the war, efforts at reducing the “drudgery” of housework through technologically innovative household appliances, in combination with post-Depression capitalist policies to encourage continued consumerism, created a market for some of the first mass-produced domestic objects; they also reveal the inextricable ways in which gendered consumption and domestic labor are linked in the United States. As Debra Thimmesch argues, “Advertisers targeted homemakers in an effort to convince them that shopping for the home and the family was an important new component of their domestic labor.” [5] But while these innovations sought to simplify women’s unpaid work (and ostensibly free up time for paid work), many of the new domestic tools came with an increased use of environmental resources (such as the increased energy consumption of single-use items and mechanized laundry and dishwashing). This demonstrates an important shift in the cultural imperative of domestic work in the United States postwar, and one with significant relevance to sustainability—wartime domestic activities were promoted as resource-*efficiency* efforts, while their postwar parallels were aimed at consumption. At the same time, postwar development largely revolved around a new automobile-dependent pattern of sprawling tracts of single-family homes, with supermarkets and shopping malls (the predominant sites of domestic consumption) relegated to the edges rather than the center of civic life. [6] Today, with women comprising almost half the US workforce, the environmental consequences of undervaluing domestic work—and of removing these practices, quite literally, to the periphery—have expanded. [7] In addition to timesaving devices, many families now rely on time-saving prepackaged meals, which replace the labor of cleaning and preparing foods at home with energy-intensive industrial processes, require refrigeration or freezing during their transport and storage,

[3] Amy Bentley, *Eating for Victory: Food Rationing and the Politics of Domesticity* (Urbana: University of Illinois Press, 1998), 4.

[4] Gordon M. Fisher, “The Development and History of Poverty Thresholds,” *Social Security Bulletin*, vol. 55, no. 4 (Winter 1992): 43–46.

[5] Debra Thimmesch, “Burning Down the House: Resisting the Commodification of Motherhood and Domesticity,” *Blind Field* (September 28, 2016), [link](#).

[6] Gregory Donofrio, “Attacking Distribution: Obsolescence and Efficiency of Food Markets in the Age of Urban Renewal,” [Journal of Planning History](#), vol. 13, no. 2 (May 2014): 136–159.

[7] “Women in the Labor Force in 2010,” *United States Department of Labor*, [link](#).



American propaganda posters from World War II. Left: Alfred Parker, “We’ll Have Lots to Eat This Winter, Won’t We Mother?”: Grow Your Own, Can Your Own,” United States Office of War Information [OWI], poster no. 57. Right: “Food is a Weapon: Don’t Waste It!” OWI, poster no. 58. Both posters were published by the Government Printing Office, Washington DC, 1943.

and increase the total energy, water, and waste burdens of daily meals. [8]

Despite the clear impacts of domestic practice on sustainability, it remains an underexplored approach in design and planning. In fact, we argue environmental design has *neglected* to address domestic practices (and women’s roles in them) as sites through which to address sustainability, and potentially gender inequity as well. The feminist scholar Sherilyn MacGregor describes the politics of normative “green thought” more bluntly: “There is a pervasive blindness to gender within mainstream environmental disciplines.” [9] In response, we ask the following questions in this piece: How would our definition of sustainability change if seen through a lens of ecofeminist theory? What precedents exist for addressing sustainability in the built environment through domestic practice? And lastly, what implications might these theories and precedents have on contemporary practice?

The Limits of Sustainability Without Addressing Feminism

WHY SHOULD WE WANT TO SUSTAIN THE KIND OF WORLD
THAT HAS BEEN SO BRUTAL AND UNJUST FOR WELL OVER HALF
OF THE POPULATION?

—SHERILYN MACGREGOR, “FEMINIST PERSPECTIVES ON SUSTAIN-
ABILITY” [10]

The current sustainability agenda in environmental design can be traced to the 1987 Brundtland Commission, in which the term “sustainable development” was first defined, tasking environmental designers to address “the needs of the present without compromising the ability of future generations to meet their own needs.” [11] An earlier threshold moment in environmental design occurred twenty years prior to the commission, when a group of landscape architects assembled by the Landscape Architecture Foundation gathered to discuss their “shared concern for the quality of the American environment and its future.” The result of this gathering, a “Declaration of Concern” signed in 1966, stated, “We are concerned over misuse of the environment and development which has lost all contact with the basic processes of nature... Those who plan for the future must understand natural resources and processes. These are the basis of life and the prerequisite for planning the good life.” [12] Though the term *sustainability* is not explicitly used in their declaration, environmental designers following the declaration’s charge, and using new planning tools like geographic information systems (GIS), designed development with an effort to preserve natural resources—some of the first models of sustainable development in the United States. While these new landscape-architecture-driven models of development integrated concerns of water quality and wildlife habitat, they proved reluctant to radically question patterns related to domestic life. The distribution of homes and supermarkets, for example, still followed prevailing market and zoning logic.

Latent in the declaration’s arguments for a sustainable approach to design is a set of relationships that are the basis of a feminist critique of modern environmentalism: the narrative of man vs. nature. Ecofeminist philosopher Karen J. Warren has noted the social constructions of man-nature dichotomies

[8] Sherilyn MacGregor, “Feminist Perspectives on Sustainability,” in *Introduction to Sustainable Development*, ed. David V. J. Bell and Yuk-kuen Annie Cheung (Oxford: Eolss Publishers, 2009), 470.

[9] Sherilyn MacGregor, “A Stranger Silence Still: The Need for Feminist Social Research on Climate Change,” *Sociological Review*, vol. 57, issue 2 (October 2009): 123.

[10] MacGregor, “Feminist Perspectives on Sustainability,” 469.

[11] United Nations, “Our Common Future: Report of the World Commission on Environment and Development” (New York: United Nations, 1987): 16, [link](#).

[12] “Declaration of Concern,” Landscape Architecture Foundation, [link](#).

and their negative impact on both women and the environment. Warren's seminal text *Ecofeminist Philosophy* (2000) suggested that "women and nature have been constructed as Other in patriarchal societies" and that the dichotomies of man-woman, culture-nature, mind-body, and reason-emotion in Western society have led to a dominance of supposedly "male" characteristics. More importantly, she argues, it has led to a "logic of domination."

[13] Landscape architect Elizabeth Meyer has developed this argument more closely in relationship to the built environment, observing that "the continuation of the culture-nature and man-nature hierarchies by designers when they describe the theoretical and formal attributes of their work perpetuates a separation of human life from other forms of life, vegetal and animal. This separation places people outside the ecosystems of which they are a part and reinforces a land ethic of either control or ownership instead of partnership and inter-relationship." [14] Reformulating our relationship with nature is central to a feminist critique of contemporary sustainability discourse: by locating ourselves "outside" of our ecosystem, we no longer perceive that we rely on it for our daily domestic needs but rather imagine that we satisfy those needs through our own invention and technological mastery.

In 2016 the Landscape Architecture Foundation organized a retrospective summit to reevaluate the relevance of the original Declaration of Concern. Gina Ford provided one of the twenty-eight written responses: "Fifty years ago, the voice of our profession was eerily prescient, undeniably smart, and powerfully inspired. It was also, let's admit it, almost entirely white and male." Ford follows her critique with a new call for the profession: a need to diversify the ranks, to design with humanity, and to cultivate an ecosystem. Her definition of *ecosystem* is a socio-ecological one: "Truly sustainable development requires careful orchestration of complex layers of technical expertise as well as the including of many distinct voices and constituencies," [15] which would include, among others, the voice of the household worker.

Tracing Ecofeminism and Sustainability

A SUSTAINABLE SOCIETY WOULD NEED TO INCORPORATE THE HIDDEN WORK, INTERESTS, AND EXPERIENCE OF WOMEN.

—MARY MELLOR, "SUSTAINABILITY: A FEMINIST APPROACH" [16]

The rise of the ecofeminist movement in the 1970s and '80s sought to connect the feminist and environmental movements. "If our survival on this planet is, indeed, threatened," writes feminist sociologist Margrit Eichler, "what help will social justice be to us as we lie gasping for a clean breath of air on our devastated earth? Is it worth continuing to do feminist work given the immediacy and overriding importance of environmental issues?" [17] The term *ecofeminist* was first introduced by French activist Françoise d'Eaubonne in *A Time for Ecofeminism* (1974). Her argument came to be seen as an essentialist framework for ecofeminism, asserting that as child-bearers and -rearers, women have a unique awareness of the needs of future generations. d'Eaubonne believed that "male power over women is to blame for over-population and, by extension, the overconsumption of natural resources." [18]

[13] Karen J. Warren, *Ecofeminist Philosophy: A Western Perspective on What It Is and Why It Matters* (Lanham, MD: Rowman and Littlefield Publishers, 2000), 1.

[14] Elizabeth Meyer, "The Expanded Field of Landscape Architecture," in *Ecological Design and Planning*, ed. George F. Thompson and Frederick R. Steiner (New York: Wiley, 1996): 71.

[15] Gina Ford, "Into an Era of Landscape Humanism," [link](#).

[16] Mary Mellor, "Sustainability: A Feminist Approach," in *Environmental Planning and Sustainability*, ed. Susan Buckingham-Hatfield and Bob Evans (New York: John Wiley & Sons, 1996), 69.

[17] Margrit Eichler, *Change of Plans: Toward a Non-Sexist Sustainable City* (Toronto: University of Toronto Press, Toronto, 1996), 1.

[18] MacGregor, "Feminist Perspectives on Sustainability," 472.

This argument for the connection between women and environmentalism stems from a concept of the feminine as being “closer to nature,” an oversimplification that is evidently flawed—linking women to sustainability for reasons of childbearing alone neglects the impact of sustainability on millions of women (and vice versa) who do not bear children and reifies man-woman, culture-nature dualisms. [19]

In contrast, the work of Ellen Swallow a century prior draws more vital linkages between women and sustainability. Swallow was the first female instructor at the Massachusetts Institute for Technology and is credited by some with the founding of ecological sciences in the 1870s. Her work focused on demonstrating the connections between domestic practices and environmental conditions, and she believed that women—in their societal role as housekeepers—are most knowledgeable about the care and use of basic resources and the ones that need to be educated most as environmental stewards. The term *ecology* (like *economy*) is derived from the Greek *oikos*, meaning “household,” and early advocacy for sanitation programs and urban beautification projects by Swallow and others often referred to these urban projects as “municipal housekeeping.” [20]

Domestic Ritual: Case Studies in Ecofeminist Environmental Art

I AM AN ARTIST. I AM A WOMAN. I AM A WIFE. I AM A MOTHER.
(RANDOM ORDER). I DO A HELL OF A LOT OF WASHING, CLEAN-
ING, COOKING, RENEWING, SUPPORTING, PRESERVING, ETC.
ALSO (UP TO NOW) SEPARATELY I ‘DO’ ART. NOW I WILL SIMPLY
DO THESE MAINTENANCE EVERYDAY THINGS, AND FLUSH THEM
UP TO CONSCIOUSNESS, EXHIBIT THEM, AS ART.

—MIERLE LADERMAN UKELES, *MAINTENANCE ART*, 1969 [21]

While their counterparts bulldozed earth and piled stone in the open deserts of North America’s Southwest, an often overlooked pair of female environmental artists similarly rejected the white-walled galleries of formal art society in the 1970s, turning their attention instead to their own domestic and feminine lives, seeking to elevate housework to the level of performance art. San Francisco-based Jo Hanson and New York City-based Mierle Laderman Ukeles were pioneers of addressing issues of feminism and domesticity in their environmental art; moreover, Ukeles’s and Hanson’s work also tackled the impact of domestic practice on urban and environmental health.

This work began for Hanson in the early ’70s as a product of cleaning her home. The very act of sweeping the city streets outside her house became a means of linking her domestic actions with her neighbors, and the majority of her environmental art operated in the sphere of daily ritual and performance art. But it was the sophisticated manner in which she shared these acts with community members and integrated them into civic events—displaying the contents of her collected sweepings at schools, churches, and even City Hall—that elevated her work from domestic activity to public project. In her 1980 project *Public Disclosure: Secrets from the Street*, Hanson exhibited ten years’ worth of street litter at San Francisco City Hall. This display was coupled with slide

[19] This argument also ignores the commodification of motherhood, avoids the sustainability implications of population growth, and makes a false assumption that all mothers act in sustainable ways.

[20] MacGregor, “Feminist Perspectives on Sustainability,” 471.

[21] From Mierle Laderman Ukeles, *Maintenance Art*, 1969.



Jo Hanson, *Art That's Sweeping the City*, 1980. Photograph by Jim Weeks. Courtesy of Dr. Leni Reeves and Zack Schlesinger.

shows depicting the collection and sorting process, which involved community participation and city staff. Thus the process through which refuse was transformed into an artwork became an extension of the project itself. Later in her career, Hanson championed the artist-in-residence program at the Sanitary Fill Company (now managed by Recology), developing the program that continues to house three artists annually charged with promoting public awareness of environmental issues. [22]

Roughly concurrent with Hanson's work, Ukeles was tackling similar connections between domestic ritual and the creative process. Her 1969 manifesto, *Maintenance Art*, established a new genre of practice that turned to the various tensions wrapped up in being a female artist: Ukeles wrestled with the value of her actions as either domestic or artistic. By elevating everyday maintenance actions into performance art, Ukeles's work was able to connect the private and public spheres, the domestic and the systematic, communities and their urban infrastructure. [23] Her 1978 performance piece *Touch Sanitation* resulted from a series of interviews with New York City sanitation workers, which revealed their dissatisfaction with the general public's negative perception and treatment of sanitation workers. *Touch Sanitation* included an eleven-month period in which Ukeles walked the five boroughs of New York City, shaking hands and thanking sanitation workers as she encountered them. [24] In this project, Ukeles sought to recognize and elevate the work of individuals for their contribution to an important system of environmental maintenance. She embraced the infrastructure of waste management as a performance artwork itself, and the maintenance crew as both participants *and* community members.

The work of Hanson and Ukeles shares an ambitious vision of connecting art, community, environmental stewardship, and domestic ritual along with the feminine lives intertwined with these rituals. Thirty years later their work still provides relevant precedents for contemporary designers seeking sustain-

[22] "Artist in Residence Program," Recology, [link](#).

[23] See Mark D. Feldman, "Inside the Sanitation System: Mierle Ukeles, Urban Ecology, and the Social Circulation of Garbage," *Iowa Journal of Cultural Studies* 10/11 (Spring/Fall 2009): 42–56.

[24] Nato Thompson, *Living as Form: Socially Engaged Art from 1991–2011* (New York: Creative Time, 2012).



Mierle Laderman Ukeles, *Touch Sanitation Performance*, 1979-80; "Handshake Ritual" with workers of New York City Department of Sanitation. Courtesy the artist and Ronald Feldman Gallery, New York.

ability through the embrace of domestic practice. Both women understood broader definitions of community than is common today, including those who serve the community (whether artists, city agencies, or maintenance crews) as a *part* of that community. Both embrace process—even a kind of metadesign—as a critical component of their creative work. [25] Furthermore, Hanson and Ukeles embedded their explorations of infrastructure within common urban sites—homes, streets, and civic centers. In contrast to the tendency to address complex environmental problems using ever newer technologies, which often come with their own problems (e.g., designing larger and more sophisticated infrastructural systems supports greater waste generation), these artists looked to the patterns, habits, and awareness embedded in everyday acts that could prevent the issue from occurring in the first place (e.g., creating awareness of infrastructure and waste, and the impact of domestic habits on these systems). This ecofeminist approach is indispensable if we are to meaningfully tackle the complex environmental problems that persist in our built environments today.

[25] Borrowing from Ehn's definition, the principles of "metadesign" include: "to defer some design and participation until after the design project, and open up for use as design, design at use time or 'design-after-design.'" Such a practice enables community participation to more actively contribute to design outcomes and merges monitoring and maintenance into the design process itself. From Pelle Ehn, "Participation in Design Things," in *Proceedings of the Tenth Anniversary Conference on Participatory Design 2008* (Bloomington, IN: ACM Press, 2008), 92.

What We Design: Implications for Contemporary Practice

Challenges to urban sustainability are too often described in terms that position humans as standing outside the nature they seek to protect; in response, engineered or other techno-science solutions become predominant. The current enthusiasm for (and claims to sustainability made on behalf of) "smart cities" and driverless cars exemplify this approach. These solutions often mask their actual function—creating another thing to be bought and later disposed of—by design. In this way they avoid fully engaging with the consequences of our domestic needs for warmth, food, water, and waste disposal from within the ecosystem rather than as master of the system.

Where sustainability is defined as a socio-ecological issue rather than a techno-managerial issue, daily habits and domestic practices can be understood as both part of the problem and part of the solution. Both Ukeles and Hanson sought to make visible the systems that support urban living, and in doing so the links between "women's work" and sustainability became clear.



Mierle Laderman Ukeles, *Hartford Wash: Washing, Tracks, Maintenance*, 1973; Part of the *Maintenance Art* series, 1973-1974; Performance at Wadsworth Atheneum, Hartford, CT. Courtesy the artist and Ronald Feldman Gallery, New York.

What, then, might environmental designers do to work from a place within the ecosystem, instead of from a position of mastery and dominance that relies on large-scale technological solutions? How might designers bring the insights of ecofeminist theorists and artists into their own professional practices?

The precedents discussed here suggest that contemporary practice must focus not only on further innovations in technology but also on innovation in process. From Swallow's work in the 1870s to Ford's writings almost a century and a half later, a complex, interrelated, and layered narrative of polyphonic process, dissolution of hierarchy, and the formation of radical partnerships emerges. Translated into contemporary practice terms, the areas for innovation lie in the realms of process and public engagement, maintenance and monitoring, and communications.

Public engagement: By engaging community members in the design process, environmental designers simultaneously create opportunities for design to be informed by the patterns and habits of everyday life *and* to educate the public about the potential for more sustainable patterns and habits. To achieve the full potential of participatory design, designers must radically embrace the end user as part of the designed ecosystem and create innovative structures for participation to occur. In this sense, the design of any sustainable environment is as much about the design of a robust and engaging public process as it is about the formal, ecological, or technical design solutions. Practitioners such as Konkuey Design Initiative and BASE explore such practices in their work, with a focus on innovation in public outreach, bringing design workshops to farmers markets, street fairs, and storefronts, and thereby altering the hierarchies embedded in normative public outreach processes.

Monitoring and maintenance: Likewise, this model of sustainable design positions the ongoing maintenance of the environment as an integral element of the overall ecosystem. This calls for innovations in how we invite maintenance personnel to participate as co-designers and as long-term stewards of our designed environments and how we value innovations in maintenance practice and education. Landscape architect Carol Franklin observes that “Sustainability is a goal that no one as yet knows how to achieve... Observation, recording, and monitoring are crucial elements of the sustainable design process.” [26] For environmental designers, such an approach means engagement with how our designed landscapes are maintained, and a willingness to experiment with and design maintenance regimes. Franklin’s firm Andropogon exemplifies this approach by offering services such as adaptive landscape management plans and by monitoring their own built works in order to inform future projects both for themselves and others.

[26] Carol Franklin, “Fostering Living Landscapes,” in *Ecological Design and Planning*, ed. George Thompson and Frederick Steiner (New York: Wiley, 1996), 274–275.

Communication: The writers and artists surveyed here recognized that the innumerable daily actions of anyone caring for their home, their family, or themselves were acts of maintenance. To engage the informal and dispersed maintenance of the designed environment, designers might begin to see their work as grounded in communication *about the environment*, as much as design of physical environments. Through public workshops and communications campaigns, designers can communicate the ways in which people and the environment are connected and address sustainability issues from within our existing infrastructure by changing habits and patterns of consumption and waste.

Conclusion

EVERYONE TALKS ABOUT GREEN CITIES NOW, BUT THE CONCRETE RESULTS IN AFFLUENT CITIES MOSTLY INVOLVE CURBSIDE COMPOSTING AND TACKLING SOLAR PANELS ONTO ROOFTOPS WHILE RESIDENTS CONTINUE TO DRIVE, TO SHOP, TO EAT ORGANIC PEARS FLOWN IN FROM ARGENTINA, TO BE PART OF THE BIG MACHINE OF CONSUMPTION AND CLIMATE CHANGE. THE FREE-RANGE CHICKENS AND PRIUSES ARE GREAT, BUT THEY

ALONE AREN'T ADEQUATE TOOLS FOR CREATING A TRULY DIFFERENT SOCIETY AND ECOLOGY.

—REBECCA SOLNIT, "DETROIT ARCADIA," *HARPER'S*, JULY 2007

Sustainability is not as easily achieved as the technology sector promises. The intertwined threads of desire, culture, gender, class, sustenance, ritual, maintenance, technology, and economics are far more complex and require far more careful study and discussion than can be addressed through a revolving series of the next best "innovative" solutions. True sustainability will require a cultural revolution, not merely a technological one. [27] Valuing "women's work" and expanding our understanding of domestic practices, within the home and within the larger environment, begins to describe a relationship where we as humans exist within our *oikos*, the environment that is our home and ourselves.

[27] We recognize that this essay represents a limited discussion of feminism, sustainability, and environmental design in the North American context and neglects important intersections, such as gender and ethnicity. In developing nations, women contribute an even greater proportion of time to unpaid domestic labor than men, and in the US, when domestic tasks are performed by a paid individual, the majority of those jobs are held by immigrants and/or women of color. These conditions are detailed in Linda Burnham and Nik Theodore, *Home Economics: The Invisible and Unregulated World of Domestic Work* (New York: National Domestic Workers Alliance, 2012), available as a PDF from various sources online.