

Chapter 31. Environmental activism and gender

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I Introduction

Environmental activism merits an important place in a contemporary analysis of gender and economic life. In the first place, most environmental activists are, and apparently always have been, women—and this is at least partly related to gendered roles in the socio-economy.

Because women's roles tend to involve food provision and preparation, health care, child care, and, in many places, agriculture, and because many environmental hazards manifest themselves as reproductive hazards, women are usually the first to know about environmental degradation, and are often more affected than men, both physically and socio-economically. This motivates women's activism and leadership on environmental issues. Moreover, because it leads to constructive change, women activists' work and leadership has crucial, valuable social and economic implications.

Further, in a theoretical sense, the economics of environmental degradation are closely related to the economics of gender. Both women's work and environmental goods and services tend to be "externalized" by neoclassical economics, taken for granted, unaccounted for, and/or unpaid. This interrelationship among women's work and the environment offers important theoretical insights about how to build more sustainable socio-economies. Finally, when we stretch beyond the traditional framework of neoclassical economics to consider provisioning, well-being, social reproduction, non-market value, and sustainable economic futures, the process of activism is an economically-relevant force for ongoing reconstruction and progressive improvements in society. In the following sections, this chapter discusses and provides a number

of examples from around the world to illustrate each of these aspects of environmental activism and gender — the empirical, theoretical, and dynamic—ending with a few concluding remarks.²

Throughout the chapter, I have attempted to include data, voices and views on environmental activism and gender from a variety of locations and perspectives. By “activism”, I mean the organizing and practice of direct vigorous action or campaigning to bring about political, economic or social change. It is activists working in conditions of poverty and marginalization (for very logical reasons) who are most adept and efficient at organizing, articulating priorities and developing effective movements, and who have a great deal to teach and share. Though the details of local environmental situations and activism vary widely, I believe there is a great deal of commonality in the basic processes of organizing and activism across the global North and South.

II Women as environmental activists

Across the world, women are leaders in environmental activism. As Darlene Clover states, “Throughout history, it has invariably been women who have blown the whistle on the negative impacts of environmental degradation and human manipulation of the environment. In fact they are at the forefront of major environmental initiatives, struggles and actions worldwide and the virtual ‘backbone’ of many an environmental group” (Clover, 2002, p. 315). Empirical research consistently shows a strong link between female gender and environmental concerns. In a range of studies conducted since 1960, women are significantly more concerned than men about environmental risks to their health and safety (see, e.g., Davidson and Freudenburg, 1966; Blocker and Eckberg, 1989; Flynn *et al.*, 1994). Women are also consistently more concerned than men about environmental issues at the local level (see Blocker and Eckberg, 1989), which

may in turn be related to the recognizable health and safety concerns caused by detrimental local conditions and policies (Caiazza, 2003). Further, data from North America (Gould and Hosey, 2007) indicate that women are more likely to:

- Rate the environment a high priority;
- Cast ballots around environmental issues;
- Volunteer for and give money to environmental causes, especially related to public health;
- Support environmental activists; and
- Have more concern that government is not doing enough for the environment and therefore support increased government spending for the environment (while men favor spending cuts).

Cross-national studies also underscore the prevalence of women's environmental concern and behaviors (Zelezny *et al.*, 2000; Hunter *et al.*, 2004; Stein, 2004).

The vast list of individual women whose environmental activism has brought about progressive economic change, and whose leadership has inspired and motivated others, includes women from around the world: 2004 Nobel Peace Prize laureate Wangari Maathai, Rachel Carson, Vandana Shiva, Love Canal activist Lois Gibbs, US environmental justice activists Florenza Moore Grant, Beverly Wright, and Hazel Johnson, German Green Party founder Petra Kelly, Chernobyl and Bhopal investigator Rosalie Bertell, Chilean ecofeminist Rayen Quiroga, Josephine Mandamin (Beedawsige) and the other First Nations women of the Mother Earth Water Walk around the Great Lakes, Chinese environmental activist Man Si-Wai, toxicologist Theodora Colborn, Australian anti-nuclear activist Helen Caldicott, Brazilian ecofeminists Moema Viezzer and Miriam Duailibi, and so many others (United Nations Environment

Programme [UNEP], n.d.). Their foremothers include Jeanne Baret, a French naturalist who travelled around the world in 1767-1774 (Ridley, 2010) as well as Hildegard of Bingen and countless other Asian, American and African women herbalists, naturalists, medicine women and environmental defenders throughout human history (LeBourdais, 1991; Rosenberg, 1995; Shtier, 1996; Taylor, 2002; Spears, 2009; Brown, 2011).

With so much historical and anecdotal evidence, it is surprising that little specific data exists on the proportion of environmental activists who are women in any jurisdiction or time period.³ What studies there are seem to indicate that, at least in North America, women's activism and leadership may be somewhat limited by time constraints given their double or triple workday, and that women tend to focus their environmental activism on local, health-related environmental problems rather than the broad politics of environmental protection (Mohai, 1992; Tindall *et al.*, 2003). Nonetheless, from the Chipko and Green Belt movements to the 1991 First National (US) People of Color Environmental Leadership Summit and the 1992 Women's Congress for a Healthy Planet, as well as many others, environmental activist movements begun and led by women have transformed local and global politics, forestalled ecological disasters, conserved resources, prevented the rapid externalization of environmental costs onto powerless people, and maintained traditions of environmental protection and stewardship (see Basset, 1991; Bullard and Johnson, 2000).⁴ As political scientist Paul Wapner notes:

When people change their buying habits, voluntarily recycle garbage, boycott certain products, and work to preserve species, it is not necessarily because governments are breathing down their necks. Rather, they are acting out of a belief that the environmental problems involved are severe, and they wish to contribute to alleviating them. They are being "stung," as it were, by an ecological sensibility. This sting is a type of governance.

It represents a mechanism of authority that can shape widespread human behavior (1995, p. 326).

III Theoretical interconnections between gender and socio-environmental economics

With regard to the reasons and motivations for women's environmental activism, there is a huge literature that traces and debates the links between women and the environment, over time and space. Carolyn Merchant, one of the major theorists of ecofeminism, has stated that there are complex cultural reasons for why nature has been "gendered" as female over the past 2,500 years throughout the world, and these factors are closely related to women's motivations "to act to preserve both nonhuman nature and themselves" (Merchant, 1996, p. xi).

Economists and feminists extending back at least to Friedrich Engels, Emma Goldman, and Charlotte Perkins Gilman have documented how women always lead the ranks of the economically vulnerable and marginalized, and bear the brunt of economic and health problems caused by degraded environments (Engels, 2010 [1884]; Goldman, 1972; Gilman, 1997 [1898]). Goldman famously said, "Woman is the worker's worker," highlighting the double exploitation of women in comparison with men of the same social class. Unsafe work conditions, including pollution, pesticides, industrial chemicals and other ecological hazards, disproportionately affect women forced to accept dangerous jobs due to poverty, which is largely feminized in both the global North and South. Gendered work roles encompass both paid and unpaid labor in women's public and private lives. Responsible for the care and feeding of the young, aged and ill, women worldwide have to seek ways of sustaining themselves and their families even in times of environmental and political crisis. They have always done so by building and maintaining social structures that provide a modicum of resilience. Key strategies include developing local

ecological knowledge to use and try to protect natural sources of food, water, fuel, and shelter, and transmitting wisdom intergenerationally that tends to involve a healthy skepticism about technicist, male-dominated and market-oriented structures.

Feminist ecological economics focuses on such subjects as unpaid work and ecological services; valuation, collective decision-making and equity; skills transmission; relationships and exchange; local economies; interpersonal well-being and community; institution-building, commons and property ownership; and human/nonhuman continua, biological time, and future generations (Perkins, 1997; Kuiper and Perkins, 2005). *Feminist ecosocialism or ecofeminist socialism* is a related area of academic and activist work; some of the important writers in this field include Maria Mies, Vandana Shiva, Mary Mellor, and Ariel Salleh (Mellor, 1992, 1997a; Mies and Shiva, 1993; Shiva, 1994, 2010; Salleh, 1997, 2009; Mies, 1999; Mies and Bennholdt-Thomsen, 1999). Many thinkers and activists who call themselves ecofeminists live in the global North, but the most stark and inspiring stories of ecological activism and change led by women generally come from the global south. I use the term “ecofeminist” to include all those whose work demonstrates the connections between women and environment and their common exploitation by patriarchal, market-based political-economic systems. Also, feminist ecological and/or ecofeminist work is theoretically pluralist or heterodox, to a greater or lesser degree. That is, it envisions economic and political realities and processes in unconventional ways and actively challenges status quo disciplines, institutions and assumptions. The following sections discuss important themes that are addressed in the interrelated literatures on ecofeminism, feminist ecological economics, and feminist ecosocialism, summarizing how these themes relate to gender and economic lives and livelihoods.

Unpaid work and ecological services: a central concern

For women, especially, there is much more to life than the market economy. The overlapping and mutually reinforcing ways in which unpaid work (mainly women's work) and unpaid ecological services are exploited by growth-driven economies is the central concern of feminist ecological economics. There are structural reasons for the "externalization" of both the natural environment and gendered, unpaid work within economic theories and systems. All economic productivity depends on the productivity of women and "nature", which provides workers and raw materials for capitalist economies, calling these factors "free" (see Mies, 1986; Mellor, 1992, 1997a, 1997b; Langley and Mellor, 2002; Perkins, 2007). As Mies states, "The characteristic of (capitalism) is that those who control the production processes and the products are not themselves producers, but appropriators. Their so-called productivity presupposes the existence and the subjection of other—and in the last analysis, female—producers" (Mies, 1998, p. 71). This is both socially and ecologically unsustainable (see Folbre, 1994, pp. 254-255).

Finding new ways of recognizing and compensating the value of unpaid women's work as well as ecosystem services is crucially important. Nancy Folbre and many other feminist economists have grappled with how to value unpaid work and the difficulty of measuring it in monetary terms alone (Waring, 1989, 2009; Nelson, 1997; Jochimsen, 2003; Himmelweit, 2003); how to account for multi-tasking and multiple functions (Waring, 1989; Nelson, 2003); how to address underlying economic assumptions and fairly integrate the interests of market actors from different social locations (Henderson, 1978, 1980, 1983, 1992; Jochimsen and Knobloch, 1997; Zein-Alabdin, 1996; Todorova, 2005); and how to escape or pose alternatives to the market as the only site for economic transactions (Kennedy, 1987; Agarwal, 2000; Raddon, 2002; Jochimsen, 2003; Vaughan, 2004).

A further difficulty is that any conversion of unpaid work to paid work, besides being

very costly—unpaid work is estimated to equal roughly 60 percent of GDP in the global north (Pietilä, 1997, 2007), and probably even more in the global south—could also potentially heighten ecologically-damaging consumption and accelerate material throughput in the economy, as formerly-unpaid workers' incomes rise. Another issue is the potential trade-off of sorts between ecological and gender dimensions of economic activity if gender roles remain unchanged. Many aspects of more-sustainable living require increased labor inputs close to home (e.g. composting waste, separating recyclables, participating in local food co-ops, doing errands by bike rather than driving, eating less packaged food, using cloth instead of disposable diapers, etc.). As long as these tasks are seen as mainly women's work, the responsibility for living more sustainably is shifted to women's shoulders. One important conclusion from this is that economic models and policies should be compared and judged by how well they “treat the interaction of production and social reproduction” (Elson, 1998, p. 167), and also how they mediate the interaction of economic and ecological activity.

The economy and the market cannot possibly handle or compensate all the vital functions and productive work of women and nature. At the very least, the economy must be prevented from destroying and undermining the “sustaining services” (O'Hara, 1997b) on which human society and subsistence depend. When poverty, combined with a breakdown in social institutions, forces people to deplete environmental resources in order to survive, this is symptomatic of how economic pressures can effectively destroy long-standing sustainable socio-cultural systems. From a development perspective, Rayén Quiroga-Martinez and others have highlighted the pernicious effects of ignoring non-marketed goods and services; because they are outside of government statistics, policies may blindly harm both women and “nature” (Quiroga-Martinez and van Hauwermeiren, 1996; Quiroga-Martinez *et al.*, 2005).

To address these kinds of problems and build more sustainable economic systems that create just and democratic opportunities for people to pursue sustainable livelihoods, women's activism and leadership are crucial. This includes the creation of governance institutions, sustainable resource management processes capable of resisting the pressures of globalized markets, and structures which recognize and mediate both unpaid work and ecological services. Hilkka Pietilä, for instance, envisions a reversal of market priorities, which she says is in women's hands, since women can decide how much of their labor and skills to sell to the market economy:

The entire picture of the human economy should be turned the right side up: the industrial and commercial economy should be seen only as auxiliary, serving the needs of families and individuals instead of using them as means of production and consumption..... (W)e have to denounce the values and rules on which the neoliberal economy operates, such as constant economic growth, conspicuous consumption, maximization of profits and competition. (Pietilä, 2007, p. 10)

Activist women are already taking steps in this direction. For example, every day for fifteen years, poor Mexican women in the village of La Patrona have provided free food for migrant workers they do not know who are heading to the US on trains that run through their village (Las Patronas, 2010). They do this because they know it is important, not for money. Women around the world build, maintain, and rely on microcredit and informal loan pools to support subsistence production and small-scale economic initiatives. From Asia to Latin America, women build and use alternative community-based economic structures to invest in ecological supports for subsistence (Mies and Shiva, 1993; Bennholdt-Thomsen, 2001; Self Employed Women's Association [SEWA], 2011). These are powerful examples, but in fact

every community depends on work done for free by “volunteers” who realize the importance of what they are doing, despite its non-recognition by the market. They gain respect from others in the community and give hope by helping sustain the needy while creating community, and global, resilience through their work.

Valuation, collective decision-making, and equity

Ecofeminists have contributed many ideas about alternative ways of valuing ecological services and unpaid work for the purposes of political decision-making. As economic processes become more complex and trade makes them less understandable and controllable at the local level, the need for alternative valuation methods becomes more pressing, since the value of unmarketed goods and services is contextual and socially or communally mediated.

The literature on “discourse-based valuation” and other collective valuation systems meshes equity-enhancing identity-grounded discussions with political-economic decision-making (O’Hara 1997a; Perkins, 2001; Wilson and Howarth, 2002). The essence of these proposals is that valuation and decision-making about what is to be produced and how, resource and energy allocation, incentives for economic change, and local/global distribution must involve the considered weighing of views from all members of the society (one person, one vote), not just those with economic interests/abilities in the market economy (one dollar, one vote). Discourse-based valuation legitimates social and discussion-centered valuation processes while calling market-derived, centralized, and rootless valuation systems into question, allowing local governments to reduce expenditures on circuitous economic valuation techniques while streamlining the political decision and public approval process. It is consistent with local democratization initiatives in response to neoliberal globalization, and while it is no panacea, it represents a step toward more diverse and equitable public decision-making. Brazilian and

Venezuelan activists are at the forefront of exploring how this can work in practice (Luchmann, 2008; Martinez *et al.*, 2010).

Skills transmission

While technological change makes necessary the constant acquisition of new (individual) skills, scientific progress is a high price to pay when this comes at the expense of losing traditional (individual and also social) knowledge of how to live sustainably within the limits of local ecosystems. Child-rearing and socialization, including skills transmission and early formal education as well as community service, are in most cultures done largely by women and are undervalued/underrecognized/underpaid. Thus it is not surprising that they have become endangered (e.g., van den Hove, 2006; Garmendia and Stagl, 2010; Swartling *et al.*, 2010).

Ecofeminist attempts to combat social deskilling include the movements to reintroduce farmers' markets and facilitate direct links between food producers and consumers (Foodshare, 2011; The Stop Community Food Centre, 2011; Evergreen Brick Works Farmer's Market, 2011); harvest urban fruit (Not Far From the Tree, 2011); cultivate bees (Malach, 2010); link apartment-dwellers with urban householders who are willing to share garden space in their backyards (Yes in My Backyard, 2011); and provide communal cooking and child-care classes (The Stop Community Food Centre, 2011; Foodshare, 2011).

Ecosocial community organizations run a range of participatory ecological community-building programs. In a marginalized region at the western edge of Guanabara Bay near Rio de Janeiro, Brazil, Agua Doce People's Services works creatively with local people at the interface of social, economic and ecological development; their goal is "expanding human consciousness towards the development of sustainable communities and the emergence of a globalization that preserves the planet's community of life, guarantees the minimal social needs to all and

promotes an efficient and human economy” (Centro Clima, 2005, p. 58). Such initiatives have the mutually-reinforcing outcomes of contributing to community well-being, increasing trust and building social networks in marginalized areas which can lead to increased political engagement and, ultimately, economic redistribution—extending far beyond the market economy while developing social resilience.

Relationships and exchange

Partly because of the valuation problems mentioned above, ecofeminists have long been attracted to alternatives to money and non-monetary exchange systems such as Local Exchange Trading Systems (LETS)⁵ and other forms of community currencies (Kennedy, 1987; Raddon, 2002; Mellor, 2009). The essence of ecofeminist alternatives to money systems as they exist at present is their emphasis on the need to acknowledge and encourage the relationships among people—the true basis of material exchange (Perkins, 2002). As Mary Mellor eloquently states, “A provisioning economy would start from the embodiment and embeddedness of human lives, from the life of the body and the ecosystem, from women’s work and the vitality of the natural world. Priorities would be determined by the most vulnerable members of the community, not its ‘natural’ leaders as defined by economic dominance” (2009, p. 264). Mellor adds that making money subject to democratic control is essential to begin the process of building a non-gendered, egalitarian and ecologically sustainable provisioning economy.

Genevieve Vaughan (2007) views the “gift paradigm” as encapsulating the perspective that is needed for transforming competitive market-based economies into nurturing systems for life-enhancement. Exchange, in her view, which creates and requires scarcity, needs to be replaced by free gift-giving as a general social value. She adds: “Indeed we could begin to take nurturing as the creative norm and recognize exchange as the distortion which is causing a de-

evolution and a danger to the human species as well as all other species on the planet” (Vaughan, 2004, n.p.). While this perspective offers hope about humanity’s ability to change and improve upon the past, some other ecofeminists find it needs more coherence, detail, and safeguards before it can offer pragmatic signposts towards a better future (Fournier, 2005). Quiroga-Martinez *et al.* (2005), drawing from the “matristic” philosophy of Humberto Romesin Maturana and Gerda Verden-Zöller (2008), calls for a paradigm shift towards mutual care and interpersonal support as the foundation of a sustainable socio-economic future.

Local economies

Another central theme in ecofeminist visions of sustainable economic alternatives is that localization is more likely to generate caring and ecologically-sustainable human communities than rampant globalization. That is, when people interact at human scales—producing, exchanging, consuming, dealing with pollution, etc., without drawing inputs from or sending wastes to faraway places—this is the essence of healthy provisioning (Nozick, 1992; Henderson, 1992; Perkins, 1995, 1996). There are many reasons for this emphasis. First, people in local economies are forced to live sustainably within their means. When they know each other they are more likely to jointly solve problems and share assets. They will protect and preserve their ecological surroundings. And, finally, they will learn and transmit the knowledge necessary for making the best use of their local conditions.

Critics charge that in a globalized world, advocating localization is a rejection of the fundamental principles of economies of scale as well as quality-of-life-enhancing technical progress. This is not necessarily the case. The degrowth movement and local food movements are showing that consumption can shift significantly towards locally-produced products and services within a market context (Perkins, 2010). But if all economies or many areas in the

global north were to “go local”, what would be the mechanism driving redistribution at a global scale? Centuries of colonialism, now exacerbated by climate change, have produced extreme disparities in people’s rights and access to resources which must urgently be addressed (Moyo, 2009). To these concerns we add the problems with a local economic bias. Local economies can be parochial and repressive to women, gays, and minority groups. They can allow “bullies and thugs” to gain or retain power.

Recognizing these shortcomings, an important contribution of feminist work on local economies is the way its focus on equity highlights the pitfalls of aiming single-mindedly for local sustainability. Historical and current injustices, and mechanisms for addressing inequitable distribution, must be part of economic restructuring. The ecosocial sophistication of local subsistence strategies is demonstrated by ancient gravity-fed irrigation systems that are still in use in western Kenya (Adams and Carter, 1987; Turner, 1994; Watson *et al.*, 1998), southern India (Shenoy, 2009), and other places. Such systems depend on socially-mediated maintenance work and periodic reallocation of water and other resources within the community, creating the conditions for sustainable survival over very long periods of time.

Interpersonal well-being and community

Even neoclassical economists recognize that human well-being depends much more on relationships and relative positions in society than on actual levels of consumption or affluence. This is a powerful motivator for equity-enhancing policies: spreading resources around more fairly will make voters happy (Wilkinson and Pickett, 2010). Happiness can be measured, although governments tend not to measure it; alternative economic indicators include a range of proposals for community-derived, participatory measures of what is important (e.g., Calvert-Henderson Quality of Life Indicators, 2006; Waring, 2009). Academic and activist collaborators

meet regularly to discuss this at conferences on Gross National Happiness, inaugurated and led by the King of Bhutan (Gross National Happiness Commission, 2011). Participatory governance, including accurate statistical indicators of socioeconomic success and human well-being, will become ever more crucial for social resilience and stability.

Ecofeminists have not only highlighted the connections between interpersonal relationships, ecological health, community strength and human well-being (Nozick, 1992; Salleh, 1997; Perkins, 1995, 1996, 2002, 2003; Bennholdt-Thomsen, 2001; Waring, 2009). They have also demonstrated and tested methods of measuring, fostering and nurturing these interconnected benefits for society (Forsey, 1993; Gibson-Graham, 1996; Eichler *et al.*, 2002). As Ivone Gebara says:

In Latin America we want to be part of a national and international movement for the globalization of social justice ... A new national and international order is our goal. An ecofeminism as an echo of feminism takes this as its goal without forgetting the special commitment for all women, without forgetting the importance of local education for a better world for everybody (2003, p. 97).

The dynamic and growing World Social Forum movement, initiated in Brazil in 2001, brings together global activists who are working similarly to build equitable ecosocial alternatives in the midst of and as an alternative to unsustainable existing institutions (see World Social Forum Charter of Principles, 2002).

Countless women have led valiant and inspirational struggles for political and economic rights and community access to land, water, and the products of their local ecosystems as a matter of subsistence. For all that are well-known—Chipko, las Madres de la Plaza de Mayo, Wangari Maathai and the Green Belt Movement—there are hundreds more whose struggles are

no less important: Man Si-Wai in China, the Kenyan women of Freedom Corner (Tibbetts, 1994), and many others.

Institution-building, commons and property ownership

Functioning equitable social systems grounded in institutions that foster mutual respect, which are required for common property systems to operate sustainably (Hardin, 1968), are intertwined with commons themselves as sources of community resilience. The awarding of the 2010 Nobel Prize in Economics to Elinor Ostrom, whose work focuses on commons, underscores the growing recognition of the problems with traditional economic rigidity regarding private property ownership. The International Association for the Study of the Commons (IASC) and its journal connect a growing network of scholars and activists who see promise in community-based mechanisms for holding, protecting, and using land and ecological resources collectively (Berkes and Davidson-Hunt, 2009). They advocate open sharing of artistic and intellectual resources, too, through mechanisms such as the Creative Commons (n.d.). Even financial savings can be held and used collectively for the greatest community benefit (Podlashuc, 2009), in the context of institutions which include mechanisms of equitable and flexible social self-governance.

Globally, women have a critical role in defending commons from enclosure and reestablishing commons management systems, in order to protect their own subsistence livelihoods and the socio-cultural institutions which undergird them. As Terisa Turner and Leigh Brownhill state: “Subsistence political economy is the world of commoners ... The ecofeminist politics of counterplanning stands against the (usually, but not exclusively, white male) leftist prejudice denigrating the agency and revolutionary capacities of the unwaged, in general, and of housewives, indigenous peoples, peasants, students, and rural Third World women, in particular”

(2006, p. 95).

Ana Isla's analyses of the tragic effects of enclosures of commons for the survival and subsistence of local people in Latin America (2002, 2005, 2009), along with those of Vandana Shiva citing situations in South Asia and elsewhere (1988, 2010), demonstrate the terrible costs of the global economic system in human terms. This scholarship shows how a commons framework can explain desperate conflicts that a market-based approach leaves mysterious; it also sheds light on potential solutions to intransigent ecological and political problems of globalization, through renewed social development of commons. One example is the overlapping forms of land tenure now being employed in Kenya, which in effect introduce land reform intertemporally over two generations, by allowing landless people access to unused land that is nominally owned by large landholders, and then granting the title to their children through usufruct rights (Brownhill, 2009). Similarly, using powers enshrined in Brazil's 1988 constitution, Landless Movement activists plan occupations and take possession of unused land needed for subsistence production (Movimento Sem-Terra, 2011).

Water commons, and common access to water, is another area where ecofeminist activists have demonstrated the practicality of shared ownership, overlapping access, and community-organized stewardship. For example, earth dams for water reservoirs in South India, traditionally built by women, were replaced in the colonial era by "modern" British irrigation systems which soon silted up; the earthworks systems are now being reclaimed. Since 2003, a group of First Nations women and their supporters has been gradually walking around all the Great Lakes in North America to call attention to the importance and sacredness of fresh water, a commons of significance for millions (Mother Earth Water Walk, 2011). Womens' activism on water privatization and access to water is an example of the intertwined nature of commons,

gendered economic roles, subsistence, and the need for progressive political change (Perkins and Moraes, 2007).

Human/nonhuman continua, biological time and future generations

Human links with the biosphere involve far more than people's use of animals and plants as economic resources. When we see humanity as part of the web of life, it is easier to understand how our own health and well-being are intricately interwoven with those of the more-than-human world. Ecofeminist authors and activists have long explored these connections (Carson, 1962; Warren, 1987, 1997; Colborn *et al.*, 1997; Noske, 1997; Steingraber, 1997; Hawthorne 2002, 2009). Feminist animal care theory calls on humans to extend ethical reasoning to relationships with animals, especially domestic and agricultural animals that are associated with feminine energy in Western cultures and also provide the economic basis for many people's livelihoods (Davis, 1995; Donovan, 2006). Ecofeminist animal sanctuary activists are exploring ways of rehabilitating and caring for abused animals, developing skills of empathy and social communication (Efrati, 2005; Jones, 2006; Herzog, 2010). Care for animals, plants, and ecosystems is a vital component of preserving the earth's diversity into the future.

Women's reproductive health, environmental hazards, all living beings, and future generations are connected in what Barbara Adam (1998) calls "socio-environmental time". "Biological time"—the uncontrollable and often unpredictable amounts of time it takes for caring and for more-than-human processes such as growth and healing to run their course—is another concept that both Adam and Mary Mellor (1997b) have developed to point out the contradictions between this and "economic time." Mellor says, "The exclusion of biological time means that economic systems are no longer rooted in the physical reality of human existence... If we are to be in tune with ecological time, the time-scale of ecological sustainability, the

socially created time of economic systems will have to be abandoned” (1997b, pp. 137-138).

Ursula Huws (2003), in describing how time and work have progressively become commodified, focuses on the concomitant loss of control modern people have over our time. She also shows why “the ‘knowledge’ economy is not dissolving material (goods) into thin air but, on the contrary, generating new physical commodities that make voracious demands on the earth’s resources” (p. 22). Far from relying on the dematerialization of the growing service-based global economy as a potential solution to the sustainability challenge, we must engage with and change the interpersonal, political dynamics driving human society in unsustainable directions.

Indigenous peoples’ practices of thinking ahead to the seventh generation illustrate the wisdom of situating current human decisions and actions in a time-frame long enough to allow biological time and socio-environmental time to merge, where economic time is the strange outlier.

IV Conclusions: activist processes in socio-economic change

What are the key results and challenges related to gender and activism for broader aspects of gender and economic life: provisioning, social reproduction, well-being, value, climate change, sustainable futures? Fortunately, the structures and institutions that humans develop to manage their affairs are mutable and evolve to address challenges as they arise. Criteria for judging these institutions and their evolution include how well they facilitate the interpersonal transmission of skills for sustainability; how flexibly they permit different groups to develop their own culturally and ecologically appropriate systems of provisioning; and how well they mediate the boundaries between production and reproduction, among people of different ethnicities, genders and classes, and between human and more-than-human access to Earth’s solar-fuelled bounty.

One principle central to ecofeminist thought is that both theory and action are collective, collaborative, and based on relationships among diverse people who speak from, and share with each other, their situated knowledges. This happens best in a climate of respect, where justice for all is the goal. Sustainable social systems must foster equitable sharing of opportunity, work, power, and compensation, and must create democratic forums and multiple occasions for community-building. Moreover, production—or purposeful human action of any kind—cannot take place without a huge support system of reproduction, care, and interactions with the more-than-human world over long stretches of uncontrollable time. Humility, environmental caution, and mutual aid are fundamental.

These principles are expressed in ecofeminist visions and models of sustainable socio-economic dynamics. For example, Hilikka Pietilä's (1997) model of the human economy (functioning within, and dependent upon, its environmental matrix) is a series of concentric circles centered on the home and local community, the area of freely-given and exchanged human enterprise; surrounding this is the realm of monetized, market exchange; and finally the “fettered” realm of global market constraints and controlled trade.

Quebec activists have recently proposed abandoning the dual public-private conception of economic activity in favor of a quadripartite model composed of

- a *social economy* composed of social and non-profit enterprises and community, collective or cooperative organizations which render innumerable services to the people.
- an essential *domestic economy* based on the services provided in the family, by caregivers (primarily women) as well as free or volunteer services that we wish to find means of recognizing socially and accounting for at their fair value.
- a *public, state and parastatal economy*, whose importance and social role should be

enhanced in equitably providing accessible services to the entire population.

- a *private economy* composed of private enterprises whose purpose is to sell products and services and which agree to function in compliance with the collective (social, environmental, etc.) rules that society establishes (see Fidler, 2011).

Most of the examples of sustainable livelihood strategies mentioned above were generated through processes involving diverse people's knowledge and varied contributions to social well-being, based in interpersonal skills, respectful communication and power-sharing. These are the kinds of processes we must keep envisioning and creating, even (especially) in times of political and ecological crisis.

Feminist ecological economics has built on and evolved from a cogent and compelling critique of the unstable and unsustainable capitalist status quo. Feminist ecological economists and political ecologists have described the economic importance of women's environmental and community development activism, the importance for women's work and health of ecological processes, and the fundamental economic significance of the myriad unmarketed services provided by women and nature. They have documented women's crucial role in subsistence production and in protecting and preserving ecosystems as well as their leadership in political struggles over the natural environment and commons. This is contributing to new research and activism on nonmarket valuation methodologies and human well-being, quality of life indicators, links between health and the environment, local economic systems, trade and globalization, commons, and many other topics. Heightened by global climate change and other crises, there is also new pressure on public authorities to measure, monitor, and report on physical, ecological, health and gender indicators as well as more traditional economic ones, to broaden the scope of what is called "economic" data for use in designing progressive policies and preventing gendered

social and ecological destruction.

Ecofeminism adds to this list of policy challenges a wisdom born in experiential understanding of inequities, provisioning and care for others and for earth systems. Ariel Salleh (2009) calls this an “embodied materialism” that is capable of replacing “metabolic rift” (Foster, 1999) with “metabolic fit”. Women’s environmental activism, feminist ecological economics and ecofeminist theory and praxis are contributing to more sophisticated, nuanced, green, diverse and equitable ways of understanding the processes of production and reproduction, distribution, consumption, waste generation and avoidance, materials cycles, and human well-being. The aim of both theory and praxis is to greatly improve gender relations and economic livelihoods.

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Endnotes

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² At the outset, I would like to acknowledge my standpoint: I write as a white female academic and environmental activist, living on territory in Toronto which was violently taken from aboriginal peoples. I have also lived for several periods of time in the global South (Brazil, Mozambique) where power and economic privilege also distort social relations. Some of my activist work, especially around climate justice, is global in focus and reflects collaborations with partners and colleagues in many places. I welcome critiques of assumptions, omissions, and bias that readers may find in this very short summary of a very complicated story.

³ This is an example of the kind of data gaps which often hamper studies of women's economic impact as well as feminist economics generally.

⁴ The modern Chipko Movement began in the early 1970s in Uttarakhand, India, where grassroots women activists practiced the Gandhian non-violent resistance method of satyagraha by hugging trees to prevent their being felled. Chipko also involves reforestation to protect marginalized people's livelihoods. The Green Belt Movement, started in 1977 by (the late) Kenyan activist and 2004 Nobel Prize winner Wangari Maathai, organizes women to plant trees, combat deforestation, stop soil erosion and earn income while preserving their lands and resources. The environmental justice movement addresses the racism inherent in the fact that communities of color, often poor, are much more likely to live and work in polluted environments. The 1991 Women's World Congress for a Healthy Planet, organized by the Women's Environment and Development Organization (WEDO), adopted Women's Action Agenda 21 and led to women's strong participation in the UN Conference on Environment and Development in Rio de Janeiro in 1992, as well as a range of subsequent international women's environment meetings and actions.

⁵ Local Exchange Trading Systems, or LETSystems, are locally-initiated, not-for-profit community enterprises that facilitate the exchange of goods and services among members by recording and crediting transactions, thus creating a local currency of LETS Credits. They may also be called Local Employment and Trading Systems or Local Energy Transfer Systems.