

## Standing on Solid Ground: A Materialist Ecological Feminism

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- A billion people in the world lack safe drinking water, and some 80 percent of all disease in poor countries is caused by contaminated water (Seager and Olson 1986). An estimated 40,000-50,000 children die each day worldwide, mainly in Africa and Asia, from malnutrition and a lack of clean water.
- Millions of industrial and agricultural workers are employed in hazardous conditions. Oil companies, chemical companies, and textile and electronics producers are responsible for severe environmental devastation through their regular manufacturing processes as well as industrial “accidents”, but operate without meaningful constraints (Chavez 1993; Noble 1993).
- In India, Africa, and Latin America vast acres once used for subsistence crops have been diverted into cash crop production to earn hard currency to pay the interest on overseas loans. In some places new dams make water available for large-scale irrigation of cash crops, but many poor women have to carry water and firewood increasing distances for home use (Shiva 1988).
- A significant number of babies without brains have been born to women on both sides of the Rio Grande, polluted by US-controlled *maquiladora* industries on the Mexican side of the river, and to Pacific Island women who were exposed to radiation during atomic tests or subsequently through irradiated land and water (de Ishtar 1994; Dibblin 1989; Women Working for a Nuclear Free and Independent Pacific 1987).
- In the US, children’s health has been compromised by environmental factors such as lead in paints and gasoline, air pollution, traffic hazards, and violence that often involves the use of handguns, with significant differences between those living in inner cities and suburban neighborhoods (Hamilton 1993; Phoenix 1993).
- Under pressure of poverty some Native American reservations in the US, as well as African and Pacific Island nations, import toxic wastes from industrialized countries and regions as a way to earn income, particularly foreign exchange, by providing landfill sites (Center for Investigative Reporting 1990; Center for Third World Organizing 1991; Third World Network 1988).
- In the US, breast cancer, which is increasingly linked to environmental causes, affects one woman in nine—many more in some areas—and has killed more women than the AIDS epidemic (Arditti and Schreiber 1992). Native America women whose land and water are heavily polluted have initiated research into the likelihood that their breast milk is toxic (Cook 1985; 1993).
- In the past few years several patents have been taken out on genetically engineered parts of plants and animals, including the cell lines of a US man and an indigenous man from Papua New Guinea, and many more patents are pending (Juma 1989).

The purpose of this chapter is to show how gender, race, class, imperialism, and the global capitalist economy are connected to ecological destruction, and how effective analysis and

activism need to be informed by a broad, integrative materialist framework. Given the vast scope and critically serious nature of environmental devastation, I am dismayed that relatively few feminists in the US appear to be concerned with this issue. I see the theoretical frameworks that dominate US feminist discourse and activism—liberalism, radical feminism, and postmodernism—as the least useful approaches for understanding ecological issues, and the pre-eminence of these perspectives is a serious limitation to feminist work in this area.

Women are the backbone of grassroots organizing around ecological issues worldwide. Well-known examples come from the Chipko (tree hugging) movement in India (Anand 1983; Shiva 1988), the Kenyan women's greenbelt movement (Maathai 1983), Micronesian women working in communities devastated by atomic testing (de Ishtar 1994; *Women Working for a Nuclear Free and Independent Pacific* 1987), US women organizing against toxic dumps and incinerators (Zeff et al. 1989), Native American women's research on toxicity in breast milk (Cook 1985, 1993), and many projects in Asia, Africa and Latin America that promote sustainable agriculture (Durning 1989b). Much environmental activism in the US is currently undertaken by women of color and poor white women, arising from their daily experiences of poverty and degraded physical environments, and often drawing on analyses of race and class rather than gender. While women's engagement with environmental issues comes out of a variety of situations and experiences, I argue that an understanding of their close material connection to the nonhuman environment puts such women on the cutting edge of resistance to ecological destruction, and that such analysis should also be a crucial part of any feminist oppositional project.

Ecological feminists and women environmental activists need to understand and challenge the source of environmental devastation: the unsustainable priorities, values and living standards of industrialized countries based on highly militarized, capitalist economies. A materialist framework identifies economic and political institutions as the perpetrators of ecologically unsound investment; it offers a basis for understanding how the seemingly random instances listed above are connected and suggests appropriate public action—locally, nationally, and internationally. It allows one to see global connections across lines of race, class, and nation, and to build alliances across these lines of difference. While emphasizing women's activism here I do not consider women to be solely responsible for planetary caretaking.

## FEMINISM AND ECOLOGY: SEEING THE WOOD FOR THE TREES

There are several ways to make theoretical links between feminism and ecology, with varied roots in feminist theories (Griffin 1978; Warren 1991), feminist spirituality (Sjöo and Mor 1987; Spretnak 1982; Starhawk 1987), social ecology (Bookchin 1990; King 1990), and socialism (Mellor 1992). While some ecofeminists embrace this eclecticism (e.g. Spretnak 1990), many proponents and detractors find it confusing and incoherent. Some reject ecofeminism as essentialist; others see it as synonymous with goddess-worship and earth-centered spiritualities (Biehl 1991) or animal rights (Adams 1990; Gaard 1993). Women of color critics argue that, as with much western feminism, ecofeminism privileges gender over race and class (Agarwal 1992). English-language ecofeminist anthologies have been dominated by a concern for ethics, personal transformation, and earth-centered spirituality—idealist rather than materialist concerns (Adams 1993; Caldecott 1983; Diamond and Orenstein 1990; Plant 1989), and the contributions and perspectives of women of color are marginal in these collections, which tend to assume a unitary

theoretical framework. Joni Seager (1991) uses the term “ecological feminism” in an attempt to sidestep the confusion surrounding ecofeminism. I consider this theoretical quagmire briefly in order to define a solid place to stand.

### AN ESSENTIAL CARING WOMEN’S NATURE?

The fact that women are disproportionately involved in campaigning against environmental issues and against militarism at a grassroots level worldwide is a phenomenon for explanation. Some ecofeminist writers assume an essential, caring woman’s nature (e.g. Gray 1979); many critique this as a facile essentialism that necessarily limits women’s activities and perspectives within the constraints of traditional roles as wives, mothers, domestic workers, and caretakers (paid and unpaid). For the past decade academic discussions of ecofeminism in the US have been bogged down by arguments about essentialism and the related claim that women are closer to nature—a complex concept—than men. This claim implies a separation between people and the nonhuman world that is highly problematic. Nature is not something “out there” somewhere.

Rather, people are intimately connected to the nonhuman world in the most profound yet mundane way, through the air we breathe, the food we eat, the water we drink, and so on. But this long drawn out argument about essentialism is also unnecessary and can be avoided by focusing on women’s socialization as caretakers across many cultures with overwhelming responsibility for caring for children, the sick, the elderly, and the well-being of their communities, as family members, friends and neighbors, or professionally as nurses, teachers, and social workers. I see women’s caring work—and this includes environmental knowledge and activism—especially in rural areas where women are farmers and herbalists who understand the visceral interconnections between people and the nonhuman world—as part of this gendered division of labor. Women and men are socialized very differently in many cultures. While it may be fascinating to hypothesize about why this gendered socialization and division of labor first arose, one does not need to speculate about “essentials” to see a clear experiential connection between these aspects of women’s lives and their environmental activism.

### CONNECTING SPIRITUALITY AND POLITICS

As many scholars have noted, the European “Enlightenment” tradition—from which such liberatory philosophies as liberalism, Marxism, and socialism have been developed—is fundamentally dualistic and constructs hierarchical concepts such as mind and body, matter and spirit, and reason and spirituality, which are also basic oppositional categories of contemporary western thought (Merchant 1982; Plumwood 1993). This routine construction of hierarchy and the justification of difference in terms of inequality have had profound consequences. Pre-Enlightenment philosophies such as European paganism and the worldviews of indigenous peoples in the Americas, India, Australia, New Zealand, and the Pacific do not make these separations (Booth 1990; LaDuke 1993; Sanchez 1993; Shiva 1988; Starhawk 1987). On these views, spirituality and politics, for example, are not dissociated categories but interrelated approaches to life. A spiritual belief in the interconnectedness of all life forms is then the springboard for environmental activism against governments and corporations that repudiate such connections by destroying or contaminating the earth, air, and water as well as a multitude of life forms.

This questions of a legitimate connections between politics and spirituality—also a complex term—seriously divides US environmentalists, ecosocialists, and ecofeminists. For some, ecofeminism is held to be synonymous with goddess worship and embraced or rejected on that basis. Distinctions should be made here between goddess religions, earth-centered spiritualities in their many cultural forms and contexts, rituals and the cultural underpinnings of specific rituals, organized male-dominated religions, and the origins of people’s passionate but seemingly secular beliefs, which lead them into political action. This issue needs exploring in more depth, but I note that many Native American, African American and Chicano environmentalists in the US do not polarize spirituality and politics as some US Greens and ecofeminists do, though even the most secular activists derive their passion for social and economic justice from a fundamental belief, for example in people’s equality or intrinsic value. Indeed, the perspective I put forward here may also run into this problem. In an attempt to avoid charges of essentialism and goddess-worship I emphasize the material basis for women’s environmental activism, because western thought has no concept of a blended spiritual politics. This is very different from individualist spiritualities that focus on personal growth, betterment, and salvation without also incorporating an oppositional political practice of some kind. Particularly egregious in this respect are those “New Age” spiritualities that appropriate Native American rituals and concepts, sometimes turning them into commodities for sale, without taking on a wider concern for and resistance to the continuing oppression of Native Americans. Scientists who have proposed that the earth is a self-regulating system, personified as Gaia, the Greek goddess of the earth (Lovelock 1988; Margulis and Lovelock 1974), have attracted “New Age” environmentalists as well as hard-core polluters to the idea that Gaia can look after herself. But to throw out all spiritual beliefs as superstitious mumbo-jumbo, as Bookchin and Beihl do, is to continue to uphold a disconnected view of life, which ecological feminism should seek to transcend (King 1990).

#### INTEGRATIVE FRAMEWORKS: CLASS, RACE, GENDER AND NATION

A key insight of ecofeminism put forward in the germinal works of Susan Griffin and Carolyn Merchant, for example, is the connection between the domination of women and the domination of nature often feminized and sexualized as in “virgin forest,” “rape of the earth,” “penetrating the wilderness,” and so on. Sources—whether forests, seeds or women bodies—are turned into resources to be objectified, controlled, used, and only valued when placed in a system that produces profits (Mies and Shiva 1993). But this is not just a matter of women and nature. In the service of capital accumulation, white-dominated, capitalist patriarchy also creates “otherness” and oppresses people of color and poor people worldwide. This continual process of objectification is the central mechanism underlying systems of oppression based on class, gender, race and nation (Plumwood 1993). Thus, the oppression of women, racism, and ecological destruction are directly linked to economic exploitation.

In practice there is an enormous gap between much US ecofeminist writing and the perspectives of grassroots activists involved in the environmental justice movement—predominantly women, many of whom see their activism not only in terms of gender, but also and often more importantly in terms of race and/or class arising from their daily experiences and understandings of the world as women of color or white working-class women. As I outline briefly below, the global capitalist system is intrinsically anti-ecological. If ecological feminism is to inform a vital ecological politics in the US we need to emphasize the interconnections

among oppressions, activists, and movements; to frame issues broadly to mobilize wide-ranging involvement and support, rather than emphasizing points of disagreement; and to show how the process of capital accumulation is reinforced by the ideological articulation of difference based on gender, ethnicity and culture. While I agree with those who argue that much US ecofeminism is overly concerned with gender at the expense of race and class, what is often missing from environmental justice activism is an explicit recognition of sexism as a crucial mechanism of oppression. This is very different from acknowledging that most grassroots environmental justice activists are women, and it means embracing theoretical perspectives that see women's liberation as fundamental to ecological soundness and a sustainable world.

In summary, I argue for an ecological feminism that focuses on the social and material reasons for women's environmental concerns, has an integrated view of spiritual politics, and can integrate class, race, and gender in theory and practice. Fundamental to this approach is an understanding of the profoundly anti-ecological nature of the global capitalist economy.

### THE ANTI-ECOLOGICAL GLOBAL ECONOMY

The widespread nature of environmental destruction is an integral part of capitalist and state-planned economies (O'Connor 1994). This discussion focuses on capitalist economics now dominant worldwide, which while not identical, share a logic of capital accumulation. Key principles of capitalist economies include the following:

- They are based on production for profit, not needs—admittedly a tricky concept that varies from context to context—and inevitably result in considerable inequalities of wealth, material comfort, safety, social standing, and opportunities for work, education, and self expression among people in the same nation and between nations.
- They are inherently expansionist, always seeking new markets, new commodities, and generating new “needs”.
- They are intrinsically wasteful, routinely producing trash, derelict land and buildings, and polluted environments as businesses establish themselves, operate until they have exhausted the opportunities for profit-making, and either close down or move on.
- Growth = Progress. There is an inbuilt assumption that economic growth is the same as progress—a more complex concept with economic, intellectual, social and moral dimensions. Wealth is seen only in terms of material wealth.
- Capital must be able to move at will and without loyalty or commitment to the people of a particular area, so that businesses can always maximize their operating costs, pitting workers in one region or country against those in another.
- Immediate costs and short-run considerations dominate corporate and government decision-making. The role of governments is to maintain political and economic conditions favorable to profit making through laws, regulations, tax breaks and other incentives.

Current inequalities between countries are often based on older inequalities resulting from colonization. While the details differed from place to place and from one colonial power to another, colonialism invariably involved the distortion of local economies with dependence on a few agricultural products or “raw materials”—people, timber, minerals, and cash crops. Throughout the second half of the twentieth century, virtually all former colonies have gained political independence but have remained linked to their colonizers politically through

organizations like the British Commonwealth, and economically through the activities of established firms and transnational corporations and loans from governments and banks based in northern countries. There are also ties of language and culture, as many members of the new political and business elites were educated at prestigious universities in former colonial capitals. Whether the hand-over of political power was relatively smooth or accompanied by extreme turmoil and bloodshed, newly independent governments have been under pressure to improve living conditions for their populations and have borrowed capital to finance economic development. This combination of circumstances has led many commentators to characterize the continuing economic inequalities between rich and poor countries as “neocolonialism” (George 1988; Payer 1991).

## EXTERNAL DEBT AND STRUCTURAL ADJUSTMENT

This is the contemporary context for international trade. Currently many countries pay more for imports than they earn in exports, leading to external debt or a balance of payments deficit. In 1991, for example, the US budget deficit dropped to \$66.2 billion, the first time it had fallen below \$100 billion since 1983. Governments of Latin America, Asia, Africa and the Caribbean jointly owe over \$1.3 trillion to northern governments and commercial banks. The sixteen major borrowers in Latin America owe a total of \$420 billion; between 1982 and 1990, \$160 billion was transferred from Latin America to the developed world in debt repayments (O’Reilly 1991). Partly because countries of western Europe and North America have such serious balance of payments problems themselves—increasingly a focus of political debate and domestic policy-making—they have put a great deal of pressure on other debtor countries to repay loans. Indeed, since the mid-1980s, African governments have transferred \$2 billion more to the International Monetary Fund in interest payments than they have received in new loans (Beresford 1994). Loans have to be repaid in “hard” currency—US dollars, Japanese yen, British pounds, French francs, Swiss francs, and German marks—which can be exchanged on world currency markets. Thus debtor nations have to sell goods and services that richer countries want to buy, or that can earn hard currency from poorer countries, with clear implications for the physical environment. Such products include raw materials (hardwoods, oil, copper, gold diamonds); cash crops (sugar, tobacco, tea, tropical fruits and flowers); drug-producing crops (coca, marijuana, opium poppies), processed illegal drugs, and weapons. Debtor countries may also export labor (construction workers, maids, and mail-order brides); lease land for military bases or trash dumps; or develop their tourist assets—sunny beaches, beautiful landscapes, and “exotic” young women and children involved in sex tourism.

As well as selling goods and services to offset their external debt, the World Bank and the International Monetary Fund have pressured all debtor nations to make stringent changes in their economies to qualify for new loans, with the aim of increasing the profitability of the economy and making it more export-focused (Barnet and Cavanagh 1994; Danaher 1994; Reed 1992; Parr 1994; Vickers 1990). Measures relevant to environmental concerns include:

- cuts in government subsidies and the abolition of price controls, particular on food, fuel and public transportation;
- selling nationalized industries or at least a majority shareholding to private corporations often from outside the country;

- improving profitability for corporations through wage controls, tax breaks, loans and credit, or provision of infrastructure such as better roads or rail transport; and
- increasing the output of cash crops by increasing yields and/or increasing the amount of land in cash crop production.

In parts of Latin America, governments have been willing to allow international environmental organizations and foreign banks exclusive control of specific parcels of land to be left undeveloped—“debt-for-nature swaps”—as a way of dealing with a small proportion of their debt (Madrid 1990). Many activist groups in southern countries oppose the repayment of external debts and challenge the structural/social adjustment policies that are making many people’s lives much harder. They argue that many foreign loans were used by their nation’s elites for inappropriate, prestige development in urban centers that have not benefitted the majority of the population, or that the country has already lost enormous wealth to northern countries due to centuries of colonization.

## THE POLITICS OF SURVIVAL

This global economic context—with complex inequalities of class, race, gender, and nation—frames ecological issues and politics. I now look at several examples that illustrate how such inequalities impact ecological concerns and grassroots environmental projects, particularly focusing on development and health. These examples come from the United States and southern nations, from very different contexts and life situations; not all of them concern women exclusively. Thus my discussion has an inevitable unevenness and requires the reader to shift between varied contexts while at the same time keeping in mind the overarching framework, so that these are not seen as random cases.

## AGRICULTURAL DEVELOPMENT: FEEDING THE WORLD

Women’s role as primary agricultural producers in many parts of Africa, Latin America and Asia gives them direct experience and detailed knowledge of ecological issues. Women make up 80 percent of subsistence farmers in sub-Saharan Africa, for example. They are the main users of water in agriculture and forestry, as well as domestic life, and they carry it each day, sometimes several miles. Women are also responsible for finding fuel—wood, crop residues, and manure—another time-consuming and arduous daily task. While some women are involved in cash crop production, a gendered division of labor and the gender bias of many economic development projects means that men produce most cash crops and receive the income from them. Increasingly, cash crops compete with subsistence agriculture for available land, labor, and water. To provide food for their families women farm more marginal land and walk further for water and fuel (Agarwal 1992; Dankelman and Davidson 1988). They may well understand ecologically sound agricultural practices but are pressured into farming steep hillsides or cutting trees for fuel-wood, for example, thus worsening soil erosion and flooding during heavy rains. Such women may work sixteen-hour days, seven days a week, juggling farming with cooking, cleaning, laundry, and child care—though according to national income accounting none of this counts as productive work as it is not done for wages (Waring 1988).

Agricultural development agencies, transnational corporations, and government policy-makers are dominated by capitalist and neo-colonial notions of economic development and

material progress. Large-scale, chemically dependent, capital-intensive mechanized agriculture, usually producing cash crops for export, is the model promoted and funded by international financial institutions. An extensive literature on women and development offers trenchant critiques of such mal-development for its emphasis on cash crops at the expense of viable subsistence agriculture; its exclusion of women from much development policy-making; and its promotion of ecologically unsound agricultural practices (Braidotti et al. 1994; Dankelman and Davidson 1988; ISIS Women's International Information and Communications Service 1984; Rodda 1990; Sen and Grown 1987; Shiva 1988). The so-called green revolution with hybrid "high yield" seeds that require chemical fertilizers, pesticides, and regular irrigation, has not solved the issue of food security for poor people in the "two-thirds" world<sup>1</sup>, but has turned plants and farmers into consumers of chemicals (Shiva 1988). New hybrid varieties tend to be more susceptible to drought, disease, and pests, and—the biggest contradiction of all—are not fertile, so farmers cannot recycle their own seed for the next year's planting but must buy more each season from chemical companies—an example of a new commodity creating new "needs" as part of the expansionist process of capital accumulation.

### SCIENCE REDESIGNS NATURE: BIOTECHNOLOGY AND GENETIC ENGINEERING

Going beyond this plant-breeding technology is genetic engineering, a remarkable new form of biotechnology capable of changing the very nature of life itself (Juma 1989; Spallone 1992). It involves the manipulation of genetic materials—DNA—so that it is possible to implant human genes in animals, for example, and animal genes in people, creating combinations that could never be achieved through selective breeding as traditionally practiced. Other examples include research on human embryos intended to identify genes responsible for various genetic "defects" that can be corrected in the womb, making genetically engineered "designer babies" a real possibility. A cancerous mouse, created and patented by Harvard University and DuPont, is already available for sale to cancer researchers. The use of genetically engineered bovine growth hormone, introduced in the US in 1994, will increase milk production. Genetically engineered bio-pesticides and seeds will have far-reaching effects on agriculture and are considered the most lucrative products of this technology—seeds being the crucial first link in the food chain (Mather 1995; Raeburn 1995). Enormous profits are anticipated as is clear from even a casual glance at the business pages.

Genetic engineering is being vigorously promoted as the answer to many problems: curing disease, eliminating mental illness and physical disabilities, reducing crime, curing infertility, as well as increasing genetic diversity and ridding the world of hunger. These claims need to be examined very carefully. While researchers, promoters, and investors argue that everyone stands to benefit from this new technology, it is important to note that it is controlled by a small number of transnational corporations and research facilities in northern countries, in contrast to traditional plant and animal breeding practices developed in specific settings, known to many farmers and passed on from generation to generation. Clearly this will reinforce the power of elites and further marginalize the poor. World hunger, for example, is not caused by deficiencies in crop varieties but by the consumption habits of rich countries and the unequal distribution of wealth and political power in the world (Moore Lappé and Collins 1986). Pineapples from the Philippines, strawberries from Mexico, and carnations from Colombia are all imported into the United States and are grown on land that could produce food for local needs,



as is also the case with crops like sugar cane, coffee, and tea. As well as increasing milk production bovine growth hormone makes cows more vulnerable to disease, for which they are given powerful antibiotics and other drugs on a regular basis, which in turn affects the quality of their milk. The percentage of human diseases whose cause can be traced to genetic defects is very small. Most disabilities are caused by accidents and environmental or occupational exposure. By focusing on a tiny proportion of diseases, genetic engineering gives them enormous attention, while the study of many illnesses is ignored and poorly funded. Social causes are also ignored. Rather than genetic factors, poor prenatal care, directly traceable to socio-economic class, is the primary cause of birth defects, with environmental or drug-related effects close behind.

Besides engineering genetic material, people's thinking is also being engineered to accept it (Shiva 1993). Genetic engineering suggests fantastic or terrifying possibilities and assumes that there are technical solutions to social and economic problems. Thus, discussions that should be taking place in the political arena have been transferred to biological experts who present their work to their funders and professional colleagues in obscure, scientific language. Research and activist groups like the Research Foundation for Science, Technology, and Natural Resource Policy in India<sup>2</sup>, the Pure Food Campaign in the United States<sup>3</sup>, and the Feminist Network of Resistance to Reproductive and Genetic Engineering<sup>4</sup> (with groups in sixteen countries) are piecing together available information and challenging the underlying assumptions and practices of genetic engineering as it affects agriculture and human reproduction, though there is little public debate in the US on this issue, which has such far-reaching consequences—many of which, like the release of genetically engineered organisms into the environment, are simply not known. Beyond the political and economic details, what is at stake here are opposing systems of knowledge and values.

#### WHO OWNS LIFE? ETHNOSCIENTIFIC KNOWLEDGE, INTELLECTUAL PROPERTY

Despite the incursions of profit-driven agriculture in Africa, Asia, Latin America, and the Caribbean, there are thousands of small-scale ecologically sound development projects, many of them organized by women, described by Alan Durning (1989a) as “the best hope for global prosperity and ecology”. Many rural farmers struggle to continue to use ecological practice and appropriate technology, and to draw on long-standing ethnoscientific knowledge—for instance, the National Council of Women of Kenya's Green Belt Movement, which has spread to many other African countries. Started in 1977 by biologist Wangari Maathai, this program was initiated and promoted by women as a solution to diminishing supplies of fuel-wood and desertification in rural Kenya. By the mid-1980s Kenyan women had planted more than 2 million trees (Maathai 1988; 1991). Other projects rely on the introduction of appropriate technology to reduce the long hours women spend working for subsistence (Charlton 1984; Dankelman and Davidson 1988; Leonard 1989).

Ecologically sound development projects also have their counterparts in the US, including women's economic projects in rural areas and on Native American reservations; organic farms; seed banks that safeguard genetic diversity and promote the use of old, established varieties that can withstand drought and pests; and community gardening in inner cities (Bagby 1990). The 4-H Urban Gardening project in Detroit<sup>5</sup>, for example, coordinates well over 100 small gardens citywide and relies on the expertise of local people, mostly elderly

African American women, who raise vegetables for individual use and to supplement food prepared at senior centers, as well as producing crops for sale: loofah sponges, fresh herbs, honey, and worm boxes for fishing. Many of these women were brought up in rural areas in the southern United States, where they learned about gardening before coming to Detroit for work in the 1930s and '40s. By drawing on local people's knowledge and interests, providing fresh produce at little financial cost, and using the land in an ecologically sound and productive way, these gardening projects combine aspects of economic, ecological, and cultural survival. Besides growing vegetables and flowers, they contribute to the revitalization of inner-city communities and a sense of empowerment that comes from self-reliance. When people are outdoors gardening they also make neighborhoods safer by their presence, watchfulness, and care. An additional goal is to teach young people about gardening, strengthening connections between the generations and helping young people become more self-supporting. A rural example from the US is Ganados del Valle/Tierra Wools in northern New Mexico, a worker co-operative of twenty people—most of them women—which owns some 3,000 head of Churro sheep and produces high-quality hand woven rugs and clothing, and organic lamb.<sup>6</sup> Its objectives include economic development, environmental protection, cultural revival and conservation, workplace democracy, and social justice (Jackson 1991; Pulido 1993).

Sociologist and activist Devón Peña (1992) notes that as ethnobotanists, Chicanas in northern New Mexico know the backcountry in great detail because they go there at different seasons to gather herbs for medicinal purposes. Older people have passed on this detailed knowledge, as is also the case among some Native Americans and others who live in rural areas. Though many who have been raised in cities have not had the opportunity to learn such things, feminists involved in women's health in the past twenty years have encouraged women to become more knowledgeable and self-reliant with regard to health, and have published guides to herbal remedies as part of this work (Gladstar 1993; Potts 1988). On other continents, indigenous people—often women—also have detailed knowledge of local plants—their medicinal properties and usefulness for many domestic tasks—learned from their mothers and grandmothers and developed over many generations. Increasingly, the pharmaceutical industry is interested in developing medicines from plant material from tropical regions, which are the richest and most diverse sources of plant life. Seventy-five percent of plants that “provide ingredients for prescription drugs originally came to the attention of western researchers because of their uses in traditional medicine” (Kloppenburg 1991). Western agribusiness insists that plant and animal resources from the two-thirds world are public property, part of a common human heritage, but when developed by pharmaceutical companies they become private property for sale, graphically described by Vandana Shiva as “biopiracy”. As well as medicines, many staple food crops now produced in northern countries, such as corn and potatoes, have been adapted from tropical crops. According to Jack Kloppenburg (1991), “Indigenous people have in effect been engaged in a massive program of foreign aid to the urban populations of the industrialized north”. This commodification of knowledge in a capitalist context raises complex questions about who owns knowledge of life forms and whether indigenous people should have intellectual property rights and be compensated for their knowledge, a debate that feminists in industrialized countries should participate in. Genetic engineers who seek protection for modified life forms by taking out patents on their “inventions” pose a similar challenge.

WORKING FOR WELLNESS: ENVIRONMENTAL HEALTH

Capitalist production processes—whether in the industrial, agricultural, service or information sectors—are a crucial factor for workers and those who live and work near toxic workplaces. The explosion of the Union Carbide chemical plant near Bhopal, India, in 1984, which killed and maimed thousands of people, is a graphic example of lax safety standards routinely adopted as a way to cut production costs (Kurzman 1987; Shrivastava 1987). While many labor organizers oppose unsafe working conditions, companies often frame the issue in either/or terms and pit jobs against a better working environment. Firing particular individuals or threatening to relocate the plant elsewhere are common management strategies in this struggle for improved working conditions (Moses 1983; Noble 1983).

In the US hazardous working conditions and toxic wastes disproportionately affect lower-income neighborhoods, particularly those housing people of color, in a correspondence so striking it merits the term “environmental racism” (Bullard 1990, 1993; Hofrichter 1993; Lee 1987; Schwab 1994; Szasz 1994). Many women are involved in campaigning against toxic pollution in the workplace and the community in an environmental justice movement significant for its racial diversity (Kraus 1993; Zeff et al. 1989). Typically they get involved because they get ill themselves, or through caring for a sick relative, often a child. Activists piece together information to find the source of the illness, publicize their findings, and take on agricultural or industrial corporations and city agencies responsible for contamination. The Citizens’ Clearinghouse for Hazardous Wastes, founded by Lois Gibbs in the early 1980s, provides resource materials to local groups and published news of local campaigns (Gibbs 1995).<sup>7</sup> Other organizations actively pursuing these issues at regional and national levels include the National Women’s Health Network (Nelson et al. 1990)<sup>8</sup>, the Southwest Organizing Project<sup>9</sup>, the Center for Third World Organizing<sup>10</sup>, and the United Farmworkers of America (UFW)<sup>11</sup>, which opposes the extensive use of pesticides in commercial fruit and vegetable production. For some years the UFW has called for a boycott of California table grapes to protest the fact that farmworkers and their families, particularly women and children, suffer severe health effects due to pesticide exposure, and as leverage in negotiating better conditions in work contracts. Such produce is not good for consumers either. Middle-class parents were very successful in getting the pesticide Alar banned in the late 1980s because it damaged children’s health (Mott and Snyder 1987; Witte Garland 1989), with no apparent awareness or concern for farmworkers exposed to it in the course of their work. In many parts of the US mainly white middle-class consumers avoid contaminated produce by buying organic, which does nothing to improve conditions for most farmworkers or to reduce the effects of chemical pesticides on land and water. Much more needs to be done to build alliances between farmworkers—many of whom are Mexican American or Central American—and consumer groups. This will include increased education and public awareness of the dangers of pesticides and the low nutritional value of much mass-produced food, as well support for farmers markets, producer/consumer cooperatives, and other alternative agricultural projects.

## WOMEN’S HEALTH, FETAL HEALTH

For US women, cancer is the second leading cause of death, and breast cancer currently affects one in nine women, though the figures are much higher in some areas. Rita Arditti and Tatiana Schriber (1992) argue that cancers have environmental causes, evidenced by dramatic differences in cancer rates between geographical locations and the identification of specific substances including asbestos, chemicals, and ionizing radiation, which are linked to cancer.

They conclude that cancer is not only largely environmental in origin but also largely preventable, a view that underlies the work of groups like the Women's Community Cancer Project.<sup>12</sup>

Women and children are "ecological markers" with regard to toxics and often show signs of disease earlier than men do, either due to low body weight in the case of children, or because their bodies are said by health professionals to be "unhealthy environments" for their babies (Chavkin 1984; Nelson 1990). In some cases US women have been barred from jobs involving routine exposure to toxic chemicals so that they cannot sue their employers should they give birth to a disabled child—a form of fetal protection where women are seen in terms of their reproductive potential rather than as people in their own right. A Supreme Court decision in April 1991, for example, barred Johnson Controls, an auto battery manufacturer in Milwaukee, from keeping fertile women out of high-paying jobs that involve exposure to lead (Daniels 1993). While some feminists hailed this as a victory for equal rights, others saw it as the right to be treated equally badly. The decision does not address the more fundamental issue of hazardous workplaces, regardless of gender. Men's reproductive systems are also affected by toxics—as has at last been officially accepted in some extreme cases, such as exposure to the defoliant Agent Orange during the Vietnam War, and exposure to radioactive substances in nuclear plants and through nuclear weapons tests (Gibbs 1995). A Native American women's initiative concerning connections between the health of a mother and the health of her baby is the Akwasasne Mothers' Milk project, started in the early 1980s by midwife Katsi Cook (Cook 1985, 1993). Akwasasne, home of the Mohawk Nation (near Rooseveltown, NY), is affected by severe chemical pollution flowing through the Great Lakes as well as from nearby industries. Akwasasne women became concerned that by eating local vegetables, fish and other wildlife they might be exposing their babies to toxic pollution through their breast milk, and questioned whether they should continue breastfeeding. Despite the economic costs and against their tradition of supporting themselves from the land, they decided to stop eating locally produced food—garden produce, fish, and small game animals—and to monitor their situation carefully. More recent analysis of breast milk samples is not as bad as originally feared but still gives no cause for complacency. Another egregious examples involves women from Micronesia in the western Pacific who have been campaigning for years about the catastrophic effects of atmospheric atomic tests conducted by the British, French, and US governments in the 1950s and early 1960s (de Istar 1994; Women Working for a Nuclear Free and Independent Pacific 1987). Whole islands have been irradiated and soil and drinking water contaminated. Some women have given birth to "jelly fish babies" without skeletons, who live only a few hours. Other children survive despite severe illnesses and disabilities caused by radiation.

The general relationship between environmental hazards and human health needs much more detailed research and public debate (Gibbs 1995; Nelson 1990), including research into the environmental causes of illnesses like cancer, chemical sensitivities, and allergies. In addition, there should be increased education and support for holistic healing practices that do not rely on drugs and surgery.

#### POPULATION: TOO MANY PEOPLE FOR WHAT?

The issue of population is another key one for ecological feminism. The discourse about fertility and population is also a discourse about race. With white populations falling in relation to people

of color in the United States, it is white women who are offered so-called fertility treatments and whose right to safe accessible abortion is being eroded. The question of why so many young people in this country are apparently infertile, for example, is salient here. In the US infertility is looked upon as a personal failing to be remedied by treatment, another example of a new product meeting a new “need”, even though infertility treatments have a spectacularly low success rate so far and are very expensive. They are aimed at middle-class women as a widening of individual choice, but the relationship between infertility and environmental hazards is rarely examined. Feminist critiques of reproductive technologies have tended to focus on their invasiveness and the lack of power and knowledge consumers have compared to medical experts (Arditti et al. 1984; Correa 1985, 1987; Stamworth 1988). Sterilization without women’s full knowledge or under duress has been a common practice in this country among low-income women, especially Latinas, African Americans and Native Americans. In the 1950s and ‘60s Puerto Rican women were used in trials of contraceptive pills later made available in the US in much lower dosages. Currently low-income African American women and Latinas are much more likely than white women to be encouraged to use the long-acting contraceptive, Norplant, implanted under the skin, on the assumption that their pregnancies are not socially desirable and that these women would be unreliable if they used other contraceptive methods.

There is also a similar, distinctly racist dimension to the environmental debate about population globally. Simply looking at numbers of people and rates of population growth, prominent environmentalists in northern countries have argued that many nations, particularly in Africa and Asia, must cut their high rates of population increase. They talk in terms of the limited carrying capacity of the planet to support human life and pose the “problem of overpopulation” as a central (sometimes *the* central) environmental concern. Anne and Paul Erlich, for example, emphasize the inevitable destructive potential of this “population bomb”, implying that two-thirds world women, more than anyone else, threaten the survival of the planet (Erlich and Erlich 1990). Deep ecologists have gone much further, calling for drastic reductions in population. An *Earth First!* contributor who wrote under the pseudonym Miss Ann Thropy (1991) made the outrageous claim that if AIDS did not exist it would have had to be invented, or that starving people in Africa should be left to die so that the human population can be brought back into balance with the carrying capacity of the land. Framing the issue this way is ideologically loaded, racist, and obscures several central questions: the varied cultural and economic reasons poor people have children; the inverse relationship between women’s status and family size; why men are not required to take responsibility for their sexuality and fertility; the political reasons for starvation and hunger; the skewed distribution of wealth on an international level, where industrial nations consume most of the world’s resources and generate most of the waste, especially the chemicals and gases that deplete the ozone layer. The US, for example, which has 6 percent of the world’s population, uses some 40 percent of the world’s resources. “A family of eight in Rwanda or Nicaragua neither depletes nor pollutes the Earth anywhere near the amount that does a family of four in Great Britain or the United States” (Hynes 1991). Feminist researchers like Betsy Hartmann, Director of the Population and Development Program<sup>13</sup>, “emphasize this relationship between population and consumption, positing a “problem of overconsumption” on the part of the North (Bandarage 1994; Hartmann 1991, 1995; Moore Lappé and Schurman 1988). Many southern countries are working to reduce their population growth and recognize only too well the difficulties they face in terms of food security. It is also important to see this in the context of external debt as outline above. One reason it is difficult to feed fast-growing populations in south countries is that an increasing

acreage once used for subsistence crops now produces cash crops for export as a way of earning hard currency and making repayments on foreign loans.

### MILITARY SACRIFICE AREAS: OUTPOSTS OF EMPIRE

A final example to illustrate my general argument concerns military activities, which cause the most severe, long-term environmental destruction worldwide (Seager 1993). This includes weapons production, storage, and testing, as well as outright war. In many wars farmland, deserts, and forests are routinely mined, making them extremely dangerous and unusable for years to come. In the Vietnam War, chemical defoliants were used to destroy the forests. During the 1991 Gulf War, US bombers did significant environmental damage, including an unprecedented attack on oil wells that continued to burn for many months after the war was officially over, giving off a thick, noxious smoke that completely blotted out the light. The production of nuclear weapons is another case in point. The mining of uranium, the development of weapons-grade plutonium, and the assembly and testing of warheads have contaminated indigenous peoples' lands in North America, southern Africa, Australia, and the Pacific, and have affect the health of countless people through contaminated air and water (Birks and Ehrlich 1989; Christensen 1988). The half-life of weapons-grade plutonium is 24,000 years, so this is a long-term problem of overwhelming dimensions, currently with no solution. Many community organizations in the US have been campaigning for years against nuclear processing plants and dump sites, which leak radioactive particles into the air and ground water, ironically in the name of national security.<sup>14</sup> Not only do these processes treat the land as disposable, they treat people the same way. Many Native Americans see uranium mining on reservations as racist and genocidal, though this often provides the only well-paid work available. People from the Pacific view the decision to test atomic weapons in their islands, which the French continued in French Polynesia until January 1996, as imperialist and racist in the extreme. During agreements to end the UN Trusteeship of Micronesia in 1969, then US Secretary of State Henry Kissinger said, "There's only 90,000 people out there, who gives a damn?" (Women Working for a Nuclear Free and Independent Pacific 1987). He did not say people of color but the implication is clear.

As the world economy becomes more integrated and more reliant on automation, there are fewer chances of employment for many people. At the same time military budgets have risen in virtually every country to a staggering total, with arms sales a major export for many industrialized nations (Collinson 1989; Leger-Sivard 1991). Poorer countries also trade arms, a key source of hard currency. For many young men, whether in US inner cities or war-torn countries like Afghanistan or Sri Lanka, guns are far easier to get than jobs, while many women worldwide campaign against militarism and military values. Women in Sri Lanka have come together across lines of ethnicity and culture to try to stop civil war. Jewish and Palestinian women are working together to oppose the military violence of the Israeli state. Women in the Pacific island of Belau have been crucial in the campaign to retain their country's nuclear-free constitution—incidentally the only one in the world—against great economic and political pressure from the US to use Belau as a navy base. Women's antimilitarist campaigning in northern countries, especially in the 1980s, included many demonstrations, vigils, and peace encampments outside military bases, factories making weapons components, bomb assembly plants, and military tracking stations. The Women's Pentagon Action (1983) protested military priorities and the vast resources allocated to them, as well as the widespread, everyday culture of violence manifested in war toys, films, and video games, an important factor in the construction

of militarized masculinity (Enloe 1990). Greenham Common Women's Peace Camp in England, which started in 1981 as a protest against the siting of US nuclear missiles, linked violence against women and children, military violence, and ecological destruction. Greenham inspired dozens of other peace camps in North America, western Europe, Australia, and New Zealand, and many thousands of women there participated in campaigns of nonviolence direct action—protests that were imaginative, colorful, and assertive, with powerful artistic and ritual elements (Cook and Kirk 1983; Harford and Hopkins 1984). Greenham women also campaigned for the demilitarization of what used to be common land, making connections with others whose land has been annexed and appropriated in the interests of military domination, including indigenous people of North America, Aoteroa (New Zealand), and the Pacific Islands. This antimilitarist activism was the source of much ecofeminist theorizing and practice, though criticized by women of color for being overly concerned with gender at the expense of race and class (Amos and Parmer 1984; Omolade 1989). This tendency, together with the inevitable ebb and flow of any voluntary campaign, made for a limited theoretical understanding, and this feminist peace movement has not sustained itself into the 1990s.

### PRINCIPLES OF A MATERIALIST ECOLOGICAL FEMINISM

With these examples I have outlined a broad basis for a materialist ecological feminism, which will have many cultural variants depending on specific circumstances. Based on this discussion I suggest the following general principles for a materialist ecological feminist theory and practice. It should

- include the experiences and perspectives of women dealing with ecological issues as a matter of survival;
- recognize the linear expansionism of capitalist economies as fundamental to ecological devastation;
- link the domination of women by men, people of color by white people, nonhuman nature by human beings—understanding that the connection between ecological sustainability and social justice is structural and not just a campaigning strategy based on coalitions of different groups;
- challenge existing industrial and agricultural production processes that involve the routine use of toxics, excessive packaging and waste, the pollution of workplaces, and the oil-intensive transport of goods over great distances;
- challenge the overconsumption and materialism of rich countries and elites in poor countries, opposing prevalent ideas about modernization, growth, and progress;
- call for decreased production such that the goals of the economy are reoriented to the production and reproduction of life;
- frame issues in ways that include women and men of different backgrounds and experiences, to enable diverse groups to work together across race, class and national lines;
- move from a framework of oppression to a framework of resistance;
- oppose personal and military violence; and
- promote sustainable, life-affirming projects that link economic and cultural survival.

### AGENDAS FOR ACTION

These principles give rise to extensive agendas for action. I see two fundamental questions for feminists in industrialized countries who are concerned about ecological issues. What is involved in creating sustainable economies worldwide? How can we work toward this change?

Ecological feminism needs to be involved with sustainable agriculture, restoration ecology, and health in the broad sense of wellbeing. It must oppose the structural/socio economic adjustment policies of northern governments, as well as militarism and the cultures of violence it generates and requires. This means opening up a public debate that challenges and opposes the values and practices of this economic system—its hazardous production practices as well as its consumerist ideology—rather, framing progress in terms of sustainability, connectiveness, and true security. It involves promoting vibrant local projects so that people are not dependent on the whims of corporate investors and developers, building up communities where young people are needed, where they can develop skills and gain respect for themselves and each other through meaningful work and participation in community projects and decision-making (Boggs 1994). It involves expanding and strengthening many existing, small-scale projects including community gardens; farmers' markets; cooperative organic farming; backyard gardening, composting and beekeeping; the design and building of eco-housing; repairing, reusing, and recycling discarded materials, vacant land, and derelict buildings especially in blighted post-industrial cities; promoting technologies that rely on renewable resources.

This agenda also means questioning what constitutes valid knowledge and who can claim authority and expertise. It assumes that people may need to be made aware of these issues—a task for formal schooling and informal community-based education—and that they should be active participants in decision-making with control over their means of livelihood. It means challenging the assumptions and practices of genetic engineering as it applies to the production of seeds, plants, and animals, as well as human reproduction; challenging institutionalized science as a major contributor to ecological destruction—indeed, as Carolyn Merchant put it, the death of nature—but promoting what Lin Nelson has called the “kitchen table science” of women piecing together information about polluters, and the ethnoscience of women farmers in the Himalayas or Native American and Chicana herbalists. It requires research that is of interest and value to activists and policy-makers, rather than an abstract academic feminism increasingly coopted by patriarchal notions of scholarship. It needs organizations and contexts where working relationships between activists, researchers, and policy-makers can develop, and where students can learn this approach in practice. It will require extensive democratization of political processes and institutions locally, nationally, and internationally.

Clearly, I am outlining both a long-term agenda and something already happening in small ways through many projects. Such a broad perspective may seem utterly daunting given the basic contradiction between exploitative economic systems and a world without environmental destruction or violence, but many women and men are grappling with these issues and making changes. Local, regional, national, and international networks of feminists and environmental justice activists, admittedly small and rather fragile, currently link organizers, researchers, and policy-makers around many of the issues I raise here. Examples include Development Alternatives for Women in a New Era (DAWN) active in Asia, Africa, Latin America and the Caribbean; Women Working for a Nuclear Free and Independent Pacific, with groups in Britain, Australia, and the Pacific; and Women's Environment and Development Organization based in New York. Fifteen hundred women from all continents gathered in Miami in November 1991 to develop a women's agenda to take to the UN Conference on Environment and Development in Brazil in June 1992. The World Women's Congress for a Healthy Planet<sup>15</sup>



included women who work for UN agencies, elected politicians, teachers, scholars, journalists, students, and activists—women who are working inside formal government structures, in lobbying and educational work, and through grassroots organizing. It was the first major international women’s gathering to discuss ecological issues and showed the growing strength of women’s analysis and organizing.

Environmental issues have enormous potential for bringing people together across lines of gender, race, class, and nation in projects and movements that radically challenge white-dominated, patriarchal capitalism and include transformational agendas and strategies for sustainable living. At root this is about taking on the whole economic system and the systems of power—personal and institutional—that sustain it, working to transform relationships of exploitation and oppression. This means that northern countries must consume far fewer of the world’s resources. Feminists and environmentalists need to challenge the fundamentals of materialism and consumerism, creating a definition of wealth that includes health, physical energy and strength, safety and security, time, skills, talents, wisdom, creativity, love, community support, a connection to one’s history and cultural heritage, and a sense of belonging. This is not a philosophy of denial nor a romanticization of poverty, though it does involve a fundamental paradigm shift in a country—indeed a world—so dominated by the process of capital accumulation and the allure of material wealth. There is a need for greater dialogue between those from rich and poor countries, and between middle-class and poorer people in rich countries like the United States, but this needs to move from a politics of solidarity—implying support for others in struggle—to a politics of engagement, where we are in struggle together.

This is a pivotal time in human history. The point is not to pursue the liberal ideal of equal opportunity for material development in a world that is heading toward even greater ecological destruction; to intellectually deconstruct the complexities of reality without apparent interest in practical reconstructions; or to buy “Green” products—where the emphasis is still on consumption (Hynes 1991; Mies 1993), but to transform relationships among people and between people and the nonhuman world so there is the possibility that our children’s children will inherit a healthier planet and will be able to live in more truly human ways.

## NOTES

1. I follow Charlotte Bunch in using this term to emphasize the fact that the majority of the world’s people live in the so-called Third World, while recognizing that such shorthand terms are all problematic. “First World/Third World” assumes the superiority of North America and Western Europe. Economic development terms, which rank countries as “developed,” “underdeveloped,” or “developing,” assume a unitary view of development and progress following the industrial capitalist model of Western Europe and North America. Hemispheres of political influence—West and East—are also oversimplifications; as is the distinction between countries of the North and South. Comparing countries masks serious inequalities within them.
2. Research Foundation for Science, Technology and Natural Resource Policy, A60 Haus Khas, New Delhi, 110 016, India. Journal: *Bija—the Seed: A Quarterly Monitor on Biotechnology and Intellectual Property Rights*.
3. The Pure Food Campaign, 1130 17<sup>th</sup> Street NW, #300, Washington, DC 20036.
4. Feminist Network of Resistance to Reproductive and Genetic Engineering (FINNRAGE): <http://www.finrrage.org>

5. 4-H Urban Gardens is a project of Michigan State University, Department of Agriculture, Wayne County Cooperative Extensions Service, 640 Temple Street, sixth floor, Detroit, MI 48201.
6. Tierra Wools, Los Ojos, New Mexico: <http://www.handweavers.com>
7. Citizens' Clearinghouse for Hazardous Wastes, now Center for Health, Environment and Justice: <http://chej.org/>
8. National Women's Health Network: <https://www.nwhn.org>
9. Southwest Organizing Project: <https://www.swop.net>
10. Center for Third World Organizing: <http://ctwo.org>
11. United Farm Workers of America: <http://ufw.org>
12. Women's Community Cancer Project, c/o The Women's Center, 46 Pleasant Street, Cambridge, MA 02139.
13. Population and Development Program, Hampshire College, Amherst MA: <https://www.hampshire.edu/popdev/population-and-development-program>
14. Radioactive Waste Campaign, 625 Lafayette Street, New York, NY 10003; the Military Toxics Project, Tides Foundation, P.O.Box 845, Sabattus, ME 04280.
15. Women's World Congress for a Healthy Planet: <http://wedo.org/bella-abzug/>

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