

633

ECOFEMINIST CRITIQUES OF DEVELOPMENT : AN EVALUATION

Dissertation submitted to the Jawaharlal Nehru University
in partial fulfilment of the requirements for the
award of the Degree of
MASTER OF PHILOSOPHY

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1994



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Certified that the dissertation entitled "Ecofeminist Critiques of Development: An Evaluation," submitted by Nita Mishra, in partial fulfilment of the Degree of Master of Philosophy (M.Phil.) in Jawaharlal Nehru University, has not been previously submitted for any other degree of this or any other university. To the best of our knowledge this is an original work.

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To think as a feminist means trying to think connectedly about, e.g., the science of embryology as it may connect with sexuality; about human body-rhythms and their relation to natural cycles (the menses and the lunar month, the connections between woman, darkness, sleep, and death in the male unconscious; the connections of these with male attitudes and political decisions affecting women; the connections of these with male attitudes and political decisions affecting women); about the uses and criteria of psychology with the political and social order). It is easy to say that we cannot ever know what is truly male or truly female. There is much we can know. We do know that these principles have been split apart and set in antagonism within each of us by a male-dominated intellectual and political heritage. That is at least a starting point (Adrienne Rich 1975: 101).

ACKNOWLEDGEMENTS

I would like to thank my supervisor, Dr. Gurpreet Mahajan, for pushing through this dissertation topic when it was initially being rejected on grounds of being 'apolitical'/sociological/anthropological. My determination to work on the same would not have been possible without her enthusiasm and support. She has patiently gone through my initial drafts, and her comments have helped me organise my thoughts. The emotional support extended by her towards the end, during the submission period, of the thesis has been a source of encouragement. I would not have been able to complete my dissertation without her help.

Personal communications initially with Prof. Patricia Uberoi, and towards the end with Prof. Bina Agarwal have helped me in formulating my stand/viewpoint. Early last year, I managed to get reading material from Prof. Agarwal, material which is not available elsewhere in Delhi to the best of my knowledge. Discussions with Dr. Sarah Joseph on women's studies, Dr. Rudolph C. Heredia on ecological studies, and Fr. Walter Fernandes have been most helpful. Debates and discussions with my friends Harsh Dhobal, Mita Radhakrishnan, Arundhuti Roy Choudhury, S. Anandhi, and my brother, Vishnupad, have helped me as well. I am also thankful to Dr. Ramachandra Guha for allowing me to borrow his edited book, *Social Ecology*, which has not yet come to the libraries. I am indebted to Fr. Sebasti Raj of the Indian Social Institute, for allowing me to use its structural facilities, especially the computer, when he could have easily refused permission. Kusum has extended some help in typing out parts of the bibliography and the tables in the manuscript. Without the support of my immediate family, especially my mother, and my fiance, Tuhin, I would not have been able to complete it.

I dedicate my dissertation to my mother for being the courageous woman that she is...

CONTENTS

	PAGES
ACKNOWLEDGEMENTS	
PREFACE	
I. A BRIEF SURVEY OF THE ECOLOGICAL MOVEMENTS AND FEMINIST STUDIES	3
II. THE CONCEPT OF ECOFEMINISM	28
III. CRITIQUES OF DEVELOPMENT	52
IV. A CRITIQUE OF ECOFEMINISM	77
REFERENCES	91

PREFACE

The 1960s and 70s witness a spate of social movements and local struggles (e.g. of women, gays, and ecologists). These provided an important social matrix for the rise of a postmodern social discourse. There was a shift of leftist politics from the politics of labour to the new social movements. The centrality that Marxism accorded to class politics had rendered gender, racial, sexual and ecological struggles marginal and secondary. The plurality of these local movements focused on their own local or particular struggles to build autonomous communities, to evolve their own language of social analysis, and to forge their own opposition politics.

I have begun with the concerns that developed in the social science discourse following the rise of the new social movements and local struggles, among many others, that of women, gays, ecology, ethnic. My main concern relates to the state of the environment today the cause of which I, on the basis of my arguments in the thesis, attribute to the present process of development. I have attempted to survey the critiques of the existing pattern of development--ecological critiques, feminist critiques, and more specifically, an eco-feminist critique. I intend to restrict my thesis to women's ecological struggles. More specifically, I intend to look at it with a feminist perspective for which one needs to use the ecofeminist approach. My contention is that the ecofeminist perspective is not adequately developed to provide an alternative approach. It has to be corroborated with many other insights as discussed in the final chapter.

In the first chapter, I have dealt with the parallel developments in Feminist Studies, and ecological studies which have emerged as a result of the continuous degradation of the environment. What I propose to do here is to arrive at the concept of eco-feminism by way of its critique of present ecological discourses, and modification of existing feminist thought. I shall

begin with a survey of the ecology movement and then go on to the developments in feminist studies. Following this I attempt to bring in the common concerns of both discourses in the concept of eco-feminism.

In the next chapter, I intend to deal with the concept of eco-feminism, its emergence as a theoretical paradigm, ecofeminism and the intersection of feminism and ecology. Next, I intend to survey the concept of development--as seen by the west, as interpreted by concerned native authors, and the effects of development on poor, rural and tribal women, with examples. Examples of women resisting the forces of ecological decline have also been taken up.

Chapter four deals with the critique of the Eco-feminist thought, and its potential in directing future research. My own stand is that, possibly, one needs to blend the 'modes of resource use' model forwarded by Gadgil and Guha (1992) with the insights provided by Eco-feminism. What exactly are these insights that may help in the evolution of gender history in terms of the categories identified by Guha and Gadgil have to be worked out. Without understanding the foundation and the functioning of the asymmetric relationship between men and women historically, it is not possible to overcome alienation of women and men from resource allocation.

This is a modest account of my research interest on 'ecofeminism'. Based on this dissertation's alternative queries, I intend to pursue my doctoral degree in a field enquiry.



NITA MISHRA

CHAPTER I: A BRIEF SURVEY OF THE ECOLOGICAL MOVEMENTS AND

FEMINIST STUDIES

In this chapter, I intend to discuss briefly the common concerns regarding science, the 'development' process, and the rights of the future generations which have emerged in the ecological studies, and in women's studies. Following this is a discussion on the developments in both disciplines which seem to converge in the concept of ecofeminism.

To begin with, I would like to mention that the two great intellectual traditions of sociology-- those associated with Karl Marx and Max Weber-- have remained unconcerned with the natural world (Guha 1994: 10), and with the problem of gender as well. As a consequence of this neglect, the subject of 'Environmental Sociology' developed recently in response to the environmental movements. On the other hand, Women's Studies have emerged as a reflection of the various women's local movements. The anti-nuclear and peace movements question the very rationality of the 'development' process which leads to environmental degradation, destruction of livelihood systems of those based on nature directly for daily sustenance, serious health problems, and increasing the burden of work of women.

A GENERAL PICTURE

In recent times, the concern for the state of our environment has increased considerably. The depleting natural resources, uncontrollable pollution, and the hazardous effects of industrialisation have placed the problem of ecology in the agenda of social sciences, and that of the political groups for mobilisa-

tion. Ecology emerges as an issue in this context. What is man doing to nature, and to the ecological balance in the name of 'development' became a central issue of research. Three developments, viz. the relationship between man and nature, the effects of development, and the rights of future generations, as discussed below, followed this concern.

A. Man-Nature Relationship

Scholars have pointed out that the man-nature relationship used to be harmonious and interdependent in past societies. It was harmonious because man venerated nature, and the 'use' of nature was need-based. Nature and natural resources were not exhausted or exploited beyond a point ~~beyond a point~~ which was defined by the needs of man. Nature was given time and space to regenerate itself as can be seen in the practice of *jhum* or shifting cultivation which was/is prevalent in most traditional societies¹

Over time, with the achievements of science and technology in the industrial west, man's dependence on nature was seen to have diminished. Nature was progressively marginalised when people (at least some people) overcame the environmental constraints presented by distance, climate, and other such natural constraints (what was previously considered as a limitation)². Scholars of the New-Left school (Frankfurt school) attribute this

1. Shifting cultivation is characterised by community ownership, equitable distribution of resources, maintaining the environmental balance, and of being a women's economy. For further details, see John Deeny and Walter Fernandes "Tribals: Their Dependence on Forests, Their Traditions and Management Systems", in Walter Fernandes ed. *National Development and Tribal Deprivation*, New Delhi: Indian Social Institute, pp. 49-75.

2. See Stuart Mill, David Held and Tony McGrew (eds). *Modernity and its Futures*, Cambridge: Polity Press, 1992.

state of affairs to the Enlightenment era-- a period when man is supposed to have attained enlightened knowledge based on reason and a scientific temper. Further, the New Left scholars contend that whereas the Greeks did not sharply distinguish between mind/subjectivity and the world of objects, for the Enlightenment thinkers, there was a radical disjuncture between subjectivity and nature. The roots of the change in man's perception of nature is traced to the Enlightenment era.

The Enlightenment period coincides with modern industrial development, colonial explorations of newly discovered territories, scientific discoveries, and technological inventions. One finds a need to delve into the studies of science and technology because human progress is measured by the developments in science and technology. It is necessary to trace the ecological crisis to the Enlightenment period because the environmental deterioration heightened during this time. It was in the Enlightenment period that unparalleled progress in science and technology occurred, thereby, affecting man-nature relationship¹ In the field of the social sciences, Locke's concept of private property, and finally the Utilitarian ethics conceived of nature as an object/matter having value only and only if it had utility-value for humans. Developments in the above-mentioned fields coloured man's conception of nature, and shaped his world-view.

The Enlightenment thinkers conceptualised nature as neutral, disenchanting, and indiscriminately appropriated. Nature is conceived to be pure matter, or the sphere of objects, structured according to laws and capable of being known through a mathemati-

1. The relationship between man and nature is mediated by science and technology.

cally formulated universal science. In itself nature has no value. Further, matter was conceived to be insignificant and, therefore, it could be altered and manipulated. Nature is also unfathomable, unwieldy and uncontrollable. Therefore, the goal of the Enlightenment scholars, on the one hand, was to learn from nature itself the technique to use it and, correspondingly dominate it through scientific technology. On the other hand, this understanding provided them with the rationale to dominate and control people (the underdeveloped, marginalised peoples, and women) embodied 'nature' in them. The embodiment of 'nature' in humankind implied the state of 'underdevelopment', 'savagery', 'ignorance', and thereby in need of 'development', 'civilisation', and 'knowledge'. The latter categories were the domain of the enlightened scholars-- western, white men who carried what was later termed as the 'white man's burden'. It was the task of man to spread the knowledge of scientific rationality.

Such an understanding as mentioned above was also heightened by the Protestant ethic which valued the profit motive¹. Thus, the relationship of man and nature was interpreted as that of subject and object, respectively-- subject (man) acting upon the object (nature). Man as 'active', and nature as 'passive' matter to be acted upon.

Thus, the epistemic defense of science as necessary to safeguard reason and a good society was shaken. Dominant science and technology had no answers to this ecological degradation.

1. For a comprehension on the Protestant ethic see Anthony Giddens, *Capitalism and Modern Social Theory*, Cambridge: Cambridge University Press.

B. *The Effects of Development*

The present path of development with its cultural corollaries of accumulation of new knowledge, extensive use and control of natural resources, advancement of men's technical capabilities and an increase in material richness has also brought humankind to the brink of an ecological and cultural crisis. The effects of the present process of development, it has been noticed, has unleashed a series of interlinked problems-- growing impoverishment and inequality, food insecurity and famine, financial and monetary instability, population pressures, and environmental problems consequently (Slatter and Murray 1985: 1)¹. It has resulted in a process of violence and domination, and "boundless exploitation and unbalanced growth, spearheaded by a small part of mankind at the detriment of a large majority" (Dias 1992: 1).

Contemporary development pattern believes that commodity production will improve the basic needs of people. However, the expansion of cash-cropping and production for export did not accompany the 'trickle-down' of benefits to the poor as expected by development thinkers. On the contrary, it has led to water pollution, soil erosion, destruction of firewood resources, and a loss of genetic diversity of plant and animal stocks" (Momsen 1991: 93-94).

The demands to keep up with hi-tech industrialisation and a high rate of economic growth (measures of development) have only led to an "environment catastrophe, over-all cultural disruption,

1. See Claire Slatter and Sally Murray, "Development, Crisis and Alternative Visions: Third World Women's Perspectives," *Development Alternatives with Women in a New Era*, New Delhi: Institute of Social Studies Trust, 1985.

ethical confusion, unequal concentration of wealth and over-consumptive practices, leading to squandering of the scarce resources of the earth and to increase of the greenhouse effect" (Dias 1992: 1).

The general environment crisis caused by the overuse of agricultural and forest resources as a consequence of modernisation and intensification of agriculture and animal raising, decreased access to land, impoverishment, growing industrial and urban fuel and timber demands on rural resources, and local population imbalances due to refugee camps and new settlements have all led to a rural fuel crisis (Cecelski 1984: xi).

Since the World Forestry Conference in 1978, the concept of social forestry¹ has been taken up seriously by national governments to counteract the pressure on forests. However, it has provided incentive to farmers to opt for cash crops. For example, it has made farmers switch land from food production to plantation of eucalyptus trees. These trees provide neither food, fodder nor fuel to communities directly depended on land. On the other hand, these are used by the industrial textile and paper mills (Cecelski 1984: 70). Similarly, in Peru, pine and eucalyptus are planted in the name of social forestry, for use in pulp and paper, and mining industries.

The UN World Commission of Environment and Development in its report "Our Common Future" states that-- Ecology and economy are becoming ever more interwoven-- locally, regionally, nation-

1.To have a understanding of social forestry read Sandhya Venkateswaran, "Living on the Edge: Women, Environment and Development", New Delhi: Friedrich Ebert Stiftung, 1992, pp.67-75; Vandana Shiva, H.C. Sharatchandra and J. Bandyopadhyay, *The Challenge of Social Forestry*, in Walter Fernandes and Sharad Kulkarni (eds). *Towards a New Forest Policy: People's Rights and Environmental Needs*, New Delhi: Indian Social Institute, 1983, pp.48-72.

ally, and globally-- into a seamless net of causes and effects...Debts that they cannot pay force African nations relying on commodity sales to overuse their fragile soils, thus turning land to desert," (Kennedy 1990: 14). To counteract this the report advocates "progress within the guidelines of human needs and natural laws," (ibid).

There has arisen the redefinition of the concept of 'development'. Does 'development' necessarily have to lead to ecological destruction; 'development' at what cost; and the parameters of the development process have become debatable issues presently.

This has also set on a series of debate on the concept of ecology and its use. Philosophy became concerned with the question of moral duties related to environmentally sensitive decisions to set out the various interests which are at stake; and adjudicate between them. It was to concern itself with what was considered as the broadest of all problems: that is the quality of the natural world on which we depend for our existence but threaten by our activities (Almond and Hill 1990: 2). This has set in motion a new perspective of looking into ecology-- the school of 'deep ecology'. Deep ecology treats environment as a living entity. Later in the chapter a description of the concept is discussed.

C. The Rights Of Future Generations

One speaks of the paradigms of liberty and free-will that have opened up for the future generations following the development and spread of science, 'development', and knowledge. And yet a closer look into these paradigms reflects the very shallowness

of these claims. It is shallow because the environment we are leaving behind for the coming generations is not conducive to any growth-- life or otherwise.

Yet another study (Butcher and Page 1984) records the effects of environmental hazards leading to health problems. Table 1.1 reflects the reproductive ailments because of environmental chemicals.

TABLE 1.1: Examples of Environmental Agents That Affect Reproduction in the Female

CHEMICAL	KNOWN EFFECT ON REPRODUCTIVE FUNCTIONS
METALS	
Lead	Abortion, mental deficiencies
Mercury	Abortion, menstrual disorders, birth defects
Cadmium	Retarded foetal growth
Selenium	Abortion
PESTICIDES HERBICIDES, ORGANIC SOLVENTS ETC.	
Dioxanes	Abortion, birth defects, stillbirth
Polychlorinated biphenyls	Retarded growth, natural depression
Pesticides	Birth defects, mutation, neural alterations, ovarian dysfunction, abortion
Herbicides (2,4-D & 4,5-T)	Stillbirth, birth defects, menstrual dysfunction, anemia
GASES	
Carbon monoxide	Foetal death, brain damage
Ozone	Abortion, birth defects
Anaesthetics	Infertility, birth defects
RADIATION	
X-ray, gamma ray	Mutations, microencephally, mental
DRUGS	
Thalidomide	Birth defects
Diethylstilbestrol	Vaginal adenocarcinoma in offspring
Alcohol	Neural deficiencies, growth retardation

Sources: Butcher (RL) and Page (RD). Introductory Remarks: Environmental and Endogenous Hazards to the Female Reproductive System. Environmental Health Perspectives: 1981; 35:17 in (GOI, 1984), in Venkateswaran: 1992: 145.

Dr. Rosalie Bertell (1990: 18) writes that our unconscious

assumption that the future generations have the freedom of choice is based on a false premise. Because one is creating "a next generation that is physically less able to cope with hazardous material than their parents were". Ecological degradation increases what is called 'genetic damage' as a result of radiation. Radiation causes damage to living cells, induces the waste of precious resources like the DNA in the human body leading to the birth of deformed babies, and increases the possibility of cancer, among other diseases¹.

In the village of Jaduguda in Singhbhum district of Bihar, the indigenous tribal population of the area is facing extinction due to the effects of radiation from the 'tailing pond' of the Uranium Corporation of India Ltd. (UCIL). The ponds have been polluted with the radioactive wastes of UCIL, as well as from those brought from other such plants situated near 'developed' cities like Calcutta and Hyderabad where the objection of the people is taken into account (Areeparampil 1993: 33-47)².

At the same time, within the parameters of Women's studies, enquiries, debates and discussions on the same issues-- of man/woman-nature relationship, the effects of the 'development' process on women, and the subsequent effects of these on women's biology (which has implications for the future generations) had begun. These enquiries began with Women's demand for equality and

1. For details please refer to Dr. Rosalie Bertell, 'No immediate danger? Prognosis for a radioactive earth', in Trine Lynggard and Mette Moberg (eds.) *Women and Sustainable Development: A Report*, Oslo: Centre for Information on Women and Development, May 1, 1990, pp.18-21.

2. For details of the case study see Matthew Areeparampil, 'The Impact of Uranium Mining and Processing on the Indigenous People of Singhbhum District in Chotanagpur', Walter Fernandes (ed.), *The Indigenous Question: Search For An Indigenous Identity*, New Delhi: Indian Social Institute, pp.33-47.

equal rights for women in society. Over time the role of patriarchy (male domination) in perpetuating an unequal society was analysed and studied. The claim of feminists is that at the base of all inequalities lies the domination of women by men.

There is a strong belief that science (as it is) is a patriarchal social practice that is part of the strategy of groups struggling (through the instruments of State power and ideology, threat of physical violence, among others) to impose and legitimise their conflicting interests. This belief was strengthened by a re-vision of the Enlightenment period. In addition to the discussion on the Enlightenment done above, a review of literature (Merchant 1980) of the period from a feminist perspective reveals that the enlightened men conceived of women as embodying nature in them. Thereby, women were natural, irrational, and lesser privileged and therefore needed to be controlled.

Prior to the idea of 'control' of nature and women prevailed the idea of nature/and women as mother and life-giving. However, parallel to the massive developments in Science and technology, the desire to 'tame' nature for maximum use and 'profit' arose. And one notices a simultaneous public killings of women healers and mid-wives on the accusational pretext of their being witches. Merchant 1980, Shiva 1988 note that the violence against women by men arose because of the fear of women's capacities to produce and sustain life followed by a death of the 'feminine' principle in men¹.

Secondly, the concept of womanhood as based in the female biology came under scrutiny. The feminists attack the scientific

1.A detailed discussion on the 'feminine' principle is done later in the thesis, more specifically in chapter 2.

and medical disciplines for constructing concepts of womanhood that disempower women with their normative and behavioural directives (that women belong to the weaker sex, and therefore there are ways and means in which they ought to behave for their own good and safety to avoid being physically assaulted for instance). Documentation of androcentric biases, values, and interests of science by feminist critics (see Merchant 1980, Keller 1985, Harding 1986, Bandyopadhyay and Shiva 1986, Mies 1986, Mies and Shiva 1993, Agarwal 1988, Shiva 1988) has led to a debate over the concept of a universal science as well.

Science is becoming relativized by the evolution of alternative social discourses. For example, most feminist writings (Adrienne Rich 1977; Susan Griffin 1978; Kate Millet 1969) suggest a "non-scientific" mode of social analysis that frequently combines autobiographical, liberty, society-scientific, and journalistic styles (Siedman and Wagner 1992: 49-54).

The second area of research is that of women in 'development'. The present pattern of 'development' seems to have ignored the fact that women and men are differently affected by any process of development activity. The gendered needs have to be taken into account. One notices that women are the worst victims of the present 'development' process¹.

The third concerning the rights of future generations to a healthy environment depends on a large extent on the health of the women who reproduce them, and on the environment in which one is born into and lives in. In present times, the health of women, and that of the environment has been adversely affected by the

1.Chapter 3 deals with this aspect extensively.

development process itself as well as by the developments in the fields of technology and science. For instance, the effects of the gas leakage in Bhopal in 1984, were tremendous on the general health of women, and their reproductive roles. The environment of the region has been affected very badly as well. Table 1.2 reflects the foetus death rate following the tragic gas leakage of the multinational Union Carbide Corporation.

TABLE 1.2: Foetal Death Ratio Following the 1984 Bhopal Gas Leakage Tragedy

	Before gas leak	After gas leak
No. of deliveries	255	253
No. of spontaneous abortions	24	115
No. of still births	1	13
Total no. of conceptions	280	381
Foetal Death Ratio	8.6	31.33

Source: MFC, not dated, cited in Venkateswaran 1992: 146.

Thus one notices that both the roles of women-- as life producers and life sustainers-- are adversely affected by the developments in science and technology. The increasing birth of deformed babies, brain mutilation, and the resultant handicap which women face in their roles of family food providers has negative implications for the future generations.

ECOLOGICAL STUDIES

The concern for ecology emerged in two waves-- concentrated upon conservation practices, and on policy prescriptives. Environmental studies have focussed upon aspects of ecological improvement, and efficient resource use. The fact that natural resources are limited and exhaustive has led to this concern. One notices the gradual internal differentiation within various ecological perspectives that have emerged over the years.

The *Environmentalists* have been concerned with evolving ways

and means with which to limit the use of natural resources. However, one observes that these efforts are restricted to state boundaries and policies. For instance, to reduce the quantity of waste disposal in their countries, the West has resorted to the dumping of nuclear and other waste in the South. Further, the target of Western environmentalists has been the rising population--and the consequent rise in the demands and pressure on nature--in the third world countries. This school of thought treats nature as a commodity, and is biased against the 'developing' countries. It tends to forget that the ecological crisis began in the industrialised West. And the solutions which it will give will be trapped in the same paradigm of thought. It attempts to locate answers in the very paradigm of development studies which has helped foster the present ecological crisis. Further, "without 'a whole new orientation to science and technology'" (Heredia 1991: 492), the creation of a new ecologically oriented science, as envisaged by them is not possible.

Many claim that in a science-based world men need not foster manipulative and exploitative attitudes to the natural world (Grey 1990: 45-50). This growing ecological sensibility has, however, brought the links between certain forms of modernism and technological modernisation along with its dominant gender/ race/ class/ caste underpinnings under critical scrutiny.

These ecological concerns have found a place in the agenda of political groups for the mobilisation of peoples against the destruction of the environment. One such group is that of the *Greens* in Germany.

THE GREENS

The Greens movement in Germany emerged as the political

voice of the different movements---ecology, anti-nuclear-power, peace, feminist, and others. Different wings have come up in the party. The Eco-Greens focus on the use of renewable-resource technologies, and are against pollution, the dumping of toxic wastes, etc. The peace-movement Greens are concerned with networking with all peace activists. The radical-left, or Marxist-oriented, Greens are former members of communist groups. The holistic Greens are concerned with the evolution of a new society which reflects the interconnectedness of all phenomena. They call for a "sensible, postpatriarchal ways of interacting with nature, individuals, groups, and other countries" (Capra and Spretnak 1984: 4). The other concerns are decentralisation, postpatriarchal perspectives, and spirituality which are further linked by the principle that "all things--abstract and concrete, personal and political, or economic, or social--are *in process*" (ibid: 56).

The Federal program of the Greens refers to environmental protection primarily. It states: "We define ecological politics as those measures that understand human beings and our environment as being part of nature. Human life, too, is embedded in the life cycles of the ecosystems; we interfere with our actions and this in turn, acts back on us. We must not destroy the stability of the ecosystems. In particular, ecological politics presents an all encompassing rejection of an economy of exploitation and plundering of natural resources and raw materials, as well as the destructive intervention into the cycles of nature's household" (Capra and Spretnak 1984: 33).

Ecology, for the Greens, is understood in the context of the concept of "deep ecology". Deep ecology advocates a web of inter-related relationship between nature and humans, and is against

the setting up of hierarchies---"Green politics must expose the tendencies to set up hierarchies" (Ozlog Verlag, Philosophie der Grunen, 1982, quoted in Capra and Spretnak 1984: 32).

In continuation with this line of a thinking, the Feminists, in the Greens movement, assert that women's rights are essential to the goal of a non-exploitative society. And since the connection between ecology and the women's movement is a relatively new idea it is not "widely understood outside the Green party and the feminist movement. As Petra Kelly related: I am shocked when people say to me, 'Feminism has nothing to do with ecology. What are you talking about?' To me feminism is ecology and ecology is feminism. It's a holistic way of looking at things" (Capra and Spretnak 1984: 52-53). We will come back to the critique of deep ecology by the eco-feminists in the next chapter.

Not only political groups but *local movements* reflecting environmental issues have emerged in most third world countries. The Chipko¹ movement is often quoted as an instance of this order. It is a case of resistance of local peasants and, more specifically, by women, against the exploitation of forests by timber contractors. The Appiko² movement in Karnataka, the case of the anti-Narmada dam agitators, among many others exemplify

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1. Chipko as a women's movement has been discussed extensively by scholars-- Vandana Shiva, *Staying Alive: Women, Ecology and Survival in India*, New Delhi: Kali for Women, 1988; Bina Agarwal, "The Gender and Environment Debate: Lessons from India," *Feminist Studies*, vol.18, no.1, pp.119-158; S. Jain, "Women and People's Ecological Movements: A Case Study of Women's Role in the Chipko Movement in Uttar Pradesh," *Economic and Political Weekly*, 13 October, pp. 1788-1794. A different perspective has been added by Ramachandra Guha who treats Chipko as a peasants' movement. See R. Guha, *The Unquiet Woods: Ecological Change and Peasant Resistance in the Himalaya*, New Delhi: Oxford University Press, and Berkeley: University of California Press.

2. See the CSE report *The State of India's Environment 1984-85: A citizen's Report*, New Delhi: Centre For Science and Environment, 1985.

the rebel against ecological degradation. People have become aware of the need to respond to the environment in which they live, sustain their lives and earn a livelihood.

The philosophical underpinnings of the Greens is based on the eco-philosophy of *Deep Ecology*.

DEEP ECOLOGY

The term 'deep ecology' was coined by Arne Naess, a Norwegian philosopher. Deep ecology considers the environmentalists as promoting "shallow ecology" because it treats nature as a given. "Shallow ecology" concentrates upon resource conservation and anti-pollution environmentalism. Deep ecologists maintain that these forms of environmentalism are anthropocentric in motivation, i.e. to the extent that they advocate resource conservation and pollution control in the interests of human well-being. In so doing, nature is treated as a mere means to human well-being which is similar to something like giving admonitions on the lines of-- treat your slave kindly lest she/he be less productive or turn murderous.

In contradistinction, deep ecology views non-sentient nature as having value, independent of human or animal consciousness. It argues for a change in human perspective involving harmony with nature. "Deep Ecology is a philosophical activity, an inquiry, and also a social movement that aims to reopen the conversation with nature and between communities of beings that has largely been interrupted by certain developments in modern industrial society" (Drengson 1990: 52)¹. At another level it also argues

1. Deep Ecology has been extensively discussed and critiqued upon in part I of Brenda Almond and Donald Hill, *Applied Philosophy: Morals and Metaphysics in Contemporary Debate*, London: Routledge, 1990, pp. 9-55. Also refer to Ariel K.

for a return to a non- technological paradigm as found in non- western cultures. The argument here is that non- alienated original populations had succeeded in creating an "equilibrium" with the environment. As Airaksinen (1990: 30) states , "One's range of actions, its planning and success, depend(ed) upon one's relation to natural forces". Further, he explains the notion of equilibrium with an example:

In Finland, if the hunter uses only a bow and arrow or a very primitive gun, he can kill moose mainly in special weather conditions. When firm snow carries the hunter or skies but prevents the mooses' running away. there is an equilibrium between man and moose and it is determined by the regularity of the weather and the low level of technology. the hunter is not able to kill moose too frequently. Nowadays one is able to exterminate moose by helicopters and machine guns. The natural equilibrium is replaced by hunting laws, (ibid).

Other issues have become linked to that of the ecology. Broadly, these concerns have been that of justice, social equality, and the need to have a fair distributional mechanism. These issues have been covered under the broad category of *Social ecology*.

SOCIAL ECOLOGY

Prior to the concept of an ecological infrastructure of human society, traditional social sciences shared the assumption

.....
...Continued...

Salleh, "Deeper Than Deep Ecology: The Eco-Feminist Connection," *Environmental Ethics* 16, Winter 1984, pp. 339-45; Michael E. Zimmerman, "Feminism, Deep Ecology, and Environmental Ethics," *Environmental Ethics* 9, Spring 1987, pp. 21-44; Jim Cheney, "Ecofeminism and Deep Ecology," *environmental Ethics* 9, Summer 1987, pp. 115-45; Helen E. Longino, "Can There Be A Feminist Science?," *Environmental Ethics* 3, Winter 1981, pp. 365-69.

that" social facts can only be explained by other social facts" (Guha 1994: 4). However, an ecological perspective has broadened the horizons of the social sciences-- "the ecological infrastructure powerfully conditions the evolution and direction of human economic life, political relations, social structure, and ideology. At the same time, human intervention itself reshapes the natural environment in its own image,"(ibid: 5). Further, an environmentally oriented sociology, or social ecology, is the study of the reciprocal relations between the ecological infrastructure (soil, water, forests etc.) on the one hand, and the economy (forces and relations of production, trade), the social structure (family, kinship, caste and community), the polity (relations of power, law, and the state), and culture (the arts, religion, ideology)," (ibid).

Social ecology, then, rests on the awareness of the interdependence of the biophysical and socio-cultural domains. "Social ecology does not have a theoretical orientation but a problem focus, albeit with important theoretical and methodological implications" (ibid: 7).

Social Ecology attempts to emphasize the embeddedness of human consciousness in nature, a radical critique of hierarchy and domination in society, and the historical unity of ecological and social concerns. It views the ecological crisis as essentially a socio-political one, and, therefore, demanding a corresponding structural-cultural response. It seeks to substitute hierarchical domination of all kinds with participatory forms of a "humanity-in-nature...(where) freedom would no longer be placed in opposition to nature, individuality to social coherence" (Bookchin 1982: 318).

Over time a combination of these philosophical and social concerns have provided the matrix for the emergence of the new philosophical concern of *Ecofeminism*. Ecofeminism absorbed some aspects of ecological concerns with issues raised within feminism/ women's studies. As we have already dealt with issues of environment, we shall move into the domain of feminist studies.

WOMEN'S STUDIES

Feminists claim that of the three movements, viz. ecology, social, and women's movement, the women's movement is holistic. All the three movements, however, recognise that "there are limits to human action upon nature, that nature strikes back because it is not limitless, and because humans are also limited and part of nature. They criticize the exploitative character of the development of the productive forces and the reduction of nature to mere matter to be dominated and exploited" (Mies, Bennholdt-Thomsen and Werlof 1988: 3-5)¹. This belief rests on the assumption that the primary form of exploitation is that of women by men, and once this grievance is addressed, all other forms of exploitation-- social inequity and ecological destruction-- will be simultaneously dealt with.

Traditional Women's studies' have concentrated upon the concept of the 'division of labour' which has been based on biological difference between the sexes. This school of thought is that of the *Radical Feminists*. Since biological activities are different, women and men must 'naturally' have separate social roles and functions. The natural corollary that follows this is that women should become mothers and their chief task be child

1. The book deals with the subject of exploitation of women as household workers by the Capitalist world.



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rearing, nurturing and caring. Correspondingly, since men have greater physical strength they become hunters, providers and protectors. For Aristotle, the female was the 'mutilated male', and inferior to men not only in biology but also in her capacities, her reasoning abilities, and in decision-making as well--"the courage of man is shown in commanding, of a woman in obeying" (Bhasin 1993: 21).

Their contention is that gender differences can be explained by the fact of men's control over women's reproductive capacity or sexuality. It is also related to the fact that men have the ability to rape women (Brownmiller 1976). Men's biology and men's psychology have also been explored. Radical feminism is critiqued for accepting biology as a determined factor which eludes the factor of change in women-men relations. Further, men's domination of women cannot be justified on the base of different biological functions. Patriarchy is man-made and not biological.

The tracing of women's subordination to biology is unacceptable to Socialist feminists. "This covert or overt biological determinism, paraphrased in Frued's statement that anatomy is destiny, is perhaps the most deep-rooted obstacle for the analysis of the causes of women's oppression and exploitation..." (Mies 1988: 68).

SOCIALIST FEMINISTS

Rejecting the theory of biological determinism as the base of hierarchical relationship in society, Socialist feminism attempts to locate sexual inequality and asymmetry in social and material foundations. Socialist feminism accepts the basic principles of Marxism, but feels that it has neglected the role of patriarchy in maintaining and perpetuating an unequal society, and

the subsequent subordination of women by men. Women's subordination, and not that of the working class, is the primary or basic form of domination-subordination relationship.

Socialist feminists acknowledge Engel's contribution in explaining the origins of patriarchy to the development of private property and the State, which made rigid the sexual division of labour (SDL) in the family and in society. The SDL describes the different set of tasks, and its worth, accorded to women and men within households and in particular societies. But the emphasis on the economic factors alone is considered to be an inadequate explanation of the subjugation of women. The role of gender (as a social construct and as opposed to biological determinism) in economic production as well as sexual and household reproduction in the daily lives of women was not taken into account. Further, the validity of applying Marxian economic and class analysis to pre-modern kinship-based societies was also challenged.

According to Socialist feminists the relationship between patriarchy and the economic system is mediated by the *relations of production and the relations of reproduction* which are important analytical tools in the study of patriarchy. They identify three kinds of reproduction--- biological reproduction, reproduction of labour power, and social reproduction (or the reproduction of production relations within a given society). These are necessary for any total comprehension of the base of inequality in society. Patriarchal society has accorded men a dominant status which enables them to exercise power and control over women's ability to reproduce labour and life itself, and it was first manifest in family authority relationships. And it is ex-

tended to the entire set of social arrangements which in turn ensures men's control and women's subordination in society. This asymmetric sexual division of labour (SDL) as well as men's domination has been upheld by the State, by powerful ideological systems, as well as religions which have defined women as part of nature and thereby need to be controlled and dominated by man.

Maria Mies in her paper "Social Origins of the Sexual Divisions of Labour" (1988) points out that the establishment of an hierarchical and exploitative relationship between the sexes was the result of the development and control of destructive tools. Through this men controlled women, nature, and other men. Women invented tools for production and men invented bows and arrows--- destructive tools even in hunting and gathering societies. However, since it was a limited activity, its exploitative potential was not realised. Men's control over arms continued in pastoral and later in capitalist societies as well. Simultaneously, women were being relegated a secondary position in society and in the family. Women's tasks were seen as subsidiary to men's work in the family, the community and society at large. The coming in of the market economy with importance attached to the generation of cash reinforced women's subjugation. Her work is perceived as being centered at home, and men's work takes them out into the public sphere and earns them cash.

The Socialist feminists are critical of the dominant paradigm of development and knowledge generating system which has coloured the perceptions of science and technology.

'WOMEN IN DEVELOPMENT' LITERATURE

Since our concern is the rural woman and ecological resources---the dynamics of their relationship---one needs to take a

look into the bodies of literature dealing with it. These are 'Women in Development' writing, and secondly, the emerging literature on the effects of the "commodification of nature" (Rao 1991: 2)¹ on women.

The former falls into two broad categories, the first (Boserup 1970; Yudelman 1987) of which deals with arguments such as that women are suffering most because the fruits of development did not reach them. The answer to this 'maldevelopment' is to "integrate" women in development policies. The limitations of this approach is that it tends to be ethnocentric; portrays development as a unilinear process--from tradition to modernity--thus camouflaging the historically inherent unequal power relations between western and non-western societies; and finally, it locates women's oppression in the realm of production alone.

The second (Mies 1985; Leacock 1986) refers to women's household work. It is influenced by Marxist and other dependency theories. "The large scale changes in women's lives, resulting from capitalist development, including the erosion of traditional forms of authority, the dislocation of the household, loss of property rights, increase in work, loss of livelihood and status form the focus of these studies" (ibid: 5). Problems with this approach have been manifold as well. Using the household as a unit of analysis to study women's lives has brought up some methodological problems. Agarwal (1988: 114) points out that in households classified in census documents as being above poverty

1. For this section, I have referred to Brinda Rao, "Dominant Constructions of women and nature in social science literature," Pamphlet 2, *Capitalism, Nature, Socialism*, New York: Guildford Publications.

levels, women's nutritional intake was way below the official poverty line. Further, it tends to assume that all women in rural societies are married with children, and ignores the single women in society. It is also accused of treating women in the non-western societies as homogenous as is evident in the concept of the "third world woman" (Rao 1991: 12).

The major theme of the emerging writings is that "the social costs of ecological scarcity in non-western societies are borne by the poor, the lowly and the marginalized" (Rao 1991: 12). Women are the worst hit because of their low status in the family and society in general. "Modernising" of agriculture has led to women's decreasing access to and control over natural resources. Matrilineal systems of landholding, wherever they existed, gave way to patrilineal relations (Agarwal 1988a). The commercialisation of forests have affected the lives of rural and tribal women adversely (Fernandes and Menon 1987; Agarwal 1986, 1988; Batliwala 1983; Guha 1983; Shiva 1987). Most of these studies have, however, been concentrated on the effects of environmental degradation on the lives of women rendering invisible women's potential for self-empowerment and social change. Further, women's militancy has always been accorded an invisibility in scholarship writings because of patriarchal assumptions about gender, and the desire to perpetuate the representation of women as passive.

CONCLUSION

In mentioning these approaches to the ecological crisis, I am attempting to point out their inherent limitations which restrict them to one level, or at another level of response. However, their common concern is the state of the world's and, of

local ecology. Eco-feminism attempts to address almost all that regarded as common issues-- social equity, non-hierarchical society, non-violence, spirituality, and postpatriarchal perspectives-- in all the above-mentioned movements by seeking to redress what it considers the primary form of domination-subordination relationship, that of man over woman. Since the ecological studies have ignored this basic fact of domination in society, it will be handicapped to comprehend the domination-subordination relationship between the worlds of humankind and nature respectively.

Further, women's studies without an ecological sensibility is inadequate to deal with the manifestations of the different forms of domination and hierarchy in society. Ecofeminism attempts to embrace the concerns of women and of ecology simultaneously on grounds of victimisation of both.

Nature and women, both, have been the victims of man's development activities which is based on a patriarchal, western, and capitalist ideology. The fate of women and of nature are now integrally connected, and therefore, feminism and ecology need each other. "The rape of earth, in all its forms, becomes a metaphor for the rape of woman, in all its many guises" ().

Ecofeminism, it can be said, is an amalgamation of the different strands of feminist thought-- borrowing, ignoring or rejecting from each of them. The emphasis on biology can be traced to the concerns of radical feminism. From socialist feminism, it borrows the concerns of the effects of the 'development' process, specifically on women as well as the sensitivity to other forms of life.

CHAPTER 2: THE CONCEPT OF ECO-FEMINISM

The term 'Eco-feminism' was coined by the French writer Francoise d' Eaubonne in 1974. It was meant to represent women's potential for bringing about an ecological revolution to enhance human survival on the planet. Such an ecological revolution would entail new gender roles/relations between women and men, and between humans and nature¹.

The claim is that "... if we have any hope of charting a postmodern, post humanist, and post patriarchal transition to the age of ecology" (Spretnak 1989), the immediate need is a new underpinning of civilisation.

As mentioned in the last chapter, the ecofeminist perspective has been enriched by the liberal, radical and socialist schools of feminist thought which have been concerned with the human/nature relationship. *Liberal ecofeminism* is consistent with the objectives of reform environmentalism to alter human relations with nature through the passage of new laws and regulations. *Radical ecofeminism* analyses environmental problems from within its critique of patriarchy and offers alternatives that could liberate both women and nature. *Socialist ecofeminism* grounds its analysis in Capitalist patriarchy and advocates a total restructure through a socialist revolution. The domination of women and nature which is inherent in the market economy's use

1. Refer Judith Plant (ed). *Healing The Wounds: The Promise Of Ecofeminism*, Santa Cruz: New Society Publishers, 1989; Irene Diamond and Gloria Orenstein (eds). *REweaving The World: The Emergence of Ecofeminism*, San Fransisco: Sierra Club Books, 1990.

of both as resources can end thus¹.

It is the belief of ecofeminism that feminism instead of just focussing on women's rights, must define itself in terms of "the reality we inhabit," and this 'reality' in present times is the fact that "we are moving fast towards an ecological catastrophe and/or nuclear Armageddon", (Dinnerstein 1989: 192). Further, as different from radical or socialist feminism (to which it seems to be the closest), ecofeminism stands for spirituality and materialism. Thus it attempts to go beyond the limits of previous feminist studies, and gives a modest historic perspective (King n.d. 124-125)².

THE MOVEMENT

As a political movement ecofeminism is about fifteen years old with the publication of Susan Griffins book 'Women and Nature' in 1978, and Carolyn Merchant's 'The Death of Nature: Women, Ecology and the Scientific Revolution' in 1980. The latter is an important contribution to the feminist perspective on the scientific revolution of the Enlightenment era.

In the late 1970s ecofeminist work and study groups sprung up. Their work has been twofold-- a) confronting sexism in the daily work and process of mixed movements, and b) insisting on a broader ecofeminist analysis of the social origins of the ecological crisis.

1. See Charlene Spretnak, "Histories and Mysteries: In The Beginning," in Irene Diamond and Gloria Orenstein (eds). *Reweaving The World: The Emergence of Ecofeminism*, San Fransisco: Sierra Club Books, 1990, pp. 12; Ynestra King, "Feminism and the Revolt," *Heresis 13*, (Special issue on feminism and Ecology), 1981, pp.12-16.

2. Ynestra King, "Healing the Wounds: Feminism, Ecology, and the Nature/Culture Dualism," in Irene Diamond and Gloria Orenstein (eds). op. cit. pp. 98-112.

In 1979 Donna Warnock began an ecofeminist resource clearinghouse (Feminist Resources on Energy and Ecology). In 1982 the Heresis collective initiated a special issue on "Feminism and Ecology," and in the late 1970s, Pat Hynes and several other *Ecofeminists* founded 'Women in Solar Energy' (WISE)¹.

In Amherst, Massachusetts, in April 1980, a 'Conference on Women and Life on Earth: Ecofeminism in the 80s' was held. It marked the beginning of an *ecofeminist* political context. There were more than 200 workshops and three major plenaries, which addressed feminist perspectives on ecological issues, ecofeminist theory, and directions for future actions. Also from the final session came the idea for the Women's Pentagon Action, a feminist anti-militarist political action. The focus of the first Women's Pentagon Action held in November 1980 was militarism. Their Unity Statement connected feminism, ecology, peace, and other issues into a holistic, anti-rhetorical stand.

The ecofeminist movement was not confined to the West. In 1983, 'Women and Life on Earth' in England, held a one-day ecofeminist conference to commemorate the publication of the book 'Reclaim the Earth' edited by Stephanie Leland and Leonie Caldicott. There were native American women, Madhu Kishwar of Manushi, Black feminists, Greenham women, artists, poets, and ecological campaigners. The same year the Japanese Women For Life on Earth also held a conference. Also, the New York group of Women and Life on Earth met with the Tokyo women at the UN disarmament Conference. Meanwhile, India had already witnessed the Chipko Andolan where women had taken the initiative to save the trees

1. For this section on the movement, I am heavily indebted to an article by Ynestra King, "Ecological Feminism," n.d., source: Centre for Science and Environment.

from felling. It heralded the 'transfer' of the concept to the Indian context. The debate over the concept of ecofeminism began with the book 'Staying Alive' (Shiva 1988).

THE ECOFEMINIST DISCOURSE

The Ecofeminist discourse attempts to highlight three aspects--

(a) the underlying commonality between the premises and goals of the women's movement and the environmental movement;

(b) some of the important conceptual links between the symbolic construction of women and nature and the ways of acting upon them;

(c) an alternative vision of a more egalitarian and harmonious future society.

Therefore, the need to study the concept of ecofeminism arises. The moot point, in short, on which ecofeminism is based is the assumption that both women and nature have one common premise which is the indiscriminate appropriation and exploitation of both by western-rational-white men¹. Second, both women and nature (ecological nature) are sources of life and productivity².

1. One categorises men as western-rational-white men because the Renaissance occurred in the west; this period is marked by the technological and scientific revolution, industrialisation, and the repository of enlightened knowledge based on reason and rationality; and this was the domain of men (not all men).

2. Women's act of reproduction, and their role in the social sexual division of labour across regions and communities (as has been recorded)*, which makes them primarily responsible for family food provision, places them in a position which is closer to nature. Because nature also produces, and sustains life. This state of affairs that was harmonious with the existence of all life was disturbed by the values of the enlightenment period.

* The references for this are spread out throughout in the chapter, and in the bibliography.

Thirdly, the capacity of women and nature to regenerate, produce and sustain life has to be restored¹. I have attempted to focus on these three points in the rest of the chapter.

A. *The Common Premises of the Women's movement and the Ecology movement*

"...We live in a culture that is founded on the repudiation and domination of nature. This has special significance for women because in patriarchal thought, women are believed to be closer to nature than men. This gives women a particular stake in ending the domination of nature-- in healing the alienation between human and nonhuman nature. This is also the ultimate goal of the ecology movement, but the ecology movement is not necessarily feminist...[Because] the hatred of women and the hatred of nature are intimately connected and mutually reinforcing...feminism and ecology need each other..." (King 1983: 16 cited in Cheney 1987: 116).

Following the above-mentioned statement ecofeminists argue that a feminist critique of "this culture and politics of abstraction"² could be ground in a self-conscious ecological perspective. Such a perspective is applied to all theories and strategies as one applies factors of class/ caste/ race to any feminist analysis.

Parallel to the 'inclusion' of the ecological perspective to

1. Following from the discussion on the 'natural' role of women and nature, one also notices that both had an inherent capacity to heal which was also supported by social practices; e.g. the practices of shifting cultivation was in accordance with nature's healing process-- these communities were in close contact with natural processes based on close observation of the same. Their gods were female deities which signified fertility in most cases (see Raine Eisler, "The Gaia Tradition And The Partnership Future: An Ecofeminist Manifesto," in Irene Diamond and Gloria Orenstein (eds). *Reweaving the World: The Emergence of Ecofeminism*, San Fransisco: Sierra Club Books, 1990.

2. Refer to Ynestra King, op. cit.

women's studies, one requires a feminist perspective, a feminist insight into ecological studies. "Without a thorough feminist analysis of social domination that reveals the interconnected roots of misogyny and hatred of nature, ecology remains an abstraction: it is incomplete...Ecofeminism contributes to an understanding of the fact that we could not live without the rest of the nature; it could live without us," (King 1990: 23-24).

Ecofeminism integrates within its fold the growing consciousness on the parallel episodes of involvement in women's resistance politics and ecological struggles. Ecofeminism, for instance, reflects on the relation between the contamination of women's wombs and breast milk which in turn leads to struggles against chemical dumping; how compromises to our immunity systems which render our bodies vulnerable to a host of viruses leads to challenges against Capitalism, food industries and the practices of western medicines; how logging practices in India leads to women there struggling against the multinational destruction of their culture; how the Pentagon's extravagant military funding leads to feminist actions that combine anti-militarism with demands that funds be channelled from war technology to day care, education, and environmental protection (Quinby 1990).

The underlying common goal of both movements, women and ecology, is to strive for an egalitarian, and non-hierarchical social systems-- in relation to other communities and life-forms as well. In addition, it suggests "new values and social structures, based not on the domination of women and nature as resources but on the full expression of both male and female talent and on the maintenance of environmental integrity," (Agarwal 1992: 120).

Vandana Shiva (1988: 48) rejects environmentalism and feminism as separate movements. Such an approach is based on a cleverly disguised "extension of conventional categories of patriarchy and reductionism". As independent movements, both ask for "concessions within maldevelopment because in the absence of oppositional categories, that is the only development conceivable. Environmentalism then becomes a new patriarchal project of technological fixes and political oppression. It generates a new subjugation of ecological movements and fails to make any progress towards sustainability and equity. While including a few women as tokens in 'women and environment', it excludes the feminine visions of survival that women have conserved. Fragmented feminism, in a similar way, finds itself trapped in a gender-based ideology of liberation--- taking-off from either the 'catching-up with men' syndrome (on the grounds that the masculine is superior and developed), or receding into a narrow biologism which accepts the feminine as gendered, and excludes the possibility of the recovery of the feminine principle in nature and women, as well as men", (ibid).

On the other hand, women's struggles against social inequity and ecological crisis suggest that "women and nature are intimately related, and their domination and liberation are similarly linked" (ibid: 47). Women's ecological struggles have opened up new vistas of learning of particular economic and intellectual worth. It involves queries pertaining to what constitutes knowledge and who is the repository of intellectual value. Concepts of wealth and what/ who constitutes wealth and economic value are being re-interpreted (ibid: 224). The dominant paradigm of knowledge is being questioned.

One notices that previously all strands of feminist thought

have ignored the fact of the integral connection of the domination and exploitation of nature with that of women. Maybe this link was not explored because of the 'fear' of feminists of being excluded from history-- which is male-biased and dominated (King 1981: 124). However, natural history and human history occur simultaneously¹. This fact has been recognised by the deep ecologists. Since we have already had an overview of deep ecology in the previous chapter, I feel it is significant, also, to mention the differences between deep ecology and ecofeminism in this section because one is talking of the common concerns of the women's and the ecology movement-- deep ecology seems to be the point of intersection of feminism and ecology.

Ecofeminism and deep ecology have many common concerns. Both crusade against what Zimmerman calls "abstract, dualistic, atomistic, hierarchical categories" of understanding which are responsible for the domination of nature and women. Both schools of thought are critical of reformist attempts to extend modern moral categories to 'protect' non-humans from human abuse. Ecofeminism and deep ecology insist that humans are not radically separate from nature: that the fulfilment of our own humanity is profoundly linked with learning to appreciate the nature within us and without (ecological nature). In the same line of argument, one may use the idea that nature, too, has "rights", so long as one does not speak of rights in the technical sense (used by moral philosophers²), but instead suggest that all things have intrin-

1. See Ynestra King, *op. cit.*

2. Almond and Hill, *op. cit.*

sic worth that we are called on to respect (Zimmerman 1987: 43)¹.

Although ecofeminism and deep ecology, both call for a new ethos required for humans to live on earth, there are differences between the two schools of thought. Deep ecology turns out to be, in Ariel K. Salleh's (cited in Cheney 1987: 119) eyes, "simply another self-congratulatory reformist move" because it appears to be motivated by male alienation. Therefore, there is a possibility that the methods employed for overcoming alienation will be a modern version of "the ancient compulsion to fabricate perfectibility" and turn out to be "supremely rationalist and technicist", employing "the language of technocratic managerialism which is part of the problem". (Salleh 1984: 339-345).

(a) According to Deep Ecology the root cause of environmental malaise is the anthropocentric worldview. (Ecofeminism maintains that deep ecology is an androcentric worldview.) Deep ecology refers to a gender-neutral concept whereas, on the contrary, under patriarchal society women have been identified with the devalued natural world.

(b) Deep ecologists write that the estrangement of mankind from nature began with classic Greek humanism and the rise of Judeo-Christian Culture. Ecofeminists maintain that this alienation began around 4500 B.C. with the Indo-European invasions of nomadic tribes from the Eurasia steppes. They replaced the nature-based and female-goddess with their thunderbolt God. It thus removed that which is held sacred and revered from the life

1. It is worthwhile at this point to go through Zimmerman, op. cit., pg. 43. Both women's and the ecology movement also wonder whether a real shift is possible or not especially even when the "highly educated, self-conscious, self-critical philosophers," are also entrenched in these mind and body shaping social institutions (ibid).

processes of the earth to the distant realm of an omnipotent, male sky-God. Thus the earliest sources of desacralised nature and the foundation of a mechanistic worldview is found in the Indo-European revolution, and not in the Scientific Revolution of the 16th and 17th centuries.

(c) Deep ecologists write that both human and non-human life on earth has value-in-itself, and humans have no right to reduce the richness and diversity of life-forms except to satisfy vital human needs. Eco-feminists argue that the concept of "vital needs" is shaped by the values of patriarchal culture.

(d) Another assumption of deep ecology is the principle of diversity and symbiosis: a beneficial mutual co-existence among living forms. For humans the principle favours cultural pluralism. These departures, Eco-feminists claim, from anthropocentrism, and ethnocentrism are only partial if the ecologist continues to ignore the cultural role and space of women. The suppression of women's identity and creativity by patriarchal culture continues to be a fact of daily existence. Progressive attitudes towards nature is superficial if it does little in itself to change this.

(e) Deep ecology is an anti-class posture; it rejects the exploitation of some by others, of nature by man, and of man by man, this being destructive to the realisation of human potentials. However, sexual oppression and the social differentiation are not mentioned by Naess. Women appear to be subsumed by the general category¹.

1. However, some scholars are optimistic enough to bring together the concerns of the deep ecologists and ecofeminism in providing a sound alternative vision.

Ariel Salleh (ibid: 343) continues by pointing that Naess' overview of ecosophy is dressed up in the jargon of science-dominated standards of acceptability and is a solution trapped in the given paradigm. The very term 'norm' implies the positivist split between fact and value, the very term 'policy' implies a class separation of the rulers and the ruled. Even Bill Devall (1980: 317), the Deep Ecologist, seems to present purely linear solutions--- "an objective approach", "a new psychology"; the language of cost-benefit analysis as in "optimal human carrying capacity", and the language of science, "data on hunter gatherers", both creep back in. The call for a new epistemology is absent.

Ecofeminists point out that the suppression of the *feminine* is an all pervasive human universal. It is not just a suppression of real, live, empirical women, but equally the suppression of the feminine aspects of men's own constitution. "Devall and all other deep ecologists want education for the spiritual development of 'personhood'. This is the self-estranged male reaching for the original androgynous natural unity within himself", (Salleh: 344). The deep ecology movement will not truly happen until men are brave enough to rediscover and to love the women inside themselves.

B. *The Conceptual Links Between the Symbolic Construction of Women and Nature*

"We have been perceived for too many centuries as pure Nature, exploited and raped like the earth and the solar system; small wonder if we now long to become Culture: pure spirit, mind. Yet it is precisely this culture and its political institutions which have split us off from itself. In so doing it has also split itself off from life, becoming the death culture of quanti-

fication, abstraction, and the will to power which has reached its most refined destructiveness in this century. It is in this culture and politics of abstraction which women are talking of changing, of bringing into accountability in human terms," (Rich 1976: 285).

In investigating the roots of our current environmental dilemma and its connections to science, technology and the economy, we must re-examine the formation of a worldview¹ and a science that, reconceptualising reality as a machine, rather than as a living organism, sanctioned the domination of both nature and women, (Merchant 1980)².

"Is the female to male as nature is to culture?", is a question raised by Sherry Ortner (1974). Ortner argues that women "seem to be" closer to nature because of their biological function of reproduction. However, she maintains that "...it is not biology per se, but the social construction of it, that places women closer to nature", (Ortner in Sayers ed.1982: 108). The idea of nature exists in opposition to culture in western thought. Simone de Beavoir (1988) argues that female biology actually renders women to enslavement;

the female, to a greater extent than the male, is the prey
of the species; and the human race has always sought to

1.The need to review the dominant worldview arises here. Such a re-examination requires one to delve into the developments of science and technology because human progress and civilisation are measured by levels of progress in the fields of science and technological inventions. Also, the relationship between human beings and nature is mediated by technology. It was in the Enlightenment period that unprecedented developments in these fields occurred followed by a heightened environmental crisis. Therefore, it is necessary to trace our ecological crisis to this period for our worldview was shaped by the developments of the Enlightenment period.

2.A primary reader for this viewpoint is Carolyn Merchant, *The Death of Nature: Women, Ecology and the Scientific Revolution*, New York: Harper & Row, 1980.

escape its specific destiny. The support of life became for man an activity and a project through the invention of the tool; but in maternity woman remained closely bound to her body, like an animal...it is male activity, that in creating values has made of existence itself a value; this activity has prevailed over the confused forces of life; it has subdued nature and woman" (Jackson 1993: 391).

Merchant (1980) traces the social construction of the concept of nature to the scientific revolution. One dominant image was organic, based on a culturally sanctioned respect for the earth which was seen as a "nurturing mother". The second saw nature as wild and disorderly, and therefore in need of control¹. The parallel treatment of women was accusations of practising witchcraft who "raised storms, caused illness, destroyed crops...and killed infants," (Merchant 1980: 127 in Jackson 1993: 390). As a result, they were tried and burnt alive.

Feminists argue that 'witches' were persecuted because these women were wise and experts in these societies. They were "hounded because there was a new professional class of doctors and scientists emerging, whose point of view was constantly contradicted, by the point of view of the other professionals/experts who were declared, at that point in history, to be witches. Women were then turned to the second sex and this ideology was then pushed into other cultures and superimposed on existing patriarchal structures. That is the colonization the women's movements

1. See Vandana Shiva, "Women and Nature in South Asia," *International Journal of Sustainable Development*, vol. 1, no. 3(84-91); Mies, 1988, op. cit.; Merchant, op. cit.; Cecile Jackson, "Women/Nature or Gender/History? A Critique of Ecofeminist 'Development'," *The Journal of Peasant Studies*, vol. 20, no. 3, April, pp. 389-419.

in Asia are trying to struggle against", writes Shiva¹²;

Some (White 1967) trace the connections between women and nature to the impact of Christianity; and, others like Reuther (1982) to transcendent dualism in Greek traditions. Masculine consciousness and rationality were seen to transcend the visible inferiority of nature and the bodily, or female immanence. Transcendence is the work of culture and therefore of men, it is the process of overcoming immanence through the dominance of both nature and women (King 1989: 21). Levi Strauss (1969) suggests that the nature-culture dichotomy is a fundamental cognitive structure of thought in the human brain.

So far as India is concerned, colonialism was the starting point for the exploitation and control of nature and women. The development paradigm imposed, by the 'developed' colonisers, on India, marked a shift from the traditional cosmological view of nature as *prakriti*, a living and creative process based upon the feminine principle of *shakti* (female energy). Together with *purusha*, the masculine principle, it created the world. Therefore, for women, "...the death of *prakriti* is simultaneously a beginning of their marginalisation, devaluation, displacement and ultimate dispensability. The ecological crisis, is at its root, the death of the feminine principle," (Shiva 1988: 42).

Eco-feminism believes that to think that "there is something insulting or degrading about linking women and nature stands an

1. See *ibid.*

2. Mies writes "Historically, this violence was used in Europe in the witch-hunt to destroy women's autonomy over their bodies, and in the colonies to destroy people's autonomous relation to their own land and subsistence production. Both processes took place around the same time". Maria Mies, "Introduction," *op. cit.*, 1988, pp. 1-10.

unstated set of assumptions about the inferior status of the non-human world. Arguments for women cannot be based on a 'put-down' of the non-human world" (Plumwood 1992: 10). The connections between the two cannot be set aside because contemporary society also denigrates women's activity and reproduction, and nature as well. Their labour in traditional roles is not recognised. They have been systematically backgrounded as house-wives, secretaries and nurses.

As observed in the last section, one notices that *Eco-feminism* begins with the assumption that with the emergence of the western industrial civilisation, *Nature* became something to be dominated, made to serve the needs of man. It was reduced to 'natural resources'. It became the "other", something essentially different from the dominant. Women, who are identified with nature, have been similarly objectified and subordinated in patriarchal society. Women and *Nature*, in this sense, are the original "others". Men seek to dominate women and *nature* for reasons that are economic as well as psychological which involves a denial of a part of themselves similar to other male culture-making activities¹.

It is interesting to note how ecofeminists relate women's and men's bodies to the appropriation of nature. "The historically developed qualitative difference in the appropriation of the male and female bodily nature has also led to 'two qualitatively different forms of appropriation of external nature, that is two qualitatively distinct forms of relations to the objects of appropriation, the objects of sensuous bodily activity,'" (Leu-

1. It follows that domination over external nature necessitates domination of internal nature. See King, *op. cit.*; Susan Griffin, "Split Culture," in Judith Plant (ed.), *op. cit.*, pp. 7-17.

kart 1976: 41 cited in Mies 1988: 73)¹.

Ynestra King (1989: 22-23) writes that the recognition of the connections between women and nature and women's bridge-like position between nature and culture poses three possible directions for feminism: One is the integration of women into the world of culture and production by severing the woman-nature connection. This position does not question nature-culture dualism itself. It sees the severance of the woman-nature connection.

Second, other feminists have reinforced the woman-nature connection--- woman and nature, the spiritual and the intuitive, versus man and the culture of patriarchal rationality. This also does not question the nature-culture dualism or recognise that women's ecological sensitivity and life-orientation is a socialised perspective. It could also be socialised right out of us depending on our day-to-day lives. There is no reason to believe that women placed in positions of patriarchal power will act any differently from men, or that we can bring about a feminist revolution without consciously understanding history and without confronting the existing economic and political power structures.

✓ *Eco-feminism* suggests a third direction: a recognition that although nature-culture dualism is a product of culture, one can nonetheless consciously choose, not to sever the woman- nature

1. Mies, op. cit. writes-- over time women gained a vast experiential knowledge about their bodily functions-- of menstruation, pregnancy, childbirth. "This acquisition of knowledge was closely related to the acquisition of knowledge about the generative forces of external nature, about plants, animals, the earth, water and air," (pg. 74). On the other hand, men cannot experience a similar observation. Their relation to nature was mediated by external means (as different from internal bodily fluids and processes), of tools. "Men's reflection of their relation to external nature found expression in the symbols with which they described their own physical organs," (pg. 77).

connection by joining male-culture. Rather, use it as a vantage point for creating a different kind of culture and politics, that would integrate the intuitive, spiritual and rational forms of knowledge, embracing both science and magic insofar as they enable us to transform the nature-culture distinction. It would also envision and create a free, ecological society.

The connection between the domination of women and that of nature, in the ecofeminist argument, is basically seen as ideological--- as rooted in a system of ideas and representations, values and beliefs, that places women and the nonhuman world hierarchically below men. Quoting Ortner (1974), Michael Zimmerman (1987) writes: "the male's conception of himself as essentially cultural, nonfemale, nonnatural, immortal, and transcendent, as opposed to the essentially natural, noncultural, mortal woman, has continued in various guises for several thousand years". [Ecofeminism calls upon women and men to reconceptualise themselves, and their relationships to one another and to the nonhuman world, in nonhierarchical ways.]

C. *An Alternate Vision of an Egalitarian and Harmonious Society*

"Ecofeminism supports utopian visions of harmonious, diverse, decentralized communities, using only those technologies based on ecological principles, as the only practical solution for the continuation of life on earth," (King 1990: 25).

An alternate vision of a harmonious and non-hierarchical society is based on the rejection of some premises of the primary form of dualism-- that is, of the feminine and the masculine. This is discussed in the rest of this section.

A. A Critique of the Categories of the 'Feminine' and the

'Masculine':

It believes that any thorough-going and critical feminism must revise and challenge the ideals of both *masculine* and of *human* character. The western concept of reason identifies maleness with the rational sphere of public life, production, social and cultural life. Femaleness, or the feminine sphere has been assigned the private, domestic and reproductive life. "The masculine sphere is one where human freedom and control are exercised over affairs and over nature, especially, via science and in active struggle against nature and over circumstances. The feminine represents passivity, the unchangeable human nature and natural necessity" (Plumwood 1992: 8). And "rationality" is defined in opposition to "nature" in the Western intellectual tradition¹.

Thus, masculinity and femininity are treated as *dualisms*. "To the extent that women and men conform to gendered definitions of their humanity, they are bound to be alienated from themselves. The concepts of femininity and masculinity force both women and men to overdevelop certain of their capacities at the expense of others. For example, men become excessively competitive and detached from others; women become excessively nurturant and altruistic" (Jaggar 1983: 314). Dualism is a process in which power forms identity, one which distorts both sides of what it splits apart, the master and the slave, the egoist and the self-abnegating altruist.

The dualisms of human/nature, male/female, reason/emotion, civilisation/primitive, mind/body, and mental/manual have "natu-

1. For more on this point, read Carolyn Merchant, *op. cit.*

ralised" the domination of nature, of women, of race and of class. There is a need to break this dualism. It would involve affirming and reconceptualising nature and human identity, and the relationship between them in non-hierarchical ways. "An eco-feminism which takes into account a critique of dualism is a highly integrative one," (Plumwood 1992: 13). It could take the impulse to integrate women fully as part of human culture from liberal feminism; it can get help from socialist feminism in comprehending the processes and structures of power and domination as expressed in these dualisms; from radical feminism, it can take the critique of the masculinity of dominant culture.

Ecofeminism believes that the emphasis on rationality by what they insist as advocated by the dominant, white western male is based on linear and dichotomized thought patterns. This divides reality into dualism: one is good and the other bad, one superior, the other inferior. Ecofeminism strongly believes that linear thinking simplifies, dichotomises, focuses on parts, and fails to see the larger relationality and interdependence. One has to disrupt the linear concept of order to create a different kind of order which may appear very "disorderly" to the linear, rational mind. A holistic world-view has to be forwarded.

This fragmentary worldview of the modern western civilisation as expressed in the categories of gender, of 'masculine' and 'feminine' are socially created categories. And in turn these categories reflect a deeper schism in the shared vision of our civilisation: the separation between the natural world and the spiritual world. The 'masculine' is assigned the province of the soul, the spirit, or the transcendence. And we read the 'feminine' as representing nature and the earth or immanence. For

Simone de Beavoir (1968), "transcendence" is the process of overcoming immanence, a process of culture-building that is based on the increasing domination of nature. "Immanence", symbolised by women, is that which calls men back, that which reminds man of what he wants to forget: it is his own link to nature that he must forget and overcome, to achieve manhood and transcendence. And, therefore, men have had a specific interest in retaining their domination over women.

B. On Gender-Based Responses

There have been two gender-based responses to this process of male-domination, argues Shiva. The first advocated by Simone de Beavoir calls for the masculinisation of the feminine. The second response sees liberation as feminisation of the world--- 'in as much as the male principle has been the ruling mental and physical force, a free society would be "the definite negation" of this principle--- it would be a female society' (Marcuse 1974 as in Shiva 1988: 51).

Both responses accept the feminine and the masculine as natural and biologically given. Such an assumption caters to a patriarchal gender ideology with categories that have been created by that ideology. Shiva (ibid: 52) quotes Marcuse again to reinforce her point--- 'Beneath the social factors which determine male aggressiveness and female receptivity, a natural contrast exists; it is the woman who "embodies" in a literal sense the promise of peace, of joy, of the end of violence. Tenderness, receptivity, sensuousness have become features (or mutilated features) of her body--- features of her (repressed) humanity', (Marcuse 1974: 16).

Further, she considers this as 'Gender Ideology' because it

creates a dualism and disjunction between male and female. It creates a conjunction of activity and creativity with violence and the masculine, and a conjunction of passivity with non-violence and the feminine (Shiva 1988: 52).

Beyond the prescription of either the masculinisation or the feminisation of the world, Vandana Shiva offers "a third concept and process of liberation that is trans-gender" (ibid: 52). This is based on an understanding that gender is a social construct and not biologically determined. Similarly the association of values of violence and activity with the masculine is a social construct. The feminine principle is not exclusively embodied in women but present in men, women and nature. "The distinction between the masculine and the feminine, person from nature, *purusha* from *prakriti* is not possible because they are dialectically united, as two aspects of one being" (ibid). Further, this perspective can recover humanity as it transcends gender and it creates a wholeness in which there is no victim or its oppressor. This recovery of the feminine principle is also a challenge to the multiple forms of dominations of women, nature and non-western cultures. It calls for a recovery of all three; and bring back the humane-ness in non-western, white men¹. Moreover, it is

1. In continuation with this line of thought, and in total agreement with Shiva, Patrick V. Dias* states-- "This upholding of the feminine principle, as part of a dialectical harmony (*shakti* as dynamic energy), might not be of liking of everybody, nor be found to be in conformity with the here (dominant, enlightenment) criticized philosophy of knowledge, with power as its correlate, to which many feminist approaches are, unfortunately, indebted. It is, however, a viewpoint that, according to the postulates put forward in this (Shiva's) exposition, belongs by its own right in the mainstream of international discussion on new theories and political practices. As Rajni Kothari (Foreword in Shiva 1988, pg. xi) rightly remarks, 'the holism implied in the feminine principle must be distinguished from the universalism of the modern scientific era. The former respects and nurtures diversity; the latter undermines it under its homogenising and centralising thrust and, in the end, destroys diversity'".

based on inclusiveness which implies seeing women as active and productive. In men, it is a relocation of action and activity, to create life-enhancing societies.

The death of the feminine principle occurs when "passivity" is associated with the feminine; when the concept of activity shifts from creation to destruction; and the concept of power from empowerment to domination. In other words, the feminine principle with its attributes of self-generated, non-violent, creativity is destroyed with the coming in of the masculine model of activity with its base in violence and aggression. Nature and women turn into passive objects of violence. The Age of Enlightenment with its base in scientific rationality brought in this patriarchal mode of activity.

To counteract this patriarchal process of the victim and oppressor based society, Shiva introduces the concept of the trans-gender process of liberation. Since gender was created historically to serve patriarchal needs its (gender) liberation cannot be based on a gendered understanding or gendered concepts. One has to transcend gendered concepts. History has shown us that a gender-based ideology cannot respond to ecological crises created by patriarchy and its violent modes of relating to nature. Nor can it understand how third world women lead ecological struggles based on values of conservation, claims Shiva. These struggles and other such local movements for environment protection have led to a redefinition of the basic categories of understanding such as the concept of production, value, ethics, progress, development, work, nature, and womanhood. Science and

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...Continued...

*Patrick V. Dias, 'The Eco-Cultural Crisis as a Challenge of Survival to the 'Inventio

its use has to be redefined in terms of women's experiences, women's work and culture. In favour of her theoretical arguments, Shiva takes up the case of the Chipko movement where women have been involved in active protest movements against destruction of forests. Further, women's role in the food-chain, their active resistance of 'development' projects, and their need to protect forests, all three have been explained in terms of their embodiment of the "feminine" principle.

Ecofeminism also rejects the *theory of natural rights* as advanced most distinctly by Thomas Hobbes and Locke¹.

Ecofeminism believes that domination begins in the realm of ideas and systems of knowledge. Therefore, there is a need to *reconceptualise key concepts* of-- nature, natural resources, work/labour, productivity, value, science, technology, development, liberty. For instance, since the scientific revolution, the terms 'work', and 'productivity' refer to that work which have a market value. Thus, it renders useless and valueless women's household work, for instance². A feminist analysis of the Enlightenment era reflects that the claims of science to a value-free universalism are baseless. As we have noticed in the two chapters, science has been violent towards women, nature, and colonised peoples'. One has to redefine 'science'³.

A GENERAL CONCLUSION

1.A detailed argument is provided in Michael E. Zimmerman, "Feminism, Deep Ecology, and Environmental Ethics," *Environment Ethics* 9, Spring 1987, pp.21-44.

2.There are innumerable references on women's unpaid labour. See Mies, Bennholdt-Thomsen, and Werlof, op. cit.

3.For a thoughtful debate on 'science', please refer to Susan Harding, *The Science Question in Feminism*, Ithaca: Cornell University Press.

A GENERAL CONCLUSION

Ecofeminism realises that to achieve the goal of a harmonious world there arises the need to connect ecological studies with that of the feminist concerns. A feminist analysis supplies the theory, program, and process without which the radical potential of social ecology remains blunted. Ecofeminism has attempted to develop the connections between ecology and feminism that deep ecology needs in order to reach its own answered goal of creating a free and ecological way of life.

The refusal to banish feelings of interrelatedness and caring from its theory and practice will save ecofeminism from mere reformism-- which seems to characterise previous ecological and feminist studies. One needs to find a way out of the technocratic alienation surrounding humankind by honoring our direct connections with nature.

Further, the ecofeminist approach attempts to transcend the "victim approach"¹ by envisioning women and the marginalised sections of the population as the harbingers of an environmentally sustainable era. "It attempts to capture and reconstruct those insights and visions that (Indian) women provide in their struggles for survival, which perceive development and science from outside the categories of modern western patriarchy" (Shiva 1988: xviii).

In the next chapter, I have focussed on a critique of science, technology, and the present pattern of development.

1. The 'victim approach' views women and nature as passive and acted upon by men. In contradistinction, ecofeminism views women and the marginalised people as capable of action. As such, instead of merely studying the various ways in which the process of victimisation occurs, ecofeminism provides a base for active recuperation and action for the 'victims'.

CHAPTER 3: CRITIQUES OF DEVELOPMENT

The concept of development evokes different kinds of responses. In its most conventional and 'popular' meaning, it refers to the process of economic growth. This understanding is based on the claims to the superiority of the principles of rationality and technology. It fundamentally believed in a single, universal path to progress, i.e. from tradition to modernity. This led a superimposition of this model of economic progress on the 'underdeveloped' countries of Asia, Latin America, and Africa in a bid to 'develop' and modernise them.

Key economic indicators such as the Gross National Product (GNP) reflected the prosperity of the 'developed' nations. However, the gap between the haves and the have-nots has increased. The poverty of the 'developing' countries also increased. Ahmed (1993: 3) points out that the Dependency theorists (Bernstein 1973; Frank 1978) maintain that attempts to link the developing countries to the global market system through aid, transfer of technology, and multinationals has led to a further "development of underdevelopment".

This pattern of 'development' resulted in debt-traps, a non-sustainable development process and an inequitable global economic system as against the interests of the lesser privileged. It all went unnoticed by the 'developed' West till the repercussions on 'their' environment was felt. Environment knows no conventions, or State and National boundaries. Eventually, the fast depletion of natural resources, the dumping of toxic wastes in

the poorer countries alongwith other processes of 'development' have led to an ecological crisis. 'Environment friendly' solutions have come up to combat this crisis which threatens the survival of all species of all kinds.

Thus one sees that added to this dimension of uneven development is that of ecology. Lester R. Brown (State of the World 1990: 7) writes that "at a time when demand for various biological products is rising rapidly, the earth's biological production is shrinking...at some point, the continuing decline in the photosynthetic product will translate into a decline in the economic product". Further, "...economic indicators show the world is prospering...(When) the economy grew, trade increased, and millions of new jobs were created. How can basic biological indicators be so bearish and economic indicators so bullish at the same time?"

The answer, says Lester (ibid 7-8), is that economic indicators are flawed: they do not distinguish between resource uses that sustain progress and those that undermine it. The GNP as a measure of economic progress totals the value of all goods and services produced and subtracts depreciation of capital assets, i.e. plant and equipment. It, however, does not take into account the depreciation of natural capital, including non-renewable resources such as oil or renewable resources like the forests. According to the conventional approach, countries that overcut forests do better in the short-run than those that manage forests on a sustained-yield basis: trees cut down are counted as income and subtracted as depletion account (as natural asset). The

advantage is short-lived because overcutting destroys the resource base leading to the collapse of the forest products industry.

"If all the environmental consequences of economic activity were included, real economic progress would be much less than conventional economic measures indicate" (ibid: 9).

Societies everywhere are slowly realising that they are not only destroying their environments but undermining their futures as well. Consequently, the concept of 'sustainable development' became the alternative. "A sustainable society is one that satisfies its needs without jeopardising the prospects of future generations" (Brown, Flavin, and Postel 1990: 173). It is an attempt to match ecological principles of natural equilibrium and bio-diversity with economic growth and decentralised governance (Ahmed 1993: 4).

Sara Ahmed (ibid: 4-5) provides a critical outlook to the developments in this field:

The popular phrase, the "pollution of poverty", coined at the UN Conference on the Human Environment in Stockholm (1972), defined environment and development as opposite sides of the same coin which could only be tackled by an integrated approach, linking north and south, growth and sustainability. However, the resolutions were reductionist, based on the assumption that "conflicts could be planned away" (Adams 1990: 38). This was later reinforced by the naievity of the World Conservation Strategy (IUCN1980) which

emphasised "people-centered development" towards the maintenance of essential ecological processes and the preservation of genetic diversity in a context divorced from hard and powerful political and economic realities.

DEVELOPMENT AND ITS COROLLARIES

"Development is a label for plunder and violence, a mechanism of triage...the disillusionment with the development promise, however, has come sooner than expected, though from the victim's point of view it ought to have come much earlier..." (Alvares 1992: 1). 'Development' as capital accumulation and the commercialisation of the economy for the generation of 'surplus' and profits involved the reproduction of not only a specific kind of wealth creation, but also of the associated creation of poverty and dispossession.

"Modern science brings development. That is the promise. Instead, we have more violence" (Alvares 1992: 63). Moreover, he takes monospecies 'forests', alcohol, tinned baby food, white bread as "symbols of that great modern co-operative: science, technology, and development" (ibid: 89). And in his final analysis all these have been the sources of violence as well. The pattern of development followed by India and other 'Third world' countries seems to be based on violence towards women and nature. Science and development both are patriarchal projects because they are thought to be class, culture and gender neutral (Shiva 1988: xvi).

'Modernisation' is associated with the introduction of new forms of dominance. It is against an equality in diversity, and superimposes western categories as dominant modes of perception. These are based on reductionism, duality and linearity (Shiva 1988: 1-3)¹.

Alvares (1992) has attempted to base his study on development in two dichotomies: the natural versus the scientific, and the second, subsistence versus development. "In past decades, nature and subsistence (they overlap as images) were seen as 'primitive', lacking the superior imprint of modern science, of modernity. The latter set, modern science and development, became the norm. This has produced unacceptable *himsa* (ibid: 143).

"The transfer of development is welcomed by the ruling classes of the South because 'they' (i.e. the western world) have more 'modern science', 'we' have 'less'. And they are willing to 'share' it with us, for our own benefit" (Alvares 1992: 63). Further, "this development cannot but have serious negative consequences for communities in the South and their eco-systems...the development process directs the economy away from meeting the basic needs of people, and compromises their rights to the re-

1. One example of such a reductionist process is that of the Green revolution-- "The crisis of desertification and the death of soils has been the result of the following aspects of the green revolution policy: a) introduction of large scale monocultures and uniform cropping patterns; b) high nutrient uptake and low organic nutrient returns to soil by the new hybrid varieties of crops; and c) high water demand and low water conservation functions of the new hybrid and cash crop cultivation. There has, consequently, been increased soil and nutrient loss, water logging, salinisation and drought and desertification," (Shiva 1988: 143).

sources they have enjoyed at every stage" (ibid:32).

If, as seen above, this is development, then the answer lies in examining "'undevelopment' as a value, and explore how it can be given political space" (Alvares 1992: 109).

Technology, science, and its corollary paradigm of 'development' seen as 'imposed'¹ without an understanding of the local indigenous and 'sustainable' techniques of resource-use, have initiated a crisis---ecological and otherwise. This entails the death of the feminine principle.

The death of the feminine principle occurs when "passivity" is associated with the feminine; when the concept of activity shifts from creation to destruction; and the concept of power from empowerment to domination. In other words, the feminine principle with its attributes of self-generated, non-violent, creativity is destroyed with the coming in of the masculine model of activity with its base in violence and aggression. Nature and women turn into passive objects of violence. The Age of Enlightenment with its base in scientific rationality, and development model brought in this patriarchal mode of activity.

According to Vandana Shiva, the forests, nature and women, all have the feminine principle inherent in them. It is this

1. For instance, there are innumerable instances of social forestry programmes which favour plantation of eucalyptus and commercial species rather than trees-- neem, banyan, etc.-- considered useful by local people. Also see Bina Agarwal, "Neither Sustenance Nor Sustainability: Agricultural Strategies, Ecological Degradation and Indian Women in Poverty," Bina Agarwal (ed). *Structures of Patriarchy: State, Community, and Household in Modernising Asia*, London: Zed Books, 1988.

principle that makes them act for the regeneration of productivity and fertility, and act against the destruction of nature. The latter is considered to be male activity.

It also ignores both nature's and women's work of sustaining life. Their reproductive capabilities are also violated--- nature is not given time to recuperate itself and taken to be the source of unlimited resources. Women's reproductive capacities are violated by State policies of population control by techniques which harms their general health; it is further compounded by the threat of rape and the control of their sexuality by dominant male ideology. The age of Enlightenment was therefore based on a patriarchal ideology furthering the interests of a certain sex, class, and race of men. It rendered nature, women, the lesser privileged, and the third world countries as dispensable. In fact, these 'developed' societies were based on the exploitation of the work of these marginalised peoples. Women¹ bore the brunt of the present paradigm of 'development' in all cultures and societies.

Concern for the environment among the Third World scholars posed a challenge to the apolitical assumptions of global environmentalism. It's vision of an alternate society included community management of resources, people's participation in decision-

1.I am citing some quotations from research papers in favour of this argument. "Most forest policies and most foresters continue to overlook or ignore"...the grave implications for the future of forest resources if women's needs and expertise is not given due importance, (Paula J. Williams, cited in Jacobson, op. cit.); World bank consultant ravinder concludes "the importance of other forest products to women and the very active role that women play in forest resource management have been largely unrecognised and unspecified"

making at all levels, sensitivity to indigenous knowledge and technology, and access to information to enable empowerment of the people. In the following section, I have delineated the various implications of the pattern of development on the marginalised populations and women, in particular.

A THIRD WORLD CRITIQUE

I have divided this section into 2 parts-- the first deals with the marginalised sections of the population, the tribals in this case; the second deals with women; both are studied in the background of the adverse effects of the depleting natural resources or the indiscriminate exploitation of nature.

- a) The tribals and the loss of indigenous knowledge systems;
- b) Women and the development process-- alienation and greater hardships;

In this section, I shall deal with the loss of the indigenous knowledge systems of the tribals as a result of the process of development and modernisation that have rendered previous bases of knowledge useless.

"Economic and industrial development of a country involves large scale deployment of resources. The greater the urge of development, the wider the lag to catch up with, the faster the pace of development, especially in the third world...The process of resource mobilisation entails heavy sacrifices in the interest of the nation at large", states Mahapatra (1992: 131). It has been noticed that the natural resource rich areas have been those regions that have been untouched by development processes previ-

ously-- and these happen to be inhabited by indigenous tribal populations.

"One factor that comes out of all the studies on the tribals is their very close link with the forest. Their relationship has often been called symbiotic, i.e. the two depend on each other as the mother and the foetus do," (Deeny and Fernandes 1992: 49). A set of religious myths and social customs were built around the forest which ensured forest conservation¹. This was compounded by restrictive practices². However, the onslaughts of 'development' have caused heavy deforestation and loss of natural resources, displacing the tribals. Apart from deforestation, the building of multi-purpose dams have also led to destruction of the balance of nature.

In present times, most scholars have attempted to provide answers to this ecological havoc unleashed by the development process by trying to see as to how 'undeveloped' communities have survived in the past. This has been corroborated by research in the field of tribal studies. In the tribal set of religious myths

1. See Verrier Elwin, *Tribal Myths of Orissa*, Bombay: Oxford University Press, 1954; also V. Elwin, *The Religion of an Indian Tribe*, London: Oxford University Press, 1955a; Walter Fernandes and Geeta Menon, *Tribal Women and Forest Economy: Deforestation, Exploitation and Status Change*, New Delhi: Indian Social Institute, 1987.

2. 'Restrictive practices' towards preservation of the ecosystem involved protecting trees of very high economic significance-- sal, mahua, neem, peepul, and secondly, allowing conditional use of some trees for specific use under the supervision of the village elders-- mango, jack-fruit, tamarind. The third set of trees were for daily use-- sal leaves; the families were assigned a definite quota of firewood, there was communal ownership of grazing land etc. See Deeny and Fernandes, op. cit.

in the Chhotanagpur region, for instance, there was a prohibition to cut trees of some protected areas called *sarna*, the *akhara*, and the *sasan*. Religious significance were given to these enclosures to distinguish between what was considered as the sacred from the profane. Inevitably, these enclosures had trees like the sal, and the peepul-- trees which were used for food, shelter, fuelwood (twigs), and other purposes.

Social customs were attached to these practices. For example, the *sarna* was the place of worship; the *akhara* is the meeting place of the youth where they choose their life-partners; and the *sasan* is also sacred because it is the burial ground in the midst of a forest. The ecosystem in all three of these is considered sacred. Another significant social practice of the tribals used to be the practice of shifting cultivation¹. Although a quick glance of the practice tells us that *jhum* wastes large tracts of land, a thorough study will reveal that it was eco-friendly, and allowed the land to regenerate its used capacities².

With deforestation, the medicinal herbs also disappeared. Modern medicines have taken over the traditional knowledge of

1. Refer to note 1 on page 4.

2. See L.K. Mahapatra, "Development in Situ," *Tribal Development in India: Myth And Reality*, New Delhi: Vikas Publishing House, 1994, pp. 76-117.

herbs and medicinal plants, and ethnozoology¹.

Studies have revealed that women have been the repositories of knowledge regarding nature, natural resources, and herbs because of the role assigned to them by the division of labour. The following sections reflect on this aspect as well as on that of the adverse effects of ecological degradation on women-- women, especially of the marginalised sections of society, form the last colony.

WOMEN AND DEVELOPMENT

Women are the hardest hit by the interlinked crisis that begins with an emphasis on the expansion of global/ national agricultural production and trade, leading to a decline in the national food self-reliance. This situation is worsened by the lack of integrated policies towards farming, timber use, and water management as well as the shift of the common property resources to private ownership. This has important ecological and demographic implications².

Development inevitably implies "a movement away from subsistence production in an extended kin context to modern industrial production accompanied by a high degree of division between

1.A.N.T. Joseph, "Ethnozoology of Reptiles in Relation to Health Care Among Tribals in Madhya Pradesh," in Walter Fernandes (ed). *National Development and Tribal Deprivation*, 1982, New Delhi: Indian Social Institute, pp. 76-88; Deeny and Fernandes, op. cit. Both have studied in great detail the various traditional uses of herbal plants, and other animals.

2.Refer to Claire Slatter and Sally Murray, "Development, Crisis and Alternative Visions: Third World Women's Perspectives," *DAWN*, 1985, pp. 11-13.

the economy and the family-kinship organisation" (Krishnaraj 1992: WS-7). The argument, however, is that contrary to western assumptions, development is not a linear process of transition from the former to the latter. For example, in the Indian context, key institutions of the pre-capitalist mode of production like caste and family-kinship units, become articulated into the new system. As such specific consequences for women ensue. Both caste and family-kinship units have served traditionally as instruments of subordination of women within the family and the economy (ibid).

It is widely acknowledged that the development processes have neglected both environmental issues and women. Poor, rural, and tribal women in India, and elsewhere, have a predominant role in activities relating to natural resources. And therefore, the depletion of these resources have a disproportionate affect on their lives. Presently, we shall look into the first, the alienation of women from their traditional (eco-friendly) roles, and secondly, we shall study the effects of development on women and their activities.

Alienation occurs when traditional roles of women give way to technological inventions. In sub-Saharan Africa, e.g., women cultivate as many as 120 different plants in the spaces alongside men's cash crops. And in the Andean regions of Bolivia, Columbia, and Peru, women develop and maintain the seedbanks on which food production depends. In full consonance with nature conservation, female subsistence producers in Africa and Asia obtain their fuel from branches and dead wood (supplemented by crop residues, dry

weeds, leaves), rather than live trees. Surveys show that women have consistently pointed out the value of preserving and maintaining the ecosystem¹.

As 'development' occurs, most rural men migrate for job opportunities because of increased pressure on land, and technological transformation in agriculture that promotes landlessness. In Haryana, the agricultural work load of women increased after men took up jobs in cities. This work is in addition to domestic chores like fetching fuel, fodder and water. A study of 3 villages in the Kumaon region of Uttar Pradesh, shows that women put in more time and energy in the fields apart from fetching fuel, fodder, and other forest-produce. Male migration is also high here. During the peak agricultural season the women worked as long as 7 hours at cultivation and animal husbandry. The amount of energy expended as human labour for fuel and fodder collection averaged 2.5 times the amount of human energy spent on food cultivation in these villages. Further with a receding forest cover, the energy expended in direct agricultural activity as compared to that spent on collection of forest-produce will decrease each year as women will have to go further and further to collect the latter (CSE 1985).

In the Dominican Republic, the number of female-headed households has doubled to 21 per cent since 1981. 96 per cent of

1. Refer to Jodi L. Jacobson, "Gender Bias: Roadblock to Sustainable Development," *Worldwatch Paper 110*, September 1992.

these households live below the poverty line. In rural Bangaladesh, 25 per cent of landless rural families are headed by women, compared to 15 per cent in the total population¹.

In Santhal Parganas, inhabited by poor tribals with no job opportunities, meagre food cultivation, some bamboo work, and animal husbandry, migration seems to be the way out from misery. As a result, female-headed households are on an increase. Land alienation, poverty and indebtedness have made these women resort to headloading. The demand for fuel-wood is high. Women walk between 2 to 10 kms to get fuelwood weighing some 20-25 kgs. In the summer, they often make 3 to 4 trips. This is in addition to the usual household chores.

Conventional agricultural developments strategies have marginalized women farmers. Jacobson (1992) writes that four major interrelated trends have been noticed as a result of 'development' in agriculture. "First, large amounts of land once jointly owned and controlled by villagers-- and accessible to women²-- have shifted into the hands of the government agencies and private landowners. Second, the distribution of resources on which cash crop agriculture is heavily dependent-- including land, fertilisers, pesticides, irrigation, and hybrid seeds-- has

1.Examples cited from Jacobson, op. cit.

2.Refer to Jacobson, op. cit.-- In Thailand, in the predominately matriarchal Thai society married women inherited the land of their parents. Today, the government policies require all land to be in the name of the husband, thus shifting control of land from the woman to the man. In Zambia, women are discriminated against the allocation of land despite the passage of the 1975 law-- the Land Act guaranteeing wpmen equal access to land.

reflected persistent gender bias. Third, the mechanization of agriculture reduced or replaced the labour traditionally done by men, but increased that done by women without increasing their income. And finally, the labour available to subsistence households in many countries has become increasingly scarce, largely as a result of the shift of male workers away from subsistence production into cash crops and urban-based industries," (ibid: 24).

For a clear picture of the sexual division of labour in rural households, I have taken the help of tables¹. Table 3.1 reflects the distance covered by women to collect forest-produce in Orissa and Chattisgarh. Table 3.2 reflects the time spent by women on household activities in different parts of India. Table 3.3 shows women engaged in agriculture (1951-1981). It reflects the increase in the work burden of the women in addition to the usual household chores. Table 3.4 reflects the role of women in livestock management in the villages of Solan district. Table 3.5 provides an overview of rural women's relation to the environment and related concerns. The reason of including the tables in this section is to focus on the point that time and energy spent on the above-mentioned work by women is not taken into consideration by officials when accounting the rate of work participation by women and men. It is solely because work is defined by the amount of cash remuneration it can beget. 'Development' has succeeded in increasing the work-load of women.

1. The tables are given at the end of the chapter.

The health effects of more distance to travel as a result of deforestation, on women are worse. It is compounded by a general neglect of the female child, for instance, in patriarchal society, and other social and cultural factors. Dr.Nirmala Murthy, IIM- Ahmedabad, writes, "Women, because of their responsibilities at home, and out of ignorance tend to neglect their illness until they become too sick to move around and attend their normal chores...Thus, women do not attend the health clinic when they ought to, and by the time they are sick enough to know they should attend the clinic, it is much more difficult for them to do so" (CSE 1985: 178).

A study of the effects of the 1984 gas leak in Bhopal reflects that a large number of women have begun to have menstrual disorders. Of the 218 women checked, 90 per cent had excessive white discharge, 79 per cent had inflammation of the mouth of the uterus, and 79 per cent had pelvic inflammatory disease (Venkateswaran 1992: 146-147).

Other related cases have been recorded. For instance, it has been noticed that problems relating to reproduction have become common in region where the Indian Rare Earth Ltd. is located in Kerala. "The ovaries and testes are highly sensitive to damage by any form of ionising radiation, and sterility is easily produced in either sex by a single exposure or by the cumulative effects of repeated small exposures..." (Padmanabhan 1986 cited in Venkateswaran 1992).

Earlier, before large-scale deforestation occurred, women

and men were conversant with the medicinal herbs available in the forests. It was cheaper, and accessible to the whole community easily. However, with the cutting down of forests, mono-cultures of cash crops, 'reservation' of forests, and industrialisation, with its needs for housing, roads and highways, forests have been disappearing. This affects the forest-dwellers most. And because of the subordinate position as well as the sexual division of labour as it exists and gets reinforced with modernisation against the interests of women, women are the worst-hit.

Female work participation rates are also under-estimated, contends Bina Agarwal. This is due to cultural and status biases against the inclusion of domestic labour as 'work'.

The much proclaimed benefits of the Green revolution were short-lived, and (if at considered positive) were beneficial only to the rich farmers. It has led to an increase in the numbers of women as agricultural labourers as seen in table 3 which has increased women's double burden of field-work and domestic chores. The reasons are population growth leading to fragmentation of land holdings; indebtedness leading to loss of land; and eviction of tenant farmers by landlords.

Further, "while there has been considerable improvements in the technology handled by men, in the form of tractors, threshers, etc. there has been little improvement in the women's kitchen apparatus, even in the economically well-off households," remarks Bina Agarwal (quoted in CSE 1985: 185-186). Kelkar also points out that "With the cultivation of cash crops entirely for

the market, women have no decision-making power regarding the requirement of grain at home. Economic principles are paramount when such decisions are made (by men). Women with no control over expenditure or marketing lose authority at home. This has been the natural consequence of displacement from the spheres of work and market" (ibid: 186).

The use of technology for these women seems to be many, e.g. solar cookers, smokeless chulhas, and fuelwood plantations. Hardly any official programmes decide on policies initiating these processes. Instead social forestry has landed up planting commercial trees like teak, and/or eucalyptus which is not of much use to the rural, tribal women.

Even if one goes ahead with this pattern of development, one finds that women have no say in the decision-making process, nor do they benefit from these schemes. One wonders whether structural adjustment programmes (SAP) and policies are gender-neutral (i.e. affecting women and men equally), or gender-blind (i.e. ignoring the impacts on women and assuming them to be the same as on men). For instance, in Sub-Saharan Africa women form a high proportion of farmers, and yet, because of social stratification and imbalances of power, they have been subject more to the pressures than to the potential benefits of SAPs (Gladwin 1991). Suffering unequal access to yield-enhancing inputs and in many cases being responsible primarily for the production of food crops, they have been unable to respond to the new incentives as fully as men have.

It is noted (Fernandes and Menon 1987) that in tribal areas, the shift from shifting cultivation where women have played a major part, to terraced or settled cultivation has led to a gradual displacement of women from their traditional (better) position in the community. Even in the matrilineal community of the Garos in Meghalaya, the development of orchards and terraced cultivation has started the process of cutting down on women's activities.

Women are also worse hit by mining practices in the forested and mineral rich tribal regions. If a single woman's land is taken away for mining purposes, under the provisions of law, she is not entitled to compensation--land, homestead, or a job. Secondly, even if some industries have provisions of equal work-equal pay, maternity leave, rest shelters, creches etc., they prefer not to hire women. Out of sheer desperation, most women agree not to avail of these facilities and work at lower rates. Women are sexually exploited. Most women are also gambled away by their husbands. In the Kedla colliery, a man gambled away his wife, and when she refused to go with the winner, he cut off her nose. The Laiyon colliery workers won a woman worker from the Jharkhand colliery and xarried her off (CSE 1985: 181).

WOMEN RESIST

The above-mentioned examples point out that it is the women, more than men, who bear the burden of the adverse effects of the present process 'development'. As a consequence of the burden felt in all aspects of life, women resist.

Some 200 years ago, the women of Khejadali village in Jodhpur district, resisted the moves of the king to cut the trees of the place required for the building of his new palace. Amrit-devi, a woman, led the protest. The Bishnoi's hugged the trees and around 350 of them were killed. Impressed by their conviction, the king ordered the stopping of tree-felling.

'We want our forests, the fodder and our fields'--resolved--the women of Khirakot village in Almora district when a Kanpur contractor obtained a lease for soapstone mining in the area. The women resorted to direct action and would take away the implements of the miners and would not let them dig. 'Either the mines remain or us'. The contractor attempted to bribe them, filed a criminal case, and used violence also. However, the women were adamant. Finally, the District Magistrate cancelled the lease, and in 1982, the mines were shut down. The women of Khirakot settled down to correct the damage: they filled in the ditches, built a protective wall to prevent the debris from destroying their fields and planted oak trees in the panchayati forests. Their biggest achievement was when similar movements emerged in nearby areas, in Pithogarah and Jhiroli (CSE 1985: 178).

In Bankura district, the women have come forward and organised themselves to restore their land rights, and rights to the forest produce, the loss of which had been forcing them to migrate. Presently, the Nari Bikash Sangh (NBS) is engaged in land preparation, nursery raising, planting and rearing of trees. It generates employment as well.

In their answer to the forest official's question as to how would the women who are resisting the cutting of trees for commercial purpose know the value of the forests, the Chipko women replied:

what do the forests bear?

soil, water and pure air.
soil, water and pure air.
sustain the earth and all she bears (Shiva 1988: 77).

The women of Garhwal region have successfully resisted the felling of trees. Moreover, presently, they are more organised and are engaged in regeneration activities.

Women have been actively resisting the new reproductive technologies¹. The third world women continue to be used as guinea pigs for new methods of reproduction control. Depro Provera² which is banned in most industrial countries has been thrust upon them. Ecofeminism calls for women's control over their reproductive rights.

THE TASK FOR ECO-FEMINISM

Shiva (1988: 223), thereby contends that "the crisis mind can offer no solutions". A problem of survival which has emerged as a result of the concepts/ categories of the age of masculinist 'Enlightenment' cannot be overcome from within these very same categories. One needs to re-define concepts and meanings. And it -----

1. A detailed study of the new reproductive technologies for birth control and regulation from an ecofeminist perspective is done in Maria Nies and Vandana Shiva, *Ecofeminism*, New Delhi: Kali for Women, 1993, pp. 164-217.

2. See Claire Slatter and Sally Murray, "Development, Crisis and Alternative Visions: Third World Women's Perspectives," *DAWN*, 1985, pp. 10-11.

is a task of those declared incapable of thinking instead of those who claimed to carry the light (ibid). Struggles of the marginalised sections of the population and those subjugated are suggesting alternate ways of structuring the world. Eco-feminism presents one such way.

In essence, eco-feminism voices against the patriarchal attitudes towards women and nature because it conceives of nature and women as passive, inert and worthless. More importantly, patriarchy suppresses the "feminine" principle alongwith the feminine gender, in both men and women. In men, this suppression leads to an over representation of what is socially constructed as "masculinist" attitudes leading to values of domination, violence, hierarchy, and competition. In women, it results in their quiet subjugation because the "masculine" values are already dormant in them. This has been the case since Enlightenment. However, women, in some form or the other, still have the "feminine" principle inherent in them which men consider it to be a weak, and lower value. Shiva calls for a recovery of the feminine principle and this is the task of eco-feminism.

TABLE 3.1: Distance Covered to Collect from Forests in Orissa and Chattisgarh: Twenty Years Ago and Present.

S.No.	Collection of	Distance Covered (km)			
		Orissa		Chattisgarh	
		Past	Present	Past	Present
1.	Flowers	1.7	6.5	1.8	3.8
2.	Leaves	1.6	7.2	1.7	3.9
3.	Fruits	1.7	6.2	2.1	3.5
4.	Seeds	1.7	6.6	1.4	4.4
5.	Fodder	1.3	7.2	NA	NA
6.	Bamboo	2.1	8.9	1.3	5.5
7.	Firewood	1.6	6.2	1.3	3.7
	Average	1.7	7.0	1.6	4.1

Source: Fernandes and Menon, 1987.

TABLE 3.2: Time Spent by Women on Household activities in different parts of India (hours/ days).

	hours/ day
FETCHING WATER	
Eastern UP	1.0- 3.9
Western UP (pregnant women)	0.8- 3.0
Karnataka	1.0- 1.4
FUELWOOD GATHERING	
Himalayan	4.0- 7.2
Karnataka	0.4- 0.9
FETCHING WATER & FUELWOOD GATHERING	
Gujarat-Rajasthan border	6.0- 9.0
GRAZING ANIMALS	
Western UP (pregnant women)	0- 3.0
Karnataka	0.5- 1.0
MAKING DUNG CAKES	
Western UP (pregnant women)	0- 0.5

Source: CSE 1985: 179.

TABLE 3.3: Women Engaged in Agriculture, 1951-1981

Year	Cultivators		Agricultural labourers	
	No. of workers (million)	% of total female workers	No. of workers (million)	% of total Fem. workers
1951	18.4	45.42	12.7	31.37
1961	31.9	55.32	14.2	24.61
1971	9.2	29.73	15.8	50.99
1981	15.2	33.03	20.95	45.57

Source: Report of the Committee on the Status of Women in India and the Census of India, 1981. Quoted from CSE 1985: 185.

TABLE 3.4: Women's Role in Livestock Management in Villages of Solan District, Himachal Pradesh.

S.No.	Activity	Gender	Time	Location
1.	Clearing of sand	F	daily	home
2.	Bathing the animals	F	daily	home
3.	Feeding fodder	F	daily	home
4.	Milking	M/F	daily	home
5.	Grazing	M/F	daily	field
6.	Storage of milk	F	daily	home
7.	Taking animals in and out of the shed	F	daily	home
8.	Giving water to the animals	F	daily	home
9.	Care of lactating animals	F	daily	home
10.	Care of sick animals	F	daily	home
11.	Selling milk	M	daily	home
12.	Making of cowdung cakes	F	weekly	home
13.	Storage of cowdung cakes	F	weekly	home

Source: Guhathakurta & Sarin, (n.d.) in Venkateshwaran 1992: 29.

TABLE 3.5: Overview of Women's Interface With the Environment and Related Concerns

Resource/ env. prob.	Womens Interface with resource	Impact of resource degradation/Env. Prob and policy changes	Other issues
Rural Context			
Corplands	Most rural women involved in agricultural activities either as wage labour, unpaid laboru or supervisors of agricultural activity.	Increase in women labours and decrease in women cultivators.	Gender differerentials in wage earnings.
	Predominant role in farms of both number of activities and time spent.	Reduced availability of crop waste and animal waste as fuel and fodder with the green revolution technology.	Marginalised farm extension services Negligible access to land and credit
	Women usually perform unskilled activities entailing greater drudgery.	Increased demand for wage labour with irrigated agriculture.	
Common Lands	High dependence for fodder fuel and food.	Erosion of rights and benefits with change in ownership and management.	
		Decrease availability of fodder, fuel and food and increased work pressure.	
		Adverse impact on livestock maintenance.	
Forests	Gathering fuelwood & forest produce.	Decreased availability of products for domestic consumption and income generation	Exploitation in terms of returns from MFP collection
	Sale of firewood	Increased investment in time and effort for collection of products. infrastructure to maximise returns on MFP	Absence of processing technology, marketing
	Production Management in Plantations	Fall in tribal women's economic role and status	
	Predominant role in shifting cultivation		
Water	Principal collectors of drinking water.	Increased workload and drudgery on account of dried up	Complete neglect of women's

Resource/ env. prob.	Womens Interface with resource	Impact of resource degradation/Env. Prob and policy changes	Other issues
		polluted water sources. tint to water quality and	knowledge rela-
	needs. Limited visible role in water management for irri- gation.		
	URBAN CONTEXT Deteriorating urban environment	Higher exposure to slum environment and therefore greater susceptibility to related problems.	
	URBAN/RURAL CONTEXT Pollution		Women affected differently or disproportionately on account of the activities they perform which increases their exposure to pollutants or due to their biological functions.

Source: Venkateswaran 1992, pp. 4-5.

CHAPTER 4: A CRITIQUE OF ECOFEMINISM

The eco-feminist argument as well as Vandana Shiva's theorisation of women's ecological struggles is not without problems and contradictions. It has led to a series of debates on its relevance in explaining localised struggles in the Indian context itself, for instance.

Ecofeminism discourse tends to trace the connections between women and the environment either to female biology (i.e. the process of reproduction as life-giving), or to ideology (i.e. the symbolic identification of women and nature), while neglecting the material basis of the connection in gender divisions of labour, property, and the power of decision-making. It is also partial and incomplete because it ignores the role of men, of gender relations. It presents a partial and glorified picture of the past, and over-emphasises the blame on capitalism. The categorisation of women as friendly to a sustainable environment, and men as exploiters makes ecofeminism fall into the same trap of establishing hierarchy. I have divided the critiques into those focussing on--

- a) an almost exclusive ecofeminist concentration, i) on biology; ii) on ideology;
- b) neglect of, i) gender divisions of labour; ii) of property relations; iii) of power relations; iv) of class relations and the caste factor;

The biological link between women and nature is problematic within feminist thought itself. It is essentialising women's subordination in society as determined by biology. Women's struggles against logging, mining, deforestation should be seen contextually. Such instances simply do not establish any fact of the

embodiment of the feminine principle and values of nurture/ care. "It is more likely to express gender divisions of labour and distribution of opportunity" (Jackson 1993a: 400).

Continuing in the same line of argument Jackson (ibid: 403-404) points out that the Chipko movement should not be taken out of context. Women of this region were actively involved in the resistance of tree-felling not because of any biologically inherent feminine principle but because their livelihood systems were being eroded. Furthermore, a) hill women are culturally less subjugated than women of caste-based society; b) following male-out-migration in the region, women have taken to subsistence work; and c) provision of food is their chief responsibility in the family.

In most cases, women work for the remuneration attached to any programme. For example, in an anti-desertification project (Jackson 1993b: 1948), the workers were paid in kind (food). It was found that mostly women came for this. The report attributes this phenomenon to women's special affinity to nature instead of noting the fact that it is poverty and the responsibility of food provision in the family that makes them work for food. "Environmental-friendly management practices by women can be explained in terms of rational short-term interest but are too often understood with an implicit assumption that women are caring, nurturing and selfless beings committed to both future generations and the environment for its own sake" (ibid).

Exclusive focus on the Chipko movement also leads to the ignoring of many cases where ecological degradation has not led to women's protest movements. There is also a need to recognise the fact women can be/ are "agents" of environmental degradation. The

common ecofeminist assertion that women's relation to their environment is based on the principle of "sustenance" whereas men exploit it for cash income can be challenged by taking into account many case-studies. For instance, women in the peripheral villages of the Hadgarh Reserve Forest in Keonjhar district, collect fuelwood for self-consumption as well as for sale in the local market (Kumar and Mishra 1993: 10-11).

The 'connection' between women and nature has been traced to their capacity of (re)production and nurturance. This understanding arises out of an essentialist viewpoint ignoring the fact that concepts (of gender, culture, nature etc.) are socially and historically constructed. Moreover, these concepts vary across and within cultures and time-periods. For instance, Shiva's examples of rural women are from northwest India on the basis of which she has attempted to generalise all third world women's experiences and actions (Agarwal 1992: 124). However, Shiva reacts to the charge of adhering to essentialism--- "...yet the charge itself emanates from a paradigm that splits part from whole, fragments and divides, and either sees the part as subjugating the whole (reductionism) or the whole as subjugating the parts--- in other words essentialising both" (Shiva 1993: 7).

Domination of both nature and of women is located solely in ideology. The material base of such an ideological dominance arising out of economic and political power has been neglected. It is absent also in the formation of this ideological construct of eco-feminism.

Further, Shiva's (1988) emphasis on the feminine principle relates to the Hindu discourse alone (Agarwal 1992: 125), and thereby it glosses over the plurality of ideologies and interests

in the pre-colonial India (Jackson 1993: 401). Scholars (Rao 1991), (DN 1990) have objected to this representation on grounds that the Hindu religious and philosophical discourses reflected the views of rich, high-caste men.

Eco-feminism offers no account of historical change. Shiva describes a past in which harmony with nature prevailed until the advances of colonialism ruptured it (Jackson 1993: 401). The role of men has been ignored in the description of this past. Patriarchy as a tool of exploitation has been traced to Renaissance and the scientific revolution ignoring the development of class, caste, and patriarchy itself in the Indian context. Ecofeminist discourse thus simplifies an important category of analysis.

And with observations such as the fact that Indian civilisation has been built on the exploitation of hill peoples, destruction of sacred groves and their replacement by temples (Rao 1991). The assumption that past societies were in harmony with nature is a false one. For instance, significant ecological elements underlie the decline of Rome such as the excessive exploitation of the Mediterranean forests and the remorseless extension of foodcrop agriculture (Seymour and Girardet 1990 in Mill, Held and McGrew 1992: 118-119). Further, burial customs in Crete between 1700-1400BC underwent changes. The huge wooden coffins were replaced by earthenware coffins which reflects the increasing shortage of trees on the island. The latter requires less wood to fire the earthen pots whereas the coffins were made of large planks of wood (ibid: 154).

The focus on the process of capitalist development as the chief exploiter of nature and of women ignores pre-existing social and economic inequalities. Patriarchy has been manifest in

pre-colonial India as well. Modern-Western-Industrial development has succeeded in only re-inforcing pre-existing gender¹ and other forms of socio-economic inequities. For example, the tribes of Oraons, Mundas and Santhals have social taboos like women cannot plough, nor can they thatch their rooftops. Different explanations are given. One such explanation is that these activities signify the role of man as the final provider of food, and man as the protector of the family.

Women's experience of the environment is mediated by their livelihood systems. It is not a uniform experience. For example, the gender divisions of labour makes the hill women primarily responsible for fetching food, fuelwood, and water². Another instance of women getting affected could be seen in the degradation of water quality. According to the gender divisions of labour in agriculture women are responsible for rice transplanting in rice farming systems, and where fertiliser application is high, women suffer from skin diseases. In Sri Lanka, rice transplanting is done by gangs of migrant women labourers who suffer from this (Jayatilaka quoted in Jackson 1992: 10).

Bradley (1991) argues that it is not advisable to read too much into gender divisions of work. In Kenya, women's task is to provide for fuelwood but have minimal involvement in tree regen-

1. See Maithreyi Krishnaraj, "Women Craft Workers as Security for Family Subsistence," *Economic and Political Weekly*, 27(n.17, April 25), 1982, pp. WS-7-WS-18. "When key institutions of the pre-capitalist mode become articulated into the new system, specific consequences for women ensue. Two such key institutions in the case of India are caste and family-kinship units. Both caste and the family-kinship units have served traditionally as instruments of subordination for women..." which the capitalist forces of production have only reinforced.

2. Refer to (to be published) Bina Agarwal, *A Field of One's Own*, Cambridge: Cambridge University Press, 1994, pp. 37.

erative activities. Further, tree planting depends on the ownership of land.

In rural Botswana, men spend 5.4 per cent of their total time on crop husbandry whilst the corresponding figure for women is 8 per cent. And in Cameroon, in 1974, women spent 300 hours per year on food crops whereas men spent 50 hours (ibid: 11).

However, these examples need not necessarily reflect that women have a special relation to nature. These have to be seen in the context of other factors such as property relations or poverty.

An observation made by Jackson (1993a: 407) is that "within gender divisions of labour, including authority, one cannot assume that women's practices reflect their choices or priorities". Women and men tend to act according to their traditional sexual division of labour without questioning it. One has to take into account the complexities of the division of labour before arriving at any general conclusions.

Gender divisions in the ownership of property vary with region/ community/ customs/ social systems. It is noted that though women have a major role in food production, they rarely own land. In patrilineal societies of Pakistan, India, sub-Saharan Africa, and Latin America, women have access to land only through husbands or sons. At least, in the past, customary laws afforded women some security of land tenure, (Agarwal 1991).

For instance, in the 'common property' systems of Asia and Africa, access to resources was determined by gender. Women could rarely own land, however, as members of the community, they usually had equal rights to use land in accordance with their

families' needs. "Under traditional systems operating in parts of southern Ghana, women had rights to land as members of a lineage; they applied to the male head of their lineage to obtain the acreage needed for food production, which was allocated according to the needs and size of a family," (Cleaver and Schreiber 1992, cited in Jacobson, 1992, pp. 25).

Also, men more than women, use common property resources for construction timber, building activities, and children of both genders seem to be the major food collectors from CPRs in non-famine times. In famine times women do use the CPRs, and there is also a shift in other conjugal rights. On the basis of a comprehensive study on the gender divisions of labour in Zimbabwe (Iliffe 1990: 15 cited in Jackson 1993a: 408), one finds it difficult to contend that women have greater interest in CPR reproduction, especially in Zimbabwe.

Property relations also determine women and men's relation to their environments. In (most) cases of patrilineal inheritance of land, the commitment of women to improve land or adopt conservation practices will be lesser than those of men who have land rights whereas the women do not have land rights. Under these circumstances, women's commitment to improve land, e.g., building contour ridges, will be filtered through perceptions of security of tenure. Also, taking into account the slow returns of conservation practices like tree planting one expects women to be less inclined to do so (Jackson 1993a).

Women's right to land is secondary, and mostly, conditional upon marriage. They also have different belief systems related to land; for the Shona of Zimbabwe there exists a strong bond between individuals and their ancestral land. And since most women

have little to do with the patrilineage and move on from the land of their birth to the land of the husband they "would seem to be both materially and ideologically alienated from the land" (Jackson 1993a: 407).

Further, in circumstances where women rarely possess land rights, their "lived experience of land relations characterised by mobility and insecurity may mean that women have differently constituted environmental knowledges (possibly a greater understanding of spatial variations and lesser understanding of temporal variations) rather than simply knowing more or less than men" (ibid: 410-411).

Livestock ownership is also largely a man's property¹.

One of the shortcomings of the ecofeminist approach is that it does not allow the analysis of changes in the relationship between women and their environments in either the long term or the short term. When common property fuel-wood becomes scarce, there may be an increase in on-farm woody biomass (Bradley 1991: 274), there may be an increase in firewood purchase or other technical changes like collecting wood by carts. A study of the 'fuelwood crisis' in southern Zimbabwe concludes that men in the past 30 years have increasingly been collecting fuelwood (ibid: 408).

Apart from the gender divisions of labour and property relations, authority and power are important factors that mediate women's relation with their environment. "There are power relations between women within households; a woman may be domi-

1. See Jackson 1992: 16.

nated by her husband's mother, or an elder wife in polygamous households, and carry a disproportionate burden of wood and water collection as a young wife but come, with age, to make use of junior women too. Thus the division of labour may allocate wood collection to wives but if a wife can delegate the means by which she meets that responsibility then the incentive (increased time in collection) towards tree replanting may not be felt equally by all wives. Life cycle processes intervene in various ways to pattern both environmental knowledges and incentives to positive environmental management.

Also land which women farm on their own account is obtained through allocation by a husband or male relative which indicates power relations' in favour of men.

The distribution of environmental knowledges also affects women and men's relation to the environment. The assumption that women have a profound knowledge of ecological processes fails to ask 'who acquires what knowledge'. The assumption of 'women as knowers' of the ecological process is questioned. A study of the distribution of environmental knowledges found out that in Chivi Communal Area of Zimbabwe, women knew more than men about some crop varieties, and men knew more about local soil classification (Jackson 1993a: 406).

Environmental relations also depend upon class-gender system. Lower class families depended on natural resources for a livelihood are worst hit by ecological degradation, and therefore are the first to resist. A closer look at the gender division of labour will reveal that if men are directly associated with work related to nature such as getting firewood, then they initiate any such anti-tree felling campaign. For example, Penan men and

women together have been involved in protests and road blockades against logging (Jackson 1993b: 1949).

The influence of the caste factor in the Indian context has also been ignored by ecofeminists. The confluence of the factors of class, caste and gender relations across regions gives a picture which cannot be generalised.

Conceptually, I find a problem in Vandana Shiva's (1988) concept of the 'trans-gender' is problematic. Can 'gender' be transcended in any discourse of feminism? Or should it be dealt with as it is, i.e., as a social construct? Is the concept of the 'feminine' principle meant to be a substitute for 'gender'?

FURTHER QUERIES

However, the eco-feminist discourse has opened up new areas of learning and research. Redefinitions of existing concepts is being attempted. It has forced open a debate on this issue of women's role in ecological struggles. In the rest of this section, I have presented the various alternate ways of seeing women's ecological roles, and conceptualising them in turn. I believe, without an indepth study of these alternative ways of seeing women's role, ecofeminism remains incomplete. I have not been able to integrate these alternate ways into one coherent approach. However, I do not see this as a limitation of my thesis because what is important is to bring these scattered alternatives together in one study-- which I have modestly attempted here.

A. Caroline Moser (Schenk-Sandbergen 1991: WS-28) poses the concepts of 'women's interest' and 'gender interest' (strategic and practical) and their use in understanding concrete problems. 'Women's interests' implies a compatibility of interest based on

biological similarities. 'Gender interest' does away with this false generalisation. Strategic gender interest is based upon the "analysis of women's subordination to men" (ibid), whereas practical gender interest are based on women's concrete experiences in their engendered position within the sexual division of labour. In contrast to the former, the latter does not question prevailing forms of subordination of women. Following this, Moser puts forth a theoretical paradigm of gender planning. It is not enough to have a knowledge of concepts of development and women's studies but also have a theoretical insight into feminist anthropology/ development sociology to be able to operationalise a 'women in development' policy (ibid: WS-27).

One has to enquire as to why do women act in harmony with nature. Is it not because of the demands of the family and the responsibility accorded to women by the social SDL?

B. Further queries can be made into the whole concept of the feminine and its connection with divinity in different religious texts. Local modes of worship have to be taken into account. These have to be analysed in their relation to patriarchy--- their relevance negates or positivates an understanding of patriarchy. The concepts of *prakriti* and *shakti* have to be located contextually.

C. A socio- anthropological study of tribal communities--- lifestyle, culture, religion, economy which was based on mutual (inter)dependence with Nature (forests, water and land). Weren't men also Eco-feminists? And to what extent women and men related themselves with their environment in their daily lives? The contradictions in the SDL, and men's work seen as more important conventionally--- again. These issues could be explored. The

process has to be worked out.

D. Is Vandana Shiva making an argument for what is called the 'main contradiction' in Marxist terminology--- as not between castes/ classes/ or sexes within peasant/ rural/ tribal communities but between the rural communities and the world capitalist system? Is this location of the main contradiction correct or not, asks Gail Omvedt (1990: 1223). More specifically, Omvedt (ibid) argues that Shiva's contention that rural women, not the proletariat, represent a kind of vanguard should be further studied. In fact, the numerous struggles of women against patriarchal attitudes and male violence in their daily lives and striving for a better as well as sustainable living in harmony with nature reinforces such an argument.

E. An alternate model of 'feminist environmentalism' has been conceived by Bina Agarwal. It argues to see women in their material reality, and calls for a contextualisation of the various examples of women struggling for environmental protection--- patriarchy had assigned women the task of food provision etc. under the SDL in the family which could be a reason for their struggle against ecological destruction. Women's participation in itself does not represent an explicit incorporation of a gender perspective, in either theory or practice, within any movement.

Feminist environmentalism attempts to do re-research, in the Indian context, on the forms of environmental degradation, the process of statization, the process of privatization, the erosion of community resource management systems, and the relation between the choice of agricultural technology and erosion of local knowledge systems. More specifically, this approach attempts to take into account the relationship of the above-mentioned catego-

ries with the pre-existing gender division of labour, systemic gender differences in the distribution of subsistence resources (food, health services etc.), and thirdly, on the unequal access of women and men to productive resources.

In concrete terms, Agarwal (1992) suggests that this approach, in the field, will attempt to focus on the effects of ecological change (degradation) on women's time, income, nutrition, health, the social support networks, and on women's indigenous knowledge. On the other hand, one must not forget to take into account men's experiences to have a complete picture.

In theoretical terms, my proposition is that maybe a combination of the feminist environmentalist approach with that of the 'modes of resource use'¹ concept forwarded by Gadgil and Guha. The concept of the 'modes of resource use' can be integrated into 'feminist environmentalism' concerns to present a viable alternative.

F. It is also a call for a 'decolonisation of the mind'. It contrasts with the modern western 'way of seeing' with an 'alternative' way of seeing and comprehending the world in personal and

1. See Gadgil and Guha (1992), "The concept of 'modes of resource use' extends the realm of production to include flora, fauna, water and minerals. With respect to the relations of production, it investigates the forms of property, management and control, and of allocation and distribution, which govern the utilisation of natural resources in different societies and historical periods. And with respect to productive forces, it analyses the varying technologies of resource exploitation, conversion and transportation that characterize different social orders... There are two additional dimensions. First, it examines whether one can identify characteristic ideologies that govern different modes. Secondly, it identifies the ecological impact of various modes, and assesses the consequences of these different modes for the pattern, distribution and availability of natural resources...". Both identify four historical modes-- gathering; nomadic pastoralism; settled cultivation; and industry. The different categories of analysis are-- aspects of technological change, economy, social organisation, ideology, and the nature of ecological impact.

impersonal ways¹. Banuri refers to this as impersonal and personal 'maps', and these maps are integral to any cultural system. The key dimensions of these cultural maps are the theories of the self, of knowledge and of the universe. In the 'impersonal map', it is possible to construct an 'individual' separable from the environment--- social, physical and intellectual. However, in the 'personal map', there is an identity between the two. Modernity with its task of rationalising the world succeeded in asserting a hierarchal relation between the two maps in which the impersonal map was deemed superior.

Thus, the ecofeminist contributions towards an 'epistemological decentralisation' can be supplemented by studies such as Banuri's.

A Review of Ecofeminism

In sum, the basic issue is not one of technology versus spirituality or nature versus culture. The fundamental issue, claim Ecofeminists, is how we define nature, culture, technology and spirituality--which in turn hinges on whether we orient to a dominator or a partnership model of society. It is not science and technology, but the numbing of our innate human sensibilities that makes it possible for men to dominate, oppress, exploit and kill. What passes for "scientific objectivity" in a dominator society is the substitution of detached measuring for an inquiry designed to enhance and advance human evolution.

Ecofeminism asserts that no doubt the story of human culture

1. Tariq Banuri, 1990, cited in a review article, "Dominating Knowledges and Subjugated Practices," by U. Kalpagam, *Economic and Political Weekly*, 27(n.20-21, May 16-23). The edited book where the paper has been published is *Dominating Knowledge: Development, Culture and Resistance*, Frederique Apffel Marglin and Stephen A. Marglin, Oxford: Clarendon Press.

is to a large extent the story of human technology. The story is not only of the fashioning of material tools but also of the fashioning of our most important and unique non-material tools: the mental tools of language and imagery, of human made words, symbols, and pictures. Advanced technology are the extension of human functions, of our hands' and brains' capacity to alter our environment and, more importantly, ourselves.

The eco-feminist position on science and technology is clearly not the repudiation of both. The answer is not in a 'return to nature' or to shun technology. What is needed is a partnership model brought in by the ecofeminist perspective made possible by the concerns of ecology and those of women, of original populations. The twin concerns of ecofeminism--- human liberation and our relationship to non human nature--- open the way to developing a set of ethics required for decision-making about technology (Technology signifies the tools that human beings use to interact with nature).

The *task of Public Policy* is to recognise the dual role of women as victims of environment degradation and as active environmentalists (repositories of knowledge). It is necessary to take gender and ecological concerns together to challenge the deep entrenched (material and ideological) interests in existing structures and pattern of development. Grassroot organisations of the poor and of women is a necessary condition for this to happen.

CONCLUSION

An oversimplification of women's link with nature, of women's role in ecological struggles, of women's place in the SDL

in the family and in society as a whole must be avoided. Patriarchy is a complex phenomenon differing across and within cultures. The eco-feminist discourse has raised significant issues, no doubt, but it has to go a long way in establishing itself as a discipline within the broader parameters of Women's Studies.

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