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GENDER ANALYSIS AND ENVIRONMENTALISMS

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INTRODUCTION

The coupling of women and environment in development discourses, popular, academic and practical, has created an illusion of gender awareness. Yet women and gender are, of course, distinct, and this chapter aims to examine this illusion more closely. I focus on assumptions about women and environments but also raise the wider question of coercion in environmental management and regulation. A secondary theme of this chapter is to query the adequacy of the view that poverty is the cause of environmentally unfriendly behaviour. This leads to assumptions that poverty alleviation will result in more positive environmental management, and that therefore development and conservation are inherently compatible. A gender perspective, however, suggests that environmental behaviour is also formed by other social relations which can disrupt such an equation. It also suggests that environmental conservation is frequently predicated upon social inequality.

Development agencies from the World Bank and international organizations to bilateral agencies and non-governmental organizations (NGOs) have stressed in particular the role of women in synergistic and 'win–win' interventions which are seen simultaneously to advance women's gender interests and meet objectives of environmental conservation (World Bank 1992, Jackson 1993). Ecofeminist writers such as Vandana Shiva agree: 'women and nature are intimately related, and their domination and liberation similarly linked. The women's and ecology movements are therefore one, and are primarily counter-trends to a partriarchal maldevelopment' (Shiva 1989: 47). In addition, much of the women and environment literature[1] sees women's agency as confined to environmental friendliness and it is assumed that women relate to the environment in a positive manner except when forced by poverty to do otherwise. Thus interventions in support of the environment will benefit women, and development agencies are urged to involve women in conservation as fully as

possible. For the World Bank women have become the means by which environmental ends are achieved and part of this process has involved the manipulation of meaning in the vocabularies of gender and development analysis. The policy trade-offs and conflicts in the population-gender-environment nexus that contradict win-win assumptions are examined elsewhere (Jackson 1993). Here I focus upon the corroboration of synergism which is found in environmentalisms and suggest that this reflects conceptual problems, enthnocentrism, gender blindness, the naturalization of women and feminization of nature, and the absence of historical and material analysis.

Following a conventional recognition of at least two main strands of environmentalism, technocentric and ecocentric, I examine the gender content of sustainable development as a major thrust of techno-centric development in the South, before questioning the under-standing of gender in ecofeminism, and the degree to which it is reasonable to assume that indigenous peoples express a gender-equitable environmentalism. But first we we need to explain what gender analysis means in the context of the South.

Characterizing gender analysis

What we here call gender analysis[2] is a framework for understanding social change through the lens of gender identities. It has its roots in Western feminisms (Stamp 1989: 12-19), but is also influenced by other intellectual traditions, including development theories, and needs to be distinguished from feminism. The contribution of feminism to gender analysis is a major one – feminism has dismantled the idea that any particular class can represent the interests of humanity, documented the differential interests and power relations *within* domestic groups, shown how reductionist are notions of what con-stitute work and workers, and asserted that 'the personal is political'. Yet the divergences are significant.

Without engaging with diferent strands of feminism, one can recognize two ideas common to all: that women are oppressed at all levels of society and that conscious political action is needed to change this situation. It follows that there is a recognizable body of women's interests which are the objectives of this struggle. Feminist politics depend on the existence of male domination. Whilst the existence of women as a social category is fundamental to feminism, in gender analysis the notion of socially constructed and variable gender iden-tity is central. Gender is a culturally specific and socially conditioned identity of men and women – it is not fixed nor is it biologically deter-mined (Sayers 1982). The attention given by social science researchers working in the South to differences within the category 'women' has

perhaps follows from the especially sharp divergences of race, ethnicity and culture there, and it is no accident that in the West, feminist assumptions of the unitary interests of women and the primacy of gender subordination have been challenged by black feminists who point out that race completely transforms gender. In the feminist anthropology, or what we here call gender analysis, laid out by Moore 'there can be no analytical meaning in any universal conditions ascribed to . . . "woman" – for example, in the "universal subordination of women" and the "oppression of women"' (Moore 1988: 189).

The assumption of unitary interests of women is strongest in radical feminism and weakest in socialist feminism. Radical feminists are most willing to accept biologically based difference, as is ecofeminism which has strong linkages with radical feminism. Approaches to menstrua-tion are a litmus test identifying differing forms of feminism, with radical feminists seeking not to demystify menstruation beliefs but to revalue them, for example, by the Baltimore Bleed-In. Thus radical feminists have suggested that menstruation is an 'heroic ritual shared by the community of women, connecting them with the rhythm of nature and with each other' (Delaney, Lupton and Toth 1976, quoted in Sayers 1982: 119). However, although feminisms have varying analyses of the bases of a universal 'sisterhood' its existence is a defin-ing quality of feminism, but not of gender analysis.

It has been argued that there is a convergence of gender analysis and feminism (Bunch and Carrillo 1990) but the divergences, in development discourses, seem more striking. Unlike radical feminism gender analysis lacks the critique of male Western rationality, is not explicitly anti-intellectual, and has not generally questioned science, and unlike (much) Marxist feminism does not glorify indigenous, pre-colonial gender relations. The critique of the concept of patriarchy as a universal and generalized power of men over women is also a characteristic difference between feminisms and gender analysis, which prefers the concept of gender relations to that of patriarchy since the latter tells us little about how such control came into being, how it reproduces itself, what variations it displays and the gender struggles which shape it. Finally, gender analysis, unlike feminism, is less susceptible to the 'politics of the personal' slipping into essentialism and orientalist assumptions about indigenous peoples and nature.

Gender analysis emphasizes the importance of analysing women, as well as men, in relation to each other rather than in isolation, and of understanding gender relations at all levels of social organization. Since men and women characteristically occupy different positions in processes of production and reproduction they are affected by these processes differently. The importance of understanding gender divi-sions of labour is not only related to gauging the amount of work

done by men and women, but also to recognizing that men and women do different work. However there are limits to what we can learn from the gender division of labour, and too often assumptions are made on the basis of this alone which fail to recognize that labour and responsibility are *not* the same. Gender divisions of rights and responsibilities, incomes, knowledges and decision-making are all constituents of a gender analysis. Gender ideologies are implicated in all these elements and form an important part of a gender analysis. In addition to these more 'structural' elements, a gender analysis suggests an understanding of the processes by which gender is created through the actions and choices, performances, struggles and strategies of individual women and men.

If gender analysis is a methodology with variable outcomes, then it is inappropriate to suggest a universal position on the degree to which women's gender interests and those of environmental conservation are compatible. However, gender analyses would appear to suggest a clash, more frequently than a complementarity, of environmental interests and women's gender interests. This chapter aims to demonstrate this opposition, without implying its inevitability, through a gender critique of different environmentalisms. I am not suggesting that there are no points of leverage which can address women's gender interests in development as well as environmental conservation. But I do aim to show that there are no grounds for believing that these are *necessarily* coterminous and that historical, social and ecological variations preclude such generalizations and necessitate site-specific gender analysis.

First to clarify two key terms. Definitions of environmentalism reveal two meanings – the first, which we shall not address, is the sense of environmental determinism. This is how the term is used in much anthropological literature (Ellen 1982). The second meaning centres upon 'the ideologies and practices which inform and flow from a concern with the environment' (Johnson 1981, cited in Pepper 1986: 13), and this is the meaning used here. Gender interests is a more problematic term. We avoid the term women's interests in order not to imply an essentialist view of women as an homogeneous category – gender interests will vary in time and space depending on how gender identities are socially and historically constructed and reconstructed. Some feminist theorists have also rejected the notion of interest because 'the language of interest, with its utilitarian connotations and connections to the "rational calculus", can never be redeemed to serve feminist purposes' (Jones and Jonasdottir 1985: 3), but here we sidestep the many difficult issues around understanding and revising the concept of interests and simply use the term gender interests to refer to 'those that women [or men, for that matter] may develop by

virtue of their social positioning through gender attributes' (Molyneux 1985). We will use a gender lens to examine different strands of environmentalist thought and practice - technocentric, ecocentric and non-Western - to weigh up the validity of the claims for positive women and environment synergism.

SUSTAINABLE DEVELOPMENT

O'Riordan (1981: 1–19) distinguishes between two major strands in Western environmentalist thinking, the technocentric and the ecocentric, although in practice these often blend. Environmental regulation, reformism rather than radicalism, the scientific approach, belief in economic rationality and in the possibility of environmental management are characterisitc of technocentric environmentalism. Ecocentric environmentalism on the other hand is radical, utopian, romantic and characterized by its bioethical standpoint – that is, nature is valued not only for its usefulness to mankind.

Technocentric approaches to nature have been the dominant paradigm for some centuries and currently they involve instrumental and managerial resource-use planning (for example, environmental impact assessment) and conservation interventions. For Carolyn Merchant (1992: 2) it was the scientific revolution of the seventeenth century which asserted the domination by *man* of nature. Exploitative attitudes to nature, the powerful mythology of the scientific method and the deepening control and domination of women, developed simultaneously and Merchant contrasts this with the organic conceptions of nature and gender in earlier times. She suggests that the sixteenth century organic metaphor of a female earth, binding together humanity and nature, was replaced by the conception of nature and women (for example, witches) as threatening disorder and in need of control. However, it has been pointed out (Plumwood 1986: 126) that women were subordinated before the seventeenth century, as indeed was 'nature', and some have blamed the anthropocentrism of Christianity for the idea of a separate and dominant humanity apart from nature (White 1967: 1205). Whether this is so or whether, as some have argued, Genesis commits humanity to a stewardship, rather than dominion, over nature, the distinction between the transcendant and the immanent has been a consistent pair of opposed categories in Western European thought, in which male transcendalism was valued above female immanence.

The ideology of scientific and technological progress may not be responsible for initiating the exploitation of women and nature, but it appears to have contributed to these processes. The mythology of the scientific method as objective, neutral and value-free has veiled

the degree to which technocentric environmentalists and environmentalism expressed particular class and gender perspectives in what were perceived as problems, in the diagnosis of causes, and in the remedial actions taken. Technocentric environmentalism has no space for the politics of gender interests – environmental problems can be managed with technical means and economic incentives. It has no awareness of its own ideological stances nor of the impossibility of assumed gender neutrality in resource relations. The idea of science as objective and value free has masked the gender differentiation and biases in the recognition and prioritization of environmental problems, in access to political and bureaucratic power, in access to resources, environmental knowledges and information, in the valuation of diferent forms of work. If, historically, technocentric environmentalism has been gender-blind it will offer no explicit position on the question of positive synergism between women's gender interests and those of environmental conservation. In the absence of any gender awareness in technocentric discourses we can examine whether the *outcomes* of a gender-blind technocentric approach offer any support for the idea of synergism. If technocentric environmentalism has had little awareness of the gender-differentiated causes and consequences of environmental degradation what have been the effects on women of gender-blind conservation technologies in the South? Do they support the view that environmental protection and conservation is necessarily gender-equitable.

Many contemporary examples of the negative consequences of technocentric environmentalism for women are available (for example see Venkateswaran 1992, Agarwal 1986a, Fernandes and Menon 1987) to show that we cannot assume that women benefit especially (or even equally) from technocentric environmentalism. Typical development interventions with explicitly environmental objectives have included fuel-efficient stoves, solar cookers and biogas plants, agro-forestry, and soil and water conservation programmes. Social forestry and other tree planting schemes have been criticized for gender bias – for example, tree species chosen are the preferences of forest officers or men rather than women (Agarwal 1986a: 120), assumptions are made that women will care for the young trees (Hoskins 1983) or agroforestry crops (Leach 1991) without consideration of their opportunity costs, and gendered property rights are ignored (Bradley 1991) in afforestation projects.

Appropriate technologies have fared little better. Stamp (1989: 59–61) explains the slow and uneven acceptance of improved stoves in Kenya with reference to their unsuitability for cooking local food, and the problems deriving from loss of light and smoke and the immobility of the stoves. In Zimbabwe, the additional labour of

women in tending fuel-efficient stoves, and the safety risks which precluded management by children were amongst a number of problems which reduced their potential for alleviating women's domestic drudgery (McGregor 1991: 470–6). Biogas plants have also been designed and implemented without attention to their acceptability to women or to their impact upon gender divisions of labour (Fernandes and Menon 1987: 139). Attempts to conserve and regenerate African rangelands have frequently involved the restriction of movement of pastoralists and herds. The group ranches created for Masai in Kenya has led to the privatization of pastures, a process which excluded women and consolidated male property rights (Joekes and Pointing 1991: 5). In soil conservation programmes women's unpaid labour has been a key ingredient (Thomas-Slayter 1992).

Beyond the particular forms of technical change pursued as strategies of green development lies what is articulated as 'sustainable development'. Although definitions are numerous there are some common elements –stewardship of natural resources and the rights of future generations, food sufficiency, consonance with 'tradional' cultures and livelihoods, environmental accounting, greater equity between North and South and within regions and popular participation (see for example, Conway and Barbier 1990, Davidson and Myers 1992). Sustainable development discourses certainly give more attention to women than earlier development approaches but this does not guarantee any more favourable outcomes for women, nor, as was pointed out above, does a recognition of women constitute a gender analysis.

The justification for special attention to women in sustainable development literatures is primarily based upon two views: 'Putting the poorest first also means prioritising the rights and needs of women' (Davidson and Myers 1992: 23), and that gender divisions of labour make women both responsible for environmental management and most vulnerable to the impact of environmental degradation. The first view, that poverty justifies a focus on women, is unsatisfactory because it collapses poverty and gender into a single phenomenon, yet we know that these are distinct axes of differentiation. Further, this view forgoes the opportunity to demonstrate the significance of social relations other than class to environmentally damaging behaviour and thereby challenge the simplistic explanation of poverty as a single cause of degradation (Blaikie 1985, Leach and Mearns n.d.). In practical terms this view rests the case for gender upon a demonstration of poverty, and implies that gender is irrelevant where poverty is not 'feminized'.

The justification which rests upon a stylized gender division of labour in which women are responsible for all reproductive labour, food production, domestic labour, child-rearing, community and

natural resource management, and in which men monopolize cash cropping and market-oriented production, is seriously flawed for a number of reasons. There has been a trend towards the exaggeration of women's subsistence agricultural labour (Whitehead 1990, Tshibaka 1992, Dixon-Mueller 1985) and community management activities (Moser 1989), as well as a failure to understand the differences between divisions of labour and rights. This stereotype of rural women as excluded from commodity production is both false and dangerous in that sustainable development is poised to exploit women's unpaid reproductive labour further through the mistaken assumption that they are major stakeholders in conservation development. It is also dangerous to neglect the evidence, in many studies of commoditization, that engagement with markets has been progressive for women. The emerging picture of the Green Revolution experience for women of various classes shows that, for many, it produced an absolute rise in the work opportunities available to women, improved consumption and reduced domestic drudgery (White 1992, Lipton and Longhurst 1989, Sen 1985).[3]

Primary environmental care (PEC) has been suggested as a means of achieving sustainable development. PEC utilizes popular empowerment to secure basic rights and needs whilst caring for the environment (Davidson and Myers 1992: 27), gives a high profile to the role of women, and is promoted by the Overseas Development Administration (ODA), Oxfam and the International Institute for Environment and Development (IIED). It reflects the current enthusiasm for 'participation' and community based approaches to the environment. Whilst less technocratic than other elements of sustainable development practice, it suffers from a tendency to portray rural communities as homogeneous and harmonious and fails to understand the limitations of 'participation' from a gender perspective. Participatory approaches to development assume that communication is unproblematic and ungendered, beyond the need to make sure that women and men are represented in the decision-making or consultative bodies involved. There is no recognition of the degree to which views expressed by participants reflect dominant/dominated models and knowledges, 'false consciousness', or mutedness. What is said cannot be taken at face value. Women may devalue themselves in line with dominant gender ideologies, they may be unable to articulate alternative views, or unwilling to do so where these may generate gender conflict. Empowerment does not necessarily follow from participation – particularly for women – because participation of women does not necessarily express their gender interests. In addition, PEC implies an empowerment of a community which is conceptualized as internally undifferentiated and sharing joint interests and fails

to see that what may empower poor men may not empower poor women. Women are portrayed in PEC as altruistic actors – a portrayal that allows community work to come to mean voluntary work by women.

Sustainable agriculture has developed a considerable momentum within the range of farming systems research (FSR) perspectives which emerged in the 1970s and became widely institutionalized, both internationally through the Consultative Group on International Agricultural Research (CGIR) system and within the national agricultural research systems of developing countries. FSR is based upon an interdisciplinary, whole-farm systems approach to technology development for, and with, resource-poor farmers. These characteristics raised hopes that FSR would be an appropriate vehicle for the incorporation of gender analysis into sustainable agricultural development (Poats et al. 1988). However this has not materialized, despite the growing volume of FSR work with women farmers, because social scientists have remained marginal within FSR teams and because FSR in practice has continued to focus on crops and enterprises prioritized by male farmers and researchers. And 'In practice the FSR/E approach is used primarily to reduce the degree of error in finding the appropriate technical fix for market-based problems of agricultural production' (Evans 1988: 39). Thus the reproductive labour of women, unpaid, may be value-adding but is treated as costless in the evaluation of production bottlenecks or of alternative technical solutions. Furthermore, although rural livelihoods are seldom based upon agriculture alone, FSR has not satisfactorily incorporated this broader perspective – for example, the constraints of domestic labour or the opportunities of remittances from wage workers.

Despite the volume of research on gender roles in rural livelihoods FSR researchers have failed to follow through the implications of this research: most importantly, the critique of the nature of the household. FSR can integrate women as worker-members of farm households but is not good at dealing with complex differentials in costs and benefits to men and women within households where there is split responsibility and decision-making powers.

The debate about the nature of the household which has developed from feminist scholarship has significant implications for environmentalist thinking and practice as well as for development more broadly (Guyer 1981). The household has been conceived of as a unitary body with a range of functions – production, consumption, residence, reproduction, and so on – in concepts and models as well as in descriptive empirical work, development policy and practice. In recent years this has been challenged by alternative views of households as having different forms and functions according to

class and other social divisions (Netting *et al.* 1984), as well as stages in the development cycle of the household (Goody 1971) that is, in the processes of household formation, expansion and dissolution. But the critique of the unitary nature of households has been made most strongly from the perspective of the conflicting interests of men and women within households.

From our discussion of gender divisions of labour, rights and responsibilities we can see some of the ways in which men and women may have distinct and different interests although they are members of the same household. The question of how differing self-interests are reflected in decision-making is important and raises directly the issue of power in decision-making. Economic models have sought to overcome the problem of how individual utilities of household members can be aggregated to a joint utility (theoretically inadmissible) by assuming the existence of a benevolent dictator who makes decisions in the interests of the household as a whole (Folbre 1986). It has not been difficult for gender analysts to show that household heads (predominantly male) do not control all decision-making, that they do not necessarily arbitrate fairly in the collective interest, and that gender conflict of interests and outcomes are present to varying degrees in most if not all societies (Folbre 1986, Bruce 1989). Bargaining models and approaches which integrate both co-operation and conflict within households (Sen 1987) indicate the indeterminate nature of decision-making processes, the central role of power, the impact of wider societal level factors upon decision-making and the importance of subjective perceptions (of self-interest, of self-worth and of labour value, for example) in patterning outcomes. From a gender perspective this sets gender relations centre-stage in any attempt to explain household-level decision-making with regard to environmental management.

It also implies that individuals within households will have differing objectives and livelihood strategies – some will be shared but others will conflict. This is a central issue which sustainable agriculture initiatives fail to consider. For example, in the promotion of low-external-input agriculture it is recognized tht households are composed of individuals with differing decision-making spheres, but it is then asserted that household members share common objectives, and thenceforth 'farmers' and 'households' are used synonymously (Reijntes *et al.* 1992: 29-31).

It also remains true that sustainable agriculture pays only passing attention to social issues and is dominated by technical approaches. The low-input strategies for sustainable development may reduce the need for external (that is, purchased) inputs to agriculture, but in so doing increase the use of 'free' inputs like women's labour. In the

context of southern Africa the adoption of high-yield varieties of maize would appear to be related to their lower labour demand in cultivation (Low 1986), and a promotion of traditional varieties may involve women in greater unpaid farm work and lower productivity. Many of the cunning techniques to sustain soil fertility or conserve water are very labour demanding and it is possible that low-input agriculture leads to deepening exploitation of women's labour at the household level which parallels the impact of PEC at the community level.

To summarize this section, technocentric environmentalism is largely gender-blind, either because it fails to recognize gender differentials at all, or, where women are recognized as a distinct category, because gender stereotypes prevail and the household continues to be treated as a unit. This is not to say that women are passive and inevitable victims of technocentric environmentalism or that they do not benefit at all from it, either directly or because of unintended consequences. However, we can say that conservation technologies are not inherently favourable to women, let alone synergistic with their gender interests.

The intellectual currents discussed in the next section which feminize nature and naturalize women do influence technocentric environmentalism – the boundaries drawn here between technocentric and ecocentric are not impermeable – and furthermore the vacuum of gender awareness in technocentric environmentalism has allowed assertions of synergy to pass unchallenged, since gender conflicts have been invisible and unrecorded. But if gender-blind technocentric environmentalism somewhat predictably fails to demonstrate a coincidence with women's gender interests it may be reasonable to expect that ecofeminism will.

ECOFEMINISM AND INDIGENOUS ENVIRONMENTALISMS

Ecocentric environmentalism can be traced to European romanticism of the seventeenth and eighteenth centuries and to nineteenth-century American transcendentalism. In this reaction against rationalism and science, alternative knowledges based on feelings, emotions, instincts and morals were revalued. Although perhaps still a secondary stream in environmentalism, ecocentrism is of growing significance – a theoretical literature is developing rapidly (Merchant 1992, Eckersley 1992, Scarce 1990), as are a diverse array of ecocentric activist movements, such as Greenpeace, which share a bioethical standpoint. Ecocentrics have been quick to claim that they have inherited the mantle of emancipatory thought (Eckersley 1992) from socialism, and

that anthropocentrism/ecocentrism replaces left/right as the most relevant political cleavage.

Although ecofeminism is still relatively recent one can identify some common themes in ecofeminist literature.[4] Ecofeminists see women as closer to nature than men, they oppose the domination of nature by humanity and insist that nature has no hierarchies which are seen to be derived from hierarchical human societies and imposed upon nature. A bioethical view, that forms of nature are not of differential value, is sustained in much ecofeminist writing. Although we examine ecofeminism as an example of ecocentric thinking it would be mistaken to assume that there are no differences within ecocentric groups. Ecocentric selflessness has been a divisive element in ecofeminism – resisted by some (Biehl 1988) to the point of renouncing ecofeminism, and embraced by others such as spiritual ecofeminists.

Ecocentrics aim at reducing human numbers because population growth is seen to 'magnify environmental degradation and therefore impair the overall quality of human life' as well as to have negative impacts on 'the nonhuman community' (Eckersley 1992: 130), and they support population control in the Third World and restrictions on migration from the South to the North. Movements such as Earth First! are deeply Malthusian – the journal of Earth First! declared that 'if the AIDS epidemic didn't exist, radical environmentalists would have to invent one' (quoted in Merchant 1992: 175). It is difficult to tell what ecocentric theorists like Eckersley mean when they promote 'humane birth control' in the Third World, but what is evident is the absence of discussion of population programmes which have infringed women's human and reproductive rights – such as the sterilizations in Bangladesh (Hartmann and Standing 1989) – or what bioethics prescribes with regard to abortion.

We will now concentrate on an examination of ecofeminism as an example of ecocentrism in our questioning of how far we can see women's gender interests and environmental interests as compatible. This section is structured around the ecofeminist acceptance of the woman and nature connection, the inherent essentialism in ecofeminist views, and the ahistorical nature and absence of material context in ecofeminism.

Two dichotomies are basic to the cofeminist position: nature and culture are opposed categories, as are women and men. The formulation that men are to culture as women are to nature is accepted. However, both these dichotomies have been shown to be untenable by MacCormack (1980: 17). Culture is grounded in the human brain which is part of nature; *both* men and women are physically part of nature and also have mentality and therefore are part of culture. Another problem is that the nature/culture dichotomy cannot be

ethnocentrically universalized from Western intellectual history. Naturalizing women, and gender relations, has been seen by Western feminists since de Beauvoir (1988) as a means of justifying gender inequality and therefore to be resisted. Ecofeminists, however, rather than resisting the idea that women are linked with nature, celebrate and revalue this linkage. They see the women–nature connection as a vantage point in the struggle for new ways of relating to nature that are not characterized by domination and control. They revalue the spiritual, the intuitive and the instinctive as alternative, and superior, forms of knowledge to science and rationalism (King 1989).

Ecofeminist acceptance of the women–nature link rests upon the roles of women in biological reproduction and the psychological and social conditioning (Ortner 1974) which are seen to follow upon this – women's bodies are creative and productive like nature; through child-rearing they come to develop caring, nurturing and altruistic behaviour which is extended to nature; they are not separated from their nurturing mothers nor therefore individualized and socialized into independence and autonomy as men are; and they lack the competitive and controlling impulses characteristic of man's relationship to nature. The biological determinism of this view has been discussed elsewhere (Sayers 1982, Brown and Jordanova 1982), but it is an unsatisfactory position because it cannot account for variation in reproductive and environmental relationships, or for how these change over time.

Ecocentric environmentalism suffers from essentialism in relation to both women and environments. Women are conceived of as a unitary category with universal characteristics which transcend the time, place and circumstances of their lives. Ecofeminist discourses are innocent of gender analysis in which masculinity and feminity are relational, socially constructed, culturally specific and negotiated categories. Ecofeminists, like radical feminists, seek to recognize and revalue the feminine. Thus, caring and nurturing are seen as universal feminine characteristics and as a model in remaking the relationship of humanity with nature. However, this presents a number of problems. Given that the feminine has formed in relation to the masculine, how is it possible to discover a feminine 'essence'? Ecofeminists such as Val Plumwood (1988) recognize that remaking humanity in a feminine form which cannot be known poses a serious problem to the ecofeminist project. Vandana Shiva attempts to overcome the problem by distinguishing the 'feminine principle' from actually existing women, but then constantly lapses into an elision of women and the feminine (Shiva 1989: 109). The empirical evidence for a view that women are universally closer to nature seems to be limited (MacCormack 1980). Women are sometimes perceived as closer to nature and sometimes as more associated with the domestic and

the settled – that is, with culture (for example, Gillison 1980). One of the problems in researching this question is the validity of the basic nature/culture opposition for where, as we see in some of the examples below, nature is intimately bound up with belief and ritual the dichotomy breaks down.

The term 'nature' like 'women' also needs to be interrogated, for ecofeminists also essentialize nature and do not see nature and environment as culturally relative but as biological facts. Anthropologists (for example, Douglas 1973) and Marxists (Schmidt 1971) have long recognized that nature is expressed and known through symbols which are culturally specific. The meaning of nature is dependent on historically and culturally specific understandings which reflect gender differences as well as other social divisions. Nature is conceived of as female in Western culture (Mother Earth and earth mothers) and ecocentric environmentalists continue to develop this imagery – the name Gaia is taken from an ancient Greek earth goddess and environmentalists continue to use this female imagery (Murphy 1988). One of the most frequently cited passages in ecocentric discourse is the quote from the Red Indian, Chief Smohalla: 'You ask me to plough the ground: shall I take a knife and tear my mother's bosom? You ask me to cut grass and make hay and sell it to be rich like white men; but how dare I cut off my mother's hair' (Eastlea 1981: 43). The feminization of nature says more about the cultures and texts in which this dialogue appears than about any inherent and universal character of nature as female or any universal preindustrial equality of women.

The making of ecomyths which essentialize and romanticize both nature and non-Western peoples, especially women, is typical of ecocentrism. The construction of the East as spiritual and ecologically aware is a form of orientalism whereby agency and rationality are then, dichotomously, seen as the preserve of the West, and Guha complains that 'varying images of the East are the raw material for political and cultural battles being played out in the West; they tell us far more about the Western commentator and his desires than about the "East" ' (Guha 1989b: 77). One famous speech, in 1854, by Chief Seattle of the Suquamish tribe has been shown to be actually a third- or fourth-hand version and 'many of the words which resonate with modern ecological consciousness are not the original words, but contain phrases and flourishes designed to appeal to ecological idealism and the Christian religion' (Merchant 1992: 122).

Women have become part of this construction of the Other through the women–nature iconography of Western society. The Chipko movement in India, which is widely given as an example of spontaneous mobilization by women in defence of the environment, emphasizes

the holistic understandings of women, the feminist character of the movement, and the altruistic motivation of the women. The Chipko slogan, 'What do the forests bear? Soil, water and pure air', is said to show the women's essential ecological understanding of hydrological cycles, and the use of the forests by women is referred to as traditional and ecological. Yet what is underemphasized is an analysis of the material and historical conditions which led Chipko women into environmentally protective behaviour (Guha 1989a), and a recognition that women typically over-exploit forest resources as much as men (Kelkar and Nathan 1991).

To summarize – the false idea of the positive synergism of women's gender interests and environmental interests seems strongly related to an essentialist denial of the social, and to a historical construction of gender and nature. We briefly examine these next.

History appears in ecofeminist thought in a largely linear 'before and after' (scientific revolution, colonialism) manner. Ecofeminist readings of history for different regions have some similarities. Both Merchant, for Europe, and Shiva, for India, conceive of harmonious complementarity in both gender and environmental relations: before the scientific revolution in the case of Europe and before colonialism in the case of India. For example, Shiva, in describing colonialism, writes that 'Maldevelopment is the violation of the integrity of organic, interconnected and interdependent systems, that sets in motion a process of exploitation, inequality, injustice and violence' (Shiva 1989: 5–6)

The feminine principle, which united people with nature in pre-colonial India is described by Shiva as 'the ancient Indian world-view in which nature is Prakriti, a living and creative process, the feminine principle from which all life arises' (Shiva 1989: xviii). However, it has been pointed out that Sanskrit texts from which such a world-view is drawn represent the views of rich, high-caste men (Rao 1991: 19). Further, Bina Agarwal has remarked that Shiva conflates the Indian with the Hindu (Agarwal 1991: 9) in her assertion of the feminine principle and thereby glosses over the plurality of ideologies and interests in pre-colonial India.

Shiva's representation of pre-colonial harmony and equality is highly questionable for both gender relations (for example, suttee in India or domestic slavery in Africa) and environmental relations. ' "[M]ainstream" Indian civilisation was set up by subjugating the forest dwellers and clearing the forests for settled cultivation' (Kelkar and Nathan 1991: 112). Indian civilization has also been repressive to women:

> The absence of any seclusion of women in the tribal situation, the free mixing of adolescents of both sexes, the choice of women

and men with regard to their marriage partners, the ease of divorce, the practice of widow remarriage – all come under severe attack in the period of formation of caste society.

(Kelkar and Nathan 1991: 113-14)

Below we examine the degree to which indigenous environmentalisms are based upon ecocentric views and the absence of women's subordination.

Ecofeminist literature relies heavily on the concept of patriarchy, which is conceived of in a monolithic, ahistorical and reductionist manner. Within gender and development discourse there has been much critical debate about the usefulness of the concept of patriarchy which fails to distinguish the variations in mechanisms and structures of gender inequality, their changing character and their reproduction (Whitehead 1979). Ecofeminism reflects an awareness of the problem of how humanity relates to the non-human, and it reflects the struggles within feminism generally of how to construct the human in other than masculine characteristics. But an ahistorical essentialism cannot be the basis for such a project. Why are materialist perspectives so weak in ecofeminist discourse and what are the material circumstances which pattern gender roles in relation to environmental management?

In addition to essentialism the ecocentric insistence on transcending left/right politics, the identification of environmental degradation in Eastern Europe with socialism, and the feminist critique of Marxism are perhaps elements explaining the absence of materialist perspectives in ecofeminism. Left environmentalists can hardly be called Marxist given the degree of revision of Marxist thought, and the term 'radical' has been captured by ecocentrics. On the whole, Marxists have seen the development of the forces of production at the expense of nature as progressive and environmentalism as an elitist preoccupation – attempts to reconstruct Marx as an environmentalist are strained and selective. However, there are important insights in Marxist perspectives which are absent from mainstream and ecocentric environmentalism – for example, the unity of nature and culture; the social construction of nature; the manner in which material conditions and history inform environmental ideas and perceptions; the internal differentiation of society which leads groups to have different environmental relations. These are a necessary antidote to the fundamentalism of ecocentric environmentalism and the apolitical stance of technocentric environmentalism. What is missing though, from a gender perspective, is considerable – the emphasis upon class alone is inadequate, and intraclass divisions and conflicts considerable – the the method without the orthodoxy remains necessary.

A key problem with ecofeminist approaches is that they fail to recognize either the diversity of lived environmental relations which different women experience, or the power structures in societies which mediate environmental relations and the ebb and flow of competing environmental ideologies. Accounts of how class relations impinge upon resource access reveal considerable variations – for example, the poor may make particularly intensive use of commons, and levels of inequality may be reduced by access to common property resources in India (Agarwal 1991: 13). In other regions, though, commons may be captured by the rich and inequality deepened – for example, grazing lands in Botswana (Cliffe and Moorsom 1979).

Gender differentiation means that men and women of the same household relate to resources in different ways and these variations are inserted into class relations. But the outcomes are not predictable – poor women may be more or less environment-friendly in their behaviour than poor men or rich men/women, depending on their rights, responsibilities, knowledges and bargaining positions within their households and communities. Thomas-Slayter (1992) describes class-gender relations in Kenya which lead poor women to effective group soil-conservation activities but prevent them taking action over sand scooping which is seriously damaging water courses and availability. Attempts to introduce alley crop farming in Nigeria encountered low uptake amongst women farmers in the south-west because the *Leucena* planting time clashed with the peak oil palm processing period for women, and furthermore weeding and fodder cutting placed heavy demands on women's time. In the south-east of Nigeria alley crop farming was resisted by women – weeding was poorly done or crops such as melon were planted by women which smothered the seedlings – on the grounds that they were uninterested in the fate of 'men's' trees (Leach 1991).

The problem of unitary conceptions of households underlies the failure to perceive some contradictions generated by gender relations for environmental conservation. Livelihood strategies for men and women within a household vary and reflect gender relations – women may seek an autonomy which can imply harmful resource use. For example, beer brewing in much of southern Africa is both a means by which poor women recruit farm labour and an activity which for many women generates independent cash incomes; yet beer brewing requires large amounts of fuel and contributes significantly to deforestation. Beer brewing involves very long cooking periods and hence frequently leads to the cutting down of live wood since wood of large diameter is required, unlike fuel for food cooking which is generally collected as smaller dead branches.

In addition to class divisions women are disaggregated by age and life-cycle in their environmental relations – although wood and water are generally said to be collected by 'women' we find on closer inspection that not all women bear this burden equally and many older women manage to delegate this responsibility to sons' wives. Similarly, developmental cycle variations in household size and composition generate significant variations in the reproductive labour of women.

Why is it that ecofeminism has become so internationally influential? An example of this influence can be seen in the high profile given to ecofeminism at UNCED in 1992, and its assumptions which have passed so readily into the women and environment literature. A number of reasons spring to mind – the effectiveness of feminist critiques of Marxism and technocentrism, the crisis in the left, the ascendancy of ecocentrism especially in America, the influence of radical feminists in the European green movements.

But within development discourse this is possibly also related to the current strength of agrarian populism (Kitching 1982) in NGOs and other development agencies. In Britain this may reflect economic pressures in recent decades which have led the disaffected urban middle classes to deepen their preoccupation with rural life (Newby 1979), the glorification of an organic past, a concern with 'community', and non-material values. Both agrarian populism and ecocentrism are influenced by romanticism, and key figures (for example, Schumacher and Gandhi) have a central significance to both. Agrarian populists see peasants as undifferentiated, virtuous (Bernstein 1990) and co-operative; they demand participation and bottom-up approaches which reject hierarchy, the use of appropriate technology and self-sufficiency, and the recognition of indigenous technical knowledge. There appears to be a strong affinity here with ecofeminist emphases upon women as an homogeneous (and virtuous) category of altruistic and community oriented people, on webs rather than hierarchies, on utopian self-sufficiency, and on women as 'the intellectual gene pools of ecological categories of thought and action' (Shiva 1989: 46). Finally, women and nature may have proved an attractive and acceptable linkage for Western women environmentalists, for whom ecocentric values have seemed to offer an opportunity to reconcile the project of feminism with that of environmentalism.

The question of how far, and why, ecofeminism has gained adherents in Third World countries requires further study, and is problematic because of the difficulty of bounding cultures when discourses are now so profoundly globlized (can Vandana Shiva be taken to represent the South?); because of the manner in which Third World environmental movements are represented in development

discourses dominated by Western culture (for example, Chipko, discussed on pp. 126-7); and because of the financial rewards for southern NGOs of conformity with the expectations of bilateral and multilateral development agencies.

Next we consider whether there are grounds for the synergism argument in what is known of Southern environmentalisms. The assumption that indigenous environmentalisms exist which are gender-equitable or which recognize a special connectedness of women and nature has to be interrogated, at least partly because of the growing emphasis in development practice on grass-roots initiatives for sustainable development.

Attention to non-Western environmentalisms has been slight – with the notable exception of the analysis of Indian environmentalisms by Ramachandra Guha (1989b). Taken as a whole, Indian environmentalism is markedly different to that of the North because it reflects competition over productive resources rather than leisure and quality of life issues; because India is not a post-industrial society; because environmental action is essentially an aspect of peasant movements in India; and because of the severity of the livelihood impact of resource degradation in India. Guha distinguishes three strands of thought in India – the crusading Gandhian movement, the Appropriate Technology movement and the ecological Marxists – all of which in some ways correspond to forms of environmentalism in the West. There are interesting similarities in Indian environmentalism to currents in Western environmental thought – the Gandhian element reveals a heavy moralism, a rejection of materialism, a call to return to precolonial harmony and a religious reverence for nature (Gadgil and Guha 1992a) which has parallels with ecocentrism. Ecological Marxists are, on the other hand, hostile to tradition, positive in their attitudes to science and industrialization and emphasize inequality in their analyses of the causes and consequences of environmental degradation. A distinctive form of feminist environmental analysis (Agarwal 1991) may well emerge from ecological Marxism but it is difficult to identify 'indigenous' models when globalization blurs all boundaries – Guha 1989a) identifies Marxist influences on movements like Chipko, and Western ecocentrics acknowledge Gandhian influences upon their thought.

How do folk models and cosmologies treat gender and are there conflicting interests here too? To begin to answer this question we need studies of environmental knowledge systems which go beyond folk classifications and reveal an explicit ideological stance of environmental protection – it is not clear how far such environmentalism itself is a Northern idea. What we can do is briefly examine concepts of nature and studies of spontaneous peasant mobilization

in defence of the environment for clues to the question of the complementarity of conflict in women's gender and environmental interests.

Nature is perceived in cultural terms, and understanding folk categories depends upon an understanding of particular cultures. Anthropological studies of folk classifications have limited usefulness for our purposes – what we are interested in is 'a more discursive indigenous knowledge of environmental phenomena and the technical theory and practice associated with them' (Ellen 1982: 210). We would like to know whether men and women of particular societies have different such knowledges and roles, whether these differences are recognized and whether those of women are more environmentally protective. The question of outcomes – that is, of whether women behave in a more environmentally friendly way – is of course different. Pursuing these questions is particularly difficult because gender has not been a focus in many studies, and there is the further problem of mutedness (Ardener 1975). What is known about women's environmental perceptions is largely collected from male informants, and even where this is not the case the domination of male world-views and the absence of, or the politics of expressing, a female vocabulary to articulate dominated environmental models is a major hurdle in interpreting what women themselves say.

Studies of indigenous knowledge systems, such as van Leynseele's (1979) work in Zaïre, show that the cognitive system is closely related to the system of exploitation and regulation of the environment. In his study, overfishing was prevented by limiting habitable space (and thus overpopulation relative to the fish resources), by technical means (for example, fish basket gauge), and by private property rights to pools and fisheries. He concludes that

> the interventions made within the niche with a view to intensive production presupposes a genuine understanding of the [ecological] processes and a consciousness, at least implicit, of the consequences of overexploitation. The degree of understanding of the environment may be established by comparing the ecological system and the classification established by the specific terminology of the vernacular language ... [which] reveals a recognition of the functional relations operative between elements of the environment as they emerge from the ecological processes.
>
> (van Leynseele 1979: 181)

The rights of an agnatic core of kin and the exclusion of others are central to this system, and the ecological understandings and management decisions appear to be held and made by dominant males. This

is as one might expect; where survival depends on preventing resource over-exploitation, environmentalism is of central political significance and reflects other pervasive power relations – in this case, male dominated. Women here are not inherently destructive of, or indifferent to, environmental sustainability, but many may experience social relations which limit their power to form environmental knowledges, or the right to express them, and operate to exclude women from direct property relations. We also see from this example that it is a technocentric (that is, an instrumental) relation with nature which is revealed rather than a bioethical view: management in the interests of human survival was behind the system. Yet ecocentrics often claim, with the very selective and often inaccurate use of examples of non-Western societies, that the organic harmony of humanity with nature in such societies reveals a bioethical standpoint. Mary Douglas observed some time ago that such a 'universe is man-centred in the sense that it must be interpreted with reference to humans' (Douglas 1966: 85), and she emphasized the limitations of studies of cosmologies in isolation from practical concerns

> The live issue is how to organise oneself and other people in relation to them; how to control turbulent youth, how to soothe disgruntled neighbours, how to gain one's rights, how to prevent usurpation of authority or how to justify it. To serve these practical social ends all kinds of beliefs in the omniscience and omnipotence of the environment are called into play.
>
> (Douglas 1996: 91)

At the very least we need to interrogate the meaning of, say, the protection of certain species by indigenous peoples before assuming they are non-speciesist.[5] Religious taboos controlling resource use certainly do protect elements of environments, but a materialist analysis of what is protected and why, as well as who the major beneficiaries are, must precede any generalizations about the absence of speciesism.

One example of a representation of indigenous environmentalism taken out of context is the suggestion that menstruation taboos, in Orissa, India, are an expression of a unified conception of nature and culture in which '[t]he actions of humans must harmonise with the movements of the sun, of the clouds, with their convergence or separation from the earth. Women and men recapitulate in a monthly rhythm the earth's yearly rhythm' (Apffel Marglin 1992: 30). These taboos require women not to touch anyone during the first days of menstruation, not to cook or wash or bathe or have intercourse, to sleep on a grass mat and eat a very restricted diet. A man's life will be shortened by the touch of a menstruating woman. Marglin's interpretation is

achieved by an illegitimate extrapolation of what villagers say about Raja Parba, the festival of the menses of the earth – in which women are left without men in the villages to amuse themselves – to actual menstruation behaviour. Thus she emphasizes the release from work for menstruating women. This is misleading – when a menstruating woman does not cook, another woman, not a man, cooks. The idea that menstruation taboos have a relation to male domination is dismissed, thus 'the understanding of menstrual taboos as signifying a male domination of women's sexuality and a way of keeping women out of the productive labour force amounts to inventing them as commoditised persons' (Apffel Marglin 1992: 26). She further asserts that freedom of choice is a 'commoditised logic' and that menstrual taboos serve to 'ensure continuity by articulating with the movements of other persons and of the seasons' (Apffel Marglin 1992: 31). We are given no analysis of class or caste or the position of women relative to men in general, nor any discussion of pollution and gender relations (Douglas 1966). Submission to taboos emanating from a religion formed by elite males is decontextualized and presented as a superior organic unity of humanity with nature.

It is necessary to see beyond the invention of environmentalist traditions of peasant societies by the recasting of ritual, religion and belief as indigenous ecocentric environmentalisms.

An example of the determination to represent even dehumanizing elements of indigenous cultures in an ecologically positive light can be seen in the reinterpretation of human sacrifice amongst tribal groups in India. Mahapatra (1992) asserts that the Kondhs, a tribal group of southern Orissa, live in harmony with nature. The evidence for this is the worship in the past of an earth goddess by human sacrifice, *meriah*. Mahapatra represents the *meriah* in a particular manner – he claims that the human sacrifice enabled Kondhs to belong to a place because their 'grandfather's bones are beneath the soil' (Mahapatra 1992: 65), yet the *meriah* was always a stranger, purchased at considerable cost from low-caste artisans and weavers (Leigh Stutchbury 1982). He justifies the sacrifice by stating that the *meriah* was a 'voluntary victim' and was drugged before being killed (quoting Frazer on this!), and he dehumanizes the *meriah* by calling s/he 'it' (Mahapatra 1992: 65-6), or in other places 'the object' (ibid.: 68). Historians have given other accounts of *meriah*. 'The method of immolation varied among the tribes, though in all cases the men cut the flesh from the living victim, who was usually drugged or intoxicated, or made defenceless by having both arms and legs broken' (Leigh Stutchbury 1982: 45).

Leigh Stutchbury compares the *meriah*-practising Kondhs with those who did not and finds that the latter group were characterized

by purity concerns, menstrual taboos, dowry, the absence of divorce and widow remarriage, hypergamy and very high rates of female infanticide.[6] The *meriah* Kondhs had few if any menstrual taboos, relatively high status of women, divorce and remarriage of women were common, and exogamous bride-price marriages the rule. She suggests that *meriah* was made to a female deity presiding over chaos in tribes where marriage customs failed to resolve the threat posed by women as the 'enemies within' exogamous societies (Douglas 1966), whereas for the infanticide Kondhs status hypergamy[7], similar to that of the Rajputs today (see Billig 1991), controlled both women and relations with outside groups. This example shows the problems of a literal reading of articulated beliefs. Earth goddess worship here expresses the anomalous position of women rather than 'a lifestyle . . . tied up with the land in a system of mutual reinforcement, . . . attuned to the sonic and sensual rhythms of the earth' (Burman 1992: 3). It also shows the degree to which issues of equity and human rights can be willingly overlooked in the claims made for indigenous environmentalisms.

An example of how indigenous environmental models may express gender conflict in a way that portrays women as antagonistic to nature can be seen in the study of the Dogon at the Mali/Burkino Faso border where van Beek and Banga (1992: 57-75) describe the punishment by men of women firewood collectors gathering valued fruit-tree wood. Women collect firewood, they brew beer and they fire pots – all these use substantial quantities of scarce wood. Yet the punishment is not just an expression of the conflicting individual self-interest of the women and men who wish to consume the fruit of the trees, it is also an expression of a kind of male environmentalism. Dogon attitudes to the bush embody respect for the powers of the bush, upon which the village depends – for the bush represents life and culture means entropy. However, although this leads to a wish to conserve the bush, 'working harder is a perfectly feasible solution to all environmental pressures' (van Beek and Banga 1992: 72) and there is no acknowledgement of the role of people in actively regenerating the bush. The punishment of the women involves the bush (actually men in masks) come into the village to seek out fruitwood in firewood piles and to chastise the women for their lack of respect by imposing fines on women, which are however paid by their husbands. 'Through these rituals men have appropriateed both the life-giving and the life-threatening aspects of the bush' (van Beek and Banga 1992: 73). What is interesting here is that it is men who are associated with nature; women are seen as subverting respect for nature; respect for nature is inextricably bound up with respect for men by women, and finally the payment of the fines by the men indicates perhaps

the ambiguity of real gender power-relations and the acceptance by men of joint responsibility for deforestation.

If environmental relations are patterned by gender, how far do they also refract other relations of social inequality? Research (van den Breemer 1992) in Cameroon shows women again to be associated with settlement and culture and men as the mediators with the wild. But this is incidental, the main finding in this work is that 'ecologically destructive processes have their roots in the aspiration towards emancipation' (van den Breemer 1992: 106). The religious prohibitions against ecologically damaging crops and animals (rice and goats) become overthrown as a result of the contradiction between these ideas about the socio-ecological order and the system of ideas which legitimizes hereditary leadership and social inequality. Matrilineal hereditary leaders required labour as power-bases and they built up followers of immigrating foreigners and (ex)slaves who then, in the 1920s, converted to Islam and Christianity (and therefore were absolved from traditional religious observances) and took up opportunities for cocoa and coffee cultivation, which was individualizing and emancipatory. This study does not have explicit gender analysis but it affirms the point that environmental conservation is often predicated upon social inequality, and that the emancipation of women (or other dominated groups) may create inevitable breakdowns of eco-order.

The degree to which gender relations are fundamental to understanding patterns of resource degradation (for example, deforestation) in the South is illustrated by a study of the Susu of Sierra Leone. The concept of wealth-in-people has been used to understand social relations in agro-ecosystems where population densities are low and labour constraints are a major feature of rural livelihoods. A number of writers (notably Meillasoux 1981, Aaby 1977) have suggested that patriarchal and gerontocratic societies have developed in these circumstances, since control of the labour of women and young men is a key to both survival and accumulation. A study (Nyerges 1992) of the swidden economy of the Susu suggests that in frontier circumstances intensification and resource degradation is a consequence of competition for labour.

Frontier social organization is characterized by local migration, rules of primacy (status derives from being a founder or descendant of a founder), and wealth-in-people (that is, the wealth of the group depends on the number of members). As a result household fission is a characteristic feature, as is a patriarchal and gerontocratic quality to social relations, since the labour of junior males and women is fundamental to male social mobility. Marriages are manipulated so that elders can benefit from (almost perpetual) bride-services, polygamy

and marriage to widows with children, whilst junior men have few alternative economic options and are seduced rather than compelled into allegiance to particular elders. Old men plant rice on old fallows (which require substantial labour to clear because of the tree regrowth) using the labour of junior men. Junior men are forced through labour scarcity to farm younger fallows (which are easier to clear) near to the village where the women plant groundnuts (in order to get help from the women to farm their crops). Women farm in their own right (and control the proceeds) on land allocated by husbands and fathers, often land which was used the previous year for rice. Men wish to grow a cash crop of chillies on this second year land, but need women's labour to weed the chillies.

> The women will cooperate in this exploitation of their labor, however, only if the farmer has chosen a relatively dry site, as groundnuts will rot if there is groundwater in the field. This means that in order to intensify production by getting women's cooperation in producing a second-year chili crop, a man must choose rainfed . . . as opposed to rain- and groundwater-fed . . . sites for rice and other intercrops in the first year farm.
>
> (Nyerges 1992: 871)

Farming rice on rain-fed land is more risky and less productive than on groundwater-fed land. Here the farming of very young fallows by junior men, as well as the farming of two-year rotations by elder men with women's labour for the chilli crop, leads to death of the tree roots, suppression of coppice regrowth, grass invasion, annual fires and degradation of the forest canopy. Thus Nyerges argues that 'individual Susu farmers interacting in the context of asymmetrical social relationships create an environment characterised by patterned risk, change, and degradation' (Nyerges 1992: 873). This example also shows the interplay of structure and action – women are structurally weak but find room to manoeuvre in the seasonal demand for their labour, the rigidities of gender divisions of labour and the character of conjugal contracts. But the outcome of these bargaining processes are not necessarily environmentally benign.

What this case shows is that even in a situation of subordination women are able to bargain on the basis of their labour power for concessions which are in their individual interests and not those of the household as a unit. It also shows that resource degradation is not only caused by poverty and that *low* population density can be implicated in environmental degradation.

We need to consider the degree to which environmental conservation, by a wide range of agents, frequently seems to be based upon coercive social relations. Democratic participatory forms of

development are advocated widely for sustainable development, yet it may be that these are not compatible. The erosion of coercive social relations and increasing individual autonomy have been associated with the breakdown of environmental regulation and the collapse of collective action. The study by Jodha in Rajasthan, India, concluded that land reform, which reduced the power of landlords and improved land access of the poor, was a more significant factor in the decline of common property resources than either commercialization, population pressure or the adoption of tractors. 'In Rajasthan the introduction of land reforms in the 1950s disrupted traditional arrangements that protected and regulated the use of common property resources' (Jodha 1985: 247). This was because 'through levies and penalties on the use of CPRs the . . . landlords exploited the peasants. However as a byproduct of this exploitative mechanism emerged a management system that protected, maintained and regulated the use of common property resources' (Jodha 1985: 254).

A further example of the way in which environmental adaptation and regulation can be based on profound social inequality can be found in the interpretation of caste and conservation by Gadgil and Guha (1992b). They suggest that in the fourth to ninth centuries the Indian subcontinent experienced a resource crunch which led to the crystallization of caste society as 'an elaborate system of the diversified use of living resources that greatly reduced inter-caste competition, and very often ensured that a single caste group had a monopoly over the use of any specific resource from a given locale' (Gadgil and Guha 1992b: 95). The authors unacceptably represent caste groups as 'linked together in a web of mutually supportive relationshps' (ibid.: 93) in a manner which denies inter-caste exploitation and the denigration of lower castes. Their case is better read as one in which powerful social control and hierarchy developed as a means of adapting to resource scarcity and regulating resource use.
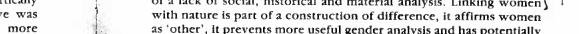
If it is the case that environmental conservation is frequently based upon coercive social relations, then how are we to understand the eco-protests of rural women? If the environmental relations of women embody their subordination then why do they, as is claimed, mobilize around the defence of the environment, as in Chipko? At one level it is possible to produce counter-evidence that shows women actively resisting conservation – for example in Cameroon, 1958, when women's protests included their objection to 'a government edict prescribing contour farming to replace the building of ridges vertically along hillsides. Meant to prevent soil erosion, the directive was extremely unpopular amongst women because it is much more difficult and labour-intensive to ridge horizontally on a steep slope' (Diduk 1989: 338; also see Ardener 1975: 38). However, this would

be to take at face value the immediate causes of protest. Environmental change has to be seen within the wider context of change. We need to look below the surface of an environmental manifestation to understand the meaning of particular protests. Although Chipko has been widely represented as showing the affinity of women with nature, more recent analyses see it as part of a broader current of peasant protest. Chipko women can be seen as defending a conservative 'moral economy' (Guha 1989a) rather than trees as such, and the Cameroonian women are also seen as essentially resisting the transfer of land from subsistence cultivation to herding and cash-crop farming and defending the traditional order (Diduk 1989: 347). In Maharashtra, Omvedt reports that it was the 1970-3 drought and famine which led women into agitation and protest: 'Women were a majority of workers on the [relief] projects and were reported as the most militant in the demonstrations' (Omvedt 1978: 394). Environmental protests by rural women cannot be disembodied from their livelihood systems, for threatened resources often mean threatened subsistence. This may well mobilize women to protest, but since the moral economy itself is imbued with gender inequality such struggles are not *necessarily* progressive for women, nor, as we point out above, are they driven by environmentalism.

What we have seen in colonial southern Africa, on the other hand, was a struggle against the control of patriarchal elders and the state, expressed through resistance to conservation technologies and planning or via 'everyday forms of resistance' like migration and non-co-operation with marriage transactions (Beinart 1989, Drinkwater 1989, McCracken 1987, Jeater 1989, Lovett 1989). Gender struggles and those to conserve environments are as likely to clash as coincide. Just as the numerical domination of men in, for example, logging rain forest or mining does not mean that women are therefore more environment-friendly, the involvement of women in 'environmental' protests cannot be used as green credentials.

In conclusion, we have found that the assumed and asserted complementarities of women's gender interests and environmental interests derive from the specific (and flawed) conceptualizations of women and nature in different environmentalisms and the absence of gender analysis. Technocentric environmentalism and ecofeminism are unable to see the conflicting interests of women and environments because of gender blindness, ethnocentrism and essentialism, as well as because of a lack of social, historical and material analysis. Linking women with nature is part of a construction of difference, it affirms women as 'other', it prevents more useful gender analysis and has potentially damaging practical consequences. Our analysis has also revealed the limitations of an exclusive focus on poverty-driven environmental

degradation – environmentally damaging behaviour also results from gender interests and ideologies. Finally, we have questioned the wisdom of assuming that equity in, and democratization of, development is not necessarily compatible with environmental protection, conservation and sustainable use of resources.

If we cannot generalize about gender and environmental relations what approach can be taken? The application of gender analysis to environmental issues would seem a preferable route to understanding the interactions of gender relations and environmental relations. This would include what Bina Agarwal (1991) has termed a 'feminist environmentalism':

> In this conceptualisation, therefore, the link between women and the environment can be seen as structured by a given gender and class (/caste/race) organisation of production, reproduction and distribution. Ideological constructions such as of gender, of nature, and of the relationship between the two, may be seen as (interactively) a part of this structuring, but not the whole of it.
>
> (Agarwal 1991: 11)

Agarwal calls for 'struggles over both *resources* and over *meanings*' (1991: 11, original emphasis). However a gendered environmentalism does not assume subordination of women in all environmental relations and it implies both the addition of greater attention to intrahousehold dimensions of resource relations rather than the intra-class/caste perspective emphasized by Agarwal, and a more action- and agency-oriented perspective.

Such a project would involve many elements of the gender analysis outlined above, both the structural characteristics of gender relations and the understanding of the interactive dynamics of the making and changing of gender relations and meanings as a consequence of individual agency. One area which is an important part of gender analysis, and which reveals the necessity to combine both structure and action, is that of property relations.

Property rights are social relations – that is, they represent relationships between people and people rather than people and things. Men and women experience access to land in profoundly different ways in most rural Third World societies yet the institutions which regulate and enforce property rights (patrilineal descent, legal structures) are not beyond manipulation and influence. Individual actions and agency over time aggregate to change these institutions – for example, Kenyan women and land struggles. In much of Kenya tenurial arrangements mean that women have predominantly secondary rights to land (that is, rights through marriage), whereby wives can be allocated land by their husbands to use whilst a member of his

household. In a study of coexisting individual freehold tenure and 'customery' land law in the Murang'a District of Kenya it has been suggested that the latter has provided opportunities to women to struggle for access to land;

> Customary law has been shown to represent 'the responses of living interests' rather than 'the dead hand of tradition' (Chanock 1985: 237). As such, it provides means for legitimation for the more powerful in struggles for control over land and labour. But it also provides some means, albeit limited, whereby women have evolved a discourse of resistance, or counter-power, whether individually, through the manipulation of such practices as the female husband, or collectively by recreating past idioms of social practice and presenting them in terms of contemporary ideology (Harambee).
>
> (MacKenzie 1990: 637)

The plurality of property rights offers a range of options for women to struggle for access to land. Land is only one resource, used for illustrative purposes, and livelihoods are composed of a portfolio of activities and strategies based on a wide range of 'resources', all of which are subjected to gender analysis – for example, environmental relations are also gendered through differential access to labour and to differential knowledges.

The concept of reproduction usefully captures the combination of structure and action, having multiple levels and meanings. Biological reproduction refers to the process of child-bearing and rearing; generational or daily reproduction refers to the maintenance of the domestic group (for example, food production and processing, water collection, etc.); social reproduction involves a range of wider processes whereby societies are reproduced (for example, education socializes children to particular positions in divisions of labour) or changed through the actions of individuals. In all these arenas women and men play different roles, have different rights and responsibilities, different knowledges and expectations. The concept of reproduction is especially useful for understanding gender issues in environmental change because it links household-level divisions of labour into societal processes such as the changing marriage and kinship structures and behaviour, the formula on and reformulation of norms and values, the trajectories of accumulation and immiserization, the ebb and flow of state policies and interventions.

We have discussed above the central importance of understanding intrahousehold relations. Domestic groups can be seen to operate on the basis of sets of implicit contracts between members, defining areas of rights and responsibilities which guide behaviour and action. These

are not immutable, indeed they are contested and struggled over and changed with time, and they may vary with class or other social divisions but they are an important element in mediating the impact of environmental degradation. In addition to gender divisions of labour and responsibilities, we also need to know about gender divisions in access to and control of incomes, both cash and kind, since men and women vary in both the acquisition and disposal of incomes. In the disposal of incomes the differential roles of men and women is an important element in both understanding the incentives towards conservation and the effective ability to participate in projects and programmes.

NOTES

1   There is an inevitable arbitrariness about labelling literatures – some views carry a mixture of approaches, some edited collections bear papers reflecting several perspectives – but I would consider the following to represent ecofeminist discourse: Cox (1992), Merchant (1982, 1992), Plumwood (1986, 1988, 1992), Ruether (1979), Shiva (1989), Warren (1987, 1990), Women's Environmental Network (1989), Gray (1981), Eastlea (1981), King (1989), Griffin (1978).

   What I call the women and environment literature is influenced by ecofeminist ideas, which emphasize the 'natural' affinity of women with their environments, even if these are not explicitly recognized, for example: Sontheimer (1991), Dankelman and Davidson (1989), Rodda (1991), Fortmann (1986), Munyakho (1985), Special Issue of *Development* 1902, IUCN (1987). Much of this is a large grey literature not formally published.

   Finally, one can perhaps discern minor alternative approaches, labelled by Agarwal 'feminist environmentalism' (for example, Agarwal 1991 and DAWN 1987), but also gender analyses of environmental change such as Leach (1991, 1992), Cecelski (1984), Kelkar and Nathan (1991).

2   Gender analysis is a composite of a number of disciplines, a collective endeavour, perhaps typified by Stamp (1989), Moore (1988), Pearson (1992), Elson and Pearson (1981), Young *et al.* (1981), Mackintosh (1989), Agarwal (1986b), Whitehead (1981, 1990), Parpart and Staudt (1989), Molyneux (1985), Sharma (1980), DAWN (1987), Rosaldo and Lamphere (1974), Guyer (1980), Kandiyoti (1985).

   Henrietta Moore uses the term 'feminist anthropology' for a similar framework, but the divergence from feminism and the interdisciplinary character of contributors to the gender analysis make this now something of a misnomer.

   The differences between feminism and gender analysis are variable (greatest for radical feminsm, least for socialist feminism) and stem largely from their different objectives – feminism aims for social change, gender analysis is a framework for understanding social relations. Feminism and gender analysis have a potentially symbiotic, rather than an oppositional, relationship; gender analysis informing feminism, and feminism generating social change.

3   The variations by class and region are great. However, in Bangladesh, for example, the evaluation of the gendered consequences of the introduction of mechanized rice milling, which was part of the green revolution, has shifted from a negative picture of massive job losses for poor women rice processors (Harriss 1979) to a more favourable one in which women of all classes have come to benefit from the technology through replacement of unpaid domestic work and new work opportunities (White 1992: 75-7).

4   'Part of the problem of characterising eco-feminist practice and thought is that both seem to be different in different regions or countries' (Faber and O'Connor 1989). There seems to be a dominant element of radical ecofeminism in US environmental groups (on the west coast in particular), with a strong spiritual perspective. The socialist ecofeminists are more characteristic of Europe and Australia. Both exhibit the elements we discuss here to differing extents. In a recent book Carolyn Merchant also identifies liberal, cultural and social ecofeminism (1992). The characteristics ascribed to ecofeminism here are a core of shared positions, given different emphasis in each strand of ecofeminism.

5   Speciesism is a key concept in ecocentric discourse and has been defined as 'a prejudice or attitude of bias toward the interests of members of one's own species and against those of other species' (Ryder 1974, quoted in Eckersley 1992: 43).

6   Female infanticide killed more people than *meriah*. In one area in 1848, only 20 girls were enumerated for the 231 boys under 10 years listed (Leigh Stutchbury 1982: 53).

7   Status hypergamy is a rule which requires women to marry into the same or higher status category than themselves. The result is that at any one level there are 'surplus' women because men of that level can demand very high dowries of lower status women. Since the condition of spinsterhood is unacceptable, the supply of women is limited through female infanticide as the response of individul men and women who, because of the cost of dowry, feel they cannot afford to allow more than one girl to survive.

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