MA Ecological Anthropology SANT 512

LECTURE 6

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Topic: Biodiversity and eco-feminism



Introduction

- Biodiversity, eco-feminism, food production and biotechnology are all inter-related topics. I will begin with a discussion of eco-feminism and biodiversity.
- Remember the general definition of biodiversity or biological diversity as “the variety of plant and animal life in the world or in a particular habitat, a high level of which is usually considered to be important and desirable” (oxforddictionaries.com).
- Two prominent eco-feminists are Vandana Shiva and Carolyn Merchant from the Global South and North respectively. Both refer to themselves as eco-feminists and engage in activist-oriented efforts to curb environmental destruction while examining the nature/culture relationship.

Biodiversity and food production

- All humans need food and with increasing technological advancements from the modern colonial period into industrialisation and up to the present, it became possible to mass produce food.
- Commercial agriculture is now immensely important to many people in both the Global North and South who are producers (those who work on the farms) and consumers (those who buy the finished product) and for states that export agricultural produce.
- It is important to note that production and consumption activities overlap, as many anthropologists point out.
- As Vandana Shiva puts it, “since many people, especially in the Third World, depend on biological resources…for their sustenance and well being… biodiversity is simultaneously a means of production, and an object of consumption. It is the survival base that has to be conserved” (1992: 207).

Monoculture

- Conserving biodiversity is therefore critical not only for ecosystems, but also for people.
- The mass production of food led to the practice of mono-production or monoculture (mono meaning one in Latin), which many activists are highly critical of for environmental and economic reasons.
- Plantations that only focus on producing one crop have arisen since the colonial period, and mono-production continues to dominate commercial farms. For example, sugar plantations in the West Indies, tea plantations in Kenya, cocoa plantations in the Ivory Coast etc.
- Shiva argues that replacing multiple crop production with “large-scale monoculture based production in agriculture” has adverse effects on the soil and peoples’ livelihoods and health since it increases certain “vulnerabilities” (1992: 210).

Monoculture (continued)

- There are specific effects that I will go through when we look at food production.
- One major example of an advance in biological technology is the “high yield varieties” of crops. The seeds of various crops such as rice and different types of beans yield more when harvested than traditional seeds.
- However, the use of these seeds have very particular requirements such as chemical fertilizers (as opposed to natural fertilizers), pesticides, monoculture etc. I will expand on this in the next session.

Monoculture vs. diverse crop production

- Proponents of monoculture argue that it is more efficient than multiple crop production or diverse production.
- Monoculture usually employs more labour-saving techniques and machinery than diverse farming. This means that there is less human labour employed on large farms compared to machinery.
- This technology combined with biotechnology like high yield crop varieties of seeds and irrigation means that crops are produced at a faster rate in monoculture than in diverse production.

Monoculture, diverse production and labour

- So in terms of harvest time, monoculture is more efficient.
- However, Shiva points out that the measurement of efficiency is skewed since it generally takes into account “only one-dimensional yield and outputs (so) the low productivity of diverse, multiple dimensional systems and the high productivity of uniform, one dimensional systems of agriculture, forestry and livestock is therefore not a neutral, scientific measure but is biased towards the commercial interests for whom maximising of one dimensional output is an economic imperative” (1992: 207).
- We will examine this relationship between commercial agriculture, profit and privatisation later on.
- For example, when measuring the output of corn, a small farmer who grows different fruits and vegetables together such as mangoes, potatoes and corn will only have his corn measured and not the other crops.

Labour and livelihoods

- Additionally, Shiva points out that in countries where labour is scarce, technology is useful. However, in countries where there is a lot of available labour, particularly countries of the Global South, monoculture threatens small farmers' livelihoods. In this situation "when labour is abundant, labour displacement is unproductive because it leads to poverty, dispossession and destruction of livelihoods" (1992: 208).
- Using an example from Kerala, India, Shiva also notes that the benefit of diverse crop production is that peoples' livelihoods remain intact to a certain extent.
- "In Kerala, coconut is cultivated in a multistoreyed, high intensity cropping system along with bananas, papaya, mango and vegetables. Compared to an annual labour requirement of 157 man-days per year in a monoculture of coconut palm the mixed cropping system increases employment to 960 man-days per year" (1992: 208).

Biodiversity conservation

- This leads to her point about sustainable development and conservation initiatives formulated in the Global North for the South. She asserts, “in Third World situations, sustainability has therefore to be achieved at two levels simultaneously—that of natural resources and of livelihoods. Biodiversity conservation has therefore to be linked to conservation of livelihoods derived from biodiversity. Women's work and knowledge is central to biodiversity conservation and utilisation because they work between "sectors" and perform multiple tasks” (1992: 208).
- This brings us to her eco-feminist argument.

Eco-feminism

- The main argument of eco-feminism is that because women are biologically and therefore naturally closer to nature, their attitude and actions toward the environment are different from that of patriarchal, capitalist society.
- So the domination of women and the domination of nature by patriarchal, capitalist society was theorised as connected.
- Women's activities (for example in child care) and attitudes (such as nurturing children) were seen as reflective of things taking place in the environment.
- The term "eco-feminism" was first used in 1970s in a French publication and then adopted by American academia.
- This patriarchal view of nature sees our surroundings as something that is meant for human use.

Eco-feminism (continued)

- This attitude, eco-feminists argue, has caused widespread environmental destruction.
- However, eco-feminism is criticised for its essentialist underpinnings that perpetuate the nature/culture and female/male dichotomy. The dichotomy itself is not problematic since most feminists argue that this kind of division exists in every culture, but the hierarchical aspect embedded in it whereby men and male activities are privileged above those of women is problematic.

Women and food production

- Shiva argues that in rural areas women, not men, are usually responsible for growing crops and therefore they are most knowledgeable about farming. (Men usually contribute to harvesting the crops).
- In this case women have both a natural affinity with the environment and the knowledge and skills to farm responsibly.
- On a physical level, crop diversity is usually practised.
- On an ideological level, diversity is part of their worldview, which I will shortly expand on.

Women and work

- In terms of her eco-feminist approach, Shiva draws attention to the lack of social recognition of rural women's work.
- This invisibility is largely the result of a capitalist definition of work as paid labour. According to Shiva, "although women work to sustain their families and communities, most of their work is not measured in wages…and (they) are normally engaged in multiple tasks" as previously noted (1992: 208-209).

Women and work (continued)

- Recent studies “with a gender perspective… prove that women in India are major producers of food in terms of value, volume and hours worked” (1992: 209).
- Additionally, the development paradigm that is “rooted in the sectoral, fragmented and reductionist approach to development…treats forests, livestock and crops as independent of each other,” point that also comes up in relation to conservation (Shiva 1992: 210).

Women and biodiversity

- The diversity found in nature is subsumed by culture that is, by man’s actions. In this case crop biodiversity is subsumed to the production of only one crop.
- “Nature's diversity is not seen as intrinsically valuable in itself. It gets value only through economic exploitation for commercial gain. The use of a commercial value framework then treats diversity as a problem, a deficiency. Destruction of diversity and the creation of monocultures becomes an imperative for capitalist patriarchy” (Shiva 1992: 205).
- She critiques the conservation paradigm by asserting that “the fragmentation of farming systems which was linked to the spread of monocultures continues to be the guiding paradigm for biodiversity conservation. Each element of the farm eco-system is viewed in isolation, and conservation of diversity is seen as an arithmetic exercise of collecting variety” (1992: 210).

Diversity in worldview

- Instead, Shiva suggests that traditional farming practices, which are usually women's responsibility, incorporate diversity in practice and thought.
- In an example from a rural Indian setting, she shows that crop biodiversity is the norm since biodiversity is a "relational category" in which "each element gets its characteristics and value through its relationships with other elements" (1992: 211).
- This is because "biodiversity is ecologically and culturally embedded" (ibid). This is evident in the concept of "navdanya" meaning "nine seeds" or "new gift" which is symbolic of the cosmos and is environmentally relevant.

“Navdanya” and biodiversity conservation

- Shiva explains that “navdanya are the symbol of…diversity and balance, not just of the plant world, but of the planet and social world. It is this complex, relational web which gives meaning to biodiversity in Indian culture and has been the basis of its conservation over millennia” (1992: 211).
- Since “women (in India) have been the selectors and custodians of seed when they conserve seed, they conserve diversity and when they conserve diversity, they conserve a balance and harmony” (1992: 211).
- Shiva therefore proposes an alternative vision and practice of conservation whereby “conserving biodiversity therefore implies conserving the relationship from which balance and harmony derive” (1992:212).

Carolyn Merchant's eco-feminism

- Carolyn Merchant takes a revisionist approach to the history of human-environment relations by including gender.
- Her work focuses on the relationship between ecology, production and reproduction (biological and social).
- In her own words, she develops a "socialist ecofeminism rooted not in dualism but in the dialectics of production and reproduction" (2006: 515).
- Of course this "dualism" refers to the nature/culture dichotomy.
- In her book "The Death of Nature: Women, Ecology and the Scientific Revolution" (1980, second publication 1990) she argued that "nature cast in the female gender, when stripped of activity and rendered passive, could be dominated by science, technology, and capitalist production" (2006: 515) which I will go on to discuss.

Gender and modes of production

- Since women's and men's roles vis-à-vis production differed historically Merchant argues that the rise of modern capitalism changed this gender role differentiation. (Remember that in every society there is a division of labour that it is usually gendered).
- She goes through societies with different modes of production.
- In horticultural societies "women are often the primary producers of crops and fabricators of hoes, planters, and digging sticks", meaning technology (1990: 1118).
- In hunter-gatherer economies women tend to have gatherer roles and men have hunter roles.

Gendered division of labour and modes of production

- Women generally collect and are responsible for plants, small animals, bird eggs, shellfish (if fishing is another livelihood activity), and usually engage in sewing (clothing for instance) and weaving (implements for storing and carrying food and children and for cooking).
- In hunter-gatherer economies men are usually responsible for hunting larger animals, fishing, and clearing the land (through the slash and burn method for example) for farming and temporary settlement.

Origin myths

- Here a note in relation to origin myths is important since Merchant examines the role of origin myths as a way of facilitating a useful approach to relations between humans and the environment.
- For example in American Indian hunter-gatherer economies “origin myths included tales of mother earth and father sky, grandmother woodchucks and coyote tricksters, corn mothers and tree spirits. Such deities mediated between nature and humans, inspiring rituals and behaviors that helped to regulate environmental use and exploitation” (1990: 1119).

Origin myths (continued)

- In this analysis Merchant is not perpetuating the “myth of primitive ecological wisdom” (see lecture 3) since Merchant is not claiming that this ‘closer’ relationship between indigenous people and nature means that they have a wisdom that people in industrial society do not have.
- Rather, this relationship “between humans and the world does not prevent the exploitation of resources for human use (as happens in the Global South as well – my insertion), but it entails an ethic of restraint and propitiation by setting up religious rituals to be followed before mining ores, damming brooks, or planting and harvesting crops. The human relationship to the land is intimately connected to daily survival” (1990: 1119).

Gendered division of labour, water and fuel wood

- According to Merchant, the important aspect of women's roles in hunter-gatherer and horticultural economies is related to water and fuel wood.
- Merchant suggests that "because water and fuelwood availability affect cooking and food preservation, decisions over environmental degradation that dictate when to move camp and village sites may lie in the hands of women" (1990: 1118).
- This shows that women play a critical role in affecting the immediate environment and in the settlement patterns of the group.
- However, Merchant argues that with the transition to a capitalist economy, "the cash economies and environmental impacts that ensue are often controlled by men…Women's access to resources to fulfill basic needs may come into direct conflict with male roles in the market economy" (ibid).

Agrarian society

- Merchant gives an example from colonial America into the modern capitalist period showing how changes in the mode of production impacted on the gendered division of labour in American society and adversely effected women.
- First it is important to recognise that both men's and women's activities affected their immediate environment.
- In the agrarian economy of "colonial and frontier America" (when it was still a British colony until the end of the 18th century) "women's dairying activities, free-ranging barnyard fowl, and vegetable, flower, and herbal gardens all affected the quality of the nearby soils and waters and the level of insect pests, altering the effects of the microenvironment on human health" (1990: 1118).
- Men's work entailed mainly "cutting forests, planting and fertilizing fields, and hunting or fishing" (ibid).

From agrarian to capitalist economy

- Then, in the 19th century, with the increasing adoption of capitalism this meant that “agriculture became more specialized and oriented toward market production (and) men took over dairying, poultry-raising, and truck farming, resulting in a decline in women's outdoor production” (1990: 1118).
- This “general trend toward capitalist agribusiness increasingly turned chickens, cows, and vegetables into efficient components of factories within fields managed for profits by male farmers” (ibid). This remains the situation today.
- As a result, women’s role in production decreased.

Women and the shift in production

- During this period of industrialisation as well when women's labour outdoors declined, for middle-class women especially their domestic responsibilities like child-rearing and managing the household took precedence over farming and gardening.
- Merchant argues that at this time women in the USA "defined a new but still distinctly female relation to the natural world. In their socially constructed roles as moral mothers, they often taught children about nature and science at home and in the elementary schools…(By WWI), women's focus on maintaining a home for husbands and children led many women…to spear-head a nationwide conservation movement to save forest and waters and to create national and local parks" (1990: 1118-1119).

Women and the shift in reproduction

- In terms of reproduction, midwives were replaced by physicians who were mostly male. These physicians "were instrumental in undermining women's traditional roles in midwifery and hence women's control over their own bodies" (2006: 515).
- This leads to Merchant's deconstruction of the Scientific Revolution in the 17th and 18th centuries which was part of the Enlightenment whereby philosophers and scientists questioned the primacy of religious thought and which also included technological advances that led to industrialisation.

The Scientific Revolution and worldview

- Merchant makes an important point about the discourse of technology and its position within the worldview held in industrial society.
- She writes that the notion of this period as a revolutionary one, “is part of a larger mainstream narrative of Western culture that has propelled science, technology, and capitalism’s efforts to “master” nature” (2006: 517).
- Recall lecture 3 on nature and culture in which I mentioned the key idea of protection that is part of the view of nature in industrial society. In order to protect the environment, humans must be able to control nature to a certain extent so again the notion of culture ‘mastering’ nature emerges.

The Scientific Revolution and "progress"

- This notion of culture 'mastering' nature is present in the "dominant narratives of colonialism and imperialism that have helped to shape Western culture since the seventeenth century at the expense of nature, women, minorities, and indigenous peoples" (2006: 517).
- By referring to this era as a "revolution" Merchant suggests that this term obscures how powerful these kinds of "dominant narratives are as well as "hides the political power of scientific narratives in remaking the earth and its natural resources as objects for human use" (ibid). One example of the power of these narratives to obscure the violence and horror of this historical era is the depiction of the New World, referred to as female, as an empty land rich in natural resources to be used in the development of Europe (Merchant 2006).

Partnership, not domination

- In doing so she questions whether the developments of this period really led to progress.
- In sum, “the subjugation of nature as female was thus integral to the scientific method as power over nature” (2006: 515).
- Merchant therefore suggests a re-conceptualisation of gendered relations with the environment by fostering “an ethic of partnership with nature in which nature (is) no longer symbolized as mother, virgin, or witch but instead as an active partner with humanity” (2006: 515).

Conclusion

- Both Vandana Shiva and Carolyn Merchant examine the relations between women, social and biological reproduction, division of labour, and environmental conservation.
- Both suggest that current conservation efforts and policies can learn from women's practices and roles today and historically.
- Additionally, Merchant interrogates the historiography of the Scientific Revolution in Western society to address women's neglected role in early conservation efforts and to question the core narrative of progress.

END



Required readings

- Shiva, V. “Women’s Indigenous Knowledge and Biodiversity Conservation” In *India International Centre Quarterly*, Vol. 19, No. ½ (Spring-Summer 1992) pp. 205-214.
- Merchant, C. “Gender and Environmental History” In *The Journal of American History*, Vol. 76, No. 4 (Mar., 1990), pp. 1117-1121.