Women and the environment in rural Mexico

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WOMEN AND THE ENVIRONMENT IN RURAL MEXICO

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ABSTRACT

Rural women in Mexico live in deteriorating environmental conditions. Do they care? Are they more interested than men in helping to stop this degradation? What knowledge of the environment do rural Mexican women have?

Section One analyses some Western views: the eco-feminist movement which sees women as equivalent to nature and both as subordinates of men, the Western historical and anthropological literature on women and nature and selected writers who see women as saviours of the Third World.

In Section Two it is demonstrated that it is difficult to know if Mexican women care about the environment or even what they know, because there is little published information. A partial answer may be inferred from what is known about their work. Rural Mexican women's work is the best proof of their environmental knowledge; their roles and work are examined and the causes of their absence from the literature are discussed.

The literature review was supplemented by field work in four communities of south-eastern Mexico. This established that these women vary in their approach to natural resources, and that this approach is much influenced by their culture and by themselves as individuals. Some have very substantial knowledge. The fieldwork supported the view that women's relationship with the environment is highly specific by place, time, culture, class and other factors, but there is still some continuity in attitudes to the environment among women, perhaps in their role as "carers".

CHAPTER 1

INTRODUCTION

I first thought of doing research about women after reading a newspaper article on rural women in Mexico, which explained not only the poor social conditions they lived in but also the deteriorating environmental conditions they were facing. My training in Biology suggested to me as a Mexican, that the subject of Mexican rural women and their relation to the physical environment would help me to a better understanding of the origins of women's subordination.

The question that this thesis seeks to answer is: are women related to the environment in a special way? Do they possess special knowledge that relates them to the environment in a different way from men?

The first approach I tried was the eco-feminist (II). This approach has its foundations in a "special" relation, a "natural" relation, that eco-feminists suppose to exist between women and nature, a relation that they consider is not being respected by men in patriarchal societies. Men are then held responsible for the degradation and exploitation both of women and of

nature. This movement can be seen as basically mystical; although some of its members are academics like Vandana Shiva (V.2), its members are mainly feminists who hold strong biases against men. Some of these feminists, such as Vandana Shiva, Joan Davidson and Irene Dankelman (V.3), consider the relationship woman-nature and the subordination of both is clearly seen in Third World countries where women are "the poorest of the poor" but have in their hands, these authors consider, the potential to change the trend towards an environmental catastrophe. Women are considered in this context as "Saviours of the Third World" (V). In this respect, we see how women's work on the land renders them knowledgeable on natural resources. This knowledge, though, must be used within the right social and political context if it is to benefit the environment.

This approach led me on to Western historical and anthropological work on women and nature (III). This includes different approaches. On the one hand there are those writers seeking to prove a universal nature-woman relationship combined with a universal subordination of women and nature to men (IV.1 and IV.2). On the other, there are those seeking an array of cultural and geographical variations upon the relation, by which they try to disprove any universal (IV.3, IV.4 and IV.5).

So women, at least in most societies influenced by Western culture, have become the Second Sex, and cannot be seen as equals by men. They will be regarded as "nature" and will be controlled, used and exploited. This, with the discussion of eco-feminism, constitutes Section One of the thesis.

I limited my search to social science material, leaving aside the arts (literature, drama, painting, film, photography, television, sculpture), which might themselves give some answers. This is only a selective view of the theme; it does not try to present a general account of what has been produced on the subject of Women and Nature, but does demonstrate the variety.

Section Two consists of an investigation into the literature on rural Mexico, to find out whether there has been research in this part of the world that either corroborates or disproves the positions mentioned above. This part turned out to be detective work rather than entirely academic; the computer searches in data banks, as will be explained (Appendix A), did not prove very successful.

Various key words were tried, but the results were not positive in the sense that not much was identified on

"Women and the environment in rural Mexico". This in itself is interesting. The literature searched consisted mainly of ethnobotanical, anthropological and a little geographical material. As with the data banks, it was again difficult to find material specifically on rural women and their relationship with and knowledge of the physical environment. Interviews with researchers (VIII.4) were revealing because of their reactions when asked about the research topic and the variety of their opinions. At this point then, I established that there is not much literature on "women and the environment in rural Mexico".

This period of research was supplemented by field work in four communities of south-eastern Mexico (VIII.3), in which women were questioned on their views and their knowledge of the environment and about their condition as poor rural women. The field work established that these women vary in their approach to natural resources, and that this approach will be much influenced by their culture, and by themselves as individuals of one specific culture. In this context, then, it is relevant to relate the women from the Chipko movement in India who tied themselves to trees so that the trees should not be chopped down (Shiva, 1988) and to the women in Mexico who became involved in politics to be able to defend their

land (Arrillaga, 1988). But there are also many women who do not show any interest in protecting their surrounding rainforest because they are too tired, too poor or too uninterested to be bothered with the environment.

The thesis eventually turned into a *prolegomenon*. The fact that there is limited literature dealing specifically with Mexican rural women and their relationship to the environment made me look for anthropological and ethnobotanical work dealing with rural women in different aspects of their lives, mainly work and health, and inferring their knowledge about natural resources from this (VII). Little can be inferred about their attitudes and emotions with reference to the environment, but more can be deduced about the amount of knowledge which they must have (VIII).

In Mexico, it is usually assumed that women know very little about their physical environment. This thesis tries to disprove this assumption. I do not claim to have read all there is about rural women in Mexico. Still, there exists a vast amount of anthropological literature dealing with this subject. From what I have read, I give examples that try to answer the question: Do rural Mexican women have knowledge about the environment? Although I do not answer the question directly, I try to

do so by deduction from the nature of their work. Rural Mexican women's work is the best proof there is about their knowledge, so I examine their roles and work. Home gardens in Balzapote, for example can be seen as evidence of what women who manage these gardens know about the physical environment.

I therefore intend to demonstrate how much they know, agreeing in this sense with eco-feminists and with Western ethnoscientists, who assume that women will know about the environment.

Section Two ends with an examination of the invisibility of Mexican rural women in the literature, and some possible explanations as to why this is. The conclusions of the thesis follow (IX).

Definitions

During the course of the research, several problems of definition arose. One was the impossibility of defining with exactitude the term "woman". According to the (Shorter) Oxford English Dictionary, woman is the adult female human being, the female sex. It is said to be an artificial social construct, always defined in opposition to man, as The Other (Sontheimer, 1991). The term comes

from Old English "wifman" (wif = man) meaning a female person (Sontheimer, 1991). The complementary term meaning a male person (weapman) was lost, and "man" came to mean both male and human being. Femaleness became the marked, different quality, maleness the norm. Without the category "woman", feminism would not be necessary because sexism would not exist (Sontheimer, 1991). Most feminists redefine the term from a woman centred perspective.

The word is often incorrectly generalized, and leads to dangerous universalizations; the thesis will argue that women should be defined in relation to their culture, class, ethnic origins and age. Linked to this is the problem of defining the relationship of an individual, in this case a woman, or group of individual women of one society, with nature. It has been said that from the perspective of social sciences in general, and of anthropology in particular it is not possible to study the relationship of 'one society' with 'nature' without considering the extreme complexities of this relationship. It changes from time to time and it is different in different segments of society, which have different relationships with different parts of the environment and a differential access to them. This suggests that the relationships of men, children and women with their environment may be different and

difficult to define and that they will change according to characteristics of each individual. We may eventually conclude that we are trying to find out about a group, in this case women, who comprise only half the set of relationships between people and the environment, "the multiform bipolar unity of nature-culture, the fundamental matrix of our social organization and of its future" (Krotz, 1990). (Of course if, as Ian Simmons suggests (pers.comm.), one takes into consideration children's relation to the environment, which should be different from that of adults, then women comprise only one quarter of the population).

Another problem is to define "nature" and "culture", concepts usually treated as being sharply separated. One way of looking at the two concepts is to regard them as "culturized nature". "Nature known, renown, mentally organized, transformed with hands and tools" (Krotz, 1990).

Nature can also be considered a historical and social creation (Krotz, 1990); so, in order for nature to exist there must exist an opposite. This would be society, or what others call culture. There are divergent views on where the limits of nature and culture lie, but some very radical feminists, such as Maria Mies (1988), even

consider that Nature is not defined by Biology but by Economy, and that it distinguishes between people and people and not between animals and people (Mies, 1988). In this view, anything that can be appropriated or stolen is nature, and the whole earth, along with its products, commodities and peoples, comes into this heading (Mies, 1988).

For some there is no clear cut opposition between nature and culture, but the concept is considered useful as "an analytical tool" (Ardener S., 1979). Some consider (Segal, 1987) that "it is a strange projection on to nature...that nature is female...", because nature is not always gentle and nurturing. It can sometimes be brutal and violent, qualities usually considered as masculine. (I would agree that nature is not any of this: people project on to it values that are thus characterized). Marilyn Strathern's opinion is that no single meaning can be given to the concepts of nature and culture in Western thought, that "there is no consistent dichotomy, only a matrix of contrasts" (Strathern, 1981). For her, neither man nor woman is consistently related to nature and culture in this dichotomy, both being represented at one time or another as nature: forceful and violent, but also tamed, civilized and domestic. One example of this can be found in the society of the Minagkabau of West Sumatra,

who do not see nature as wild; they see it is a model for culture (Sanday, 1990). Another example is in the Vanatinai society (who occupy a large island 225 miles southeast of mainland New Guinea), in which it has been found (Lepowsky, 1990) that when women are associated with the natural domain they are also associated with culture, because events require cultural elaboration to ensure human continuity.

In every culture and during every age, questions have been asked about humanity's relationship to nature. They have been answered by different myths and legends in different cultures. Myths and legends concerning animals and plants use a wide variety of motifs, but they express a relatively limited number of relational options. Humanity, animals and plants may stand:

a) in a relation of opposition or difference;

b) in a relationship of descent

c) in a relationship of mixture or transformation

c) in a relationship of identity or similarity (Encyclopedia Britannica)

In defining humanity, plants and animals in different cultures may fall into one or more of these groups. This explains the difference between the Western concept of nature (which regards humans and nature as separated) and

the Oriental one (which sees them as a continuity).

"Any full history of the uses of "nature" would be a large history of the human thought" (Raymond Williams, quoted in Segal, 1987). As Mary Evans and David Morgan say: "As in all nature/nurture debates, the problem is one of disentangling natural attributes from cultural traits" (Evans and Morgan 1979:58). On a larger scale, everything can be seen as natural, even culture; but, on the same scale, everything is cultural, even nature. If we made the definitions more restricted, cultural would be that which has been modified by humans and natural would be all that still exists in a pure and untouched state. But, in fact, there is not much left that humanity has not touched, controlled or "made over"; so the distinction can only be used to separate what is human from what is not human, such as animals, vegetation, air, sea, all of which are used by humans, this being, some consider, the most universal characteristic of nature (Segal, 1987). It is possible to say that the border where nature stops and culture starts is not fixed. It is humanity's discourse that moves it on each occasion at its convenience (Segal, 1987).

Other terms that will be used in this dissertation include the following:

Ecology derives from the Greek root "oikos", which means house, and "logos", the study of. The branch of science concerned with the interrelation of organisms and their environments especially as manifested by natural cycles and rhythms, community development and structured interaction between different kinds of organisms (Tuttle, 1987). It literally means the study of the Earth as home including plants, animals, microorganisms and people that live together as interdependent components. It can be viewed as the study of the structure and function of nature, as it deals also with energy flows and material cycles on land, air and water (Tuttle, 1987; Odum, 1975).

The word ecology was popularized by Ellen Swallow (1842-1911), an environmentalist (Tuttle, 1987; Kramarae and Treichler, 1985). For eco-feminists, ecology means the science of the household, in this case the Earth's household. For them, the connection between the Earth and the household has historically been mediated by women (Merchant, 1980).

Feminism can have various definitions, but there are now many feminisms. It is usually defined by dictionaries as the advocacy of women's rights based on a belief in the equality of the sexes. In its broadest sense the word refers usually to everyone who is aware of and seeking to

end women's subordination in any way and for any reason, although this definition is sometimes challenged (Tuttle, 1987). Feminism originated in the perception that society does not treat women as equal to men; so it attempts to analyze the reasons for and the dimensions of the oppression of women (Tuttle, 1987).

Some typical current definitions of feminism are:

"This term comes from the Latin: femina= woman, which originally meant "having the qualities of females". It began to be used in reference to the theory of sexual equality and the movement for women's rights, replacing womanism, in the 1890s. The first usage in print has been traced to a book review published in "The Athenaeum", 27 April 1895. Not until the turn of the century, however, was the term widely used and recognized (Tuttle, 1987).

"A set of beliefs and biological constructions about the nature of women's oppression and the part that this oppression plays within social reality more generally" (Kramarae and Treichler, 1985).

"With a capital "F" it is theory, a position. With a small "f" it is an organic conviction based on experience (Kramarae and Treichler, 1985).

Gender."The way members of the two sexes are perceived, evaluated and expected to behave; it is a cultural construction" (Schlegel, 1990:5).

Patriarchy. Many feminists argue that all societies, whatever their economic, political or religious differences, are patriarchies, that everywhere men are dominant. "The origin of patriarchy is unknown, and because it is universal it can seem monolithic, unassailable, even inevitable" (Tuttle, 1987). It has often been assumed that patriarchy is rooted in biology (Tuttle, 1987).

Literally patriarchy means "rule of the father", and it was originally used by anthropologists to describe the social structure in which one old man (the patriarch) has absolute power over everyone else in the family. Therefore, "it is an ideology that arose from men's power to exchange women between kinship groups; as a symbolic male principle; the expression of men's control over women's sexuality and fertility; the description of the institutional structure of male domination" (Kramarae and Treichler, 1985).

Feminists have given it many and various interpretations, all related to men's subordination of women. It

characterizes in an abstract way the structures and social arrangements within which women's oppression is elaborated (Kramarae and Treichler, 1985). For example: "The universal political structure which privileges men at the expense of women"; "the social system which feminism is determined to destroy"; "a synonym for male domination" (Tuttle, 1987).

Alternatives to patriarchy can at least be imagined. There have been suggestions of matriarchies, and even historians and anthropologists who have not found traces of matriarchies suggest that pre-patriarchal societies could have existed (Tuttle, 1987). Some feminists define matriarchy as female power, but not in the patriarchal sense. "The rule of women is in harmony with nature, non-coercive, non-violent, valuing wholeness and the sense of connection between people" (Tuttle, 1987). "A premise of patriarchy is domination..", of women by men, of blacks by whites, of poor by rich and of nature by men (Mitchel and Oakley, 1986).

"A patriarchal mode of thought dichotomizes the world into systems of control and domination". From this a scheme of dualities has developed: men are to women what culture is to nature, as mind is to body, as subject is to object, as domination is to subordination (Ortner,

1974). "Science" becomes the "objective" investigation of "nature" for its knowledge, control and domination by "man" (Bleier, 1985). We shall see this theme developed further.

Women's Movement. A "vague, catch-all phrase which means different things to different people" (Tuttle, 1987). It is often supposed to have started in the West in the late 1960s, although "many would agree with Mary Scott that "there's always been a women's movement this century!" (Tuttle, 1987; Kramarae and Treichler, 1985). It is a generic form for women's struggle. It is often used to mean women's liberation movement, although it is seen as lacking the same theoretical orientation towards feminism (Kramarae and Treichler, 1985).

In summary this dissertation will examine the current discussion in the West about "woman" and "nature", and will then compare the findings with work in Mexico. It tries to demonstrate the need for more work on rural women and the environment in Mexico and concludes with some propositions as to what academic research may be done in the future.

If one seeks for a universal categorization of women, it can be said that we are "mediator-producers of social

identities, with a capacity for social creation and transformation" (Jelin, 1990). We also generally deal within a private sphere and we share certain biological characteristics. Besides these facts, being a woman, as I will explain in this thesis, is merely cultural. Still, I believe that there is a common denominator that enables us to "speak the same language"; at this point I am not certain what this common denominator is.

CHAPTER II

ECO-FEMINISM

II.1.- Introduction

Eco-feminism represents one point of view on the woman-nature relationship. It is a movement that relies more on feelings and spirituality than on Western-style "scientific" evidence.

Eco-feminism consists of the grouping of two movements: women's liberation and the ecology movement. Although it would seem logical to deduce a definition based on the words "ecology" and "feminism", these words are themselves not easily defined. This is because neither "ecology" nor "feminism" has one single meaning. For some ecology is a science, to others it is an integrative and holistic philosophy. Feminism too has its variants: there are liberal and radical feminists with an ample range in between.

Many modern feminists conceive human and non-human nature as interconnected. Some consider this as a spiritual value that arises from a mystical communion with nature; and some cultural feminists, such as Mary Daly and Susan

Griffin, and spiritual feminists suggest that women have a special relationship to nature, that men either never had or have lost. Yet other feminists contend that there is nothing mystical in recognizing that there is much danger in continuing the reckless behaviour of humankind which is destroying our environment (Tuttle, 1987).

II.2.- Environmentalism and feminism

Eco-feminists, as well as environmentalists and "non-eco" feminists, have an egalitarian perspective in common. Women struggle to free themselves from patriarchy and from cultural and economic constraints that have kept them subordinated to men; at the same time, environmentalists warn us of the consequences of continuing with the present trend of environmental degradation and have developed an ecological ethic emphasizing the interconnectedness between people and nature rather than the dominance of "man" over nature (Merchant, 1980).

If the values of both movements are joined, eco-feminists argue, we can have a new set of values and social structures. These can be based on the full expression of both male and female talent and the maintenance of environmental integrity (Merchant, 1980). Both movements

are sharply critical of the costs of competition, aggression and domination arising from the presence of a market economy.

Environmentalism is very critical of the consequence of uncontrolled economic growth associated with capitalism, technology and "progress". "The ecology movement has tried to restore the balance (although it is difficult to establish what balance...) of nature disrupted by industrialization and over-population" (Merchant, 1980). It emphasizes the need to live in harmony with nature. It opposes the mentality of capitalism as being exploitative, and focuses on the costs of progress, the limits to growth, the deficiencies of technological decision making and the urgency of conservation and recycling of natural resources.

All these points are also taken by feminists, who add to this already long list the loss of meaningful productive roles that exist for women in pre-capitalist societies and the use of women and nature as psychological and recreational resources for men (Merchant, 1980). But although feminists have recognized the claims of the ecology movement, the male-led environmentalist movement itself has too often cut itself off from the women's movement by insisting that "women subordinate their

interests to that of a greater cause, whether it be saving whales or rainforests" (Tuttle, 1980).

Ideas from the environmental movement and from the women's movement have combined during the last two decades; the connections and implications between nature and women and between ecology and feminism have been explored by many authors including Carolyn Merchant (1980), Vandana Shiva (1988) and Susan Griffin (1978).

II.3.- History of environmentalism in feminism

The historical development of environmentalism in feminism has been better documented for the United States. The American feminist movement is said to have begun in 1842 with the pressure for women's votes (Marchant, 1980). Women formed conservation committees in the many women's organizations that were part of the Federation of Women's Clubs established in 1890. They supported the preservationist movement for national, state and city parks and wilderness areas (led by John Muir and Frederick Law Olmstead) eventually splitting away from the managerial and utilitarian wing headed by Gifford Pinchot and Theodore Roosvellt (Merchant, 1980). At this stage, women were pressing for clean air and water legislation. Socialist-feminist and "science for

the people" groups worked towards changing the economic structures into something that would equalize the work of men and women and reform a capitalist system which they saw as creating profits at the expense of nature and of working people. The connection between home and environment is not something new. In 1892 an American geologist, Ellen Swallow, was successful in gaining a place in the academic world. Her work was mainly on water, air and food purity, sanitation and industrial waste disposal; with this she is said to have started the science of ecology (Merchant, 1981) which was reclassified as "home economics" because its founder was a woman. She wrote several books dealing with maintaining a healthy environment (Merchant, 1981). Women figure little in the long documented history of relationships between "man" and nature, but it is significant that a woman founded "modern" ecology.

Seventy years later another woman environmentalist, Rachel Carson, made the question of life on earth a public issue with her book "Silent Spring" (1964). She introduced the concept of ecology to the American public. She wrote in 1960 that "The control of nature is a phrase conceived in arrogance, born of the Neanderthal age of biology and philosophy, when it was supposed that nature exists for the convenience of man" (Ginzberg, 1989). She

spoke of the death-producing effects of chemical insecticides (suggesting one should learn to live with insects, as chemical insecticides accumulate in the soil and in the tissues of living organisms), and of nuclear war, a theme on which eco-feminists also dwell. Although it can be argued that her work was within the conventional Western scientific paradigm, even if she was a woman, she has been retrospectively adopted by eco-feminists as a pioneer woman environmentalist.

In this way, the environmental and women's movements were growing together although the systematic associations between them were not made by feminists until the 70s (Merchant, 1981). Both movements posed questions over the relationships between Feminism and Ecology. They accepted that "the structures and functions of the natural world and of human society interact through a language common to both" (Merchant, 1981). Shulamith Firestone suggested in "The Dialectic of Sex" (1970), that the women's liberation movement and the ecology movement emerged at the same time as part of the common need to find solutions to the same basic problems.
(Some argue that there are real complementarities, others that this was a bandwagon effect).

The English environmentally oriented feminist movement

appears to be less documented than the American. Still, as an example of a British eco-feminist we have Mary Mellor (Mellor, 1992). Mellor considers that there might be danger when uniting ecology with feminism, of tipping the balance towards saving the planet at the expense of the politics of women's liberation. Her main argument concerning eco-feminism is that it is as important to feel affinity towards the earth as it is to locate the eco-feminist movement within a social and political frame. She considers that when uniting women's and nature's subordination, the liberation of one does not mean the liberation of the other; she does not believe that securing the future of the planet means securing the future of women, and neither does she believe that the green movement is inherently feminist. For her, eco-feminism is only part of the solution; the other aspects being elements of radical feminism, deep ecology, spirituality, and revolutionary socialism.

II.4.- Eco-feminism

The term "eco-feminism" was apparently first used by Francoise d'Aubonne in "Le feminism ou la mort", in 1974. Ever since then the term has been associated with the struggle against the oppression of women and of natural environments (Davies, 1988). D'Aubonne started an

"Ecologie- Feminisme" movement in France in 1972, declaring that the destruction of our planet was inevitable if power remained in male hands. Mary Daly made a similar connection in her book Gyn/Ecology (1978).

Different aspects of ecology and feminism are put together by different authors and thinkers, to give different definitions of eco-feminism. Still, to many, eco-feminism appears to be rather vague set of ideas or thoughts without a very clear focus, but eco-feminists contend that the integrative concepts of eco-feminism "are still being developed" (Davies, 1988).

Eco-feminists have maintained there are general features in the control and exploitation of both women and nature in a male dominated society and that to stop these it is necessary to understand these general features or linkages (Davies, 1988).

They consider that the negative effects of human existence should be reversed and further damage prevented by changing the traditional (western) techniques and lifestyles to alternative technologies that are non-polluting and non-toxic, such as recycling and using solar systems for heating (King, 1989). They claim that diversity must be maintained in a healthy ecosystem,

human and non-human, and that it is being lost due to present market economies that tend to homogenize mass consumerism. "Therefore we need a decentralized global movement that is founded in human interests yet celebrates diversity and opposes all forms of domination and violence. Eco-feminism is such a movement" (King, 1989).

A selection of statements on eco-feminism will illustrate the variety of approaches.

1) A conjunction of the conservation and ecology movements with the women's rights and liberation movements, which is moving in the direction of reversing the subjugation of both women and nature (Merchant, 1980).

2) Feminist visions plus ecological politics. A movement where members are taking action to effect transformations and radical changes that are "immediate and personal as well as long term and structural" (King, 1989).

3) It is thinking globally, acting locally, unifying "our" ecological and feminist thoughts and actions (Kelly, 1980).

4) An international movement that has the power to transform our human perceptions of our species and its place in the natural world (King, 1989).

5) Eco-feminism develops the connections between ecology and feminism that "social ecology" needs in order to reach its own avowed goal of creating a free and ecological way of life (King, 1989).

6) Eco-feminism is fundamentally a "feeling" experienced by many women that they are somehow intimately connected to the earth (Davies, 1988).

7) It is the route to the survival of the world (led by women). "Feminism must embody in its practice, the links between change in the uses of gender and a reversal of our descent into nuclear and/or ecological hell" (Dinnerstein, 1988).

8) For some, such as Susan Griffin, eco-feminism is an emotional commitment, difficult to define intellectually (Davies, 1988).

9) "The "eco-feminism" of the 80s which overlaps with "cultural feminism" and has been called a new wave in feminism proposes that women must liberate the earth

because it is they who live more in harmony with "nature" (Segal, 1987).

10) Another example of women being called eco-feminists is the case of the National Council of Women in Kenya. In order to act on the problems that women were facing: of firewood, malnutrition, lack of food and adequate water, unemployment, soil erosion, problems of maldevelopment, the council got into action. "Women are concerned about the children, about the future". The women were encouraged to "use their common sense", looking for seeds, and planting trees. "Women do not have to wait for anybody to plant trees. They are foresters without a diploma". "In Kenya ...80% of the farmers and the fuel gatherers- are women" (Ms Magazine, 1991).

There are four basic principles common to all the diverse ecological and feminist ways of thinking:

1) HOLISM. This implies that the planet is a single acting ecosystem, composed of various sub-systems, human and non-human, all of which are responsible to internal and external forces. Actions in one component will affect apparently non-related components (Davies, 1988).

"The whole is more than the sum of its parts. This type

of knowledge is holism, defined in the view that wholes have properties that cannot be explained in terms of the properties of the individual constituents" (Simmons, I. et al., 1985). Holism "can be used...purely in terms of matter and its internal relationships, stressing that at any hierarchical level, the dissection into component parts always leaves an unresolved residue" (Simmons, I. et al., 1985), since "...energy flow and matter cycling are just as much features of the man-made world as they are of the natural environment..." (Simmons I. et al., 1985).

The term has been used by the environmental movement of the 1960s and 1970s "in bringing to the fore all kinds of issues ranging from the impacts of population growth, to environmental contamination, the environmental impact of high technology and the need for high environmental quality. Above all, the movement succeeded in planting the seed of the idea that the planet was one whole and that actions in one place might produce unexpected outcomes elsewhere, and that the whole "had not an unlimited resilience to manipulation by human society" (Simmons I. et al., 1985). There is a link in these ideas to Susan Griffin's poetic approach, since Ian Simmons recognizes that "holism can only be properly experienced by means of intuition, whose highest form of verbal

expression is poetry" (Simmons I. et al., 1985).

2) INTERDEPENDENCE. All forms of life are interrelated, and humans are an integral part of the ecosystem, not separate or superior. "We originate from Earth and return to Earth, but we are biological systems, using air, water and nutrients to produce energy and wastes" (Davies, 1988).

For the eco-feminists, the idea of maintaining a healthy planet is translated into reciprocity and cooperation. They contend that if we had cooperation between men and women in each specific context: child bearing, day-care centres, household work, sexual relations, rather than separate gender roles, they believe we could create emotional rewards. Men and women should work together to create technologies that would have a lower impact on the environment.

3) NON-HIERARCHICAL SYSTEMS. These are very much related to interdependence: if all components affect and are affected by each other, then all are equally important. Eco-feminists underline the importance of each part of the system- each element having a unique role and function- and are basically against the hierarchical and anthropocentric philosophies that stress the superiority

of humans in general (and of white males in particular). These philosophies, they say, denigrate the value of women and of nature (Davies, 1988).

So, environmentalists and feminists will give equal value to all parts of the human-nature system and take care to examine the long and short range consequences of decisions affecting an individual, group or species. Eco-feminists see life on Earth as an interconnected web, not as a hierarchical system such as human societies tend to be and which is projected onto nature and used to justify social domination (King, 1989).

4) PROCESS.- The total amount of energy reaching the Earth is almost constant. Energy is changed and exchanged in its continual flow through the interconnected parts.

The stress on dynamic processes in nature is because they have, eco-feminists say, implications for change and process in human societies. The exchange and flow of information through the human community is the basis for decision making. Discussions in which men and women participate as equals are an appropriate goal for both environmentalists and feminists. Each individual has experience and knowledge that is of value to the human nature community.

II.5.- General aims

The general goal of the eco-feminist movement is to reach a non-violent transformation of the structure of society, which will create a free society in which ecological and feminist principles mediate humanity's relationship with nature. The women of this movement see themselves as agents of a transformation ("bringing a new world to birth") and for many, feminist spirituality -earthbased spirituality- is not just a theory or a philosophy, it is a practice, a way of life.

For many eco-feminists, compassion is the essence of their new paradigm. "Feeling" the life of "The Other" and literally experiencing its existence is to become the new starting point of human decision making. That is radically different from the driving force behind the self-interested approach to the natural world that underlies the entire realm of many modern human activities, such as the logging industry, mining industry, war machine production and so forth.

The environmental movement, in theory and practice, attempts to speak for nature, "The Other" in eco-feminist words. This "Other" has no voice and is conceived of subjectively. In our civilization it is objectified and

subordinated, as are women. Feminism represents the refusal of the original "Other" in the patriarchal human society to remain silent or to continue being "the other" for much longer.

One main aspect of patriarchy that eco-feminists attack is the duality of its thinking. In this they adopt arguments from French feminism and from the postmodern critique. There are problems with a dualistic mode of thought. One of them is that it structures our approach to knowledge of the world in an a priori fashion and imposes premises, dualisms and dichotomies that do not exist on to the organization of the natural world (Bleier, 1985). Some radical eco-feminists and (radical feminists) believe that the origin of the subordination of women and nature lies in these dualisms, in the dichotomous ways in which human activities are categorized and analyzed (Bleier, 1985); in the idea of a separated mind and body, culture and nature, public and private, men and women. Connecting feminism and ecology, eco-feminists consider, will enable us to step outside the dualistic culture into which we are all born. In fact, feminist scientists (Bleier, 1985) consider that a central point in feminist science is the rejection of dualisms such as objectivity/subjectivity, rational/emotional and nature/culture which focus our

thinking around the world.

Susan Griffin gives us a very good example of what dualism means to many (radical) eco-feminists: "this civilization that has shaped our minds is also destroying the earth...the dividedness in our minds is etched in our language; thought is different from feeling, also mind is different from body, feminine and masculine mean two alien and alienated poles of human behaviour - our sexuality is a source of separation...we divide ourselves and all that we know along an invisible borderline between what we call Nature and what we believe is superior to Nature" (Griffin in Ginzberg, 1989).

Eco-feminists challenge this dualistic belief that nature and culture are separate and opposed. For eco-feminists, misogyny is at the root of this opposition. Feminist theology, like much feminism, sees dualistic splits as the cause not only of sexism, but of racism, classism and ecological destruction (Tuttle, 1987).

II.6.- Strategies

Eco-feminists have developed some strategies to stop this oppression of women and nature. Their strategies for change advocate a reaffirmation of female consciousness,

associated with wholeness and interdependence. This is mainly because they believe women are more aware of the natural world than men, and that women have a vital role to play in this re-affirmation and in the necessary restructuring of society. "It is time to reconstitute our culture in the name of nature and of peace and freedom and it is women who can show the way" (King, 1989).

The general strategy for change has both historical/ideological and psychological/physiological components (Dinnerstein, 1976).

Historical/ideological (eco) feminists argue that women should create a culture which honours women and nature in order to emphasize the importance of each. This hypothetical culture should contain myths, rituals, language and philosophies which recognize women and their role in society, as well as human interdependence with the natural world. Some would like a matriarchal society as a method of repairing the damage done by patriarchy. This society would elevate the status of women, helping them to integrate traditional female roles into male consciousness. The end effect would be an hypothetically more balanced society. Although some very radical eco-feminists would promote some sort of separatist society, the majority want a fair society where "female values" of

caring and respect would be the norm.

II.7.- Authors

Vandana Shiva and Caroline Merchant may be called eco feminists and will be dealt with in more detail in the following chapter: Women and Nature.

II.8.- Critiques

Although the movement is popular among many (usually but not exclusively women), especially among those of the generation that grew up during the 60s, it has been criticized.

Eco-feminists can be called idealists. For them the changes seem easy, making social structures look trivial. But socio-political systems should be analyzed as processes with their own particular logic; they need to be understood if one is to challenge power and subordination. Without this analysis and understanding, a realistic and effective strategy for change is difficult to develop. Eco-feminists are therefore criticised for not challenging the system (although this can be explained by a refusal to act violently).

By considering that the origin of the dominance of women and nature is located in the male consciousness, eco-feminists imply that "economic systems are simply derivative of male thinking" (Prentice, 1988). Eco-feminists accuse capitalism of justifying the exploitation of nature and women, of making it morally right (Prentice, 1988). But socialism, a system that is theoretically fairer to the people, has also caused great harm to the environment, and women do not stand in a better position in socialism than in a capitalist world.

Eco-feminists can also be called reactionaries (Prentice, 1988) because they argue that women have a specially nurturing and maternal nature that makes them morally superior, an argument very similar to that used by right wing conservatives as an excuse to subordinate women because they say it is natural for men to dominate and rule as a result of their innate qualities. With this argument, they seem to be accepting that biology is destiny, and that dualism and oppression are innate to men and toxic to all living things: women are always in tune with nature and always good for it; whatever they initiate is good and healthy; men are doomed by biology, women are blessed by it. By raising this last point they fall into contradiction with their principle of non-hierarchies because they are assuming women are better

than men, so although they disagree in principle with dualism, they seem to maintain it by believing women are superior. "In emphasizing the female, body, nature of the dualities male/female, mind/body and culture/nature, we run the risk of perpetuating the same value heirrachies that we seek to overthrow" (Merchant, 1980). Carolyn Merchant contends that this could reinforce traditional forms of oppression (Merchant, 1981).

It can also be said that they are speaking from a previleged standpoint as the product of North American values, because they have not considered the different context in which other women in the world exist: women whose thoughts have nothing to do with changing men's mentality and women's special relation to nature but who struggle against imperialism, racism and poverty, points that do not seem to figure in their agenda for change.

The eco-feminist movement has been called "regressive" (Prentice, 1988), and accused of slowing down the advancement of both the feminist and the ecologist-environmentalist movements, because it offers a good counter-argument to the conviction of these two movements that men and women are as different as the different cultures they beloong to, that masculinity and feminity are not natural and that both men and women should feel

responsible for the environment. Many feminists today are critical of essentialist accounts of women's "nature" and consider them to obscure the reality of diversity.

Despite this, eco-feminism can be said to have a useful insight: the awareness of interconnecting global life should be incorporated into politics and practice, maybe being used to challenge the multiple systems of oppression, and possibly to create a form of analysis that can deal with the dominating systems of class, gender and race, and with ecological destruction.

One last and puzzling aspect of eco-feminism is the extent to which eco-feminists consider women to be sympathetic to nature. There are many "natural" factors that are not likely to relate in a friendly manner with people, so how much respect do eco-feminists have for plagues, mice, rats, diseases? All threaten human life and would be very difficult to interconnect with.

II.9.- Mother Earth 1991

Lately, there has been a "re-birth" in New Age writings of hippie style movements that have a cult of a female goddess. "When God was a Woman" Time Magazine (1991), reports, for instance, a movement which celebrates

ceremonies to commemorate Earth Day, in Mount Horeb, Wisconsin, "literally praying" to Mother Earth. This seems to be part of a growing U.S spiritual movement whose aim is to worship a goddess, this being an effort to create a female-centred focus for spiritual expression; the participants are mostly women who seek a deity other than the God the Father of the patriarchal Judaeo-Christian tradition. The movement is believed to incorporate as many as 100,000 American women. Its members believe that the goddess is located within each individual and within all things in nature; most participants embrace (mostly) good beliefs, especially harmony with nature. Their aim is to restore a prehistoric belief that was eradicated in Europe and the Middle East around 6,000 years ago by "patriarchal invaders". The pre-patriarchal utopia is portrayed as egalitarian, peace loving and gynocentric. Archaeologist Marija Gimbutas supports this in: The Language of the Goddess and the Civilization of the Goddess.

CHAPTER 111

WOMEN AND NATURE

111.1.- Introduction

My object in reviewing published work by academics on the woman/nature debate is to be able to compare it with the eco-feminist standpoint. Although both perspectives at some point, make the same suggestions, the final conclusions reached by the two groups differ considerably.

Many authors (Moore, 1988; Reeves Sanday, et al., 1990) follow Sherry Ortner (1974) in stating that there are certain oppositions that recur frequently in gender ideologies, cross-culturally. One of these is the male:female::culture:nature opposition; this has been widely debated among anthropologists, and many feminists believe it is the cause for the apparently generalized subordination of women.

Gender ideologies are frequently seen as hierarchically organized, with males being in the dominant place over women. Some authors such as Maurice Bloch believe that gender ideology everywhere "depends on the creation of a

nightmarish image of the world so that the irreversible processes of life: birth, conception and death, can be devalued and transcended" (Bloch, 1987:324-340). During his research in Menina, Madagascar, Bloch concluded that the construction of an ideology depends first on the emphasis on, and then on the expulsion of, the dialectical worlds represented by femininity.

This conclusion has been accepted by some and challenged by others. We thus see that much depends on the different constructions of gender, the different conceptions of "nature" and "culture" in a specific society, and the variety of symbols by which these concepts are represented.

The duality woman/nature has been analyzed in order to try to explain the subordination of both woman and nature from different perspectives, although always with a western point of view. Some analyses have been made with a feminist insight based on the idea of recovering historical facts "that the androcentric tradition has failed to record, and that might be recovered by reviewing history with a feminist eye" (Tuana, 1989). Such are the analyses of Carolyn Merchant (1989; 1990), Susan Griffin (1978) and Jeanne Achterberg (1990).

Others, such as Sherry Ortner (1974) and Michelle Rosaldo and Louise Lamphere (1974), have tried to find the answers in the biological and psychological differences between the sexes, concluding that the physiological functions of women are often used by society to create the dichotomy nature/culture. Anthropologists, including Henrietta Moore (1988), Marilyn Strathern (1981), Melissa Llewelyn-Davies (1981) and Bradd Shore (1981), have based their research on the categorization of women in different societies, trying to discover whether or not sexual asymmetry is a universal feature, and introducing in their analyses the idea that nature and culture can have different meanings in different cultures.

There is a new tendency for anthropologists who are investigating gender to discard the rigid dualistic models that have long dominated anthropological discussions and most of which were degrading to women. Some think now that "dualistic models may conceal deep pockets of negation", always making women "The Other". These researchers are now moving in a way that reevaluates women's participation in society, and trying to restore to women an independent role, that of subject (Gottlieb, 1990).

There have also been challenges to the practice of writing about "the status of women" as if it were

something unchangeable (Lepowsky, 1990) or even using it at all as a concept. For Barbara Rogers (1980), the concept of women's status conceals as much as it enlightens. She sees it as a concept that ignores the enormous variety of situations in which individual women live, that depend on innumerable factors such as their position in the family, age, occupation and many others. She considers that the "status of women" is a generalization about half the people in a society based on statements made either by outsiders or by the men of those societies. For her, the use of the concept of "status" dehumanizes and objectifies the people to which it is applied. Rogers does not consider it a useful concept.

It is also seen as a term used loosely and with different meanings and interpretations depending on factors of time and place. "It is a deliberately value-laden expression, effective and emotive, not intended to refer to a measurable quantity" (Momsen and Townsend, 1987).

Women's status was for a long time treated (Gottlieb, 1990), as "simple and unitary", probably because of the long influence of biological determinism. Biological determinism made of women's status a simple universal biological fact, and thus influenced the making of a

single gender ideology and a single mode of differentiation of male and female. Alma Gottlieb and others find it essential to consider the female role as multiple, complex and changeable within different contexts. Thus it becomes possible to analyze it, as well as femaleness and femininity, as cultural constructions rather than as natural facts.

111.2.- The origins (history and prehistory)

All cultures have myths about their origins. (Western culture derives its myths from the Greeks and from the Judaeo-Christian myth about the Garden of Eden). The war between the sexes and the binary organization of the world, some authors believe, figure in all cultures (Segal, 1987). In many cultures and at some point in time, women do seem to have been associated with nature (Achterberg, 1990).

Although some feminists talk about and would like to believe in matriarchies, there is no proof that they ever existed (Achterberg, 1990). But what has been proved is that societies existed where women were respected and were as important as men; where they held positions of power, as priestesses and healers (Achterberg, 1990).

Eleanor Leacock's analysis of pre-conquest America also supports the pre-conquest importance of women. Merlyn Stone (1976) maintains that, in prehistory, goddesses like the Earth Mother were widely worshipped and women had a higher status in society than in more recent history.

Jeanne Achterberg gives one account of successive myths. In her view, it was rather suddenly that male symbols became the object of worship. One possible explanation for this is a sudden change in ecology and economy, and probably invasions (although the author does not specify who the invaders were). Women and the products of their work (foods grown and gathered by them) became secondary to what men provided, not too consistently, from hunting and afterwards from herding. But the breaking point is presented as coming when men discovered their role in conception. Then they thought of themselves as the creative generative force of the universe. Later, men started establishing men's lodges which aimed to terrorize and subjugate women. Patriarchal religions originated from here; they had their own creation myths, which promoted a creator in man's own image. So man's superiority was proclaimed. And it is from these myths (Achterberg, 1990) that the Hebrew tradition, which subsequently was the source of the Judaeo-Christian

religion, seems to come.

Records of more recent times show that the nature-culture dichotomy also appeared in the early history of European thought. But its earlier expressions seem to have been more concerned with bridging the gap between the two concepts than with assigning a gender value. There are tales of a wild man (a beast-like man) and of a bear (a man-like beast) who seem to have served for this purpose in medieval and early modern European mythology and ritual. In village rituals of traditional Europe, it seems to have been a young woman who "tamed" the beasts, and thus was seen as the representation of the social, as the triumph of culture over nature (Achterberg, 1990). The subsequent association of women with nature rather than culture was, some think, connected with major transformations in other kinds of social relations after the restructuring of the economic and political systems at the start of the modern world system (Schlegel, 1990).

This history of the "fall of women" in ancient times is one explanation of the existence of patriarchal societies with which we are familiar: mainly western societies, which are highly stratified by gender, class and race. Merlin Stone (1976) suggests that dualism originated in the Judaeo-Christian tradition. For her, the Genesis myth

of creation is both hierarchical and anthropocentric, legitimating the supposed "divine right" of men to dominate and exploit nature.

Carolyn Merchant's analysis of more recent change will be discussed below.

The control and domination of nature by scientific man has historically been expressed in sexual metaphors, considering the control by men of women, and women's sexuality, as natural. Jordanova describes 18th century science and medicine in Britain and France as activities "associated with sexual metaphors which were clearly expressed in designating nature as a woman to be unveiled, unclothed and penetrated by masculine science" (Jordanova, 1980:42-69). It was considered that nature and femininity were associated, and that to enable society to continue advancing in science, to become more "civilized", both nature and femininity had to be dominated. Civilization was seen as a marriage in which nature (the bride) was to be tamed by the mind of men (the groom). Scientists were advised to torture nature's secrets in order to modernize: That older science represented only a female offspring, passive, weak, expectant, but now a son was born (the new science), active, virile, generative (Achterberg, 1990; Merchant,

1989).

In 1884, Engels, in "The Origin of the Family, Private Property and State", proposed a theory of women's subordination. He explained the division of labour as a natural occurrence. Men hunted, fought wars and procured the raw material for food; they were the masters of the forest. In Engels, view, women looked after the house, prepared food, wove; they were the mistresses of the house. Each sex owned what was needed for its activities, and there was communal property: house, garden and boat. There existed the "Mother's Right", which was the only tie recognized (relating mother and child) and which was the basis of social organization.

Engels considered the domestication of animals transformed this "natural state". He thought it to be the first major development of the productive forces. (He could still not explain how communal cattle became private property.) Cattle became the private property of men, not of women, because, he says, men were the ones who hunted and procured other necessities of life. This change had dramatic consequences: the household became a private service and the wife became a servant, excluded from all participation in social production. Men abolished the "Mother's Right" and transformed the

matrilineal descent into patrilineal descent. Engels called this "The Historical Defeat of the Female Sex". The man took command of the house (Aaby, [no date]).

This view has been very influential because of the importance of Engels to socialist writers and states; it is still much discussed.

Many misconceptions have been found in Engels' theory, especially ethnographic errors, and the theory has become questionable. According to Peter Aaby, Engels' original society was based on mutual dependency; but this relationship varied according to the ecological circumstances of the society's settlement and to the quality of its relationship with other groups and in conditions where hunting became critical or exclusive then men came into control. Aaby considers that "the greater the degree of control and influence obtained by one sex as a result of the historical, structural and ecological conditions the more its position was strengthened in the process of social reproduction. Complementarity changes and causes imbalance in power" (Aaby, [no date]). This summarizes the view now widely held.

The relationship of science, sexuality and the

patriarchal order can also be studied at a more abstract level. A patriarchal way of thought is said to dichotomize the world into systems of control and domination. A patriarchal society divides the civilized world into the public-political (men) and private-domestic (women) spheres. From here, there seems to have developed a pattern of dualities: men are to women as culture is to nature, as mind is to body, as subject is to object, as domination is to subordination (Ortner, 1974).

The origin of this **Dualistic** philosophy is explained by:

A) The historical/ideological approach: this traces the development of dualism in patriarchal cultures, with their concomitant ranking of two halves: mind and body, spirit and flesh, women and men, all seen as opposites rather than as complements, and all containing a superior and an inferior half. As a result, body, flesh, nature and women have been linked in mythology, philosophy and literature as the degraded inferior half of the duality (Dinnerstein, 1988).

Historical/ideological theorists vary in their explanations of the origins of this dualistic philosophy: some locate them in prehistory, others in the Judaeo-

Christian tradition, others in the Enlightenment or the Industrial Revolution, as we have just seen (Merlin Stone and Carolyn Merchant).

B) The complementary psychological/physiological strategy suggests that the female and male psychologies would be eliminated if men assumed equal responsibility for child care. Under equal parenting boys would identify with their biologically similar father, eliminating the separation and alienation caused by exclusive mothering. This would change male attitudes and integrate traditional "women's work" into the male domain (Chodorow, 1974).

This approach (Dinnerstein, 1988; Chodorow, 1974), traces the origins of the subordination of women to their traditional roles as mothers and nurturers. In patriarchal societies it is assumed that since women gestate, give birth and suckle new human life, they are better nurturers and care givers than men. As a result, women are almost always responsible for child care.

Nancy Chodorow's work on sex roles, gender and the institution of mothering has been very influential because she rejected the theory that women's universal primary role in child care could be explained by biology

or by a patriarchal society which prohibited other roles to women. She considered that "women's mothering perpetuates itself through social-structurally induced psychological mechanisms. Her conclusion is that because in early childhood experiences males and females develop differently, subsequently adult men tend to fear things that are different from themselves, with the end effect that they desire to control and exploit people, things, situations and surroundings (women and nature included), in a world with dualistic values.

So, to achieve women's liberation, men and women should share parenting responsibilities equally, so that children grow up being "parented" by both genders from their earliest days.

III.3.- Man:culture::women:nature

The explanatory uses of the dichotomy culture/nature, as opposed to men/women, can be traced back to Simone de Beauvoir (1952) and Margaret Mead (1949). They were the first to focus on sexual inequalities from a cross-cultural perspective and to try to give explanations either with cultural or biological universals or by specific historically constructed social formations; both believed in universal sexual asymmetry (Sanday, 1990).

Mead talked of the existence of "pre-cultural" sex differences which affected both social roles and temperament (Mead, 1949). For her, there existed socially relevant biological differences.

Simone de Beauvoir was very much influenced by various thinkers. She accepted Levi-Strauss's (1969) proposition regarding opposition and duality in the transformation from nature to culture ("from raw food to cooked"), and like him, believed in the existence of static features in the cultural elaboration of sex differences. From Hegel, she accepted views on "the deep structures of the human mind". She read St. Thomas, who regarded woman as the "imperfect man", and Aristotle, who believed that "female is female by a lack of certain qualities". She constructed socio-cultural universals that she thought explained the sexual asymetries (The Second Sex, 1952). She considered that the symbols which define masculine and feminine conform to a static dialectic pattern of binary opposition in all societies and that this dialectic follows a universal pattern which is the association man:woman::culture:nature; and that, because of the nature of this dialectic, men were placed in the dominant position and exploited women as culture exploits nature. She believed that the opposition male/female existed more as a negation of each other than as

complements.

The approaches to the man:culture::woman:nature debate vary, as we have seen. Some writers are highly emotional and passionate (Susan Griffin, Vandana Shiva); and, even when not convincing everyone, they make powerful impressions as they deliver their furious message of anger towards men, patriarchy and capitalism. Others argue more systematically, dealing with aspects of history, philosophy and psychology and anthropology. Their arguments rest on detailed evidence and seek to convince critics; the form of argument is "rational" and "scientific", and "objectivity" is sought-all attributes which are strongly criticized by the first group as being patriarchal traits. Among these latter feminists we find Carolyn Merchant and Sherry Ortner, whose work will be discussed at greater length below.

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We have seen that language itself shapes understanding. Anna Meigs (1990), Alice Schlegel (1990), Alma Gottlieb (1990), Rena Lederman (1990), and Peggy Reeves Sanday (1990), have demonstrated that "gender representations are multifaceted and must be understood first in terms of the context in which they appear and second in terms of

their fit with other representations in other contexts" (Sanday, 1990). That is a significant change from the usual western approach to gender as "a sexual difference that remained invariant across all contexts" (Sanday, 1990).

Anthropologists have often used the concept of pollution by women's bodily substances as an explanation. This supposedly contributes to women's subordination by making them nearer to nature, with the analogy: male:female::pure:polluting. The concept, however, has proved to be not universal, as had been thought; Alma Gottlieb (1990) in her research on the Ivory Coast has proved that there it is not true or relevant.

The system of the Beng of the Cote d'Ivoire, unlike many other systems that have been classified as binary models of gender relations that see women only as symbolic threats to men, seems to have two very distinct models of gender symbolism: one that stresses female sexuality alone but in both a positive and a negative way and that emphasizes female responsibility and another that stresses male-female sexuality and blames the sex act itself as polluting. This case, Gottlieb points out, challenges us to consider the possibilities of multiple models within a single society, as well as looking into

social contexts "that define and redefine what could only be glossed crudely as female pollution" (Gottlieb, 1990:130).

Finally, there is one last group of people (Bleier, 1984), who consider that "it is now anachronistic "in the extreme" to continue discussion on nature-nurture; heredity-environment". They question it as a serious intellectual issue, and are surprised that the argument continues. For them, the worst aspect is the use that can be made of these ideas in politics, especially in keeping women and non-whites subordinated (with the backing of "scientific research"). Some consider that "the lengthy discussions of the western tradition that allies females to nature and males to culture seem like a pervasive cultural axiom, tracing its expression in medical, educational and social ideology of the 18th and 19th century" (Schlegel, 1990). They consider that the nature/nurture debate is "conceptually inadequate" and "simplistic" (Segal, 1990). We shall now see how selected authors have approached the women:nature debate, and what response they have evoked.

CHAPTER IV

SELECTED WRITERS ON WOMEN AND NATURE

The discourse on women and nature and even on ecofeminism is best entered through an examination of selected writers. The most influential will be reviewed here.

lV.1.- Susan Griffin

Susan Griffin's main statement is found in: Woman and Nature: The Roaring Inside Her (1978).

It is beautifully written in the literary sense. The way in which she uses language, with many symbolic phrases and two "voices" carrying along in parallel, one being the women's voice, the other the men's or patriarchy's voice, and the idea of women and nature's special relation, both being subordinated, is made very clear, in a poetic and sensitive manner: "we are the rocks, we are the soil, we are trees, rivers, we are wind, we carry the birds, we are horses, we are..." ("we" meaning all women). She overlaps it with the language of patriarchy: "that as regards his intellectual faculties, the Negro partakes of the nature of the child or the female or the

senile white", creating an emotional response that could eventually lead to a rethinking of the whole of humanity's (not only men's) behaviour towards women and nature.

For Susan Griffin, history has been a powerful tool to remind women that men are equivalent to culture: she sees men as universal inventors and discoverers, man's truth is universal. She portrays women as recipients for feelings, regarded by men as too extreme or non existent. She has basically separated men and women as being two totally different species, with nothing in common. For her, women are natural, non-cultural, mortal, and men are the opposite, non-natural, cultural, non-female and transcendent.

To Susan Griffin "those of us who are born female are often less severely alienated from nature than are most men" (Griffin, 1978). For her (as for Adrienne Rich, another radical American feminist), it is the capacity to bear children that gives the ability to connect themselves with what Adrienne Rich calls "The essence of womanhood"; being in touch with the essentially creative nature, is what basically connects women and nature, both of whom are creative and nurturing. But although Susan Griffin emphasises the significance of female biology,

she does recognize that the idea of nature is culturally constructed, being man- made. Still, it is her feeling that women should express "what is still wild in us", and think through her body women's bodies.

Much of Susan Griffin's work has emotional and even intellectual appeal, but it can be severely criticized. It can be argued that Susan Griffin seems to be reflecting on her own experience, and that by generalizing she alienates herself from those women who think that, by making the spiritual component of humanity the female component, she is weakening the cause of feminism. She sees men and women, who are sexual partners, as antagonistic. But it should be realized that men and women also relate in other ways, as sisters and brothers, as mothers and sons, as friends, and in these contexts, attitudes vary. Her attitudes towards Patriarchy ("...ovum is nature; sperm is the spirit with new variations"...), racism ("...minds of women and inferior races..."), and androcentrism, ("...women who have survived are those who have succeeded in pleasing men...") are essentialist, and possibly typical of an extreme radical feminist who assumes that ALL men are NATURALLY bad and all women are NATURALLY good; women are very unrealistically sublimated by her. And for this, she could be called sexist.

lV.2.- Sherry B. Ortner

For Sherry Ortner the relation women-nature is mythical (Ortner, 1974). Her aim is to identify and locate the cultural valuations that make women appear as "closer to nature"; she considers that "the whole scheme is a construct of culture rather than a fact of nature" (Ortner, 1974). Women believe differently and thus behave differently. She suggests that women are associated with nature and men with "the higher ground of culture" in the gender symbolism of all human societies, so that women are therefore universally devalued. For her, the search for a genuinely egalitarian, let alone matriarchal culture, has proved fruitless. In looking for an explanation for this apparently universal devaluation of women, she discards the idea of biological determinism. She accepts male/female biological differences as long as they are seen "within the framework of culturally defined value systems" (Ortner, 1974:71). She has therefore looked for explanations in the "light of other universals" like human relations to non-human nature. This she considers to be the one thing common to every culture that leads to women being devalued through their identification with nature. And, she argues, nature will always be opposed to culture, which generates and sustains systems of thought and technology" that enable

humanity (men) to transcend the natural world" (Ortner, 1974).

Ortner develops three points:

a) Women have a body with "procreative functions" specific to women alone, which is involved in producing life. This places women nearer to nature.

b) Because of these bodily functions, women are put in social roles which are considered inferior to men's cultural roles.

c) And because of these traditional social roles, women develop a "psychic structure" which is also seen as closer to nature.

a) In developing this point she agrees with Simone de Beauvoir that "more of a woman's' body space, for a greater percentage of her lifetime, and at some -sometimes great- cost to her personal health, strength, and general stability, is taken up with the natural processes surrounding the reproduction of the species" (Beauvoir, 1952). Women create "perishables, human beings"; but men, lacking natural creative functions, assert their creativity through inventing things, eternal

and transcendent. For Ortner, a man's physiology leaves him free to involve himself in cultural projects (Ortner, 1974).

With this argument, the fact that men's often destructive activities (warfare, hunting) are given transcendental prestige over women's ability to produce life seemed to be somehow explained by her. But Ortner considers that by thinking, talking, creating and manipulating symbols, languages and values women have proved that they also belong to culture, yet, by accepting their inferiority women have taken culture's point of view. Marilyn Strathern, (1981:178), disagrees. This then, according to Ortner, locates women in an intermediate position between nature and culture, although still lower in the scale of transcendence than men. Also, women socialize the children, and transform them into cultured adults from being "mere organisms" (Ortner, 1974:80), so women cannot be all nature. She agrees with Levi-Strauss (1969) who originally made the relation Woman- Nature, comparing raw foods with nature and cooked ones with culture. The transformation from raw to cooked represents a conversion process from nature to culture.

b) Women's social roles are determined (at least confined and limited) by our physiological functions to certain

social contexts which are also related to nature: in particular the lactation process motivates women's confinement to the domestic family context. Following Levi- Strauss, Sherry Ortner believes that the fact that women and family go naturally together strengthens the relation woman-nature, because there is an opposition between the terms domestic/public, very much related to the opposition nature/culture.

c) Women's psyche is "different" from men's.

Ortner argues that the universal "psychical" differences between men and women are: relative concreteness (f.) vs. relative abstractness (m.) and relative subjectivity (f.) vs. relative objectivity (m.). These differences, which are culturally acquired, have further contributed to the view that men are more cultural than women (Ortner, 1974:82). Here too, Ortner finds women somehow related to culture because of their ability to form personal relationships with a certain degree of commitment to them (not only the mother- child relation). By seeking these types of relations, "typical of women", women become associated with the highest levels of the cultural process (Ortner, 1974:83).

lV.3.1.- Critiques Of Ortner: Maria Lepowsky, Henrietta Moore, Carole Pateman, Bradd Shore.

Although Ortner's theory has been criticised, it still considered by some as a useful starting point for discussing the cultural construction of gender and for examining how the symbolic association given to the categories "man" and "woman" can be understood as the result of cultural ideologies rather than as inherent qualities of physiology (Moore, 1988; Bleier, 1985).

Ortner was influenced by Simone de Beauvoir (1952) and Levi-Strauss (1969) and their theory of opposition, which reaffirmed the beliefs in a universal sexual asymmetry. She, together with Harriett Whitehead, argued for the cultural construction of gender relations. For their research they used analytic categories such as sex status and universal male dominance, and dichotomies like public/domestic, all of which have been challenged now by new research into gender relations (Lepowsky, 1990; Schlegel, 1990; Sanday and Goodenough, 1990).

The findings of Maria Lepowsky, among others (such as Caroline Bledsoe (1980) who found out that marriage and child bearing do not automatically associate women with nature), challenge Sherry Ortner's theory. Maria

Lepowsky's (1990) research with the Vanatinai (who live in one large island 225 miles southeast of mainland New Guinea) has led her to believe that their mythology and beliefs about the supernatural bases of power and ritual practice do not separate out female vs. male domains of power or give privilege to one gender over the other. Females, she says, are as cultural and as natural as males and are just as essential to the construction and continuity of the human and supernatural worlds. The gender ideology of the Vanatinai holds both male and female as representatives of nature and culture; both have nature/culture attributes to the same degree. In myth, both males and females contribute to culture. For them, Maria Lepowsky has found, women are held responsible for both biological and cultural reproduction. Death and birth remain in the domain of nature as opposed to culture, and both men and women have the power to destroy. (The Vanatinais are considered as an egalitarian society.)

Another society, the people from Misima, Paneati and Calvados Chain Islands, have witches, the destroyers of life, who are usually women; and healers, who are usually men and who counteract the power of witchcraft (Lepowsky, 1990). This too contradicts Sherry Ortner's theory. Edwin Ardener (1975) has also found in Yerania that women, when

transforming food, are considered as the agent in the cultural process and by extension, the man is designated to "nature" through his activities outside the home.

Henrietta Moore's writings deal especially with the assumed universal subordination of women. In "Feminism and Anthropology" (1988) she deals with "what it is to be a woman", the cultural variations of the category "woman" through space and time and how these variations actually relate to women's position in different societies. In doing so, she has arrived, as many anthropologists have done, at the question of the origins and universalization of women's subordination. She considers that Sherry Ortner's reasons for considering women as closer to nature "raise a whole series of issues from the foundations of the feminist critique, but which also threaten at moments, to overwhelm it" (Moore, 1988:14). She considers that her formulation that "nature is to culture what female is to male", has provided social anthropology with a powerful analytical framework which has had great impact on the discipline in the late 70's and early 80's (Moore, 1988:15). But she questions the universalization of women as closer to nature than men, chiefly because she collected information from the Kaulong (in New Britain) society (Moore, 1988:17) which seemed to point strongly to a cross cultural variability

in men's and women's behaviour. Henrietta Moore agrees with Sherry Ortner's argument that women are related to nature through their physiology and reproductive roles, which some cultures regard as polluting. But men too, she contends, in societies like the Kaulong society, are related to the forest and the natural world through their involvement in sexual relations. Following Jane Goodale (1980), she bases her findings on the Kaulong model, in which both women and men are associated with nature through their involvement with reproduction. She questions Sherry Ortner's universalization because in her view, there is no strong evidence to relate men and culture, which is a frequent association when women and nature are related.

Carole Pateman (1985) considers Sherry Ortner as having had great influence in anthropology, but disagrees with her, considering that she failed to give sufficient weight to the fundamental facts that women and men are social and cultural beings, or that "nature" always has a social meaning which varies among different societies and times. "She does not agree with approaching the "universality" of women's subordination by asking questions in universal terms and looking for general answers formulated in terms of universal dichotomies. For her, the distinction between the domestic/private life of

women and the public life of men does not have the same meaning in pre-modern european society as in our present capitalist society.

Bradd Shore (1981) believes that the assumption that women are associated with nature is suggesting something about how they are categorized; it does not mean that women are in fact more "natural" or less "cultural" than men. He believes there is no ethnographic evidence to prove that all societies have elaborated an explicit dichotomy between nature and culture, or even that binary opposites will be characteristic of the symbolism of every culture, although many cultures do have this binary symbolism and the nature/culture dichotomy is implicit in a great deal of this symbolism. It is in these cases that we can expect the females to be associated with nature. He too questions Sherry Ortner's universalization, on the basis of his findings in Samoa, where the symbolism of women and of gender itself is importantly framed by the double valence of the feminine. Agreeing with Sherry Ortner, he accepts that this state of affairs may well originate in certain facts of nature, in the physiology and psychology of reproduction, but it is equally true that any particular conception of the feminine is the handiwork of culture and must be interpreted as such.

Sherry Ortner and her critics are at the centre of the woman/ nature debate, and generate extensive academic discussion.

IV.4.- Marilyn Strathern and Melissa Llewelyn-Davies

These two feminists suggest, from their findings in Mount Hagen, New Guinea, (Strathern, 1981) and among the African Masai respectively, (Llewelyn-Davies, 1981) that the dimension of opposition between the sexes is the contrast between what Marilyn Strathern calls "self-interest" and "the social good". (Ortner and Whitehead, 1981:7) This means that women are more involved with private and more particular concerns that benefit themselves and their children whereas men have a more universalistic concern with the welfare of the social whole. This association is, they contend, found in many cultures and is related to a widespread "sociological distinction of the sexes". Almost universally men have control of the public domain and in the same way women are confined to the "domestic domain", in charge of their families (Ortner and Whitehead, 1981:7). This relation has been "sensed and articulated" before, by, among others, Levi-Strauss (1969), who sees

the domestic domain as a biological entity ("biological family") and the public domain as the first truly "cultural act" which invokes the nature- culture opposition in reference to the domestic-public distinction. They consider that the suggested oppositions: nature-culture, domestic-public, self interest-social good, derive from the same central sociological insight: that the sphere of social activity predominantly associated with males encompasses the sphere predominantly associated with females, and for this reason is culturally accorded higher value.

Melissa Llewelyn-Davies also questions whether the concept female-nature vs. male-culture is a universal preoccupation and thus able to account for some of the cross cultural similarities in the position of women (Llewlyn-Davies 1981:353). The concept of nature, she says, is a variable one, because what is perceived as "cultural" must depend upon what is perceived as "non-cultural" To some, nature is "the wild" (Edwin Ardener); to others it includes female reproduction (Sherry Ortner). Moreover, she continues, as among the Masai, the elements of the "not cultural" are not always linked together in a single concept "nature". She questions Sherry Ortner's idea of women's role as closer to nature because they are confined to "lower levels" of

social and cultural organization, again with the Masai examples where women are "indeed less cultural, though I do not believe that they are seen correspondingly more "natural" in any of the English senses of the word" (Llewelyn-Davies, 1981:353).

Strathern is of the opinion that, while the acknowledgment of gender seems to be universal, there are some, very few, cultures which do not seem to utilize it to any great extent. (Strathern, 1976) For the Hagens of New Guinea, "maleness" and "femaleness" are allied to a series of oppositions such as life and death, pigs and birds, but not to culture and nature, so the nature/culture dichotomy cannot be applied in this case. Marilyn Strathern considers that they use gender as an abstract basis for classifying the world, but that the gender categories do not necessarily exhaust the range of possibilities for individual men and women.

lV.5.- Carolyn Merchant

Carolyn Merchant believes in an age-old association or "affiliation", as she calls it, between woman and nature (Merchant, 1980).

She writes in a very detached manner(vs. the very passionate and self-righteous way in which radical ecofeminists describe the same events). She describes the relationship of PEOPLE with nature, demonstrating, with facts, the very important part that women worldwide had in horticulture and agriculture before the influence of western society: knowledge about seed selection, nutrition, biological control, seasonality, managing storage and distribution, perhaps even tool invention (although she accepts she cannot prove this through the archaeological record).

Hers is an historical and ideological analysis (Merchant, 1989) of the major ecological changes that affected the earth between 1600 and 1860, in which human relations with non-human nature and relations among men and women were changed drastically. She traced in history the first records of the links between women and nature and the rise of male dominance which ended this relation. Merchant considers that science developed from and within a patriarchal atmosphere that even generated a "patriarchal language" and a new cultural interpretation of the word "nature" that seemed to justify domination of women and nature. She also sees men, in the image of Francis Bacon, as having a desire for knowledge about "nature's secrets", something that, she argues, together

with the growth of capitalism led to environmental degradation and the "Death of Nature" (Merchant, 1989).

Carolyn Merchant (1990) examines more recent historical associations between women and nature, especially the crucial ones experienced during and since the scientific revolution of the 17th century. Then the theoretical structure that dominated the healing arts, which until then had included women, omitted them. "Women and nature were explicitly bound in the emerging metaphor that proclaimed the need to dominate and control the feminine forces" (Acherberg, 1990). Mind and spirit were from then separated, as is proved by the writings of Francis Bacon on the relation of women and nature, "a relationship that was obvious to earlier cultures but that was reinterpreted to advance the aims of science" (Achterberg, 1990; Merchant, 1990). The predominant belief, for scientists of that time, was that men were superior to women, and women were closer to earth: a 17th century metaphor that devalued them instead of making them worthy of respect (Achterberg, 1990; Merchant, 1990). Merchant describes an ecofeminist ideal in her description of the pre-conquest North American way of life (Merchant, 1990) which included the Indian environmental ethic that maintained survival relationships between the inanimate world and the

interdependent community of humans. Indians had a great respect for everything human and non-human, an "organic" respect, meaning an holistic perception of the world which reaffirms not only the feminist aspect but also the non racist approach of the feminist and eco feminist movements.

Another of her relevant points is the description of the social reproduction aspect of women's roles (vs. the typical description of ONLY biological reproduction with which women are more commonly related and one of the strongest reasons by which they are seen as more "natural"). But, at the same time that she is "making women visible" by stating women's importance in various aspects, she does not forget men. Women are not made to appear more important than men: "The sexes thus played complementary roles in survival" (Merchant, 1989:84), and there was not a strict gender division of labour. (Radical eco feminists would not agree in this point). It is interesting to see how she describes the importance of the clash of ideas, consciousness and symbols, and how these are used to justify and legitimate the subjugation of wilderness and of women; only in this context can the witch trials and burning of women, because of their "association" and semblance to nature, be understood.

Nature, from being "mother nature" and one with humanity, is simultaneously exploited and seen as refuge. Conservation movements appear, she contends, because of the new consciousness of the value of plants, animals and natural scenery which is linked to female piety. It is like a new ethic related to God: we now have the obligation to conserve.

But, besides all this, she emphasizes the need for a socio-economic revolution, meaning that we need new socio- economic forms, new gender roles, to break with the patriarchal and capitalist ways. She offers an alternative ideology regarding nature, women and science and technology. For Carolyn Merchant, Environmentalism and Radical Eco-Feminism have the same holistic principles and share the belief that women's central role is keeping the earth clean and unpolluted, and both disagree with capitalism. But she treats rather as a figure of speech, because she specifies that she does not intend in her analysis to reinstate nature as the mother of humankind, nor to advocate that woman reassume her role of nurturer as had been dictated by her historical identity (Merchant, 1989). She feels that there is the possibility of the full expression of both male and female talent for the maintenance of environmental integrity. She realizes that changes should be made at

the level of consciousness, with dualities becoming integrated. And at the research level, Merchant says that by including gender analysis in history and by giving reproduction as much value as it deserves, further studies will be much more complete and women will become more visible. Her conclusions are optimistic. With all this knowledge in mind she offers the idea that, even biased and transformed as it is now, ecological thinking offers the possibility of a new relationship between humans and non-human nature that could mean a more appropriate treatment of nature in the future.

This relationship woman/nature has been a cause of debate among feminists, especially feminist anthropologists, who have probably contributed much to the development of the feminist theory by providing a cross-cultural perspective to western feminists that has helped prove that gender is culturally constructed and that it is difficult to talk about universals like the nature- culture dualism. They have proved that women are not bound in their behaviour by a single ideological model (Moor,1988).

But it should be taken into consideration in almost any type of analytical research, that scientists, like everybody else, have a particular set of beliefs, biases, values, and opinions that will affect in one way or other

the results of their work, especially when the research touches the daily life of the researcher, as gender relations do. Very often the choice of assumptions and of methods as well as the choice of questions to be investigated are choices based on values.

Many of the values and practices most common in western society, and with the strongest influence on individuals, have been reinforced by religious beliefs, especially with Judaeo-Christian religions which promote a male God, in whose image man was created, and who gave men the privilege to exploit nature; and by western science and technology, which seem to somehow justify women's inferiority by being deterministic (biology is destiny) and by not making women visible.

These can give rise to androcentric readings of certain cultural processes that have distorted or covered up the significance of female action in many societies.

CHAPTER V

WOMEN DISCOVERED AS SAVIOURS OF THE THIRD WORLD

V.1.- Introduction

Peasant women, in many countries, work in the fields; they also manage fire and water in the home, so they are in charge of managing natural resources: soil, water, forests and energy. In some places they work alongside the men; elsewhere they dominate these activities.

They often have a profound knowledge of the plants and animals and ecological processes surrounding them, although the more contact they have with market economies, the more this knowledge is lost; knowledge subsequently becomes more "modern" and specialized, less related to their own place.

They have traditional ways of doing their work, and their knowledge is passed from generation to generation (something which may slowly be changing) usually helping to sustain the environment. But their voice, like their knowledge and experience, has very rarely been recorded.

Two recent eco-feminist books present women as "Saviours

of the Third World"; around these there are many lesser studies and articles.

V.2.- Vandana Shiva

A powerful case has been made by Vandana Shiva (physicist, philosopher and feminist), an Indian woman, who may be considered an eco-feminist. She has evaluated (Shiva, 1988) the development plans designed by "western white men" for India from a feminist and non-western perspective and has sought to create an awareness of what she calls "mal-development" in Third World countries. This "mal-development" has been advanced by the poor countries' economic crisis (since the mid 1970s) and the surge of development plans from the west, which, although rationally intended to help, have, she argues, really increased women's subordination and exploitation, together with the degradation of the environment. For Vandana Shiva there is a special relation between women and nature, a relation that, according to her, westerners do not respect, so it is gradually being destroyed by the influence of capitalism, patriarchy, western science and western technology. These last two are seen by her as "a masculine and patriarchal project", "a male venture", a "consciously gendered patriarchal activity", that, together with western dualism, have brought with them a

limitless appetite for resource exploitation and "new patterns of domination and mastery over women" (Shiva, 1988:xvii). She sees all these as forces that have overwhelmed the Indian philosophy of complexity and diversity and considers them to be the culprits of the disappearance of the environmental knowledge that is often held by women. She agrees with Maria Mies (1988) when she says of western man that "he is basically a parasite, not a producer" (Mies, 1988:62). Vandana Shiva suggests going back to "Ethnoscience", to find the "real value" of nature and its diversity, and the empirical knowledge of its "natives" (although not specifically of women).

Vandana Shiva considers that large-scale agricultural expansion places impossible demands on women who, even assuming that they have access to land, will not have access to credit, machinery, or hybrid seeds. She is a strong defender of forests in particular, and criticizes "scientific forestry" which has replaced the old perception of the forest as having multiple functions for satisfying diverse and vital human needs for air, water and food.

Shiva wants to learn from people, especially from rural women, and to "channel their knowledge into policy"

(Dankelman and Davidson, 1988:118). Her evidence for saying that women are taking action in the environmental movement includes not only the women from the Chipko Movement (publicized by the media) but also the women who protest elsewhere when there is no water, who resist when there is an over-felling of trees. However, she admits that women's protests ("as are many other protests" -Ian Simmons, pers. comm.) are often invisible and frequently die out. For Shiva, women have conceptualized the ecological crisis and are aware of "mal-development" (Shiva, 1988), meaning that development plans have gone wrong; the real conservationists are those who live with the resource and from it, who have to keep it alive and reproducing itself. The sustainable agriculture package (which means using the resources in such a way that they will not be depleted; thinking of long term returns from natural resources) is for her a must, but it must be based on the participation of women, and she considers it of the utmost importance to establish a system of networking to enable local conservation movements to link with each other to counter the global destruction taking place.

In the words of Dianne Rocheleau, Vandana Shiva "posits survival as the ultimate criterion for verification of poor rural women's knowledge" (Rocheleau, 1988:1). Shiva

portrays rural women's combined social, economic and ecological strategies as a science of survival. "The metaphors and concepts of minds deprived of the feminine principle have been based on seeing nature and women as worthless and passive, and finally as dispensable. These ethnocentric categorizations have been universalized, and with their universalization the destruction of nature and the subjugation of women have come about (Shiva, 1988:223). Shiva wants to put an end to this and to give a voice to those that have been silenced; she hopes for the recovery of the feminine principle in nature and society, and through it the recovery of the earth as sustainer and provider. Shiva opposes patriarchy strongly, by criticizing the "one culture" that western man has produced. She claims that "women's struggles for survival through the protection of nature are redefining the meaning of basic categories" (Shiva, 1988:223). She considers we need to re-think two basic points. How do we understand what constitutes knowledge, and who are the knowers and producers of intellectual value? How do we conceptualise wealth and economic value? Her analysis of the situation of women in poorer countries and how the "mal-development" affects them can be seen as a statement of the challenge that women in ecology groups are making, by proclaiming a non-violent and human alternative to the western scientific and development ideas, some of which

seem to have such a harmful effect on the environment.

V.3.- Irene Dankelman and Joan Davidson

Irene Dankelman (co-ordinator for the IUCN working group on Women, Environment and Sustainable Development) and Joan Davidson (a Research Fellow at University College London, environmental writer and consultant) (Dankelman and Davidson, 1988) have a comparable argument. They, as westerners consider that: "northern woman, writing about life in the South, can do little more than try to give some voice to the voiceless" (Dankelman and Davidson, 1988. Author's preface). They lay strong emphasis on sustainable development in order to preserve (some sort of) ecological balance and to avoid the loss of resources, a point which was emphasized by the Brundtland Commission in 1987, although it did not specifically mention women. They maintain, with what they present as good evidence, that the women of the world are and will be in charge of this. Dankelman and Davidson argue that there is a relationship between poverty and environmental degradation which must be studied. They seek to demonstrate that the goal of sustainability, which is what is needed (and is now widely proclaimed) if we want to maintain our resources, is in the hands of women, with their traditional knowledge and their concern for their

children's future.

In most Third World Countries, most rural people are poor, and Dankelman and Davidson argue that women are the poorest of them all. "Poverty, it is now accepted, is a major cause of environmental degradation" (Dankelman and Davidson, 1988:175). Through the circle of poverty and environmental degradation women are sometimes forced to continue the degradation of resources even when they know better and have the knowledge for sustainable development. They consider land to be the most valuable resource (Sontheimer, 1991); but poor people have little access to it, so they also have little access to food. Dankelman and Davidson provide us with statistics: of the world's 13,250 million hectares of land, about 30% is estimated to be arable, half of which is under cultivation. The inequity of access to land within countries is severe: 66% [of all rural house-holds] in Mexico are landless or near-landless (Sontheimer, 1991). Many of those with no land are women and their children, although they produce more than 30% of the food in Latin America (Sontheimer, 1991). They make up the majority of subsistence farmers, providing the family with a basic diet. But their work is not accounted for, "for statistics most often measure wage labour, not unpaid kitchen-garden work" (Sontheimer, 1991:5).

Dankelman and Davidson document women's everyday lives and see them as affected by the technification and industrialization of agriculture, as when they try to obtain clean water, food and fuel from the local environment. There is a gender-specific division of labour in most rural societies, which means that many of the immediate ill effects are confined to women. The full ill effects of hunger and disease are of course felt by the whole family, but it is women who struggle to avoid them.

Women's "specific" tasks, Dankelman and Davidson notice, are often renegotiated depending on various conditions: ecological circumstances, social structures, economic relations. Women's actual agricultural tasks (weeding, harvesting, irrigating, tending poultry and small grazing animals, food preparation and marketing) depend on where they live and on their place in the rural economy (Sontheimer, 1991). Erosion and desertification often result from technification, and they make women's tasks even more difficult. People may be forced to migrate in search of new land and women's traditional knowledge may be inappropriate in the new places.

All these events eventually make women's activities more burdensome and less socially valued. Marginalization

occurs. Women fall into what Dankelman and Davidson call the "double day"; the labour necessary for survival increases and at the same time women must often increase their participation in the market economy, which has varying importance in different geographical regions (Sontheimer, 1991).

Dankelman and Davidson have shown the central role that women play as food providers and how it is affected by the development of large scale monocultures that produce cash crops, perhaps for export. Women then tend to make less use of their traditional knowledge, which usually implies knowledge of polycultures. A side effect of this is a change in the traditional diets of rural people, which may be replaced by processed food or by staples of lower nutritional value.

Because of deforestation and erosion (a common effect of excess use of agro-chemicals in large scale mono-cultures) and the subsequent scarcity of food, nutritional levels drop (Sontheimer, 1991). In the highlands of Mexico, where beans have been the principal source of proteins for the poor, there is difficulty now in cooking them, because so much firewood is needed (15 Kg of wood per Kg of beans (Dankelman and Davidson, 1988) and it is to difficult to find it. So the poorer the

family is, the less beans they eat, with women at the end of the feeding line. The other staple food in México, *tortillas* (flat cakes made of ground maize), now costs more when prepared at home than when bought (Dankelman and Davidson, 1988). All the extra responsibility falls heavily upon women.

Dankelman and Davidson say that "gender-blind" development (Sontheimer, 1991:15) is now taking place in poorer countries. This ultimately diminishes if it does not abolish women's ecologically sound traditional knowledge. Women, who they consider "the world's most important food producers" (Sontheimer, 1991:15), depend directly on a healthy environment. Dankelamn and Davidson suggest "Working together for the Future": women "are shaping the environment and caring for it, especially the poorest; a healthy environment is fundamental for survival" (Dankelman and Davidson, 1988:171). They agree with the message of the World Conservation Strategy and the World Commission on Environment and Development (IUCN, 1980), that conserving the environment is a fundamental ingredient of sustainable development, the strategy now proposed by almost everyone involved and interested in the environment. They see women as the agents of change, as those who can make a major contribution to environmental rehabilitation by their

knowledge of and skills in natural resource management, by their capacity for working together and being able to share and interchange information and by the influence they have in educating children to a respectful attitude towards the environment. Dankelman and Davidson maintain that as a means of improving women's position, development plans should include women, both as agents and as beneficiaries. In a summary of practical recommendations on the theme of women and the environment, they list as priorities: to improve women's capacity to conserve and benefit from sustainable development at the local level; to improve their access to training; and to continue awareness-raising and advocacy (Dankelman and Davidson, 1988:176).

Gita Sen and Caren Grown (Sen and Grown, 1988), constituted as DAWN (Developing Alternatives with Women for a New Era), are two authors who have also written about poor rural women and the effect development plans have had on them. They see women's movements to organize effective strategies for basic survival as central to an understanding of the development process that, as has been said, has various effects on the environment.

These authors are just examples of some of the women, worldwide, who have examined the position of women in

relation to the environment; who recognize the major role of women in managing natural resources and who link their marginalization with the destruction of nature, especially in the Third World; who believe in and who expect to demonstrate women's ability to protect the environment on which they survive.

These authors have written convincing accounts of the relationship of third world women with their natural environments. But they make a point in portraying this as a natural affinity, something which I consider an error. Political and social aspects of women, as well as aspects of class, are what really determines their relationship to the environment.

SECTION TWO: MEXICO

INTRODUCTION

Section One has reviewed ideas of women, nature and eco-feminism in the West and internationally; Section Two will examine the situation in Mexico, in academia and among rural women.

The idea that nature is a living being that has powers that men cannot control, and that respect and care are due to it, is common to various Indian groups throughout Mexico (Suárez, 1992:67). But in Mexico there are no writers comparable to Merchant, Shiva or Griffin, and none of these is available in translation.

A few such ideas appear (rarely) in feminist publications. We shall see that little is written on rural women and the environment in Mexico and that little information is available, although there is now some research, discussed below, but unpublished. Of what there is, more relates to health and reproduction than to women's work in agriculture, and there appear to be no studies on fuelwood collection or even women's role in the provision of water. Much of this section will show how much women work with the natural environnment, in home gardens, health care and agriculture; this proves the extent of their knowledge.

First, how much information does there appear to be? Does the evidence support the contentions of Vandana Shiva, or of Irene Dankelman and Joan Davidson? (V.2 and V.3). The literature search which I conducted on women and the environment in rural Mexico proved remarkably unproductive, which is itself a finding of some interest. (The procedure is summarized in Appendix A.) The standard ways of finding literature, whether by searching in data banks (using key words and titles and the names of authors known to work on people and nature) or by scanning likely journals, proved almost fruitless. One could arrive at the conclusion that nothing much has been written about Mexican rural women and their knowledge of the natural resources to which they relate daily. But some information was found in a few sources dealing with rural women, peasants, ethnobotanical research and other such subjects that seemed relevant. As I was told by two anthropologists (Gloria Ramírez and Manuel Jiménez, pers. comm.), comments have been made about Mexican rural women and the environment, but "you must look for them", "you have to make inferences". In this way, some information has been assembled.

It can be deduced, then, that in the course of other kinds of research the researchers stumbled upon women and documented what came to their hands just by chance. But

it can be said with some degree of certainty that few have set out to find out about rural Mexican women and their relation to their environment. Such material as was found on women and the environment did clarify certain aspects of rural women in general, and of Mexican women and their relation to the environment in particular.

Not all the literature has been searched; I have combed some anthropological monographs, but large numbers exist. None is devoted to women or even men in the rural environment, but many must have valuable passing references. As suggested by Browner (VIII.4), a comprehensive search would be of interest.

When I first started this thesis, my objective was to search for one universal: the relation of rural women to the environment, with the premise that women were the prime carers for resources. Throughout the course of the research, although it was focussed on Mexico, two points became clear: 1) that there exists a "cultural multiplicity" (Marcos, 1986) that must be considered before one makes generalizations about women in México - there is no **one** relation of "women" to "environment". 2) That this multiplicity, as will be seen, depends not only on the culture under study but on the way each element is perceived and interpreted.

We shall see that much of the information that we should like to have, is simply missing. In Mexico, as elsewhere, "The relevant established academic fields and disciplines dealing with rural development have largely ignored the fact that the rural population consists of two genders and that the division of labour in rural areas is in many fundamental ways structured along gendered lines; e.g. agricultural economics generally treats labour as a concept undifferentiated by gender, while the field of peasant studies is full of references to 'the peasant, he' despite the fact that the wives and daughters of male peasants not only carry out tasks crucial to the economic and social survival of male-headed households but are often major economic actors in their own right as the primary food producers and as rural traders" (Pelzer White, 1984:1).

And finally, I shall conclude by suggesting what academic work could be done to fill in the gaps.

CHAPTER VI

SILENCED VOICES, OR A LITERATURE WITHOUT WOMEN

VI.1.- Introduction

"That the peasant women have never spoken means more that no one has bothered to collect their words. Because they disturb us when they display their profound knowledge about their natural world; because they surprise us when they describe an integralist cosmovision of the universe and because, being women's words, they do not matter to an androcentric history" (Arizpe, 1989:78).

One way to silence people, especially minorities (and women are considered a minority, although they are half the world's population), is by the creation of a self-image of ignorance and inferiority. So women's words are often not known, not only because no one asks and no one listens to them, but also because women have a cultural tradition of having a very low self esteem. This has existed in Mexico for five centuries in some cases and in others for longer, as part of cultural patterns in which patriarchy is very strong.

Women are also silenced by being ignored in National

Population Censuses. There is research (Pelzer and Young, 1984) which analyzes the ways in which Latin America censuses and surveys have "misleadingly omitted and thus rendered invisible most of rural women's work" (Pelzer White, 1984), besides that fact already stated that the definition of work does not usually include women.

In the absence of studies on rural women's relationship with the environment in Mexico, it becomes necessary to search for clues. Often, we know that women do certain work and therefore have the information necessary for doing that work. We can then infer that they have knowledge, although this will tell us nothing about other aspects of the relationship, such as attitudes or emotions.

The first problem is the very poor recording of the work of rural women in Mexico, as indeed western feminists would expect. Feminist research has claimed that women make up the majority of the world's food producers and almost all of the food preparers (Dankelman and Davidson, 1988). Women's production of food has been largely neglected in Mexico because of the "cultural stereotype that Latin American women are not workers but rather mothers and wives" (Browner, 1989:461). Mexican women are therefore included in this stereotype. Women do produce

for the market; they constitute a "large and growing proportion of the Latin American labour force, with their participation averaging about 25% of paid workers throughout the region" (Browner, 1989:461) so women are participating more and more in the (paid and unpaid) production process. According to the ILO (ILO, 1979) 5% of the agricultural labour force in Mexico was female in 1970. This is only an estimate, and certainly their participation in services is much higher (36% of all service workers, in 1970). Women in Mexico participate far less in agriculture than in Africa or South Asia. Even so, the definition of "working woman" or "worker" applies exclusively to those who produce for the market or are paid (World Bank, 1992). This is the definition approved by the UN for the production of Standard National Accounts. It is because statistics are prepared within this male-oriented mentality that women seldom appear in them. Their work is highly productive; it does not only assist men's work.

Experience in Mexico has shown that both rural men and women, when questioned about work patterns, often state that men do most of the agricultural work while women "help out". But direct observation enables researchers to get beyond this preconceived idea and has demonstrated that in many situations women actually put in as much or

more time in the fields as men (Pelzer White, 1984:2). It is only through in-depth studies of women's working lives and their options that we begin to appreciate how complex are the ideological and socio-cultural constraints that affect women's economic behaviour.

Whether women are considered apart or as a distinct sub-group within the larger population, the terms of their participation are usually distinct from those of men. This can be seen as far as quality, quantity and terms of access to the land are concerned. Women's access to other productive resources through-out the world (water, draft power, agrochemicals, credit, labour, information) also differs from men's (Rocheleau, 1988:149-151). But one aspect is quite constant: women often are disproportionately represented among the poorest of the poor, especially in the rural areas of developing countries (White et al., 1986; Dankelman and Davidson, 1988). In the last 10 years the amount of research on peasant women and their participation in productive activities, activities that imply knowledge of the characteristics of the surrounding natural resources, has increased considerably (Arizpe and Botey, 1986). It is from this research that inferences must be drawn about peasant women's knowledge and activities regarding their surrounding natural environment.

When thinking of rural families, it is widely assumed that a man is in charge. But it is calculated that a third to a sixth of the world's households are headed by women (Momsen and Townsend, 1987:52) and although there are regional variations, "globally the number of de facto women-headed households is increasing rather than declining" (Moser, 1989:7). Throughout both rural and urban Latin America the proportion of women-headed households is increasing (Browner, 1989:467) through migration, marital breakdown and divorce.

In many households with a low income, "women's work" means not only reproductive tasks (domestic and child care activities), but also productive work (income generating), for which women are often considered "secondary earners" (Moser, 1989). The study of households and the life histories of the women who manage them has proved to be a useful tool through which to study the interrelationships of class, gender and ethnicity. Class position is said to "set the framework for the degree of activity in agricultural tasks" (Nash, 1986:15).

In Mexico, peasant women are important because they "comprise the axis of the family and community cohesion and are the principal transmitters of primary cultural

and behavioral patterns" (Arizpe and Botey, 1986). They work in secondary activities and very often are central to agricultural activities. "They play an amazingly important part in peasant society and are the center of peasant identity. The daily life of peasant Mexicans gyrates around the peasant woman in their daily activities" (Arizpe and Botey, 1986:138).

Rural women today, say Dankelman and Davidson (1988), live in a situation "where their rights and access to cultivable land have decreased and the open forest, woodlands and bush from which they gather such vital necessities as fodder, fuelwood and water have grown scarce or have disappeared" (Sontheimer, 1991). This is clearly seen in the Mexican country-side. For these reasons, reasons that contradict eco-feminists beliefs, women are often seen as responsible for the disappearance of natural resources, because they are often seen carrying loads of fuelwood, polluting the waters with their washing and bearing "too many children" (Sontheimer, 1991).

Women have traditional ways of doing their work. In Mexico women work in the fields and in their home gardens applying the knowledge that is passed from generation to generation, often living sustainably in the environment.

But again their voice, like their knowledge and experience, has very rarely been recorded. In creating their home gardens, for instance, women demonstrate that they do possess knowledge about the physical and living environment that surrounds them. Women do seem to be aware of the destruction of the natural world that surrounds them. But their perception of it varies: they worry about future jobs for their children; they wonder where else they will have to go to find more land; they sometimes put up a fight to protect what they consider their patrimony.

Both women and nature have been forgotten in the Third World's rush to develop. Some are now recognizing this. We know that in many nations women are the primary national resource managers; they are the key to the sustainable management of natural resources (Dankelman and Davidson, 1988).

Yet, for too long, women have been invisible in all but our reproductive roles.

VI.2.- Giving Mexican rural women a place in history

From our school days, in Mexico we have been taught a history that is full of male heroes, male action, male

actors. We are told that behind every great man there is a great woman, something that seemed enough for some time but now sounds like an insult.

We now want and need to know how is it that women hardly figure in history texts, or in any kind of written text. Women are also almost totally absent from the literature of people and nature, a subject very few writers seem to have dealt with. Giving women a place in history, especially in Mexico, has turned out to be a "rescue mission".

Some Mexican women historians such as Verena Radkau (1986) recognize that there has been little study of women, and they call this "selective omission". This, as Radkau points out, is not due to a conspiracy of evil by male historians but to a very deep idea that history, and thus the subject of historiography, is that which takes place within the political and public spheres, spheres in which women do not move. What needs to be done, she says, is to "invert" the hierarchy of relevant information in historiography, review the traditional methodological baggage and amplify the areas of historical research. In this way one would also question the hierarchy of dominant values in the society analyzed and in that of the researcher, who very often retains these values.

Women's activities would then be described and a "total history" would be written, one which would include social life, the "private sphere", "the study of the structure of the families, sexuality, reproduction, feminine culture, domestic work, children's socialization, health" (Nash M., 1984), and beyond this, the relationship of women and of men to nature. Thus the concept of what is and what is not relevant might change. "One evokes not only an incomplete universality but also a false one, by omitting half of humanity and perceiving it as neutral" (Radkau, 1986:79). This is why we never read or hear about what women have done, and we conclude that they have not done anything, because no one has ever bothered to write about them.

When whole epochs are analyzed without mentioning women, "the ambition of this social history...turns out to be absurd" (Radkau, 1986). Could we not say the same about the women-nature question? Hitherto the usual phrase is "man and the environment". This "man" includes women, but women's vision of the environment can be very different from men's. Women's experience and perception of the environment, their knowledge and skills, are also different. "How would it be if our image of history had been designed by women and men played a secondary role and had been the "second sex" or "The Other" (Radkau,

1986)? We should realize that neither the everyday nor the scientific perception is gender neutral.

Language also expresses this gender bias, and is referred to by Susan Griffin (1978) as being a "patriarchal language". Spanish and English languages, at all levels, Radkau and Griffin say, lie to us about the existence of genders and their relations. A "neutral" voice is used when talking of males and females, peasants, young persons, "neutralizing also the concrete and very different historic experiences of feminine and masculine human beings" (Radkau, 1986). In this way, "a dichotomous model of the sexes has been built, a model that relates women to nature and to biology and men to culture and to history (Ortner, 1974); a model that is still used to explain the unequal relations between men and women" (Radkau, 1986:82). (See III.3)

A Mexican women's magazine called Violetas del Anahuac illustrates this model: "For woman, soft mediator between Nature and man, between the father and son, her study is...that of Nature. For men, called to work, to the combats of the world, the great study is History. (...) Modern man... is a worker, a producer. The woman is harmony". Yet this magazine regards itself as a progressive defender of women.

Peasant women in Mexico suffer this same treatment. The peasant problem (*la problemática campesina*) creates an image of men peasants: working the land, migrating, chopping down the forests. The image of women participating in these activities is still uncommon. It exists in the minds of those doing research specifically about peasant women, and of course in the minds of the peasant women themselves. This thesis seeks to add to the research that will, I hope, create a new image of the Mexican peasant woman, whose knowledge and actions make her a productive member of the peasantry in Mexico, and who shares sometimes in destroying and sometimes in preserving the environment.

An illustrative example of how women are often left out of the description of a society is the following article entitled "Gathering and Subsistence Patterns among The P'urhepecha Indians of Mexico" by Javier Caballero and Cristina Mapes (Caballero and Mapes, 1985). It does make some gender specific points: for example, that gathering "is done basically by men although at times the women also participate". In addition both men and women make special trips to gather herbs and mushrooms to sell in markets, and special foods for themselves which they consider delicacies (Caballero and Mapes, 1985:33). In this case, "the men stop to cook (the potatoes they have

gathered) in the field during their agricultural labours" (Caballero and Mapes, 1985:33).

But **then**, the men and women disappear. "These most highly esteemed species are gathered by the people(Caballero and Mapes, 1985:33 **emphasis added**). And, describing the collection of firewood, "The selection of one or another species depends on the kind of fire desired or availability". And "(the firewood) is usually gathered only from dead, fallen trunks" (Caballero and Mapes, 1985:33). "Long walks are now required to obtain firewood" (Caballero and Mapes, 1985:33). One may ask who does the selection and the walking?
"The major uses of medicinal plants are to prevent or cure illnesses of the digestive tract" (Caballero and Mapes, 1985:33). Who uses the medicinal plants?

In many cases, the relevant material was not found where most expected, ethnographies and similar works; it "showed up" mostly by the reading of many articles until some "rural women's activities and knowledge" were found. Ethnobotanical literature, with few exceptions, proved to deal basically with "people" and "peasants" but with no specific mention of "women".

"groups of people collect branches and flowers" (for

ornamental or decorative purposes)(Caballero and Mapes, 1985:36, **emphasis added**).

"The people recognize that using local plants is cheaper and usually more effective" (Caballero and Mapes, 1985:36, **emphasis added**).

This article is not as bad as many, it does sometimes specify who is doing the tasks, but many of the ethnobotanical articles, in which we would expect a division by gender of knowledge and uses of natural elements, completely fail to specify:

"...honey gathered..." (Caballero and Mapes, 1985:36).

"Groups of people go to dig up the nests" (Caballero and Mapes, 1985:38).

"On the other hand, medicinal plants and firewood are collected the year round" (Caballero and Mapes, 1985:39).

"...medicinal plants are stored..." (Caballero and Mapes, 1985:39).

By the use of this neutral language, women's actions are completely ignored, and the general impression the reader obtains is that men do most of the work.

But one point should be borne in mind in determining the causes for the lack of literature on women. This is that

often personal, political and intellectual aspects of field work are inextricably linked, and thus it is not possible to be a "neutral" investigator. It is understandable that to be male, or even female, and to have been trained in the traditional academic system will hamper the achievement of unbiased research. Still, it would be unfair to deny that in the last decade women have been "recovered" from history.

Feminist researchers have begun to make a parallel history of women, of their very real participation in various issues worldwide and of their experiences. The subject of women (urban and rural) and the environment in Mexico, remains to be opened; other aspects of the life of peasant women have been recorded but not this.

V1.3.- Culture; Self-Image; Cosmovision

"Although the women of any particular society are often depicted in the literature as an undifferentiated social group, their interests and experiences ordinarily vary dramatically" (Molyneux, 1985:89). One factor important to the differentiation is culture, which, according to Goodenoughe, is: "Knowledge, or what people must learn in order to function as native actors in a society" (Browner [draft]:2).

In order to learn about particular cultures, researchers employ informants; the more informants agreeing on an answer, the more likely it is they are providing the correct cultural response (Romney, Weller and Batchelder, 1986). Goodenoughe's definition, though, is considered incomplete because it does not assess "the extent to which a person's knowledge may facilitate functioning within his/her natural environments, and his/her ability to achieve associated goals" (Browner [draft]:2). So, to make the definition more accurate, the term "adaptative competence" has been added (e.g. an "informant's awareness of locally available herbal remedies that contain chemicals that enable users to accomplish the physiological effects they seek, should be regarded as more adaptatively competent than someone that knows no herbal remedies, or knows only those that are demonstrably ineffective" (Browner [draft]:2-3). There is also "intracultural variation", which accounts for differences in knowledge especially in small societies, where beliefs, values and behaviour are thought to be unevenly distributed (Browner [draft]:1).

Research on Mexican healers (in Pihátaro, Michoacán, with a rural Tarascan community) by Linda Garro (1986) has proved that intracultural variation is an important element.

Curanderas, or healers, are defined (Garro, 1986:354) as persons skilled in the use of folk remedies in treating illness and who provide their services for a fee. Among natives of Pichátaro, these healers are almost exclusively women, usually middle aged or older, illiterate, and "they use herbal remedies almost exclusively" (Garro, 1986:354). Variation in locally specific knowledge seems to be distributed in a systematic fashion, and "the cognitive content of an individual mind is to a great extent determined by the role system, especially by sex roles and the division of labour" (Garro, 1986:353). Much of the variation in cultural knowledge is now thought to be not random but patterned (e.g.: the Aguaruna plant identification (Boster, 1986)) which shows that women agree more with other women than with men, and women in the same kin group agree more with each other than with other women outside the kin group; also, since women gather plants and men do not, and women in the same kin group live and work together, variation and sharing in plant knowledge along these lines cannot be considered surprising. "Patterning in variation is a consequence of living in a culture" (Garro, 1986:353). So as I have said, it is through participation and communication that people come to learn and share more, and some people share more because they have learned more in specific situations.

This would again contradict eco-feminists who believe in women's innate affinity to the environment.

Local and personal cosmovision (Marcos, 1986) is another factor determining variability of people's reality. It is defined as "a collective cultural product" (López Austin, 1976) and as "something that identifies to an individual his or her relation with the forces of nature and with other beings of his or her surroundings" (Marcos, 1986:14)." It is profoundly collective but also individualistic, because there are no two individuals that have an identical cosmovision", as López Austin says (Marcos, 1986:15).

As noted in research in Tabasco, México, (Dinerman, [draft]), there has been particular neglect about the sources of ideologies about the sexes in research on women in Meso-America. Very little has been said about women's social roles or their self-perception.

Economic behaviour is affected (Dinerman, [draft]) by the image women have of themselves; can it be said that if their self perception were higher, they might be more productive? At least that they would answer the questions: "What do you know?" "What do you do?" "Do you work?" with more awareness. One example of this is the

women vendors of Tabasco who do not think of themselves as traders although they sell seasonal fruits or vegetables from their own gardens in the *tianguis* or local market (Dinerman, [draft]:5).

When I asked women in south-east Mexico what they knew about the local environment (Townsend with Bain, 1990), I was often told: "nothing" or "men know more because they go out more". "The limitations that women have when trying to express themselves publicly as a form of social expression are due to ideological norms" that respond to a specific type of familiar and social organization (Dinerman, [draft]).

My original thesis that there is a bias in research, that almost no one has bothered to interview women, can be only half the explanation. It is not only that there is a bias; even if these women are interviewed, they will reply that they are completely ignorant, as they have been taught to believe.

An example of ideology and cosmovision affecting behaviour (that relates women to nature) is seen in Tarascan women, who are educated, by various rituals, into "a world view and a set of associated values and attitudes" (Dinerman, [draft]:10) that will suggest the

ideal behaviour to them in relation to men. When they participate in religious events (such as the feast of "La Candelaria"), Ina R. Dinerman argues that "the act of placing candle-holders and flowers seems to signify both the domestic realm and an association of women with light, the hearth, and natural things" (Dinerman [draft]:11). In some of the rituals the women wear herbs: Dinerman suspects that this arises from a tradition "from the time when such herbs were used medicinally as love potions, aphrodisiacs, and medicines connected with childbirth" (Dinerman [draft]:12). On another occasion, a woman sits on the house floor, meaning she is "of" the earth, but not of the dirt (Dinerman [draft]:12). "The seating....thus connects her with the earth, fertility and natural abundance" (Dinerman [draft]:14). In another set of rituals, during the presentation and distribution of fermented drink, the "ideal" woman (*priosta*) is associated with the transformation of a natural product (grapes) into a "food", into nourishment (Dinerman [draft]:14). Any western eco-feminist would delight in these symbols.

When a red skirt is used by Tarascan women, red signifies blood, sexuality, fertility, heat, and the stitching of a green cord to the skirt is supposed to mean the relation between female and earth, fertility and

productivity (Dinerman [draft]:17). In an apron also used by the women, the embroidered figures are almost always fruits, flowers or birds, "the same items which occur over and over again in association with women during ritual". When the *priosta* cleans the "lower" or secondary part of the church, this repeats her association with the earth, with "below" (Dinerman [draft]:18). During Christmas festivities, there seems to be an association of sweet things such as candy and earthy things such as peanuts with the mother (Dinerman [draft]:18). Interestingly, it is processed food which appears in ritual, creating an image of woman, the food-preparer (Dinerman [draft]:19). "Women's self images are rooted in the very models suggested by the rituals" (Dinerman [draft]:20).

Mesoamerican cosmovision is in this case seen as the combination of two systems of beliefs: Mexican Indian beliefs and Spanish beliefs. This is seen in a process that parallels the "Virgin-wife-mother" figure who oversees the family's "well being and the equitable sharing of household resources" (Dinerman [draft]:12). Womanhood in these cases is not an essentialist link to nature.

Women's knowledge and attitudes towards the environment

vary considerably, as we have seen in this section, depending on their culture as well as on many other factors. In this section we have seen individual women from different geographical areas in México, and from different ethnic groups behaving in ways that reflect not only their individual backgrounds and cultural influence, but also a personality and character that is very much their own and which gives them a different "adaptative competence".

V1.4.- Women's environmental perception

The answer to the question whether or not woman have a special relation to nature must lie in the "environmental perception" of both genders. Environmental perception is defined as: "The means by which we understand environmental phenomena in order to obtain the correct answers to risks and to make the best use of the natural resources" (Daltabuit, 1991).

The process by which environmental perception is developed includes direct experience of the environment by means of the senses as well as indirect information that is obtained from other people, mass communication or scientific publications. Environmental perception is mediated by values, attitudes and personality, but it is

also influenced by economic and social factors (Whyte, 1985; Schuman, 1976). The environmental perception of an individual or a social group might tend to ignore future risks in order to respond, with the existing resources, to immediate problems (Daltabuit, 1991).

The environmental perception of different groups- indigenous peasants, agricultural *mestizos*, cattle breeders, loggers, saw-mill workers, politicians- is conditioned by economic, cultural and social factors. Many women have a perception totally different again from these because of the activities they perform. This also varies, depending on socio-economic position, occupation and education, and on ethnic origin, gender, age biological status (Daltabuit, 1991:11), and, again, personality.

CHAPTER VII

MEXICAN RURAL WOMEN

VII.1.- Introduction

"Huichol women hold strongly to the old tradition, a philosophy that says: take with confidence but never more than what you need. Love life and protect it to assure more life" (Lilly, 1992:66).

This section will examine the situation of poor rural women. First, what is the scale of the problem? How many are there? The answer depends on the definition of "rural". The CONAPO (Consejo Nacional de Población) and the General Census define rural population as living in settlements of not more than 2500 inhabitants (Jimenez Lozano, 1979:10). According to this definition, in 1980, 33.7% of the country's population was rural; by 1990 this had diminished to 28.7%. The distribution by sex showed of 11,408 million rural females in 1980 and 12,089 in 1990 (World Bank, 1992). They include a large number of women who may have knowledge about the environment and an impact on it, which should be studied.

Another definition (UNORCA, 1991) makes the rural

population those who live in settlements of not more than 14,999 inhabitants. According to this, Mexico had, in 1980, 16,314.5 million females living in rural areas and, in 1990, 20,965 million, in slightly more than 100,000 rural communities. Of these the great majority (89.3% of the total) did not have basic services (water, light or drainage in their homes) (UNORCA, 1991:5). This last definition accepts that settlements of 15,000 or more inhabitants frequently still have rural characteristics such as agricultural production or a peasant way of life, as in Cuauhtemoc, discussed below. Part of the difficulty in defining rural population lies in the influence of capitalism in the Mexican countryside which has generated regional variation and strong diversification in the conditions of production in peasant units; this "should be taken into account when characterizing the rural population and specifically the situation of peasant women" (UNORCA, 1991:1).

As this thesis draws mainly on the literature, I shall refer to peasant women in the same sense as the authors of each separate piece of research have defined them. Probably the parameter taken by the majority of authors has been that of a rural population not exceeding 2,500 inhabitants, although this is not usually specified.

There are difficulties in defining the characteristics of rural women in México (UNORCA, 1991; de Oliverira and García). Information on recent change is not easy to obtain, because the main source, the Population Census, is not yet available in detail for 1990 .

For the purposes of this thesis, the Mexican rural women with whom the thesis is concerned can be said to belong to two groups. These are:

Peasant women (*campesinas*) are of mixed Indian and Spanish origin; they are also called *mestizas*; their culture incorporates both Hispanic and Indian beliefs. Peasant women in Mexico live in a wide range of farming systems; they may practise a subsistence, market or combined economy; their land may be either irrigated or rain-fed (Jimenez Lozano, 1979). Indian women (*indias*) belong to a specific Indian ethnic group and have largely kept their own traditions and culture.

It should be said that the words *campesina* (peasant woman) and india (Indian woman) are very often used indiscriminately, both in written and in spoken language, and this can be very confusing. It is also important to note that *campesina* is correctly translated as "rural woman" rather than "peasant", since the category includes

not only those with rights in land but members of the rural proletariat.

VII.2.- Women's work: health

In the absence of studies on rural women's relationship with the environment in Mexico, it becomes necessary to search for clues. Often, we know that women do certain work and therefore have the information necessary to doing that work. We can then infer that they have knowledge, although this will tell us nothing about other aspects of the relationship, such as attitudes or emotions.

The first problem is the very poor recording of the work of rural women in Mexico. It is in health care that women's work and women's knowledge in rural Mexico are most widely recognized. "Women dominate an empirical knowledge that has a long tradition in Mexico ...with their knowledge about powerful plants and massages" (Marcos, 1986:34). Most *curanderas* (healers) are *hierberas* (plant users), *hueseras* (bone-healers) or *parteras* (midwives) (Marcos, 1986:41). Caring for the health and hygiene of everyone in the family and for themselves is seen as something basically feminine (Daltabuit, 1991). This is why women usually have a

larger knowledge of problems related to health in their homes and in their communities. Peasant women's activities related to family well-being are attributed to their roles as mothers, teachers and housewives on one side, and of collaborators in activities that produce an income and in community business on the other (FAO, 1975). In rural Mexico, women must be able to sustain all the biophysiological functions of the family; this means the provision of consumer goods and the transformation of these goods, the preparation of food and the maintenance of good health in their family (Jimenez Lozano, 1979:17). These two last activities in one way or another require knowledge of the properties of various natural products, basically the knowledge of herbs and medicinal plants.

"In many parts of Latin America, sickness is a fact of daily life, and in most cases, it is women who are responsible for maintaining household health and treating illness" (Browner, 1989:465).

There is no intrinsic reason for this division of labour, because what is considered women's work varies very much throughout the world, so it may be that these functions are allocated to women because they are seen as an extension of their role in the reproduction of society. It is widely assumed that most women possess significant

specialized knowledge concerning health care (Browner, 1989:465). This knowledge includes not only simply providing food, water and fuel but also prescribing remedies and deciding "at what point in an illness to seek outside attention, and what type of practitioner to consult" (Browner, 1989:465). When women's expertise in treating illnesses at home is recognized, there will be a better understanding of women's role in household care. In all societies, the great part of health care is provided by women in the home (Pearson, 1987).

Findings of studies (Argueta, Miranda et al., 1986) in the north of Puebla, México, demonstrate that there are different degrees of knowledge of the biological characteristics of plants as well as of the names they are known by. Also, there are different interactions of people with plants, and this means there is differentiated use of the plants depending on socioeconomic factors, *mestizaje* (extent of ethnic mix), age and sex.

Native healers used to be consulted more often in the past, but in recent times the knowledge and use of traditional healing has declined with the introduction of modern medicine, as Townsend and Bain found in Los Tuxtlas and Uxpanapa (1991). Younger women with access to

city-based physicians have in general less knowledge (Browner, 1989) of medicinal plants than older women, and it is considered (Browner 1989) that accompanying this loss of knowledge is a widespread loss of confidence "in the curative powers of herbal medicine" (Browner, 1989:466). This is explained by Browner as a symptom of the wider transformations taking place throughout Latin America as villages, towns and cities are influenced by the world economic system (Browner, 1989:466).

The *curanderas* or women healers of various Indian and peasant communities in different parts of México (e.g.: the Sierra Norte) still show in their various rites the blending of ideologies that resulted when the Spanish and Indian cultures merged (Suárez, 1992). Cultures like that of the Otomí have as "masters of nature" different *señores* (lords) represented by chile (chile pepper), corn and the sun. Each has a powerful female aspect. They, together with the evil gods, make evident the prehispanic concept of complementarity, in which one deity represents masculine and feminine, good and evil (Suárez, 1992:65). In Huauchinango (Veracruz) there are women healers of *mestizo* (Indian and Spanish) origin, who heal through the spirits of dead doctors; these spirits show the women which plants, minerals or stones to use and how to use them in specific diseases (Suárez, 1992). The main

element for these rituals is water. The Indian women healers of Tabacal (in Xicotepec de Juárez, Puebla), go to *manantiales* (springs), caves or hills were they believe the "power of nature" is found that will help them to find men's well being (Suárez, 1992).

Some knowledge of health practices is obtained by women when disease and poor health occur among their family members, because they are the ones in charge of the family health. During this time they receive more information and are able to test it (Jimenez, 1979:21). Women (*hueseras* or bone healers and *hierberas* or plant users) follow a ritual when healing, "They have the capacity to purify the souls of patients in pain from evil spirits" (Jimenez, 1979:43). Besides knowing home remedies, most working class Mexican women know how to make *limpias* (to "cleanse" the soul). "This is a privilege of women of humble origins, because it implies a certain perception of the universe which wealthier women would not possess". Since Aztec times, women have been important as mid-wives (Jimenez, 1979:43). Women still go to midwives for help. (Our society is unusual, perhaps unique, in allowing men to deliver babies; most societies have assumed they would not know how.) Techniques vary from place to place. The phrase "practical midwives" implies traditional practical

knowledge. They have an arsenal of knowledge about herbs and the rituals of their use. They sing songs that "impregnate the mother-to-be with cosmic meaning and stimulate her to be in harmony with the natural forces givers of life" (Jimenez, 1979:44). Again, this would appeal to eco-feminists and to those who see women as potential saviours.

But, despite this extensive literature on women's health knowledge, it is also seen that "professionals", mainly from urban centres in Los Tuxtlas (Townsend with Bain, 1991) often do not consider women's knowledge respectable or trustworthy even though women's role as mothers, unlike their role as economic producers, is widely recognized. Indeed, an assumption of much health and nutrition work is that "most mothers are inadequate in their task, engaging in harmful health and nutritional practices which can best be rectified" (Pelzer, 1984:4).

VII.3.- Women's knowledge on reproduction

Carole Browner (1988) has studied differential knowledge among men and women in reproduction. She has de-mythified the idea of women as sole possessors of health knowledge through her research in San Francisco, a peasant community in the Sierra de Juarez, about 100 Km. north of

Oaxaca. She sought to establish whether women knew more than men about medicinal plants used for reproductive purposes, and if this was so, if the women had more control over their fertility and their life in general due to this knowledge.

As there is usually an implication in world literature and among eco-feminists that in traditional societies women **do** have control over childbearing and other aspects of biological reproduction, Browner and her team expected this to be the case. To their surprise, they found "women and men named remedies for similar proportions of the eight reproductive health conditions" (Browner, 1988:88). "With the exception of menstrual hemorrhaging, men were as likely as women to name a remedy for each condition, and they were more likely than women to name one for contraception. Moreover, there was a fundamental similarity in the specific remedies that were named by both sexes" (Browner, 1988:89). The gender division of knowledge of medicinal plants for non reproductive health problems was closely comparable (Browner, 1988:89).

It was observed that women's and men's knowledge of herbal remedies for the management of reproductive health problems was structured differently (Browner, 1988:89). Women were more likely than men to name remedies that

others in their community had named. Their knowledge was more likely than men's to be shared rather than idiosyncratic (Browner, 1988:89-90). Still, as a conclusion, the research showed that there was a fundamental similarity in men's and women's overall responses, so women really did not have exclusive control over knowledge concerning reproduction. These results were interpreted by Browner as men's actions to control "female reproduction through ideology as well as through practical knowledge" (Browner, 1988:94) which is not exclusive to this community.

One objective of Browner's research was to find how knowledge of herbal remedies and other healing techniques was distributed through the community, and what were the implications of this distribution for community-wide patterns of social and political organization (Browner, 1985a:16). Ten of the twelve informants on this aspect were female and were chosen on the basis of their extensive knowledge of herbal remedies for reproductive health. The findings show that "the differential distribution of culture comes about either through role performance in allocated statuses or in the course of the selective information exchange that occurs during face to face interaction" (Browner, 1988:23). The data demonstrate that both role **and** interaction are

significant in explaining the organization of herbal knowledge in San Francisco, but that women and men follow different patterns (Boster, 1986). Browner found that "men's knowledge was influenced more by status than by interaction" (Browner, 1988:23). And, as Townsend and Bain (1991) were told by women informants in Los Tuxtlas and Uxpanapa, men gathered knowledge about herbal medicine outside the community, so men's knowledge was often unique. "In contrast, both status and interaction were significant in interpreting the women's data, for female Franciscanas could acquire herbal knowledge both inside and outside the community" (Browner, 1988:24).

Carole Browner (Browner, 1985) has conducted extensive work on the use of herbal remedies for the treatment of reproductive health problems. She considers that this kind of treatment is "nearly universal in many indigenous communities throughout modern Mexico" (Browner, 1985:482). One particular study shows that it is mainly if not solely women who posses and **use** this knowledge for <u>their</u> <u>own</u> reproductive disorders. "82% of the women interviewed used only herbal remedies for postpartum recovery following their last delivery" (Browner, 1985:485). "The therapeutic effects women seek from these plants also derive from Chinantec ethnomedical understanding" (Browner, 1985:492). Carole Browner

considers this community is not unique in their preference for traditional medicinal plants, and that their use persists throughout much of the developing world. This is exactly the opposite to my findings (Townsend with Bain, 1991) in the communities in Los Tuxtlas and Uxpanapa. Women appear not to be, universally, saviours, as eco-feminists believe (V).

Brigitte Jordan (1988), in research on obstetrics among Mayan women, concludes that the training courses directed to upgrade the skills of the traditional birth attendants, among other health carers, "promulgate the views of cosmopolitan obstetrics and enforce and propose a 'progressive' and medicalized discourse that makes indigenous ways of seeing, talking about, and being in the world unmentionable, invisible and irrelevant."

"In treating western obstetrics as the only kind of legitimate knowledge, they do not only devalue indigenous ethno-obstetric wisdom and skills, they disallow the very methods of indigenous knowledge and skill acquisition" (Jordan, 1988:935). When transmitting "western ways" they do not acknowledge a woman-centred view or a low-technology approach to birth, and thus they "render midwives' praxis and discourse deficient and without import". So, the indigenous knowledge they possess, and

their approach, is "rendered invisible and marked without status" (Jordan, 1988:935). The chatting that provides a relaxed social support for the woman in labour and other support, often through her hands, is not considered important at all, nor is the comfort of delivering in the home, among the family, in a low light.

We see then that although it is a common belief that women do possess knowledge on medicinal plants to treat female disorders (eco-feminists beliefs), this has been shown to be otherwise by Browner's research. Still, it is important that incorrect generalizations should not be made. When interviewed, women and men in Los Tuxtlas and Balzapote sometimes replied that women knew more. They also, in other instances, replied that men knew more. So research of this kind should be made in a wider variety of populations, to be able to compare results.

VII.4.- Women and agricultural production

This section will examine the similarity and variety of women's work in agriculture in Mexico. We shall see that, in contrast to the care of health, this work is often assumed to be done in a condition of ignorance.

The situation of Mexican peasant women is extremely

diverse, but often treated as homogeneous. "Rural women's heterogeneity of situations tends to be omitted and her triple state, as a member of a peasant family, as a worker and as a woman, is not made clear" (Arizpe and Botey, 1986:141). In the current market economy cash crops are given priority over subsistence crops. Because of the national economic crisis, family income no longer covers family needs; it is the peasant woman's job to balance this situation with either extra unpaid work in agriculture or working for a salary (Arizpe and Botey, 1986:141). In this, peasant women are indeed a single category: almost all have been subject to these additional demands for the last decade. But it is easy to overgeneralize about them. "Peasant women cannot be seen only as women. But nor can they be identified only as peasants, denying the malnourishment, the physical stress and the sexual vulnerability that is imposed upon them because of their gender and that diminishes their own role as peasants" (Arizpe and Botey, 1986:142).

The current national economic crisis manifests itself in agricultural production. Many Third World countries that used to sell agricultural or basic products, are now buying them in the international market, which "endangers the peasant production unit, that used to be able to survive with the help of the state" (Arizpe, 1989). In

order to control their debt crisis, governments have cut their expenditure, especially on education and health, on the advice of the International Monetary Fund and the World Bank. For Latin American countries this means a reversal in their ideas of development, ideas which were traditionally centred on satisfying basic needs with the help of state subsidies.

In Mexico as a consequence of the loss of state support, peasant families have reduced their nutritional levels (UNORCA 1991:4). As we have seen, women will probably suffer relatively more malnourishment. Specialization and intensification of agriculture have reduced the share of basic food crops in national production as other products have proved to be more profitable (Barkin, 1990). Peasant families are not gaining from this and cannot buy enough food. There have been complaints about tortillas made from imported yellow maize, which reflect the "resulting deterioration of nutritional and cosmetic quality of this important part of the Mexican diet" (Barkin, 1990:20). Mexican maize is palatable to people; US maize, much cheaper to produce, was destined to feed pigs. All this bears out the arguments of Dankelman and Davidson and of Sen and Grown (see above, V.3).

Some consider that even though studies about peasant

women have increased, little is known, even now, about the effects of the crisis in the agricultural sector and especially on women (UNORCA, 1991:1). I consider that the main effects are a loss of knowledge because of the loss of genetic variability, and loss of habitat which renders knowledge useless. If there is a change from working in fields to work in agro-industries, daughters will not need to learn traditional information from mothers who may be forgetting it anyway.

Mexican rural women have not only suffered from the impact of recession. Many suffered also from change in their access to resources as Mexican agriculture was commercialized. Most are in difficulties because agricultural systems have not changed appropriately as population has grown. It is important, however, not to see these external changes as dominant. Fiona Wilson (1984:24) argues against attributing all changes affecting women's lives in recent years to the impact of capitalism in agriculture. There is still a lack of understanding "that it is the social relationship between men and women which will govern the degree and direction of women's response to agricultural change rather than the "impact" of commercialization per se" (Wilson, 1984:136). Women's work in agriculture in different parts of Mexico has not been changing in the same direction.

Mexico has a great variety of landscapes and of rural communities which differ in their characteristics and degree of recent change, including those in which changes have been radical with great effects on the environment. In these rural societies peasant women are involved directly or indirectly in agricultural production, but this involvement varies depending on the type of productive unit they belong to. For analytical purposes, three types of productive family units can be said to exist, depending on their relation to the market: a) self-provisioning, b) semi-proletarianized and c) proletarianized (Arizpe and Botey, 1986). (As we have seen above, "peasants" in Mexico include all these groups.)

We simply do not know whether the self-provisionong peasant woman has more freedom than the proletarian woman to decide on her own agricultural practices. Is she freer to seek the sustainability of her production? We do not know.

In agricultural production, women may participate alone or with the husband or partner, as directly responsible for this work or as an *asalariada* (receiving a wage). Many *campesina* women work little in the field, but others have a wide array of activities. When they work on the

family farm, they plant, fertilize, weed and harvest. Women in charge of a specific agricultural activity or those who practise some sort of animal husbandry may do it alone or with their husband's or children's help (Townsend with Bain, 1991). One common activity is the tending of home gardens with vegetables and fruit trees, pigs, chickens and turkeys. "Home gardens are considered women's properties ..." (Jimenez Lozano, 1979:15). When the woman does not have a husband, she may work on her parcela or predio (plot) herself, using her own skills, or she may hire labour. The peasant woman who is *asalariada* (receives pay for her work) in agricultural activities also usually works in planting, transplanting or harvesting (she will usually earn less than the men for the same work). Women also participate in non agricultural activities that involve knowledge of conservation and preservation of foodstuffs or simply require associated tasks (Jimenez Lozano, 1979).

"Compared to peasants, women in Indian families are made to design a whole series of additional strategies..." among these..."the selling of wood and coal (illegally obtained); of flowers and wild herbs" (Garza Caligaris,:4).

Women not only work in the fields, they do so to a degree

that women consider, "...more work..." (Garza Caligaris,:5). "I plant coffee, I collect it, clean it, dry it. I prepare my food, clean my house a bit, gather honey, cut wood, mend my children's clothes, carry the pineapple, limes and oranges. That is all I do, I do not have any other job, I can't do anything else because I did not go to school..." (Garza Caligaris,:8).

Later case studies will illustrate the variety of women's roles in Mexican agriculture .

VII.5.- Agro-Industrial Units for (Peasant) Women: UAIM'S

Even the state recognizes women's role in agriculture. Since 1971, there exists in México what is called a "UAIM" (Agro-Industrial Unit for Women) (Stern); these are small farms for women, older than 16 years of age, who are not *ejidatarias* (ie who have no rights in land) and who represent a great labour potential (Arizpe and Botey, 1986:137). *UAIMs* were created partly to help stop female migration to the cities and to help improve social welfare (UNORCA, 1991:26). UAIMs, however, involve in practice very few women in total. They are found only in *ejidos* (land reform communities, which still occupy half the agricultural area). Each ejido should set aside one farm for a UAIM. But the ejido will comprise perhaps a

hundred farms, of which only one is a UAIM. Membership of the UAIM is limited to women of the community who have no rights in land; usually fifteen to fifty belong to it, but the farm may be only a few hectares. It should be the same size as the other farms on the ejido, each intended to support a single family.

UAIMs are supposed to help women establish a small agro-industrial or agricultural farm. But even with these, women have very little access to income arising from the land, due more to cultural factors than to the law (Arizpe and Botey, 1986:138). The main activities in these units are agricultural, crafts and animal husbandry (Arizpe and Botey, 1986:139). In relation to this (Excelsior, Sunday, February 16, 1992) the Minister of Agrarian Reform, Victor Cervera Pacheco, declared in Mérida, Yucatán, in February 1992, that 10 thousand million pesos would be destined for the creation of 300 more UAIMs. He considered it the duty of the Federal Government to help these rural organizations and said that all women were entitled to this help regardless of their political inclinations. He also said that at the present there are more than 6000 UAIMs and that all of them would be helped in the same way. The mayoress of the town, Dulce María Sauri Riancho, also stated that women's participation in these agro-industrial units is part of

the structure of change that is taking place in the whole country.

The main achievement of these UAIM's is to have created a social awareness of the need to open jobs for women in rural areas, and of the potential women represent. But in reality, the UAIMs have not been very successful (Stern). This might be because the government has not considered them very important so it has not given them the necessary technical, administrative and economic help, and also because there have not been the means to commercialize their products (Stern).

The number of UAIMs in the country has been and continues to be questionable. "Nobody really knows how many there are" (UNORCA, 1991:27): Teresita de Barbieri et al.(1981) reported 4,945 with a presidential 'go ahead', and 280 actually functioning; Lourdes Arizpe and Carlota Botey say that until 1986 there were 8,000 promoted, 1,224 registered and a total of 1,112 accredited; and the *Centro de Estudios del Agrarismo en Mexico* (CEHAM) reports that according to the National Agrarian Registry, there were 2,253 units registered in the country in 1991, this is, in 8% of all the ejidos of the country (UNORCA, 1991:27). And according to yet other sources (UNORCA, 1991) based in the state of Oaxaca, at present, of the

total amount registered, only 10 to 20% are working.

VII.6.- Knowledge Related To Production

We have seen how much women are involved in agriculture. Knowledge, for peasant women, as for everyone else, is acquired through experience, through personal introspection and by having contact with others or with the mass media (Jimenez Lozano, 1979:51). From very early, peasant women start their learning process within their families. Throughout their lives they gather information through experience, but it may be that "this experience is not enough for them to keep on learning" (Jimenez Lozano, 1979:51). "Individual and environmental factors condition the communication and practice of knowledge" (Jimenez Lozano, 1979:51). The position of women has much to do with the opportunities they have to acquire knowledge.

The issue can be looked at from the point of view of how women are seen by other people in society; if their abilities and skills are not seen by others because most of their time is spent indoors, then it will simply not be known how women acquire information, make decisions and deal with other people.

A common belief in Mexico is that most women that work with their husbands in agricultural activities do not possess a great deal of technical knowledge (Jimenez Lozano, 1979:143). Ma. Elena Jimenez Lozano (1979), who works mainly in Morelos, argues that the higher the level of women's schooling, the more they want to acquire more knowledge that could be either "modern" or "traditional" depending on the teacher (Jimenez Lozano, 1979:157). The younger the woman and the husband the more the tendency to search for new information, to interchange and apply it, both in productive and in home activities (Jimenez Lozano, 1979:158). Peasant women's knowledge about home and productive activities comes basically from "communication, information and interchange" (Jimenez Lozano, 1979:18). As they apply and practise new knowledge, they develop it and experiment with it. Again, because of their limited activity space, this interchange occurs mainly with the husband, children and other relatives they live with, and with neighbours and teachers. Much of the interchange occurs when fetching water or when they are in the *molino de nixtamal* (corn mill). The people they meet will have more or less the same degree of education as they do. And always, new knowledge will be adapted to existing cultural traditions. "The opportunity to acquire new knowledge from specialized persons, from government sources, is

scarce" (Jimenez Lozano, 1979:19-20). (This of course refers to western knowledge). Women can also get new information from radio and T.V. when this is available.

It may be that women do not interchange much knowledge related to productive tasks like agriculture, bee tending, cheese preparation and so forth; such knowledge, basic to the family economy in these families, is transmitted from mother to daughter but not outside the family unit, because this knowledge is jealously guarded or because the knowledge is about processes that are "characteristic of each family" (Jimenez Lozano, 1979:110).

Among the factors that Ma. Elena Jimenez Lozano (1979) sees as affecting the degree of knowledge a peasant woman has are: number of years in school, quantity of equipment, number of members in the family, their health and age. Other factors include: access to drinking water, proximity to schools and health centers (Jimenez Lozano, 1979:21). The application of "knowledge" of productive activities is directly related to the availability of tools, inputs and equipment to the women. We see that "knowledge" here is being defined as Western ideas.

Informal education becomes gender orientated. In Yalcobá,

Yucatán, (Jimenez Castillo, 1985) boys, at about eight or nine years of age, will start going out to the fields with their father; there will be a point when this activity will become duty, even though they might have gone to the fields many times before. (It is said to be a man's activity because corn has a special meaning, "sacred" for men in this geographical area). But in cases of extreme poverty or when there is no man around, women will work in the fields. In the same manner, girls of seven or eight will be called by their mothers to start their duties: grind corn, make *tortillas*, etc.

As the girls spend more time with their mothers in Yalcobá they learn (no actual "teaching" takes place) more about the "female" tasks like cooking and preparing home remedies, which implies a certain knowledge of plants, their uses and probably growing condition. Both the kitchen and the "home altar" (an altar inside the home, where there is an image or statue of a saint, the virgin or Christ, and which is venerated by the family), which are feminine domains, mean a training of the girls into a "feminine world" that is special in that it is different from the boys' world, which, in its own way, is also special. For instance, men cut firewood and leave it scattered for the women to collect, meaning that both men and women must know which wood will be better for burning

without producing too much smoke, lasting longer, burning slower.

Both genders can be said to have a "special" relationship with their natural environment, a relationship that differs in each case.

Manuel Jiménez says (pers.comm.) that there exists a relationship between Yalcoba women and the *patio* or *solar*, (home garden or yard) where they spend a great deal of time. This would imply a certain relation with this small environment which still constitutes a "natural environment", as far as it is formed by "natural" elements, and to do this work, knowledge about it is necessary, a knowledge that will be acquired from mothers.

We have seen then, in general terms, how knowledge is aquired by rural women. The factors affecting the learning process are varied and depend on geographical and cultural aspects. Yet we say that there is a kind of knowledge that is feminine but based on the before mentioned factors.

VII.7.- Women and their struggle for land

Women's participation in Mexico in specific political movements demonstrates their involvement with the land. Opinions vary as to how much research has been done on women's participation in political movements and on the quality of this participation. Some say (Magallón Cervantes, 1971) that "very few studies have been made of women's participation in peasant movements in México" and that existing research shows that though there seems to be certain involvement of the women with political movements demanding land, they usually "borrow" the demands from the men, which does not really represent changes in their subordinated condition. In this view, women are but rarely the organizers of the movements, they adhere to them once the movement is well on its way (Magallón Cervantes, 1971).

An opposing view is that there exists a long tradition of massive participation of women in the peasant movement and in political struggles (López Rodríguez, 1991). During the V Workshop of the Caribbean and Latin American Feminist Gathering, it was declared that women fight against limitations to the right to own land, against constant violence, against lack of services, against victimization by patriarchal authorities. The workshop demanded land and respect for peasant women.

Other studies (Carbajal Ríos, 1988) seek to prove that when and if women get involved in these movements, besides an array of different causes and objectives, they show an intrinsic interest in the land, in its products and as an "object" to be inherited by their children. A Mexican peasant woman is quoted as saying: "We women participate openly in the struggles of our people when these concern serious problems like the need for new land, the defence of natural resources, the destruction of land, the pollution of water..." (Magallón Cervantes, 1971). Women's participation is sometimes indirect (Carbajal Ríos, 1988). When the husbands are actively participating, Mexican women are left in charge of the household and even working the land. But when women actively participate, the explanation given by their partners is "women are the ones that love the land more and they defend it more because it is the patrimony for their children" (Carbajal Ríos, et. al., 1991:427). In some instances, women identify themselves with the land, because it assures them a space for their survival (Arrillaga, 1988).

In whatever way women participate in the movements, it is very rarely recognized (Carbajal Ríos, et. al., 1991:427), not only because there might be a certain bias in the reporting of these movements but also because the

attitude and feeling of worthlessness often found in women makes them maintain a low profile in this kind of activity. Women have been quoted as saying, "The insecurity we feel to participate in the struggle or in any other thing, is due to the fact that often our husbands and fathers have us so intimidated at home, that we don't get to know anything, because we seldom go out and then they'll tell us that we are useless and no good, then when the moment comes to speak in public, it becomes very difficult because we're just used to talking among ourselves" (Browner, 1986a).

Rural political movements have been traditionally formed by men and have been seen as instances of the masculine struggle. But again, there are those whose opinion of women is as being "neither more nor less conservative than men" (Magallón Cervantes, 1971) so that "interest and opportunity must be present for women to support social change" (Browner, 1986a:89). The reason given as to **why** women will or will not participate is that it depends on "internal dynamics within rural communities (that) might limit women's ability to participate in change efforts that in principle they support" (Browner, Carole 1986a:90). Yet, the United Nations Commission on the Status of Women has observed that "women are, on the whole, receptive to change for an explicable reason: they

usually have more to gain by changes brought about by community development than by clinging to the status quo. It has also been observed that rural women "have frequently shown more desire for innovation and change in this respect than men" (Browner, 1986a:95).

The following are examples of women's participation in movements for land.

In Doña Ofelia, Calpulápam, in 1984, women's participation in political movements was analyzed (Velasco Hernádez, 1988). It was found that women had relevance not only because of their domestic roles, but because they had organized a movement (originated in 1982) against the exploitation of the forest and its products, a movement that was successful. Reacting to a governmental order (*decreto*) that was beneficial in the beginning but that eventually ceased to be helpful, women, who considered the woods as property of the community and so felt they had the right and duty to defend it and to exploit it rationally, joined forces to defend what they felt was theirs. "Women were the element of change, the active element of this struggle, of which they became leaders" (Velasco Hernádez, 1988). They built in their children a consciousness about problems of this kind, explaining to them how things were happening; they

also educated more women, children and men; they acted with "feeling and passion"; and they successfully got the change they wanted. In this instance it is important to note that religion had a positive role, as a woman pointed out, "Our duty is to help each other, not only with prayer and words, but also with action" (Velasco Hernádez, 1988). Women in this case were portrayed as not always subordinated to men's political struggles, but as being an element of change, promoting ideas and actions on their own (Velasco Hernádez, 1988:444) and taking action against the destruction of the natural resources on which their life depended. There is a clear comparison with Vandana Shiva's findings in India, and with the expectations of Irene Dankelman and Joan Davidson (see V.2 and V.3).

Another example is found in a letter to a newspaper (López Rodríguez, 1991), in which a peasant woman from Oaxaca wrote about many "brothers" being incarcerated during their struggle for a piece of land: "Here is when the Indian peasant woman starts to play an important role in this struggle, breaking with a series of prejudices imposed upon us by a *cacique* (boss) who exploits us. We peasant women have not stopped growing corn, beans and chile peppers, because we are sure that if we keep these products, our struggle will advance, because our

ancestors survived the conquest and today we will keep on resisting this marginalization that overpowers us", is signed by Juana Vázquez.

VII.8.- Women in agriculture: Case studies

Women's participation in agricultural activities has been examined in the section dealing with "Women and Work". The following are examples of this participation and its variety, which has great influence on their relation to the physical environment.

In San Franciso (pseudonym), Oaxaca, a Chinantec speaking community, Carole Browner found that women make an important contribution to the household's economy. Besides their domestic duties, they work their own fields and many "single handed run their family's farms" (Browner, 1989:464). For this they are proud, and "they derive an important part of their female self-identity from these productive activities" (Browner, 1989:464).

Great differences may appear in communities in the same area. In a "rich" ejido called Loma Tendida Valle de Santiago in Guanajuato, (Wilson, 1984:138) it was found in 1978 that traditionally women had not worked in the fields, and even in recent times, when hands are needed to grow sorghum, they were still excluded from

agricultural labour by men. In this case, women were not "engaged in other types of productive enterprises while men work in agriculture" (Wilson, 1984:139). Here, women spent almost the whole time in home activities. They raised some chickens that were hardly ever sold. If they had enough maize, they might fatten some pigs for sale. Some might even "keep bees and most raise plants with medicinal properties" (Wilson, 1984:139). This case shows that even with the rapid introduction of cash crop production and major changes in labour requirements, the gender division of labour is not necessarily altered within agriculture (Wilson, 1984:139). There seems to be a strong effort put, in this specific area, into avoiding women working in the fields (Wilson, 1984:139-140). Commercial farming has had no effect on the sexual division of labour.

Also in the Valle de Santiago, in a poor ejido (land reform community) called Magdalena de Arceo, it was seen that "women had little participation in agriculture, but when men started migrating seasonally to the U.S., women started contributing more labour time than men in subsistence agriculture" (Wilson, 1984:140). Here, contrary to what happened in Loma Tendida, women were kept as part of the household (in Loma Tendida women were made to leave the community and work for wages in sectors

other than agriculture) as the principal subsistence producers (Wilson, 1984:140).

In the strawberry sector of Zamora, Michoacán, women also had the tradition of not working in agricultural production. But since 1965 the situation has changed and women (and children too) have started working for the strawberry growers. Women are preferred in this type of work. They can be paid less and are (therefore?) perceived as more efficient than men, especially during harvests.

In the state of Sinaloa (in tomato packing plants) (Wilson, 1984), women workers are found in contrasting groups: semi-proletarianized (with access to land but depending on wage work as the primary source of income) and proletarians (depending totally on wage income). The first group when not working in the packing plants undertake productive labour in agriculture (e.g. sowing, weeding and especially harvesting maize, tending animals and processing foodstuffs). These women "find themselves placed simultaneously in different class situations" (Wilson, 1984:145).

Fiona Wilson's opinion is that "poverty does lead to some of the rigidities in the gender division of labour being

broken down with women taking on new types of productive work" (Wilson, 1984:141).

Another aspect of women's relation to nature is the one shown by the women in Ayuquila, Jalisco (Long and Villarreal), who established a small-scale bee-keeping enterprise. They got together once a week, working as members of a women's group, they dressed in protective outfits and, forming small groups to do different tasks, they cut the grass and cleared up the area of the beehive, sprayed the hives against pests and observed the bees and the well-being of the queen. Petra, the President of the Women' Group, when interviewed, demonstrated much knowledge about the care of bees. She knew how to recognize the sick bees, the old queen (Long and Villarreal,n.d.:112) and the presence of too many drones. All this she had learnt during courses which she had studied thoroughly, and for her it was a very serious matter (Long and Villarreal,n.d.:113). With time, she had learnt, among other things, that during the nuptial flight it was eight and not one of the drones that fertilized the queen (Long and Villarreal,n.d.:114). "When speaking of the techniques and science of bee-keeping, her face lit up to communicate her engagement and genuine interest in the subject" (Long and Villarreal,n.d.:114). Petra possessed a "considerable

interest for improving her knowledge of bee-keeping and other practical skills" (Long and Villarreal,n.d.:116).

Petra's enthusiasm seemed to be influenced by her religion. She, like her father, was a Jehovah's Witness', therefore "she saw a connection between moral rectitude and abstinence and seeking godly knowledge" (Long and Villarreal,:n.d.116). Also, the organizational skills and dedication of the members of their religion were valuable, in Petra's case, for success in this group venture, which means the acquisition and utilization of new knowledge as well as some degree of commitment to the group. Petra, referring to the course she took in bee-keeping (as quoted), said: "they help us, not only with the bees, but as women, to face life. It's a bit of everything, we learn new things and are able to get out of the house for a while and it fills us with the desire to know more" (Long and Villarreal,n.d. :117). She has learnt some of nature's "secrets" and now she would like to plant plums and nopales (cacti). With the additional earnings, they might open a grinding mill for the village.

Petra's attitude could be said to reflect her general background and orientation to life, which was in contrast to that of Rosa. Rosa, working in a tomato selecting

plant, said that the beekeeping enterprise had not yet reached a point where the earnings from it could compete with those from agricultural wage labour. Besides, the bee-keeping had "created problems" with Rosa's husband, something which tended to stop her from involving herself more in it. This is an example of different attitudes towards the use of a living resource, the use of new knowledge about it, and how backgrounds and personal histories can affect decisions taken regarding the environment. If there is environmental degradation, women face different problems: disease, pollution, garbage, food shortages and malnutrition, and access to and use of resources such as firewood, construction materials and medicines (Daltabuit, 1991:14).

It is to be expected that the level of self sufficiency, of people in general and of women in particular, has diminished with the rise of the market economy. Individual direct access to natural resources has diminished.

Women in the Huichol ethnic group "see their environment as a magic place, full of deities, and as a warehouse of useful and necessary merchandise for their daily life" (Lilly, 1992:66). From the practice they have of joining what is mystical and what is practical into one concept

of reality arises the conviction that human beings should not waste what the gods have given them. They strive to be self sufficient. As almost everywhere else, it is usually the women who prepare the meals, bring the water from the water source, make and care for the clothes. It is they who teach the language and show the cultural traditions to the children. They understand the importance of water. They know that without it there is no harvest or food. Huichol women teach their daughters that water sources manantiales (springs) are places where goddesses live, therefore they should be venerated and protected. Because they have to carry the water such long distances, they appreciate the value of this resource that should not be wasted. Once when detergent was introduced to the community, the amount of foam it made scared the women so they replaced it again with their traditional washing products.

When there are no men available, it is women who go out to look for firewood for cooking. They do this with a respectful attitude, as in the ceremonies where they offer food to the trees. When they have to kill a bull, they offer it chocolate to drink and decorate it with flowers; they cry and beg for forgiveness because they are killing it, something done only for important ceremonies. Otherwise, they keep their Mesoamerican diet

of corn, squash and beans, supplemented by prickly pear, avocado, fruits and eggs. Sometimes they will vary their diet with a small chicken or some small animals that men kill, which is considered "for good luck". The relation of women to the forces of nature, with which they are in constant communication, is reflected in the things they embroider. Some women become "shamans" who heal those in need (Lilly, 1992).

It is clear that ideologies (Wilson, 1984:136) are underpinned by "the way in which a particular society perceives the context of gender relations and the stereotypes of masculinity and femininity in abstract" (Wilson, 1984:136). Although ideology is not immutable, it appears to aquire a certain independence that may even contradict the conditions in which men and women find themselves, especially in times of rapid socio-economic change.

CHAPTER VIII

WOMEN'S HIDDEN KNOWLEDGE

VIII.1.- Introduction

Ethnobiologists (Alcorn, 1984; Hernández, 1985; Laughlin, 1975) have pointed out the rich stock of folk knowledge in traditional Mexican agriculture and the many uses for maize in the many different ethnic groups, which could account for the diversity of maize varieties. There is evidence linking strategic decisions to the knowledge of maize varieties and specific environmental conditions (Brush, Bellon and Schmidt, 1988). One way of explaining the maintenance of local maize types is by the concept of the "socio-ecological niche" (Brush, Bellon and Schmidt, 1988) which is defined as: "the edaphic conditions, environmental regimes, e.g., temperature and evapotranspiration, and **human use**, e.g., for market or home consumption, that may require different growing lengths or special culinary characteristics" (Brush, Bellon and Schmidt, 1988).

Much research has been conducted on the loss of genetic material in the Third World (Altieri, 1987). Traditional agriculture is an important way of stopping this loss,

because it constitutes a "repository of crop germoplasm" (Altieri, 1987:87). Still, to stop traditional agriculture being "modernized" is not only technically complicated but can also be a politically sensitive issue; producers will accept new varieties of seed if they are better and sometimes when they are not. This trend has already been the cause of a loss of germoplasm. An effort to stop this loss must be linked to rural development programmes that give equal importance to local resource conservation and sustainable food self-sufficiency and/or market participation. "Any attempt at *in situ* crop conservation must struggle to preserve the agroecosystem in which these resources occur" (Nabham 1979, 1985b). But this cannot be achieved if there is no effort to maintain the socio-cultural organization of the local people. This will mean the utilization and promotion of autochthonous knowledge such as valuable crop germoplasm and essentials like firewood resources and medicinal plants.

All this, although again rarely specified, includes the valuable knowledge women possess, as they are in charge of many of the activities in which this knowledge is used.

Compared to the efforts of some groups and individuals

like Shiva and Dankelman and Davidson (V) who consider it of the utmost importance to conserve and rescue indigenous knowledge, especially women's knowledge, most international scientific and development communities have not asserted this. They are shown by Rocheleau (1989) to have largely ignored rural people's science. Some have seen it as an "unconscious ecological wisdom" (Rocheleau, 1989) that could be useful for the generation and introduction of new technology, but not even these potentially "practical" views of rural people's science have been properly studied and understood, and rural women's interests and knowledge have been researched even less. Research on conservation of genetic diversity seldom, if ever, deals with gendered knowledge.

Some of the valuable information women possess is related to the varieties of staples that would eventually constitute a germoplasm bank. One of these staples is corn or maize, the main ingredient of the *tortillas*, flat cakes used as the main staple in almost the whole of the country. Mexico is considered to be within the centre of origin of Zea mays and has the highest levels of genetic diversity of maize in the world (Brush, Bellon and Schmidt, 1988). Little work has been done in relation to the maintenance of its intraspecies diversity (Brush, Bellon and Schmidt, 1988). A systematic study on farmer

recognition and selection of maize varieties does not seem to exist (Brush, Bellon and Schmidt, 1988). Although it is seldom mentioned, it may be expected that some or all of this selection is practised by women. The ability to select is linked to indigenous agro-ecosystems that maintain the germoplasm, the human knowledge base and behaviourial practices.

Whether in the study of the whole system or of just some isolated facts, there exists the danger that the knowledge women possess will be sold as a packet of ideas to the scientific and industrial communities and women will not be empowered by the research.

This is particularly true in Mexico.

VlI1.2.- Proposed realms for women: Home gardens and agroforestry

VlII.2.1.- Home gardens:

A home garden (*patio/solar*) is defined as "an area around the peasant's house where they cultivate a complex vegetation to satisfy their needs" (Lazos Chavero and Alvarez-Buylla, 1988:45).

Home gardens in Mexico are very much seen as women's realm. Internationally, "their form and function have been intimately related to the evolution of society, culture and agriculture" (Lazos Chavero and Alvarez-Buylla, 1988). Such gardens have played an important role in the domestication of grain and root crops, and continue to serve as an avenue for the introduction and adaptation of new crops (Johnson, 1972; Nuñez, 1984). Home gardens receive great international acclaim from agronomists. They serve important economic, nutritional and social functions, not only in largely agricultural, developing countries. "Gardens should be examined as alternative use of scarce development resources" (Cleveland, 1987:259).

"Production advantages cited for household gardens include efficient use of soil, water, and sunlight, continuous harvesting, high and sustained yields, and utilization of labour supplied in small amounts integrated with other household tasks. Gardening is even reported as improving subjective feelings of well being (Cleveland, 1987:263).

Other advantages of the traditional style of gardening are: preservation of diverse genetic resources adapted to local conditions, minimized pest and weed problems, a

mixture of many different crops providing other products in addition to food, and little if any cash investment (Alcorn, 1984; Altieri, 1983; Binkert, 1981; Gliessman et al., 1981; Moreno, 1985; Soemarwoto, 1981; Sommers, 1982). An advantage of traditional style households is that they rely primarily on cultivation practices rather than toxic chemicals to control weeds, pests and diseases. So there is little risk of poisoning people or the environment (See also Bull, 1982; Moreno, 1985). Products from home gardens are not dependent on high energy inputs, nor transportation, marketing nor bureaucratic infrastructures to deliver them. Gardens can be socially and environmentally sustainable food systems, combined with energy-efficient cultivation techniques which maintain and increase fertility while conserving soil and water (Cleveland, 1987:263).

With regards to nutrients available for the household, home gardens play a very important role. "The availability of nutrients within the household may be related to social and cultural patterns of distribution of foods" (Cleveland, 1987:265); in Mexico working men will be fed first, then older women, younger women and their children; this is due probably to women's and children's "weaker bargaining power within the household" which as a consequence will lead to a decrease in

nutritional levels for them in relation to men (Cleveland and Soteni, 1987:265). But if it is women who control the home garden, as they usually do, more food may reach them and their children. Evidence suggests that home gardens can have the effect of improving the diet. In Tabasco, Mexico, fruits and vegetables are not eaten unless grown in home gardens; they are too expensive to buy (Dewey, 1981).

So it is possible to say that home gardens are better for improving household nutrition "than strategies that rely upon increased income or large scale agricultural production" (Cleveland, 1987:264), and that "...three of the four most important nutritional problems in the Third World: protein/energy under-nutrition of infants and children; vitamin A deficiency, and anaemia resulting from lack of iron and Vitamin C may be alleviated by gardens" (Latham, 1984). Much of this is because most of the fruits and vegetables can be eaten soon after having been harvested, when nutrient content is still high.

Gardens are important for women because many of the products they supply would be otherwise unobtainable. "They (women) are frequently the principal gardeners as well as being responsible for providing weaning foods, condiments, relishes and sauces" (Smale, 1980). Gardens

can also prove to be a useful source of cash for women from the selling of surplus products. A problem arising from this last point, though, could be that if women's gardens become successful, "men may use their superior social positions to usurp women's control" (Cleveland, 1987:266). This can be critical because gardens have become one of the few sources of cash for women, mainly because they have lost control over other resources they once could use. It has even been said that "horticulture needs to be preserved as an enterprise of the poor, most of whom are women" (Dugan, 1985:18). This last point, though, has also been found to be a strategy of exploitation of the poor: it is thought that by allowing reductions on the very high proportion of income spent on food for the poor, this could make it possible for them to survive with even lower wages (Deere and de Janvry, 1979; Painter, 1984). When women experience the loss of control over resources, the effects are worse for them than for men, since they bear the principal burden of subsistence (Nash, 1986:16).

VlI1.2.2.- Agroforestry

Agroforestry is often considered a good alternative for women, as it is they who are almost universally responsible for the provision of fuel, fodder, fibre and

animal protein. As caretakers of the household vegetable or farm plots, they are highly skilled in plant husbandry, and they have also acquired knowledge of the changing agricultural techniques, working side by side with men (Rocheleau, 1988:149-151). Women's control over the components (animals, crops, trees, shrubs, pasture) and the products (food, fodder, fuel, timber, cash, medicine) of agroforestry systems is often subject to rules distinct from those governing men's actions. "Agroforestry is people oriented and eco-responsive" (Bagchi, 1989:3). As women are the most adversely affected by the degradation of their immediate environment, "they must also devise ways to make do with minimal and inferior material substitutes. The connections are clear, an agroforestry project goal should be so tailored as to address the primary needs articulated by the female members of the community" (Bagchi, 1989:5).

Men and women's separate roles and activities can be complementary or can be shared and interchangeable. While "these differences might be limiting the scope and nature of agroforestry technology and project design, there are also distinct advantages and opportunities for agroforestry within women's separate domains of space, time, activities, interests and skills. Women may also have special knowledge, rights, and obligations to

certain categories of articrafted (tools), natural objects, and phenomena (water, fire, plants, animals)" (Rocheleau, 1988:149-151). Although agroforestry may impose new demands on women such as the need to negotiate new arrangements for use and management of shared labour, lands, or capital inputs, it will also enable them to learn new skills or to improve the ones that they possess, like the better management of soil, water, plants, pasture and boundary lands. Agroforestry may also validate women's land use rights or ownership, increase production and decrease gathering time, and reconcile conflicting objectives for shared household or community plots (Rocheleau, 1988:151).

Women and men will often have distinct skills and knowledge in the use of natural vegetation in forests and rangelands. They may each have different knowledge about the same plants and places, or their experience may be divided by species or by ecosystem (Rocheleau, 1988:160). "Women's knowledge as consumers and processors of many tree products should figure strongly in any user-focused program of germoplasm selection and improvement" (Hoskings, 1983).

Both home gardens and agroforestry seem on the whole a good option for poor rural Mexican women to engage upon.

I (Townsend with Bain, 1991) was able to see home gardens in Balzapote and La Laguna, and agree with Ma. Elena Alvarez Bullya et. al (1989) who suggest that their benefits are great. They can be seen as: a germoplasm reservoir (of a small number of wild species but of a large number of cultivated ones) and as good for preservation of soil. In the social sphere, "the home garden cropping system constitutes an adequate area to develop various domestic tasks and to conduct social and leisure activities in tropical rural areas" (Alvarez-Buylla et al., 1989:152). Although not every one agrees that they will improve women's and children's nutrition ("yet there is little evidence on this point, and no justification for assuming that project gardens will automatically be controlled by or benefit women" (Piwoz and Viteri, 1985)), I (Townsend with Bain, 1991) could see them as at least providing food otherwise difficult to obtain.

VlII.3.- Case study. Women in the rain forest: Four communities.-

All this raises certain questions. Are rural women more interested than men in the conservation of natural resources? Do they have special knowledge about them? Is there certain affinity between women and the environment?

(Questions that eco-feminists believe are answered in a positive way). Sixty women in four rural communities were interviewed in the following case study.

I spent three weeks with Janet Townsend in two different areas of land settlement (Los Tuxtlas and Uxpanapa), comprising four new communities. In these, we used questionnaires and life histories to find out about women's problems in land settlement schemes. We also asked most women interviewed and some men about their knowledge of the surrounding environment and about their gardens: who tended them and what plants grew in them, how could they be used as food for home consumption and as sale products (as food, as medicine, as decoration and as shade). We interviewed in the area of Los Tuxtlas, in the villages of La Laguna Escondida and Balzapote (both land reform *ejidos*), and in the area of Uxpanapa, in Francisco Javier Jasso (*ejido*) and Cuauhtemoc (*colonia* with privately owned land) (Townsend with Bain, 1991); fifteen households were chosen at random in each settlement. We chose Los Tuxtlas specifically because Ma. Elena Alvarez-Buylla, Elena Lazos Chavero and José Raul García-Barrios of the UNAM had documented the achievement of the gardens (Lazos Chavero and Alvarez-Buylla Roces, 1988; Alvarez-Buylla Roces, Lazos Chavero and García Barrios, 1989).

In Los Tuxtlas, there is an amazing reserve of skill and knowledge in the development and maintenance of home gardens which imitate the forest; this was seen mainly in Balzapote, but was also to be seen in La Laguna. These gardens are the only fully sustainable production in these settlements (Townsend with Bain, 1991:4; Alvarez-Buylla et al., 1989; Lazos Chavero and Alvarez-Buylla, 1988). The home garden is "the only dual purpose alternative that peasant families manage. It offers a production option, and therefore means of work, where animal and plant species are managed, and at the same time it serves as the peasants' habitational unit, giving it a peculiar vegetation structure and a physical arrangement in three components: the backyard, the garden and the orchard, each one fulfilling different aspects of the dual purpose" (Lazos Chavero and Alvarez-Buylla, 1988:47). The home garden's composition consists basically of perennial self-generating species which allow a continuous extraction of products. They are also called "multispecies agroforestry cropping systems" (Alvarez-Buylla Roces et. al., 1989:34).

In Balzapote "a large number of plants are grown" and used for a variety of purposes. Some species are even "multi-purpose plants" (Lazos Chavero et.al., 1989). More than 300 useful varieties have been found (Lazos

Chavero and Alvarez-Buylla 1988; Alvarez-Buylla Roces et. al., 1989) in these gardens in this one village, "providing food, firewood, medicines, shades, dyes, glues, building materials, animal fodder, ritual plants, ornamental species and even a tiny cash income!" (Townsend with Bain, 1991:6). Of the 337 species found, 127 have an ornamental use; 86 species are used for nourishment, the majority of these being fruits. 31 species are used for their curative powers and the rest are distributed irregularly among other categories (Lazos Chavero and Alvarez-Buylla, 1988:49). "Food species have the highest densities and the highest frequencies of appearance in the home gardens" (Lazos Chavero and Alvarez-Buylla, 1988:49). Of the 337 species, 35% have secondary uses, of which 39% are for medicine and the rest to "create shade, for construction, for firewood, to serve in rituals, as edible fruits, or as seasonings in food" (Lazos Chavero and Alvarez-Buylla, 1988:49).

Food and ornamental plants were the ones most found in the gardens. Although it is not stated in the articles (Lazos Chavero and Alvarez-Buylla, 1988), one can conclude that women must also play an important role in the use of the products, as it is they who decorate houses and churches and who prepare the meals, and mainly they who use the medicinal plants, as they are in charge

of the family's health.

The explanation for the great variety of plants in Balzapote is that its people are "heterogenous in their geographical and cultural origins and date of establishment" (Lazos Chavero and Alvarez-Buylla, 1988:52). So they all came from different places in different times bringing with them all sorts of plants which they try to adapt to the new environments.

In Balzapote, the family is a socioeconomic, productive and consuming unit. They all decide on the management of their different economic options; and this management is based "in a sexual division where the role of each family member is stipulated" (Lazos Chavero and Alvarez-Buylla, 1988:56). The family "is also a cultural unit, something which can be appreciated in the knowledge implied in the use and management of plants. This knowledge is not a static phenomenon, instead it is a continuously changing process according to family needs. Different aspects of it are taken by different members of the family. The father and the older sons are in charge of acquiring the knowledge involved in the handling and use of the cultivated trees. The mother and the older children are in charge of obtaining the plants for the garden (mostly ornamental, medicinal, and seasoning species), as well as

investigating the way of growing and using them" (Lazos Chavero and Alvarez-Buylla, 1988:56; Alvarez-Buylla Roces et. al., 1989).

The children play a very important role: they introduce, sometimes even unconsciously, some plants like fruits when they carelessly throw the seeds about. They learn from their parents the different agricultural practices. In these gardens, "the father tests new cultivars that are later introduced to crop fields and the mother generally selects the best food and ornamental varieties" (Lazos Chavero and Alvarez-Buylla, 1988:56). Still, it is important to say, according to Lazos and Alvarez-Buylla (1988), that the role played by the home garden production in the household economy is therefore specific to each family (Lazos Chavero and Alvarez-Buylla, 1988:57). Knowledge about plants is rich and diverse, mainly due to the different cultural origins of the people; for some, the environmental conditions were totally different from those in their places of origin; to others, they were familiar. From these two groups then, a flow of information has been passed that has enriched them both, and has helped to create the home-gardens, with a very diverse structure which implies knowledge of a broad range of plant species and systems. In the home gardens, plants with a "different mode of

propagation, different life forms, different origins and a variety of uses are managed. Within this mosaic, peasants utilize knowledge of specific biological processes in their management practices" (Alvarez-Buylla Roces et. al., 1989:147).

Home-gardens imitate the forest. This enables the growing of species that adapt to specific and different microclimatic conditions; the elaboration of a management calendar independent of the climatic fluctuations and experimentation with new varieties (Alvarez-Buylla Roces et. al., 1989:147). Home gardens are a means of producing both plants and animals (pigs and chickens), that complement the family diet and are also a small source of cash income or savings. The primary production in the home gardens is diverse, in small amounts and almost all year round; and it is mainly for family consumption.

Our investigations confirmed all these findings (Townsend with Bain, 1991). But all knowledge about these plants may soon be lost, as young people are not learning it; they do not seem to see much future in their gardens except for ornamental purposes, mainly because there is almost no market for the products and purchased goods are being preferred to home grown grain for home consumption. A gradual disuse of medicinal plants has been noticed

(Lazos Chavero and Alvarez-Buylla, 1988:57) and this is explained because "Balzapote is a mestizo population without a strong ethical-cultural background" which has been influenced by the capitalist system, economically, culturally and ideologically.

When the colonists arrived, the home gardens complemented the *milpa* (cultivated plot) where food and cash crops were grown. Now there are few *milpas*, the land is pasture and most food must be bought; the economy is largely commercial but there is little market for the products of home gardens. Women in Los Tuxtlas much prefer the *milpa* to family ownership of cattle. Crops they can store as food; cattle earn cash to which they may be denied access (Janet Townsend. Pers. Comm.).

In La Laguna, people are poorer than in Balzapote. Here "women have no role outside home and garden; they do no work in the fields or with the cattle" (Townsend with Bain, 1991:6). It is impossible for a woman to earn a living here; only a man can do that. Widows and single older women leave. But they do have home gardens, and as in Balzapote, they possess the knowledge to tend them and make use of what they grow.

Ironically, although they grow a variety of medicinal

plants in their home gardens, these tend to be replaced by patent medicines, which are now more trusted than their own traditional knowledge; and, as in Balzapote, it is a knowledge that may soon be lost, as Carole Browner (1988) also reported from her research in Oaxaca. These gardens, together with those in Balzapote, are the only sustainable agroecosystem of the region, but this "is unfortunately not highly regarded and is on the wane" (Townsend with Bain, 1991).

These gardens are mainly cared for by the women, although, when asked, they often said that men also intervened, that it was they who often brought plants from far away places where they had been. Again, men often tried out plant varieties in the home garden before cultivating them in the fields (Townsend with Bain, 1991:6). Women spend great amounts of time in their gardens, and care for them with the help of their children. And as it is they who provide the prepared meals and home remedies for their families, they know what to grow in the gardens, what is useful. They exchange information with their families and neighbours and often too, they told us, it was they who carried plants from their places of origin and tried to grow them in this new place: often they did grow, but not always. (see V11.6 above).

Francisco Javier Jasso (an *ejido* in the Uxpanapa region, where soils are much less fertile) had a collective programme of joint work with land and cattle, which, by the men's decision, was recently given up. Women were concerned about this, because its effects would reflect in more forest being cleared and "soon there will be no more resources and no more work. When there is no more forest, we will be unable to grow food or to work for pay" (Townsend with Bain, 1991:7). Economic survival on a woman's work in Jasso is poor, though mixed and poor Spanish speaking women work on the land, trade door to door and make *tortillas* (corn cakes). Here the home gardens are not as rich in plant varieties as those in Los Tuxtlas, but "ornamental plants have a meaning even to those women who have nothing" (Townsend with Bain, 1991:7). Ironically, the most beautiful flower garden we saw in Jasso belonged to a family where the man tended it, something which serves to prove the dangers of generalizations.

Cuauhtemoc is a *colonia* (of private farms) that has its economy based on timber. There still are crops, but they yield very little. This is a bigger settlement and women here are more economically active; their opportunities are as entrepreneurs or, when they are very poor, in paid work. A ban on timber cutting has dramatically reduced

male employment. It was here that we saw the most destitute of all people: they had no food, were sick, and laundered their clothes with no soap. Here too we could see some women working the land, although only when forced to do so by their condition: no male partner, no sons. Others mostly stayed at home and worked in the home gardens. They did possess knowledge of natural processes and plant properties and used it when necessary, although they tended to answer, when questioned, that they did not know much or anything at all.

The gender ratio of adults "always participating" in agricultural and other tasks that involve this kind of knowledge in these four communities México is: (Townsend with Bain, 1991:10; Table 2)

GENDER RATIOS OF ADULTS "ALWAYS PARTICIPATING" IN TASKS,
(Females to Males, thirteen years of age and above)

Family meals	83: 1
Feed hens	15: 1
Fetch water	11: 1
Feed pigs	6: 1
Fetch wood	1: 3
Gardening	2: 1
Milking	1: 2
Agriculture	1: 9
Cattle Work	1: 5

When there is no more forest left to fell and the land stops producing crops without fertilizer, cattle ranching is the solution. Then far less labour is needed, paid work becomes scarce and many adults are left with no work. The children, who until then had been assets because of the need for working hands, become instead burdens, extra mouths to feed. And women, who had been reproducers, cannot produce the labour with nontraditional skills that is needed in cattle ranching, because they themselves do not possess the knowledge. As money and food are needed, new lands must be sought, but now this option is restricted as the state starts protecting the forests.

When we were interviewing women from these four communities of south eastern Mexico, some points became clearer. The four communities varied in geography and the population belonged to different cultural groups. The responses to the questionnaire varied although the general answer was that they knew little about their environment (answer to the general question: what do you know about the natural resources of this area?). But when asked about their home gardens, women gave enormous lists of plants and their medicinal, cooking and ornamental uses, that they themselves had grown and taken care of (sometimes the man had been involved in some degree).

Women were also in charge of collecting the firewood necessary for cooking and of collecting plants that grew wild. Some women displayed some concern when asked: what will happen if the forest disappears? They worried that their sons would not find jobs in the future. Some did not seem to make a connection between their present situation (number of children) and the future (no forest means no land for agriculture); some did not seem to care. In a later project by Janet Townsend, also in south-east Mexico, the general response to the question: "Do you worry that the forest is disappearing?" seemed to be: "I don't care".

Women in these communities were well aware that if the Mexican state legislation to stop the cutting down of the forest is actually put into practice their area to grow food will diminish. In Cuauhtemoc, Cristina (73 years old) said: "If the forest was left to grow, what would there be to eat?" She was among the first pioneers that came to the rainforest to cut it down and open land for *milpas*. Her concern was not for the conservation of the forest; it was for the conservation of her people and their way of life (once more in contradiction with eco-feminists). And Flora Gómez, in Laguna Escondida, told us: "We don't have enough to buy anything, but we do have enough to eat", because at least they still had forested

land to grow food.

Most women in these communities regarded themselves as ignorant in relation to natural resources. Yet it was clear that, in various degrees, they all possessed the knowledge that enabled them to keep a home garden. Those who had them got not only extra nutritional intakes and even the means for extra cash, but a place to "be" that was mostly theirs and their children's.

Those women in Jasso, and even more in Cuauhtemoc who had no home-gardens seemed to me to be the poorest of women (except for those who had started private enterprises). Knowledge of gardens was either lost already or in the process of being lost altogether, as daughters would not be learning it from their mothers. In these cases, women's relationship with and knowledge of "nature", as ecofeminists imagine, was almost non-existent (I say "almost" because there were still some women working the land who would still have this knowledge).

These examples prove that situations vary, depending on the geographical and cultural region where the survey takes place.

VlI1.4.- Individual Opinions

In the process of gathering information on women and nature, I approached several researchers personally or in writing whom I selected according to what I had read or heard about their work and who I thought, would deal with women. Their comments and writings (not published material) shed considerable light on rural women and the environment in México, as well as on the causes for the silencing of women's voices.

a) Ethnobotanists:

Robert Bye, (Botanical Gardens, UNAM, Mexico, pers. comm.) is of the opinion that the project of gathering information on Rural Women in México and the Environment..."sounds fascinating as well as critical given the current environmental problems facing México and other developing countries". His work "does not specifically take gender into account with respect to ethnobotanical processes, mainly because of the limitations of being male". He "encourages women to study ethnobotany in the field because they can get better information than their male counterparts". His experience in México "indicates that women probably manipulate plants and ecosystems consistently more than men. Men seem to cause the more drastic and noticeable changes (e.

g. via ploughing, lumbering) while women are active in fine tuning, less attention-getting functions (e.g. selecting planting material, gathering plants, favouring certain plants over others)". For him "there are gender barriers in ethnobotanical studies". He and his wife (Edelmira Linares), who is also an ethnobotanist, complement each other's research. They have carried out studies on "qualities" which "suggest certain specific knowledge. The edible species are recognized by both sexes but "the finer details (e.g., collection, preparation, ecology) are better known by the women". He says that it is interesting that children apparently share these detailed data as they accompany mothers and older sisters (e.g., while gathering, herding animals, etc.) but the males tend to deny such knowledge as they get older (in some cases, they seem to think such information is "beneath" them now that they are older and male). However, such knowledge is useful when away from home or on the road. We found the same attitude in El Bajío relative to making *tortillas*".

Edelmira Linares, (Botanical Gardens, UNAM, Mexico. Pers. comm.) thinks the research has a new and interesting perspective. She is an ethnobotanist who works mainly with women but she has never seen a "feminist paper" on the theme. She feels there are areas where "women play a

most important role, like the management of home gardens, plant collection in 'anthropogenic zones' (areas near a community) but that in some other instances men have more opportunities to manage, especially in areas of traditional agriculture or forest management". She also has the idea that for her the fact of being a woman helped because she could talk more easily to women, but that her husband (Robert Bye) found it difficult. So, as there are many more researchers who are men, there is an explanation as to why we know more about men than about women.

Cristina Mapes, (Botanical Gardens, UNAM, Mexico, pers.comm.) also thinks the project is very interesting and says she "realizes how little has been written on the topic". She says she feels uncomfortable because she now realizes that women who work in ethnobotany should focus more on women; "in México, in recent years, there has been an emphasis on the fact that there exists a certain differentiated knowledge and use of natural resources. It has been thought that the use of plants will depend on sex, age and social class. It is in this sense that women's role is touched only in a tangential way". She has found it difficult working with peasant women (especially in indigenous communities) because many of them not only do not speak Spanish, but will shy away

from researchers.

All this information was corroborated by Manuel Jimenez and Otto Shumann from the Instituto de Investigaciones Antropológicas, UNAM, who in answer to my questions, replied that both men and women have "special" knowledge about the environment, each on their own area of work (home and field).

b) Medical Anthropologists:

Carole Browner (1985, 1986, 1988, 1989), has conducted research in México on gender differences in knowledge of medicinal plants in Oaxaca, Mexico. She wrote to say she knows little published work directly on the subject (Women and the Environment in Rural México), but she suggested people to write to as well as publications to read.

Her research in rural Mexico is interesting in that it has de-mythified the common idea that women, in general, know more about traditional remedies dealing with feminine disorders. Her findings show that men have as much knowledge as women in this respect. It also proves that knowledge about certain natural properties (of plants), at least in her area of research, is not only women's domain. She sees this as evidence of men's

actions to control "female reproduction through ideology as well as through practical knowledge" (Browner, 1988:94) and thinks this is not exclusive to the community where her research was done. One conclusion from her research is that almost all women in the developing world possess traditional knowledge about medicinal plants. My experience proved differently.

c) Ecologists

Victor Toledo (Center of Ecology, UNAM, Mexico), together with Altieri (1983) and Alcorn (1984), among others, are regarded by some (García Barrios and Alvarez-Buylla, 1991) as believers and "discoverers" of the "ecological peasantry" (*campesinismo ecológico*). Although Toledo does not do research specifically with women, he believes in the importance of peasants as a social group in the conservation of natural resources by traditional practices and the sustainable use of these resources.

Toledo believes that the organization of peasants as family units, producing for their own consumption, generates an intrinsically balanced interaction with nature and its natural regeneration. For him, peasants belong to a different world from that of capital, a world ruled by Chayanov's Law (García Barrios and Alvarez-Buylla, 1991). He implies that as long as the peasants

have a right to own land they will be able to maintain their living conditions and will defend the preservation of the environment. He defends the existence of the *ejido* which, as was explained above (Vll.5 and VII.8), has been extremely important to peasant women. The *ejido* is now facing drastic change, arising from recent legislation.

d) Anthropologists

Manuel Jimenez, (Institute of anthropological Research, UNAM, Mexico, pers. comm.) considers that women have a relationship with their *patio or solar* (home-garden), where they spend a great deal of time. This constitutes a "natural environment", to the extent that it is formed by "natural" elements, and women necessarily require knowledge about it, knowledge that will be inherited by their daughters. In addition to these factors, he pointed out that land property-rights should be considered. Manuel Jimenez explains that before the Spaniards arrived, the fields were worked by the system of shifting cultivation, slash and burn, and rotation of arable land and thus the fertility of the land was maintained. But when the system changed, when the land was divided into small plots, it became difficult to maintain an ecological balance. Then the relation and "respect as a provider" that the people felt for the land changed. And now increasingly, they have had to participate in the

generalized destruction of the land, attributable basically to industrialization, by men who have no interest in the land except in so far as they can extract its richness by exploiting it. So peasants (men and women), who had previously had an immediate relation to nature, have had to adapt to this system and take part in the destruction, because they have no alternative, for economic reasons.

Manuel Jiménez had seen the concern of Mayan women when large areas of rain forest were on fire, they were worried because their land could be burnt; and they were aware that their men (husbands and sons) could be left with no place to work. They were also aware that the climate could change and there could be hunger. There is concern on the part of the women when "their" natural environment is destroyed.

Feminist Anthropologists

Two feminist anthropologists were interviewed at length. Their published work will be profiled here, as they have individual and significant visions.

Lourdes Arizpe (Director of the Institute of Anthropological Research, UNAM, Mexico), sees a relation between women and the environment and global change. She

calls for research on global change, which would be "the way we would understand ecological change at different scales: local, regional, national and global". She sees a relation between local processes and women who are the ones who possess traditional knowledge dealing with biotic resources. For her, the agrarian transformation in so many Latin American countries is forcing agriculture to become capitalist "and causing a shift in traditional crops and thus affecting the peasant economy" (Arizpe 1986:57), which has also meant a change in the way peasant women participate. The implication of this is a loss of knowledge about the uses of natural resources: land, water, vegetation and even wild life. She writes "the effects of unequal development of agrarian capitalism in relation to a creation of a feminine rural proletariat" have not been properly studied or analyzed in a systematic manner "and there is a tendency to homogenize the heterogeneity of situations in which rural women are found" (Arizpe, 1986:58).

When a woman belongs to a peasant family, writes Arizpe, she is exposed to a "diminishing of family income from agricultural practices" due to low prices in agricultural products in the international market and to national policies, so that although plans are periodically organized "to help" women, much more of the surplus is

extracted from the peasant sector to pay for the prosperity of the cities. Therefore women have more unpaid work to do, and a deterioration can be observed in the nutrition and health levels of their families. In this instance their knowledge (and ability to use it) of natural resources is important; if many women were given land, they might just be able have a home garden and improve the family's health and nutrition. But one must bear in mind that they already have a triple day, and they might not have the time to do all this.

Arizpe's view is that the more structurally complex a society is, the more subordinated women will be; this is shown in various ways, depending on the "productive structure" and on the "religious or cultural patriarchy of the group". In the gathering societies of today, for example, she reports very little difference in tasks performed by women and men; both genders share the tasks of collection and transformation of food stuffs, as well as child rearing and construction of shelters. "This is why it is so important not to make imprecise generalizations and to try to analyze the diversity of norms and social institutions in which men and women participate in a specific society" (Arizpe, 1986:59).

Arizpe reports that, due to their efforts to continue

living in integrated societies, Indians have been left marginalized and even thrown off their land. And integrated societies were/are those "where collective rituals, mythologies and harmonious existence with nature give human beings a dimension of totality" (Arizpe, 1986:59).

Lourdes Arizpe has worked extensively with peasant women, with urban migrants, with colonization of the forests and now with global change.

Magali Daltabuit (Institute of Anthropological Research, UNAM, Mexico) is working on the differences in environmental perception among different groups of peoples, mainly among mestizos and indigenous peoples in southern Mexico. The indigenous: Choles, Tzotziles y Tzetzales that still inhabit the Lacandona jungle in México have maintained a traditional subsistence economy that is based on "slash and burn" agriculture, although they have started participating in the market economy with some cash crops and cattle. Still, these groups have kept certain ecological criteria (Daltabuit quoting Gómez-Pompa, 1990). The mestizo migrants that have come from other parts of the country already belong to a market economy, and besides agricultural activities and cattle they perform other commercial activities. For many

of them, the rain forest is only something that will give them economic benefits in a short time, if they exploit its natural resources. This exploitation of the natural resources has been favoured by the "development policies" of the Lacandona forest, because it yields benefits in short periods of time, but in the end it has had very adverse effects on land productivity, soil conservation and the ecological regeneration of resources (quoting Leff, 1990).

Daltabuit states that the specific causes of deforestation in the tropical rain forest, although many and different, are profoundly related to the economic, social and political problems of developing countries. One of the specific causes of the destruction is the great expansion of the slash and burn system of agriculture, which was in the past an adaptative measure. Indigenous populations in the Mexican rain-forests, Daltabuit says, are characterized by adapting themselves to the local conditions, and everything they do relates them strongly with these, including the subsistence agriculture in which all members of the family take part. "The peasant home constitutes simultaneously the unit of consumption, production and reproduction" (Daltabuit, 1991:3). Also, the home is the interface between the biological and cultural spheres, being "an institution in

which the peasants can confront the economic and environmental pressures to which they are subjected" (Daltabuit, 1991:3).

For the system of slash and burn to work, Daltabuit considers that the population needs to be low. In most tropical countries it is no longer low, but has increased in density (through better medical services), and the land has become less productive. Besides, the people now working tropical lands in México are, as Daltabuit has seen, not natives who have adapted to their land during long periods of time, but mainly labourers from other climates who come in search of land and work, but are not culturally adapted, and so are less careful. (It could be argued that, although there is a cultural tradition of caring for the land, the tradition may become inadequate when the landscape and general environment are changed by migration.) Another important cause of deforestation, according to Daltabuit (a point on which Janet Townsend disagrees, pers. comm.) is the collection of wood for domestic uses, (especially in highly populated areas). That is an activity mainly carried out by women; so it is possible to say that women do contribute, even indirectly (and because they have no other choice in this case), to the destruction of the environment. Deforestation has enormous adverse effects on the inhabitants of the

tropical rain forests, but it is women and children in rural communities that are apt to suffer most. Daltabuit feels the need to know the "dynamics that affect human interaction in the global earth system, analyzing the human causes of ecological change and the effects of these changes in the communities of the regions affected" (Daltabuit, 1991:5).

In all rural communities in the tropics that depend on subsistence agriculture, whatever the climate, Daltabuit considers that women's participation is essential. "Her work satisfies needs, generates goods and services for the family...they try balancing their productive and reproductive roles. Women ensure the reproduction of the family labour force with their children, but also when they raise them, socialize them and care for them until they become adults" (Daltabuit, 1991:6). Rural women's activities vary, depending on the culture and environment in which they live; but Daltabuit considers that the range of activities, as documented, includes home management (cooking, cleaning, washing, collection of firewood, bringing water to the home), agricultural activities (sowing, harvesting and processing the food), collection of food stuffs and medicines from the wild, care of domestic animals, tending of home gardens, commercial activities, and caring for the health and

education of their families. All this work is carried on even through pregnancy and lactation; many women are malnourished. "The biological pressure of reproduction is enormous", Daltabuit says and fertility is high because of an early start in reproductive life. In addition to health care, another aspect of household subsistence which is predominantly a feminine task is the collection of the various natural resources that the forest offers: wood, firewood, foodstuffs, medicinal plants, and other materials that are used for the elaboration of utensils (Shiva, 1988). "This and other aspects of feminine work make us see the close relationship that exists between rural women and the environment" Daltabuit says. This relationship, for Daltabuit, is of an utilitarian nature; rural women need nature to perform "their duties".

What Magali Daltabuit is currently documenting in the Lacandon forest in México is rural women's perception of the environment. She is of the opinion that their perception is related to their fertility, and should be considered important (pers. comm.). Daltabuit considers that rural women make decisions on the number of children they will have in the light of such socioeconomic factors as the need for children to do domestic, agricultural or paid jobs and of the security children will provide for the parents in old age or in case of ill-health. Also,

high infant mortality is taken into account. On this point, she says, not much research has been done because of the difficulties of having successful communication with the women (because of language barriers). "So they are eliminated from research..." (Daltabuit, 1991:12). It is Magali Daltabuit's opinion that having a large number of children is an adaptative strategy, among indigenous women, which, together with cultural traditions, ensures in some way the cultural and biological reproduction of the group (Daltabuit, 1989). But she argues that this adaptative strategy has become counterproductive in view of present economic and environmental needs. Many indigenous women are changing this strategy, but there is a time lag (Townsend. pers. comm.).

Gail Mummert (El Colegio de Michoacán, Mexico), a feminist anthropologist, considers that the theme "woman and the environment" is very interesting and important, but, although "it hasn't received enough attention within the academic circles, people in Latin America and México are beginning to examine it". (Her own recent work has been on social changes associated with strawberry picking in Michoacan.)

e) Selected Geographers:

Barbara Fredrich (San Diego State University, USA, pers.

comm.), writes that an "anthropological approach is essential to obtain the confidence of witches and healers...". At the 1982 IGU she reported that "the typical botanical paper deletes or never addresses the role of women in that capacity". She suggested that "a systematic approach might include a review of all (specially old) reports from the Smithsonian, and U.C. publications for anthropologists' accounts of Amerind activities and the reports for the same period conducted by botanists, then compare the amount of documentation of Amerind Female participation in herbal traditions. Since so many of the accounts have been written by males, there is bound to be an interesting pattern. I checked some 50 articles from one journal and found little mention of women...".

Janet Townsend (Geography Department, University of Durham, England), writes that it is not only men who are destroying the rainforests: "there are women and children too, ignored by the media, academics and planners alike. They fight and suffer to clear the forest, but soon the land is run down to scruffy cattle ranches which employ very few people; the pioneers must move on and clear more forest, but there is very little left" (Townsend and Bain quoted in The Guardian 4/1/91). These women pioneers, she says, have skills that have not been appreciated. They

can create home gardens for a sustainable production of various products (fruits, flowers, herbal teas, dyes, glues, medicines). Sustainability is a central concern among poor women, but it is difficult for them to achieve it, and she argues that this is due to a strong spatial component of local tradition: the fact that they have to ask their husbands for permission to leave the house. No other geographers appear to have worked with women and the environment in rural Mexico.

A good example of Ethnobotanical research in which one would expect to find relevant information about who does what by sex, age and occupation, but does not, is Huastec Mayan Ethnobotany by Janis Alcorn (1984). Ellen Messer referring to this book in question, says: "...a careful consideration of who does what by sex, age and occupation is missing". "Whether there is a core of medicinal plant knowledge that everyone shares, and what might be its dimension are not offered so one can adequately address general questions such as "How is knowledge structured?" and "How does knowledge change?" as the culture, land use strategies and plants change".

"Overall, problems of going from the "individual" to the "cultural", "social" or "human population" level of analysis are unresolved".

"...the tone is often irritatingly condescending,

presented as if readers are ignorant that indigenous peoples are resource managers, not just romantic primitives".

CHAPTER IX

CONCLUSION

When I first began research on the subject of "women and nature", I was certain that there was a special relation of women with nature, a relationship, I thought, based on the essence of femininity, its virtues and characteristics; it made sense, as I was used to listening to women, rather than men, who were worried about environmental degradation and the possible damage to their children, to future generations. This worry, if not necessarily related to motherhood, has to do with the assumed feminine trait of "caring", a trait assumed by some eco-feminists and by many advocates of a special woman-nature relationship to be a universal trait in women.

So in the Introduction (I) I stated that I wanted to answer the questions: are women related to the environment in a special way? Do they possess special knowledge that relates them to the environment in a different way from men? The work in Mexico partly tried to prove or disprove this eco-feminist position.

After having read what evidence there is in favour of and

against a woman-nature relationship (Part I), and after having reviewed extensive literature on Mexican rural women and interviewed some rural women in Mexico (Vlll.3), my conclusions drawn from this study are:

1. The eco-feminist position (II), the belief that all women have a special affinity to nature is an elitist idea because it assumes all women have their basic needs cared for. Research in Mexico with rural women did not sustain these beliefs.

Most eco-feminist beliefs did not apply to the Mexican women I met, nor to most of the ones I read about. The women who were interested in saving the natural resources (land, water or forests) from which they lived, had a immediate objective in mind: ownership of land and availability of jobs, a livelihood (VII and VIII). Their struggle, when they actually participated in one, to protect these resources, did not seem in any way based on an affinity to nature, as eco-feminists and followers of the "woman-nature" relation (III and IV) would contend. There were many women who suffered because of the degradation of the resources, but who could or would not do anything to protect them, for various reasons, poverty and indifference being just two of them (VIII.3).

Vandana Shiva (V.2), the indian eco-feminist who considers that the real conservationists are those who live with the resource and from it, who keep it alive and reproducing itself, would find that these Mexican rural women would not conform to this idea. My evidence does not support her contentions.

On the other hand, it does support some of the ideas of authors like Dankelman and Davidson (V.3) who believe that the ill effects of hunger and disease are felt more strongly by the women who struggle to avoid them. Some rural women in Mexico, especially in places like Cuauhtemoc in Uxpanapa (VIII.3) who did not own anything and whose partners and/or sons did not have lands or jobs, who had migrated from impoverished lands (other tropical areas that had already been depleted) seemed to really be suffering from this resource degradation.

I think that women's relationship to the environment is basically determined by political and social aspects, as well as aspects of class, and not as eco-feminist authors sustain, by a natural affinity. Poor Mexican rural women did not show any interest in the preservation of their environment *per se*.

2. Gender is culturally constructed (IV. 3 and 4). The

concept of what is feminine varies through rural Mexico as it does throughout the world (VI).

The supposed relationship woman-nature has been a cause of debate among feminists, especially among feminist anthropologists, who have contributed much to development of the feminist theory (IV.3 and IV.4). They have provided a cross-cultural perspective which has helped to establish that gender is so culturally constructed that it is not possible to refer to universals.

Anthropologists have proved that women are not bound in their behaviour by a single ideological model. Women as cultural beings, like men, analyze and interpret external reality in different ways and live in relation to that specific reality. Culturally, women's reality takes various different forms throughout the world, but it is also different from men's reality.

During my field work in Mexico (VIII.3), I discovered that peasant women have a desire for their families to survive in the long term (something considered "feminine" by western standards), but carried out activities destructive of the environment that would make for only short-term survival. This would strongly conflict with the eco-feminist ideal.

3. Rural women in Mexico will have a different relationship towards their environment from other women in Mexico.

I deduced that rural women possess some knowledge of natural resources which has not been made explicit in the literature, because the activities they do necessarily involve knowledge and use of natural resources (VII and VIII). This relationship will again vary between different groups of rural women, by class, age, geographical distribution, ethnicity and -of course- personality, across Mexico.

I have demonstrated that rural women depend more immediately than urban women on natural resources for their survival. The knowledge rural women in Mexico possess and the use they make of it relates them directly to natural resources, because, as they have the social and cultural role of carers, it is seen as their duty to know and use medicinal plants to treat diseases; they use or even produce fruits, vegetables, cereals, legumes and herbs to feed themselves and their families as well as the best firewood to cook with and flowers and a variety of plants to heal, to decorate, to calm emotions or to provide shade. This knowledge will sometimes provide an extra income to help with the household expenses.

But such knowledge is not exclusive to women; the difference is in the way it is used, because of women's culturally determined role. This knowledge is also very varied and, at present, probably very much intertwined with "modern" western knowledge. Also, some (or in some cases most) of it may be lost by changes in habitat when migrations take place.

Masculine and feminine perceptions (VI.3 and VI.4) probably differ widely because the two sexes use of and familiarity with natural resources are evidently different. Gender-differentiated knowledge of the various uses and different characteristics of the natural resources surrounding men and women must exist. But much of this knowledge is a part of culture, and influences from market economies (capitalistic and/or western influences) seem to be having a negative influence on men and women.

But rural women in Mexico do not seem, just from the fact of being women, to have a special inclination to protect the resources from destruction. If in order to survive, they must let the resources disappear, they will not have second thoughts about it.

4. There is a lack of research about rural women's

knowledge of the environment in Mexico (Appendix A).

Women's knowledge about the environment in Mexico has not been sufficiently (as far as academic needs are concerned) researched. Researchers interviewed personally or in writing (VIII.4) agreed on this. Many had not even thought of doing research of this sort.

The reason for this may be that women are not considered sufficiently important to be studied. Anthropological literature has proved that there are few, if any, societies in which women surpass the power and authority of men. Rosaldo (1974) has remarked that although women may be important, powerful and influential, it seems that, relative to men of their age and social status, women everywhere lack generally recognized and culturally valued authority. Our own culture barely recognizes the value of women's work, let alone women's knowledge. Anthropologists are now identifying societies which do not conform to this pattern of universal female subordination, but they are few in number (Sanday and Goodenaugh, 1990).

In general terms, women have been marginalized in the literature. In the early 70s, several feminist anthropologists (Rosaldo and Lamphere, 1974; S. Ardener,

1975) and some men (Ardener, E., 1975) noticed and wondered about this. Bleier (1985) agrees that there has been gynocentric science all along but no one has bothered to recognize it, because it is not seen as "science" (Bleier, 1985:70).

The history of science teaches us that the choices of assumptions and of methods, as well as of questions to be investigated by researchers, are choices based on values (Bleier, 1985). This, I think, is reflected in the lack of literature and in the assumptions of rural women's ignorance.

5. Poverty in Third World countries such as Mexico is an important reason for the destruction of the environment.

Poverty is a result of inappropriate technological changes in agriculture that have now rendered infertile large expanses of land in, for instance, the rainforests (V). Poverty is a result of failure on the part of governments (that of Mexico's is no exception, even though the rhetoric is quite different) to provide the necessary investment in human capital, the essential laws and credits and the necessary assistance, to see that natural resources are protected, or "rationally used" by both the urban and the rural sector. Above all, the

Mexican government fails to implement its rhetoric and even its laws.

Rural poverty affects men and women. Responsibility for the children in the family is shared by both parents, but seems to be of a different quality for women. Women suffer the effects of rural poverty strongly and in more than one way. Even if we do not accept the eco-feminists' belief in a subordination imposed by men, the effect of *machismo* in countries like Mexico is indisputable. Responsibility for the children, "maternal instinct", or in a more practical sense the need to assure care for themselves in old age, bears heavily upon women.

Problems related to the environment are more and more a cause for concern to women. In rural areas, various political campaigns, in which women are taking part, over the ownership and use of land and over credit conditions are related to poverty (West, 1991).

6. Rural people in Mexico traditionally made a less exploitative use of land.

The traditional knowledge that made this possible is no longer easily applicable because of the different economic policies to which land has been subjected for

many years past. This has caused an environmental degradation that should not be seen as caused by peasants' ignorance but as a product of poverty that makes them over-exploit scarce resources. Also, that women are being pushed to work in agro-industrial jobs can be seen as destructive of the peasant economies, as it probably leads to a loss of other traditional knowledge through lack of use and because new methods are superseding the old (VII).

7.- The more ecological knowledge there is to learn, the better (VII.6).

In recent years, indigenous knowledge has been "discovered" to be valuable. Rocheleau (1989) has stated that there is little doubt of the usefulness of cataloguing some "bits" of rural women's ecological knowledge (e.g. all the knowledge on wild and cultivated plants, on their uses, their habitats and their environmental requirements, can serve to improve our own collective ability to contribute to a "sustainable" development). Some of these "bits" of information can be found, as the present research shows, mainly in the anthropological literature. Yet there is still the need to comprehend the whole system. "There is clearly an instrumental value in the coherence and meaning conveyed

by a more complete contextual understanding and documentation of whole knowledge systems" (Rocheleau, 1989). So even rescuing residual knowledge from "dying traditions" is relevant. And as Merchant said, "even surviving memories of the larger scientific context will inform our understanding, as will the very story of its erosion and disintegration" (Merchant, 1980).

SUGGESTED WORK:

I suggest that the useful next step would be to undertake academic research: I agree with Dianne E Rocheleau (Clark University, U.S.A.) that "the gender division of ecological knowledge and interest in genetic resources has received so little attention, and the whole international environment/development "community" has launched into genetic resource conservation and "indigenous knowledge" as if it were gender neutral territory, which it certainly is not".

Ethnoscientists should acknowledge therefore that knowledge is not gender-neutral, and undertake research with female and with male, young and old. To avoid the problems of women not speaking to men, women researchers should be included in all teams. If women do not provide information for any reason, it is important to specify

this. In the past, the tendency has been to use the word "people" meaning the whole of a population, when in fact only men have provided information.

I suggest that the objectives of ethnobotanical research should include a differentiation by gender of environmental knowledge; in this way, a complete picture will be obtained.

In the specific case of women and the environment, it is sought to know whether women feel to some extent that they themselves represent nature, sexuality, love, chaos and irrationality, then only women will provide reliable information. It will also be useful to collect information on how women order and evaluate nature. Research of the kind being conducted by Magali Daltabuit (UNAM, Mexico) in various regions of the country could provide useful information to make it possible to draw a geography of rural women and the environment in Mexico.

One factor that would aid research on environmental perception is better understanding of the processes by which cultural knowledge is acquired. "Although it is recognized that individuals vary in how much they know or how well they report on "core" cultural information, a method of identifying informants' knowledge has been

elusive, leaving anthropologists to ponder the extent to which their informants are knowledgeable and accurate" (Weller, 1984:971). It is important also to identify factors of class and economic variables when determining both the sources of women's ideology and the processes by which that ideology is transmitted.

And as Browner suggests, a measure of "adaptive competence" should be incorporated into models of ethnographic studies; it will enable us to determine the distribution of therapeutically efficient knowledge, and also the characteristics of those individuals who can be expected to be better than others in using this knowledge efficiently (Browner, 1988 [draft]:24). In this way, the concept of culture and the nature, sources, and consequences of intra-cultural variation may be made easier to understand.

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In the writing of this thesis I did not find enough information to write a geography of women and the environment in rural Mexico; women in different populations and within different ethnic groups will have a different perspective on the environment, contrary to the eco-feminists' beliefs that maintain that <u>all</u> women

will be concerned with sustaining the environment. My field experience proved different. As stated women will worry firstly about their people regardless of the damage their survival can do to the environment.

I do not pretend to have seen every piece of research written on rural women in Mexico or to be able to draw a final conclusion about their relation to the environment. But from what I have read on women's work, I am able to say that rural women in Mexico must possess information which they act upon while working in agriculture, and in their home gardens, while they care for sick relatives and when they work for various enterprises dealing with either animals or plants. I cannot, from what information I have read, infer how they feel towards the destruction or conservation of the environment.

I have found that women must know, but we do not know what they know. I have tried to demonstrate that there is a need for research to be done, and why there is this need. The main conclusion from this study has been that, although there is a strong tendency in western society to relate <u>all</u> women to the environment, assuming that there is a greater desire on women's part than on men's part to protect it and that therefore women must have an intrinsic knowledge on how this protection will be

effected, this is not true. What is true is that women, due to their cultural and social roles, usually, but not always, possess knowledge about the environment that would enable them to protect it, if circumstances permit it and if they want to.

What is also true is that women's knowledge has often been ignored, not only because of bias but also because of difficulties in communication with women. Researchers and scientists I interviewed personally or in writing, agreed that hardly any work has been done on women's perception of the environment in Mexico.

With this thesis I hope to contribute to feminist research which is currently trying to recuperate and to recognize women's knowledge and actions relative to the natural environment. I am trying to do this not only because there is a field of research barely touched, but also because there is a possibility of finding solutions to the environmental crisis through women's perspectives, as eco-feminists would wish. Most eco-feminists insist that men are the sole cause of the environmental destruction, but not all feminists agree. Nor is it only feminists who now proclaim that patriarchal principles of potency and domination are close to destroying our planet for all future generations. Faced with such devastation,

men too may consider an alternative way to think, feel and live.

As for women researchers dealing with people, I think we must begin to conceptualize science as non-masculine. It is not easy, since, as Ruth Bleier (1985) says most of written civilization (our history, language, conceptual frameworks and literature) has been generated by men, but we only need a reminder that, if we as women believe we know and think differently, then women everywhere have much to contribute.

Appendix A

BIBLIOGRAPHICAL SEARCH

Searches in Durham:

In Durham University, in 1990, I carried out a search covering ten years (1980 to last issue of 1990), of:

a) Annual Review of Anthropology
b) Ethnology
c) American Anthropologist
d) American Ethnologist
e) Human Organization

with the object of finding relevant material on Rural Women and the Environment in Mexico. The results were:

1) Five articles dealt specifically with Mexico, four of which had to do with sex and/or gender.
2) Fourteen articles dealt with female roles and women's status in general and often in relation to production and reproduction; subsistence and agriculture; hunters and gatherers; peasants; development; and ethnology, anthropology and women's studies.
3) Five articles, although seeming more general, were expected to deal with women in some way. These were about nutrition, domestic production, household gardens, adoption of agriculture, ecological anthropology.

4) Four articles dealt with gender and women's status in specific places, not in México.

A random check of issues of journals such as Cultural Survival Quarterly proved useful for references on "general" points related to "women and the environment".

A search was also conducted on the DISSERTATION ABSTRACTS ONLINE database and the CAB ABSTRACTS database, both of which use the DIALOG Information Retrieval Service. At the end of the search, Ms. Marilyn Hird, the Information Services Librarian, wrote: "There is plenty of literature on Mexican women, but it is clear that most of this is concerned with such issues as breast-feeding and contraception. I haven't found anything associating Mexican women with ethnobotany or plants".

Dissertation Abstracts on México, women and "rural" (3 items, see bellow);
Biosis on México, women and "traditional medicine" (1 item);
CAB (which includes WAERSA (World Agricultural, Economic and Rural Society Abstracts), on México, women and "agriculture" (8 items);
Agricola on México, women and "agriculture" (5 items)

Dissertation Abstracts Online is a definitive subject, title and author guide to virtually all American doctoral dissertations accepted at an accredited institution since 1861. Approximately 99% of all American Dissertations are cited in this file. Masters' Theses have been selectively indexed since 1962. It also disseminates citations for thousands of Canadian dissertations and an increasing number of papers accepted at institutions in other countries.

DISSERTATION ABSTRACTS:
A search from 1861 to July 1989.
Words and combinations used:
woman-women/ gender/ ethnobotany/ agroforestry/ ethnoscience/ environment/ colonization/ Mexico/ Latin America.

Three items were listed, of which only **one** seemed relevant to the subject of "Rural Women in México and the Environment":
Morayanne, Patricia. Ph.D. 1986. Knowledge in Farming Systems: A personal construct theory approach with repertory grid technique (Mexico, innovation, methods, inquiry, rapid rural appraisal). University of Wisconsin-Madison. It deals with a method of eliciting local knowledge from farmers in the Puebla Valley, México. The

method proved successful when insights into women's work were gained, but women's relation to the environment was not investigated.

CAB Abstracts is a file of agricultural information, published by CAB International, formerly the Commonwealth Agricultural Bureau.
Over 110,000 journals are scanned, as well as books, reports and other publications.

These specific searches were in: World Economic & Rural Society Abtracts; Rural Extension, Education & Training; Rural Development Abstracts.

CAB ABSTRACTS:
Searches from 1972 to 1983 and from 1984 to 1989 were conducted.
Words and combinations used:
woman-women/ gender/ México/ Latinamerica

15 items were listed. 13 dealt with Latin American rural women, of these five were relatively relevant to the present research, (but do not discuss México specifically).

These 5 were:

1) Baxter, S. 1985. Feminist theory, state policy and rural women in Latin America: a rapporteur's report. Department of Economics; University of Notre Dame. Indiana, USA 46556. Working Paper, Helen Kellog Institute for International Studies, University of Notre Dame. (no. 49): 32pp. (BIDS).
Among other topics this deals with the implications for rural women of the Latin American agrarian reform experiences and the failure of women's subsistence patterns.

2) Arizpe, Lourdes. 1985. Peasant women and the agrarian crisis in Latin America. Revue Tiers-Monde. 26 (102): 325-334 (BIDS). This was used for this thesis and is cited here. It places emphasis on the heterogeneity of women's situations.

3) Ashby, J.A.; Gomez, S. (compilers). 1985. Women, agriculture and rural development in Latin America. Cali, Colombia; Centro Internacional de Agricultura Tropical; Muscle Shoals, Alabama, USA; International Fertilizer Development Center. 1985. v + 171 pp. (OAE). It is an annotated bibliography but has no material on women and the environment.

4) Deere, Carmen Diana. 1985. Rural women and state &

policy: the Latin American agrarian reform experience. Working Papers, Office of Women in International Development, Michigan State University. (No. 81): 32pp. It reviews 13 Latin American agrarian reforms showing that they have mostly benefited men mainly because of the use of "households" and the incorporation of only male household heads into the new agrarian reform structure. It does not deal with women and the environment.

5) Wilson, Fiona. 1985. Women and Agricultural change in Latin America: some concepts guiding research. Centre for Development Research, Copenhagen, Denmark. World Development 13 (9): 1017-1035. It states that it is still not possible to say how the lives of ruarl women are affected by the processes of commercialization in agriculture. It stresses the interplay of relations of gender with relations of class and ethnicity.

Two articles dealt with gender in Latin America, neither of them specifically in México although both were interesting.

1) Jiggins, Janice. 1986. Gender-related impacts and the work of the international agricultural research centers. CGIAR Study Paper, Consultative Group on International Agricultural Research, World Bank. (no. 17). 95 pp. It

deals with the neglect of gender issues in agricultural research and technology which diminishes actual potential. She challenges the "appropriate" male and female roles by demonstrating the importance of women-headed households among the rural poor; the necessity of female income for the family's survival and the scale of women's participation in agricultural production. She states that there is a growing volume of documented examples of gender-specific varietal preferences for seed, determined by the particular roles, tasks and responsibilities of men and women (these documented examples seem unavailable). She also says that little effort has been made by the International Agricultural Research Centers (IARC's) to determine women's seed and or stock selection criteria, varietal preferences and existing genetic resources, or the experimental variables tested on them.

2) Wilson, Fiona. 1983. The representation of gender in current indigenous thought, CDR Project Paper, Centre for Development Research, Denmark. (No. A. 83. 6): 31pp.
This discusses the representation of gender in current indigenous thought. Questions are explored with specific reference to Andean Indian society in Bolivia and Peru (not in México).

In Agricola, some examples of the items listed:

a) Browner, C.H.; Ortiz de Montellano, B.R. 1986. Herbal emmenagogue used by women in Colombia and Mexico". In Plants in indigenous medicine and diet: biobehavioural approaches. edited by Etkin, N.L. p.32-47. Bedford Hills, N.Y. : Redgrave, c1986. It did not prove useful for the specific theme of women and the environment in Mexico as other papers by Browner did.

b) Elmendorf, Mary. 1976. Nine Mayan Women: a village faces change. Cambridge, Mass.: Schenkmann Pub. Co. June Nash (In the section "Applied" of American Anthropologist (83, 1981), pp. 970-971). As indicated in this book: she "accomplishes two objectives":...presenting a sympathetic view of the society, capturing the humanistic and phenomenological aspects of peasant women's life'. And it is "...a methodological exploration of what is gained in an ethnographic study focusing on women".
She "...makes the focus on women an extension of knowledge rather than a step in the dark".

c) Arizpe, Lourdes and Botey, Carlota. 1985. Mexican agricultural development policy and its impact on rural women. In Rural women and state policy: feminist perspectives in Latin America. Edited by Deere, C.D. and

León de Leal, M. Presented at the Symposium on "Agricultural Development Policy and Rural Women in Latin America: An Evaluation of the Decade". July. Bogotá, Colombia. It did have useful information and it is cited in this thesis.

Geo Abstracts was also used in the search using the key words and possible combinations: women/ gender/ mexico/ environment/ agroforestry/ colonization/ ethno.

The result was a listing of 23 items of which only **three** were relevant.

1) Dankelman, Irene and Joan Davidson. 1988. Women and the Environment in the Third World. Earthscan Publications, Ltd. London. This was used here and is cited.

2) Wilson, Fiona. 1984. Women and the Commercialization of Agriculture; a review of recent literature on Latin America. Centre for Development Research, Copenhagen, Denmark. This was used here and is also cited.

3) Women's role in changing the face of the developing world. Papers for discussion. Women and Geography study group session. Institute of British Geographers, Durham

1984.

Searches in Mexico city:

The Bibliographical search in Mexico City did not give positive results in the form of bibliography about rural women and the environment in México. The search was carried out in:

1) CICH, Unam (National University). Two Data Banks were used:

a) International Data Banks:
Searching in:
In Social Science research from 1972 to 1991,
In Sociological Abstracts, from 1963 to 1991 (march) and
In Dissertation Abstracts, from 1861 to 1991 (april). (In Durham the search in Dissertation Abstracts was from 1861 to 1989; the combinations of words used in Mexico were different from those used in Durham).

Using combinations of:
woman/ peasant/ rural/ natural resources/ environment/ ecology, but without "Mexico". Only **five** references appeared, none relevant.

b) National Data Banks:

This produced more references, although only SOME dealt specifically with women and the environment. The geographical area was all Latin America.

The words being searched for in this case were (in Spanish and English), in both title of publications and as key words in combination and on their own:

mujeres (women)/ campesinas (peasant women) / medio ambiente (environment)/ México/ Recursos Naturales (natural resources)/ Ecología (ecology)/ conservación (conservation)/ Reforestación (reforestation)/ huertos familiares (home gardens)/ plantas medicinales (medicinal plants)/ medicina tradicional (traditional medicine).

After various combinations, this search produced **thirty nine** references, mostly dealing with medicinal plants and traditional medicine. If we consider who is usually in charge of growing and tending medicinal plants and doing the healing, we should expect to find the word "woman" in them.

Only **one** of the 39 references has "woman" as a key word, (the same that had the word "ecology" and "feminism):

Vitale, L. 1984. Especificidad Latinoamericana de los

movimientos sociales feministas. Universidad Central de Venezuela. Fac. Ciencias Economicas. Cuadernos Americanos. 252; 1; Ene-Feb. 29-44.

One deals with "midwives":
Namakfordosch, MN. 1983. Las Parteras; medios de difusión y canales de distribución adecuados para la planificación familiar: areas rurales. UNAM. Fac. Contaduría y Administración. México. 125, Jul-Ago, 67-83. It does not deal with women and their relation to nature.

one about pregnancy and traditional medicine:
Prado, X. 1884. Embarazo y Parto en en la Medicina Tradicional del Area P'urepecha. Secretaria de Educación Pública. Dir. de Cultural populares. Relaciones; 5; 20; Otoño; 113-120. It does not deal with women and their relation to nature.

To the previous words, the following were added (in English and Spanish), to try to make the search more complete:
mujeres (women)/ campesinas (peasants)/ mujeres rurales (rural women)/ etnobotánica (ethnobotany)/ curanderas (healers)/ ecology/ feminism and ecology.

In this national data base (BIBLAT), with titles in

English, Two references appeared.

They are:

a) Zolla, C. 1980. Traditional medicine in Latin America, with particular reference to México. In the Journal of Ethnopharmacology; 2; 1; 37-42. 1980. It does not deal with women and their relation to nature.

b) Young, Kate. 1978. Changing economic roles of women in two rural Mexican communities. In Sociologia Ruralis; 18; 2-3; 197-216. 1978. This does not deal with women and their relation to nature.

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