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The social construction of nature as the other and its human consequences

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**THE SOCIAL CONSTRUCTION OF NATURE AS THE OTHER AND ITS
HUMAN CONSEQUENCES**

**A Thesis Presented to The Faculty of the Department of
Social Sciences
San Jose State University**

**In Partial Fulfillment of the Requirements for the
Degree Master of Arts**

**By
Shannon Abernathy
August 1999**

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ABSTRACT

THE SOCIAL CONSTRUCTION OF NATURE AS THE OTHER AND ITS HUMAN CONSEQUENCES

By Shannon Abernathy

This thesis explores the historical relationship between the human domination of nature and the domination of some social groups by others. I will examine the symbolic connections between women and (disordered) nature that led to the mass persecution of women in Europe, largely during the 16th and 17th centuries. I will also uncover the symbolic connections between native Africans and Americans and animals, leading to the enslavement and persecution of both groups by colonizing European Americans.

My research has revealed that the Euro-American fear and/or hatred of nature, which characterized much of the 16th and 17th centuries, underlay the oppression of both groups. I will argue that this hatred accumulated through three marked stages in history: the agricultural revolution, the rise of anthropocentric monotheistic religions and the Scientific Revolution.

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CHAPTER 1: INTRODUCTION

The history of race and gender relations in the West¹ is an extremely complex set of topics. What is clear, however, is that historically, both women and members of certain "racial" groups have been oppressed by the ruling class.² Numerous factors have influenced this oppression over the last several centuries. These include political, economic, religious and social arguments for the continued domination of some humans by others. Owing to this complexity, no single factor can fully explain the origins or relationship between these seemingly disparate phenomena.

Yet there is one unique factor, which has been largely overlooked, that ties together the oppression of European women and native peoples of the Americas and Africa. This factor is the social construction of nature³ as the Other⁴

¹ "West" in this paper refers to the United States and Western Europe, particularly during the 16th and 17th centuries.

² This refers to Caucasian or white, patriarchal rule inherent in Western culture.

³ By nature, I mean all those things outside of the human cultural sphere. This would include plants, animals and all of inanimate nature (rocks, mountains, rivers, etc.).

⁴ "Other" refers to the identification of nature as the antithesis to culture or Western civilization. Nature in this context symbolizes the "wild," "chaotic" and "disordered" perceptions of nature, which became prominent during this period.

and in this paper, I will examine how native peoples of Africa and the Americas and European women were affected by this social category largely during the 16th and 17th centuries.

An obsession with cultural "progress" and a marked fear and hatred of nature permeated the Euro-American atmosphere of the 16th and 17th centuries. During this period, millions of Native Americans and Africans were directly compared to animals and were described as "brutes," "beasts," and "sub-human." In addition, hundreds of thousands of European women were targeted as witches, due to their symbolic associations with nature. The need to control nature and the disorder that symbolized it led to the torture, mutilation, enslavement and deaths of millions of people in the Americas and Africa and hundreds of thousands of European women during this period.

The Euro-American fear and hatred of nature came about very gradually through three marked stages in human history: the agricultural revolution (c.12,000 BC), the religious revolution, or the rise of Western monotheistic religions (c.2,000 BC) and the scientific revolution (c.1500-1700). New cultural views of nature emerged through these three events. In each case, nature became

increasingly exploited and despoiled due to these developments. And unfortunately for some human groups, "natural" status was projected onto them and they too would suffer greatly because of this label.

CHAPTER 2:

Objective

My objective is to demonstrate how changing social concepts of nature and human values toward the natural world have altered social relationships. In Chapter 4, I specifically focus on the relationship between race and nature in the Americas, largely during Euro-American colonization (16th and 17th centuries). In Chapter 5, I focus on the relationship between gender and nature, as it played out in Europe during the same period.

Methods

In this thesis, I will primarily use a qualitative analysis of a male-dominated Western culture, focusing on three highly important developments. In Chapter 4, I will examine the shift from a hunting and gathering economy to

an agricultural one and the cultural views of nature that it engendered. Second, I will focus on the rise of Western monotheistic religions, such as Christianity, and the resulting desacralization⁵ of nature. And finally, I will describe how Western science and philosophy have affected our perceptions of the natural world and of those human beings living within it.

I will also focus on race relations between Euro-American colonizers and the indigenous peoples of Africa and the Americas. The colonizers carried with them highly anthropocentric and dualistic views on animals and nature, as well as ethnocentric views on "cultural progress." I will argue that the strong associations between native Africans and Americans and animals led to mass oppression by the Euro-American colonizers over the natives.

In Chapter 5, I will focus on the Scientific Revolution and its associations of women and nature. I will trace the fall of the "organismic" theory of nature to the newly introduced theory of a dead, mechanical nature and illustrate its implications. And I will reveal the

⁵ Prior to the rise of Western monotheistic religions, pagan religions—which held nature to be sacred—flourished for thousands of years.

associations of symbolic imagery between disordered nature and disordered women that led to the witch trials.

In Chapter 4, I will use content analysis to reveal the highly condescending values carried by the Spanish soldiers as they vanquished the American Indians. I will also use this same tool to reveal the anthropocentric values contained within Genesis and within Western philosophy- mainly that espoused by Aristotle and Descartes.

I will use content analysis in Chapter 5 to examine the misogynous metaphors abundant in the scientific discourse of the 16th and 17th centuries. The strong presence of female metaphors for the Earth and the need to control (a disordered female) nature figure prominently in this analysis.

I will use statistics and demographic analysis in Chapter 4 to illuminate the numbers of enslaved Africans, as well as the numbers of American Indians casualties encountered during the colonization of the Americas. I will use statistics in Chapter 5 to argue that the witch trials/persecutions were gender-specific.

At the end of Chapter 5, I will use personal narratives of the lives and trials of several witches and

by doing so, I hope to illuminate who these women were and what their lives were about. I will also examine the strong sexual content of the witch trials, which will further elucidate the gender specificity of these persecutions.

Theoretical Framework

I am approaching this topic from an ecofeminist perspective, which sees a strong historical link between the domination of some social groups (e.g., women) by others and the domination of nature. In this thesis, I examine Western socio-cultural construction of nature and the sets of dualisms it created-- such as human/animal and culture/nature-- used to rationalize the oppression of European women, Africans, Native Americans, and nature alike. This paper stands as a polemic against the Western cultural construct of nature as the Other and the related concept of social "progress."

CHAPTER 3:

Literature Review

My interest in this topic stems from my research into and concern for issues such as animal rights and environmental ethics. While researching these topics, I found there to be a strong relationship between the domination of some social groups by others and the domination of nature.

After reviewing the literature, I found that some authors have specifically demonstrated the link between the domination of nature and the domination of human beings, yet nearly all of them approach this issue from a single perspective. For instance, ecofeminists typically discuss issues of gender inequality, while many minority authors specifically focus on race. In this thesis I will synthesize the arguments of many authors before me to claim that the social construction of nature as the Other has affected both race and gender relations.

In Chapter 4, I rely most heavily on Jim Mason's An Unnatural Order: Uncovering the Roots of Our Domination of Nature and Each Other (1993). Mason's book comprehensively examines the cultural roots of the domination of nature and of some humans by others. Although Mason makes the connection between the domination of nature and the domination of humans, his analysis of gender falls short.

Authors dealing specifically with gender are focused on in Chapter 5, below.

Other works contributing to the argument set forth in Chapter 4 include: Victor Ferkiss's Nature, Technology and Society: Cultural Roots of the Current Environmental Crisis (1993). Although Ferkiss focuses on the acquisition and use of technology in addressing current environmental concerns, he outlines the cultural shift from hunting and gathering to the rise of agriculture, which I develop further, below.

Marjorie Spiegel's The Dreaded Comparison: Human and Animal Slavery (1988) provides an in-depth analysis of the symbolic connections between the domination of humans and animals. Many theoretical and statistical features of her book are incorporated into this document.

Yi-Fu Tuan's book Dominance and Affection: The Making of Pets (1984) offers valuable insights into human domination of the natural world. Of special interest to my thesis is his illustration of the animistic worldview.

Author James Serpell explores the historical relationship between animals and human beings in: In the Company of Animals: A Study of Human-Animal Relationships (1986), with an emphasis on pet keeping. Serpell also

addresses the changing relationships between humans and wild animals—especially after the rise of the agricultural revolution. Historian Roderick Nash also argues that the development of agriculture played a key role in changing our relationship with nature in Wilderness and the American Mind (1967). Nash's argument that "wilderness" is a social construct is a salient feature of this document.

Sir Keith Thomas offers an historical perspective of the rapidly evolving views toward nature and humanity's place within it. He outlines his arguments in Man and the Natural World: Changing Attitudes in England 1500-1800 (1983). Thomas' critique of shifting human values plays an important role in this thesis, especially those engendered by the Scientific Revolution.

William Leiss offers an historical account of the ongoing struggle between humans and the natural world in The Domination of Nature (1972). Leiss focuses on the religious, philosophical and technological roots of the current environmental crisis and I am indebted to him for many of the structural arguments contained in this thesis.

Philosophers Peter Singer and Tom Regan contribute to this document from an animal rights advocacy position. Singer's Animal Liberation (1990) and Regan and Singer's

(eds.) Animal Rights and Human Obligations (1989) both offer numerous primary source quotes from philosophers such as Aristotle and Descartes and religious authorities such as Aquinas. I am indebted to these authors for their analyses of anthropocentric philosophy.

The Boundless Circle: Caring for Creatures and Creation (1995), by Michael W. Fox, examines organized religious attitudes toward animals and nature. Fox's analysis of the history of religious ideas from animism to monotheism provides data, which has been useful to the arguments contained in this work.

In Chapter 5, I shift my focus to the interconnections between the domination of nature and the domination of women. Ecofeminism understands these links and ecofeminist authors have offered valuable insights into these connections. Little has been written about the fate of witches, however, from an ecofeminist perspective. In this thesis I will combine the works of feminists and ecofeminists to argue that some women were specifically targeted because of their symbolic relation to nature.

I am most heavily indebted to many of the arguments contained within Carolyn Merchant's book The Death of Nature: Women, Ecology and The Scientific Revolution

(1980). In this book, Merchant examines the impact of natural imagery being projected onto women (and vice-versa) during the Scientific Revolution, culminating in the "death of nature" and the deaths of hundreds of thousands of women during the witch trials. Merchant also provides this document with numerous primary source quotes.

W.B. Crow's book A Fascinating History of Witchcraft, Magic and Occultism (1968) offers valuable insights into the history of witchcraft, as well as contributing to the statistical account of witches' persecution. Like many other authors, however, Crow ignores the issue of gender in his analysis of the witch trials, which forms an important part of this document.

A gender-focused analysis of the witch trials is put forward by Anne Barstow in her book Witchcraze: A New History of the European Witch-hunts (1994). In her foreword, Barstow makes explicit her contention that gender has been grossly overlooked as a focus for the witch-hunts. She has also thoroughly researched the statistics relating to this topic. Barstow provides details of the lives of accused women, giving them context and meaning- an important feminist addition to this history. I utilize all

of the above mentioned aspects of Barstow's work in this document.

Other ecofeminist authors' work contributing to this thesis include: Vandana Shiva's Staying Alive: Women, Ecology And Development (1988). Shiva argues that women's oppression, as well as nature's, stems from a reductionist, patriarchal science and its dualistic framework of value. Shiva's analysis adds to the theoretical implications of this thesis. Barbara Noske's Beyond Boundaries: Humans and Animals (1997), provides further analysis of the reductionist, dualistic structure of science and its impact on (female) nature, which has been utilized in creating this work.

In Rape of the Wild (1988), Andree Collard and Joyce Contrucci expose the philosophical links between the exploitation of women and the exploitation of nature. This argument, as noted above, is a core feature of this thesis. I am also indebted to Roger Gottlieb who edits This Sacred Earth: Religion, Nature, Environment (1996), which contains an essay by Rosemary Radford Ruether. In this essay, Ruether discusses the connections between woman and nature and offers an explanation for the female-nature identity: childbearing and child rearing. This argument helps

develop the concept that nature has been traditionally viewed as female.

Woman and Nature: The Roaring Inside Her (1978), by Susan Griffin, offers an eclectic collage of information relating to the interconnectedness of women's domination and that of the natural world. Of particular interest to this work is her data pertaining to the European witch trials.

Carol Adams offers a feminist perspective of the domination of animals in her book Neither Man Nor Beast: Feminism and the Defense of Animals (1994). Adams explores the concept of the logic of domination, which posits that the strong necessarily dominate the weak. In Adams view, this forms the basis for the domination of women by men and the domination of animals by human beings. This concept forms a salient feature of this thesis.

CHAPTER 4:

RACE AND NATURE

a. INTRODUCTION

The emergence of an agricultural economy, monotheistic Western religions and the development of highly

anthropocentric Western philosophies and sciences have caused untold suffering for the natural world. It is primarily through these three events that Western peoples have become estranged from nature and have sought to gain control over it, physically and psychologically. No longer a part of nature, many Westerners have learned to fear and hate the natural world and its powerful symbols- the animals.

Through the process of domestication and the impact of religious and secular reasoning, the animal kingdom (and the rest of nature) has become objectified and has been forced to endure great hardships in its relationship with humans. This Western mentality towards the "brute beasts" has also had serious implications for some human groups as well; and as will be demonstrated, the ideology employed toward dominating both humans and animals is rooted in the same underlying hatred of nature and the need to control the Other.

The Western cultural worldview has reduced those "uncivilized" people who were perceived to be living "close to nature" to the status of animals- beings incapable of possessing rights. Hence, when Euro-American "explorers" encountered Native Americans and Africans living in their

natural settings, they were thought to be "brutes", "wild beasts" and/or "savages." Many Europeans and later American colonists regarded these people as animals or "mere objects." In this thesis I will demonstrate that Euro-American colonizers feared and hated nature and animals and due to this, they ruthlessly enslaved and murdered native peoples in the Americas and abroad.

This fear and hatred of nature developed very slowly in the west. For millennia, humans lived in relative harmony with the rest of nature; until about 12,000 years ago, all human groups lived within nature as nomadic hunter-gatherers. These peoples often worshipped nature or features of it, as all of nature was considered to be living and possessing spirits or souls.

b. ANIMISM

Although it is problematic to generalize about disparate groups of people over vast periods of time, anthropological research has concluded that pre-agrarian peoples had a much different, interdependent relationship with nature. Much of this was due to necessity, as early human groups interacted and competed with nature, much as

the other animals did. These peoples developed subsistence economies that were more or less balanced with the rest of nature and regulated their populations when future food resources were questionable.

To pre-agrarian human groups the natural world and animals were seen as alive and full of souls. This religious belief is known as animism and may still be found among a dwindling number of indigenous people scattered around the world today. These pagan religions developed and spread throughout the world and have flourished with their numerous animal deities for tens of thousands of years. A prayer by the Sioux Indian Black Elk exemplifies many indigenous peoples' beliefs that nature was full of spirits and was considered sacred:

We should understand well that all things are the works of the Great Spirit. We should know that He is within all things: the trees, the grasses, the rivers, the mountains, and all the four-legged animals, and the winged peoples (Fox, 1995 p. 108).

Until about 12,000 years ago, this basic worldview pervaded human thinking, and animal lives, if they were taken at all, were taken through (sometimes-complex) rituals with much reflection and consideration for the fallen being. Foraging peoples co-existed in nature, not

outside of it, and certainly not above it morally; human-animal relations were seen as a partnership. This animistic ideology has lasted well into current times and change has come about gradually for pre-agrarian people, as they have resisted efforts to "agri-culturalize" them. Animals were (and by some still are) seen as elders and teachers, at least the equals of humans, prior to the development of agricultural values. An Inuit hunter's statement illustrates this fact:

The greatest peril in life lies in the fact that human food consists entirely of souls. All the creatures that we have to kill and eat, all those that we have to strike down and destroy to make clothes for ourselves have souls, like we have, souls that do not perish with the body, and which must therefore be propitiated lest they should avenge themselves on us for taking away their bodies (Tuan, 1984 p.91).

Pre-agricultural peoples were not isolated from nature and saw many similarities between themselves and the other animals in body shapes and sounds, feeding and sexual behaviors, and other bodily functions. These "animal" behaviors were not regarded with disgust or embarrassment, nor seen as inferior in any way, as these creatures were seen as other kinds of people with communities and languages of their own. The contemporary Western mindset, with its anthropocentric and dualistic views towards humans

and animals makes this a very difficult perspective to understand, but it did, and undoubtedly still does exist among many "primitive" tribal peoples today.

In the West, the rise of agrarian cultural values greatly diminished the role of animals as teachers and elders who deserved great respect. The domestication of animals had a powerful impact on the social psyche of budding agricultural societies and the enslavement of wild "beasts" drastically altered human's age-old relationship with the natural world. Western agrarian culture subjugated animals to human whims and placed humans above moral accountability for their actions towards them. This manifesting ideology would come to have dire consequences on human-to-human relations as well.

c. THE AGRICULTURAL REVOLUTION

Agrarian culture developed in the "cradle" of Western civilization, what is popularly known as the Middle East, around 12,000 years ago. Farming began here in fits and starts, the first farmers moving with the seasons, gathering wild plants and hunting animals to supplement their experimental farming methods. But over time,

foraging gave way to sedentary farming, as more people settled, built permanent housing and intensified their efforts at cultivating the soil.

Farming allowed human groups a measure of control over their food resources, but as the populations grew, this control needed to be intensified, as more and more people came to depend on the land for their sustenance. New technologies developed, such as irrigation, damming and monocropping that gave the early farmers greater control over the food supply. This control had to be constantly increased in order to meet the burgeoning population's needs.

Agriculture depends on land. The most alluring land to the farmer, as American history attests, is "virgin" land. Virgin land has many practical values; it is usually cheap, fertile and empty (of other "civilized" people), thus easier to cultivate. Through the agrarian cultural lens the arriving colonial farmers only saw and valued the lay of the land and the quality of the soil- things that would benefit themselves at the potential expense of others, such as wild animals living there.

Besides its practical allure, virgin land had an emotional attraction as well: The colonial farmer felt that

virgin land needed to be cleared and cultivated, needed to be made productive for humankind. It was deemed immoral to allow land to be left alone, uncultivated, unimproved. Western agriculture, then, produced a moral obligation for humans to create usable land out of this "virgin" material. "Uncultivated land meant uncultivated men," said Sir Keith Thomas (1983, p.15) in reference to the early European settlers of North America. This mentality was an established component of the American "pioneering spirit" and "manifest destiny."

Another very important development was the commencement of animal domestication, with its associated values of hierarchy and domination. This developed when hunters of wild sheep and goats began to assert greater control over wild herds around 12,000 years ago. These hunters would follow and gradually began selective, systematic killing of animals -- usually the males and the younger ones of the group-- initiating a primitive form of herd management.

Bands of hunters and foragers then began to attach themselves to particular herds, which became "their" herds to follow, to cull and to live from. Along with culling, herders began to control herd movements to the best grazing

and watering areas. Little by little, these early shepherds learned the rudiments of animal husbandry, i.e., techniques used for the deliberate control of mobility, nutrition and reproduction of animals.

The control over animals, and nature in general, became an obsession with the early agrarian societies and was frequently ruthless, but it brought comfort and benefits to humans. "In time" said Mason, "control came to be valued in and of itself. It was the way of the good shepherd, a patriarchal model for the guilt-free exploitation of animals and natural processes" (1993, P.145).

Animal husbandry brought economic advantages to people, but it also disturbed the ancient and deeply held beliefs about animals, nature and human beings' place within it. This process occurred very slowly, but it eventually destroyed many peoples' primal view of the living world that held natural forces and animals in awe.

After practicing animal husbandry for several centuries, however, humans gained conscious control over animals and their life processes and reduced them through physical and psychical submission. Castrated and harnessed, penned and shackled, domesticated animals no

longer retained the wild and mysterious powers that their ancestors had when stalked by early hunter-gatherers. Domesticated animals became disempowered through confinement, selective breeding, and increasing human familiarity with them. Gradually, they came to be viewed more with contempt than with awe.

Through the process of reducing wild animals to domestic ones, farmers reduced animals in general, as well as the living world that the animals symbolized. Agriculturists viewed more and more wild animals as pests and the natural elements-- fires, storms, floods, etc.-- as threatening. But it was animal domestication in particular that altered people's views of animals as equals to seeing them as commodities and tools. University of California historian Roderick Nash succinctly summed up this new relationship: "[F]or the first time, humans saw themselves as distinct from the rest of nature" (1967 p.xiii). The economic switch from hunting and gathering to agriculture/animal domestication forever changed the ancient human-animal relationship, from an animistic partnership- to one of master and slave.

This new relationship with nature and animals wasn't necessarily a matter of choice, however. A surplus of food

meant security to the farmers and nature wasn't always cooperative in providing it to them. British scholar James Serpell sums up the agriculturist's adversarial relationship with nature and animals thus:

The farmer has no choice...[L]and must be cleared for cultivation and weeds and pests, which would otherwise restore his fields to their original condition, must be vigorously suppressed. Domestic livestock must be controlled and confined, using force if necessary to prevent them from wandering off and reverting to a wild state, or being eaten by predators. The entire system, in fact, depends on the subjugation of nature, and the domination and manipulation of living creatures (1986 p.218).

Western agrarian cultural influences have done much to create and maintain an imaginary chasm between humans and animals and it has taught humans to fear and hate nature. As the primary representatives of nature, then, animals bear the brunt of this hatred. Agricultural values reduced the power, dignity and status that animals once enjoyed before agrarian values were stamped into Western minds. No longer seen as beautiful, intelligent teachers, animals have been degraded into base, cruel and vicious beasts through the agrarian cultural lens: They have been repeatedly portrayed as "bloodthirsty, ravenous beasts snarling at the gates of civilization, cruelly intent on bursting through to ravage innocent humanity" (Mason, 1993

p.174). Western agrarian culture subjugated animals to human whims and placed humans above moral accountability for their actions toward the natural world.

d. WESTERN RELIGION AND NATURE

The economic and cultural changes brought on by the shift to agriculture were major psychic changes and to work through them people needed new ideologies, which would absolve them of any lingering feelings of guilt. "Good Shepherd" religions developed, which provided a moral cover for the control, domination, and exploitation of nature and animals. These early dominionist beliefs spawned the monotheistic religions of contemporary Western society, i.e. Judaism, Christianity and Islam, with their full complement of nature fearing and hating ideologies.

Christianity has, since its inception, maintained that only humans can possess "spirits" or "souls" and that nature and animals never could, "thus man [sic] did not have to fear the resistance of an opposing will in nature; the Bible seemed to indicate that the earth was designed to serve man's [sic] ends exclusively" wrote William Leiss (1972, p.30). Western religion desacralized nature,

leaving human beings morally exempt from dominating it. "Christianity" declared historian Lynn White, "...not only established a dualism of man and nature, but also insisted that it is God's will that man exploit nature for his proper ends" (quoted in Mason, 1993 p.26).

Dominionism didn't begin with Christianity, for it was developed thousands of years before the Bible was written. However, Western religion did more than simply perpetuate an older ideology, it lent great authority to it- from the one and only God. Because it is considered a sacred document, Genesis is, in the words of Keith Thomas, "the Old Testament charter upon which human rule over nature was founded" (1983, p.18). Genesis didn't found human rule over nature, but served to reinforce and sanctify condescending human attitudes towards the natural world.

Genesis describes the Western religious creation myth, the fundamental myth of Western civilization. It begins with God making the heavens and the Earth, the land and waters, the sun and moon, all in four short days. Then on the fifth day, God made the fish and other sea creatures, and birds of the air, commanding them to "...[B]e fruitful, and multiply, and fill the waters in the sea and let fowl multiply on the earth" (Genesis 1:22).

On the sixth day God created the land animals and the first human; the human being created in his own image. God then granted humanity "...dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth" (Genesis 1:26). This passage clearly prescribes human rule over all of the animal kingdom.

After the creation of Eve, God directed his new man, Adam, to "...[B]e fruitful, and multiply, and replenish the earth, and subdue it: and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth" (Genesis 1:28). There is little room for misinterpretation here: it is apparent that God ordered the domination of nature. This gave broad license for humans to control the natural world.

After the fall or the original sin, God punished Adam and Eve, banishing them from the Garden of Eden. God felt ashamed of his creation and decided to destroy the Earth. But he spared Noah, his family and breeding pairs of each of the animals, so that the Earth may start anew; this time, it was hoped, without sin. Noah built an ark for his

family and all of the animals and then God flooded the planet.

After the flood, God again granted humans rule over the earth to humans. God then ordered Noah and his family to take command over the animals: "...the fear of you and the dread of you shall be upon every beast of the earth, and upon every fowl of the air, upon all that moveth upon the earth, and upon all the fishes of the sea: into your hands they are delivered" (Genesis 9:2).

It is very clear then, that human rule and domination of nature and animals is God's will and this is the most basic belief of the Western religions: The story of Genesis is included in the Christian Bible, the Jewish Torah and the Islamic Koran.

It may also be concluded that Genesis expresses a hierarchical relationship among the living things upon the earth. When asked if the Christian prohibition on killing could apply to creatures other than humans, and if why not, St. Thomas Aquinas answered:

Now the most necessary use would seem to consist in the fact that animals use plants, and men use animals, for food, and this cannot be done unless these be deprived of life, wherefore it is lawful to take life from plants for the use of animals and from animals for the use of men. In fact,

this is in keeping with the commandment of God himself (in Regan and Singer, 1989 p.11).

Western (dualistic/anthropocentric) ideas towards nature did not begin, nor end with the Bible. The domination and rule over nature, as well as the hierarchical relationship among humans and animals expressed by the Bible, would be continued in Western culture through values expressed within secular philosophy and through the prevailing agrarian economy.

e. WESTERN PHILOSOPHY AND NATURE

Following centuries of Western religious dogma forbidding moral consideration of animals were the secular philosophies of two of the most influential Western secular philosophers: Aristotle and Rene Descartes. Their reasoning helped to cement the hierarchical ideology of "man above nature" and to further perpetuate the oppression of animals and the natural world. As for Aristotle, his philosophies served a two-fold purpose, justifying both human and animal slavery.

Aristotle held that nature is essentially a hierarchy, one in which those with less reasoning power exist for the

sake of those with more. The great philosopher claimed that "Plants exist for the sake of animals, and brute beasts for the sake of man- domestic animals for his use and food, wild ones... for food and other accessories of life such as clothing and various tools." He continues on utilitarian grounds, arguing that "Since nature makes nothing purposeless or in vain, it is undeniably true that she has made all animals for the sake of man" (quoted in Singer, 1990 p.189).

Aristotle believed there to be nothing wrong with enslaving people who did not possess reason (like animals), practice virtue or participate in political affairs. These people were clearly uncivilized and undeserving of moral consideration on a human scale. "Slaves and animals" wrote the philosopher, "do little for the common good, and for the most part live at random" (quoted in Mason, 1993 p.228). Some people were seen to be "natural" slaves. According to Cambridge historian Anthony Pagden, Aristotle viewed the slave's "position in the hierarchy of nature...at the bestial end of the human scale...[the slave's] role in the household would seem to be similar to that of domestic animals. He is condemned to a life of servitude" (Ibid. p.228).

In 1630 Rene Descartes, known as the father of modern philosophy, and who was heavily influenced by Christian values, presented a new philosophy of nature, describing animals as mere machines, or automata, like clocks. To Descartes, animals were capable of complex behaviors, but completely incapable of speech, reasoning or even sensation. Most importantly, however, was Descartes declaration that animals, unlike humans, lacked souls. Only humans, he claimed, combined both bodies and souls.

This seems to have given broad license to the supporters of Descartes, who declared that animals did not feel pain. To them the cry of a beaten dog was not proof of the animal's suffering any more than was the sound of an organ proof that it felt pain when struck. Animals' cries were merely external reflexes, unconnected to any inner sensation. Because of these beliefs, Descartes and his followers dissected living animals, without anesthesia, in order to advance their knowledge of anatomy and physiology. Nicholas Fontaine, a witness to these practices remarked on the early vivisectors in 1738:

They administered beatings to dogs with perfect indifference, and made fun of those who pitied the creatures as if they felt pain. They said the animals were clocks; that the cries they emitted when struck, were only the noise of a

little string that had been touched, but that the whole body was without feeling. They nailed poor animals up on boards by their four paws to vivisect them and see the circulation of the blood, which was a great subject of controversy (quoted in Spiegel, 1988 p.61).

These arguments were attempts by people to distance themselves from the rest of nature, as humans sought to make things out of beings. If animals were only (unfeeling, inferior, etc.) objects, then there was no reason to feel guilty about their exploitation.

I will now argue that "agri-cultural," Judeo-Christian and secular ideologies combined to produce a system of thought which allowed the mass enslavement and genocide of groups of humans who were thought to be "sub-human" or "animal-like". As will be demonstrated, this was particularly evident through the Euro-American colonization of the New World.

f. COLONIALISM IN THE AMERICAS

Racist, ethnocentric colonizers repeatedly drew upon the hatred of nature and animals to justify their territorial expansion, with its associated oppression and bloodletting. On Columbus' second voyage to the Americas,

he formed some very bad impressions of the island natives that he encountered, writing that they were of a "...bestiality greater than any beast on Earth" and that "...they will be better than any other kind of slaves." During his 1495 voyage he sent 550 Native American slaves back to Spain, 200 of which died on the return voyage and most of those who reached Spain died shortly thereafter of European diseases (quoted in Mason, 1993 p.229).

A debate ensued in the Americas over Native American "humanity" between the adventurers and conquistadors, who were interested in plundering the natives' wealth and the Spanish professors and priests, who wanted to make sure that they (conquistadors) followed established lines of conduct. A "humanist", Dominican Tomas Ortiz, wrote of the inferiority of the original Americans: "They are more given to sodomy than any other nation...they go naked...have no respect for love or for virginity...or truth" and possess "...no obedience among them..." and that they "...are incapable of learning" (Ibid. p.230).

Spain's pro-slavery faction had no qualms about their ruthless treatment of the Native Americans. For them, the situation was quite clear, the natives were clearly "sub-human," "bestial" pagans, and the Spanish (themselves),

being close to God (Catholics), had clear rights and obligations to master them. Such thinking was to give the Native Americans "the status of an object" wrote Tzvetan Todorov. He then proceeded to describe a horrid account of Spanish treatment of the natives: "...their flesh is used to feed the surviving Indians or even the dogs; they are killed in order to be boiled down for grease, supposed to cure the wounds of the Spaniards" (Ibid. p. 231).

This account may sound horrible, yet it happened to animals on a daily basis; thus, it is apparent that the Spaniards regarded the indigenous Americans as animals too. In the course of such treatment, Todorov continues, the natives "...are identified with animals for the slaughterhouse; all their extremities are cut off, noses, hands, breasts, tongue, sexual organs, thereby transforming them into new shapeless trunks, as one might trim a tree" (Ibid. p. 231). The Spaniards ostensibly went about their "business" much as the modern butcher does today.

It has been estimated that 50-80 million people inhabited the Americas before the arrival of Columbus. By the year 1575 there were only 5-10 million natives left, many falling dead from European diseases. Researchers Jerald Milanich and Susan Milbrath claim that native

populations fell by 90-99% in the 200 years after Columbus "discovered" the Americas (quoted in Mason, 1993 p.236). This rapidly declining native population left a huge demand for labor on the budding European plantation systems; in response, the Euro-Americans set their sites on the continent of Africa.

g. AFRICAN SLAVERY

For roughly four centuries Euro-Americans preyed on Africa's populations to meet its demands for slave labor. Capture and shipment of human slaves began there before 1500, when the Portuguese began trading in slaves to work their sugar plantations on the islands off the coasts of Western Africa. The African slave trade did not accelerate until after 1650, when the sugar boom hit the Caribbean and Brazil.

Although the demand for cheap labor obviously influenced the slave trade, a much deeper ideology was employed which allowed such horrible acts to take place. Owing to the natives' apparent lack of "civility," ethnocentric Euro-American cultural views reduced Africans to the status of animals, that is "Others." If they were

humans, they were an "Other" kind, regarded as inferior and uncivilized.

Another element influencing Euro-American fear/hatred of the African Other was their "blackness." For many Euro-Americans, "blackness" was a color loaded with intense meaning; it was a symbol of baseness and evil and a sign of danger and repulsion. Compare this to the imagery of "whiteness," which connoted purity, benevolence and virtue.

This fearsome image was exacerbated by Euro-American ideas about the African continent; it was known as the "dark" continent, because of its lore of especially mysterious and dangerous wilderness. Europeans were essentially cut off from Sub-Saharan Africa until about the year 1000, when camel caravans opened up trade routes into Western Africa. Even then, most Europeans found tropical Africa to be an entirely inhospitable place: European attempts to explore and settle there were repeatedly met with malaria, yaws, river blindness, liver flukes and other parasitic diseases.

Until relatively recently, tropical Africa's disease-producing environment was as effective as the Sahara Desert in inhibiting travel, trade and cultural exchange with Europe. Most of Africa was off limits to Europeans and was

viewed as a land full of mystery and danger, thus from this perspective it is understandable that its inhabitants were also viewed with fear, anxiety and hatred.

The transportation of African slaves to Europe and the Americas was, by all accounts, a horrible experience. Pools of excrement and urine were "normal" during the "middle passage" to the Americas and owing to these conditions, there were clearly "acceptable" mortality rates. In fact, roughly half of the 30-40 million Africans died during the capture and transport to the Americas (Spiegel, 1988 p.50). Author Marjorie Spiegel described the cramped conditions:

When demand for slaves soared in the 18th century, those ship captains who "tight-packed" their human cargo won out over the "loose-packers." Two and sometimes three tiers were built in a six-foot hold. Slaves were frequently so tightly packed that, in the words of one observer, "the shelf would not easily contain one more" (1988 p.50).

In the Americas, African slaves were met with this mixture of fear, hatred and anxiety precisely and they were dealt with severely by their white slave masters. Castration and other forms of dismemberment, such as cutting off a slave's foot were considered by slaveholders

to be a necessary means of control. Historian Winthrop Jordan argued that the

castration of blacks clearly indicated a need in white men to persuade themselves that they were masters and in all ways masterful, and it is illustrated dramatically by the ease with which white men slipped over into treating Negro slaves like bulls and stallions whose [wild animal] spirit could be subdued by emasculation (quoted in Mason, 1993 p.239).

Numerous examples suffice to demonstrate the depth of Euro-American beliefs about the African's "animal condition." Slaves needed to be controlled-- just as domesticated animals were-- and many of the same techniques were applied to human and animal alike. There was no distinction made between slaves and animals, as both were ruthlessly exploited.

Slaves were considered property and this property needed to be clearly marked, therefore African slaves, like domesticated cattle, were branded. Author Keith Thomas (citing Moryson) describes one account:

The Portuguese, reported one English traveler, marked slaves "as we do sheep, with a hot iron," and at the slave market... Moryson saw the buyers taking their slaves indoors to inspect them naked, handling them "as we handle beasts, to know their fatness and strength" (1983, p.44).

In addition to branding, many slaves were muzzled at auction, ostensibly to prevent them from biting their

potential owners. Another example is the use of collars on African slaves, which were utilized for reducing the mobility of slaves and to symbolically assert the dominance of the slave master.

Castration, as mentioned above, was also widely used on troublesome or hypersexual male slaves. Runaway slaves also could have their testicles cut off, due to the belief that it would make them more docile. These beliefs and practices stemmed directly from centuries of European animal domestication and further demonstrates the depths to which Euro-American beliefs about "sub-human Africans" could go.

h. CONCLUSION: CHAPTER 4

Humanity's relationship with nature has been a dynamic one. For millennia, hunting and gathering groups lived in harmony within nature, much as the other animals did. Then around 12,000 years ago humans began experimenting with agriculture and animal domestication and gradually adopted this economy. This change marked the end of an era between humans and animals. Control over animals and natural forces became highly valued and an "agri-cultural" mindset

developed which supported the exploitation of animals and nature for human benefit.

The rise of Western monotheistic religions, which in large part stemmed from agrarian culture, desacralized nature and accelerated human domination of it. Genesis not only gave permission for individuals to exploit animals, but also called on humanity to dominate the natural world. Anthropocentric Western philosophies echoed the religious position on human-nature affairs, exacerbating humanity's mastery of nature.

Feelings of fear and hatred peaked as Europeans began the colonization of the new world. For native peoples of Africa and the America's, their symbolic associations with nature proved disastrous. Reduced to the status of "brute beasts" and/or "sub-human" by Euro-American colonizers, millions of indigenous peoples were enslaved and murdered in the Americas and abroad.

CHAPTER 5:

WOMAN AND NATURE

a. INTRODUCTION

Prior to the Scientific Revolution (1500-1700), many Europeans viewed nature as a living being. Most individuals at this time lived in cooperative communities, spending much of their time in immediate contact with nature. Living close to the land, people saw many similarities between their own bodies, society and the natural world. This belief in living nature was known as organicism.

Nature was also traditionally viewed as female⁶. Age-old associations between women's role in reproduction and production and that of nature pervaded people's thoughts. Nature was generally viewed as a kind and beneficent mother who provided for all her children's needs, such as food and materials for clothing and shelter. But another view of nature existed—one that emphasized her disorder. The "unkind" Mother Nature was capable of bringing storms, floods, droughts and plagues. These dichotomous images of nature engendered both fear and respect for 16th and 17th century Europeans.

⁶ By nature, I mean all those things outside of the human cultural sphere. Things which are natural would include plants, animals and all of inanimate nature (rocks, mountains, rivers, etc.). I contrast nature with culture, not to perpetuate a dualism, but to emphasize the non-human role being carried out by other-than-human forces.

The rise of the Scientific Revolution meant the gradual downfall of the organic view of nature. The new male scientists replaced the living Earth metaphor with a mechanical view of nature's workings. For men such as Francis Bacon, Rene Descartes and Isaac Newton, nature could be easily explained by the new objective science. Nature was now viewed as a dead, passive object-- mere matter-- to be subdued and dominated. The language of Bacon relating to (female) nature was particularly instructive, as it contained numerous metaphors of rape, calling on men to "probe" and "investigate" the Earth's secrets, which lie in the "womb" of nature.

New sets of dualisms were introduced which exemplified the logic of the new scientists. Matter (female) was contrasted with spirit or soul (male), rational (male) was contrasted with emotional (female) and subject (human) was contrasted with object (nature). These structural dualisms would have important implications for both women and nature, as they justified a logic of domination (superior/inferior) for both.

The new scientists were bent on controlling all of nature. Those features that represented disordered nature were to be brought under (masculine) control. Women who

were perceived to be hypersexual and believed to have magical powers-- alleged witches--represented disordered nature and were ruthlessly sought out and exterminated between the years 1500-1700. Witches, like nature, were believed capable of producing storms, droughts, plagues and pestilences of all sorts. The new scientists were especially fearful of the powers that nature and witches held and were bent on controlling both.

b. NATURE AS LIVING, NATURE AS FEMALE

Human groups have, from their obscure origins, lived in immediate, organic relationship with the natural world. Most people, until relatively recently, lived in close contact with the land and relied upon one another and the fruits of nature for their daily sustenance. During the 16th and 17th centuries most Europeans lived in close-knit, cooperative communities, so it comes as no surprise that these people projected their daily life experiences onto the cosmos in an attempt to define natural processes, viewing all of nature as a living organism.

Within this organic framework was the identification of nature as female. This "identification of women with

non-human nature lies in ...women's reproductive role as child bearer" according to Rosemary Radford Reuther (1996 p. 323). This identification also stemmed from the view of the Earth as a nurturing mother: it was believed that the Earth Mother brought forth life and provided sustenance for all her children, in an orderly, planned universe. Andree Collard and Joyce Contrucci summarize the Renaissance view of female nature: "Being born of Mother Earth, everything that existed was perceived as partaking of her spirit" (1988 p. 7).

Female earth imagery was pervasive, as most traditional European cultures living prior to the Scientific Revolution believed, for instance, that metals "ripened" in the "uterus" of "Mother Earth" and mines were compared to her vagina. Metallurgy was likened to a midwife's role in that it was believed to be

the human hastening of the birth of living metal in the artificial womb of the furnace—an abortion of the metal's growth cycle before its time. Miners offered propitiation to the deities of the soil and subterranean world, performed ceremonial sacrifices, and observed strict cleanliness, sexual abstinence, and fasting before violating the sacredness of the living earth before sinking a mine (Merchant, 1980 p.4).

Many literary images of nature existed during this time period, all of them variations on the organic theme.

One view of nature saw a designed hierarchical order of the cosmos and society that corresponded to the integrated functions of the human body. This represented a basic projection of human biology onto the natural world. But among the most important images was one that viewed nature as benevolent, peaceful and rustic. This view derived from Arcadia, the mythical, pastoral interior of Greece.

The pastoral image viewed nature as a sanctuary from the ills and anxieties of urban life through the return to an untarnished Golden Age. Nature was depicted as a garden, a country landscape or as a peaceful, nurturing scene. This view presented nature as a kindly female, graciously offering her bounty. Against an idyllic background, animals grazed contently, while birds sang melodies and trees and vines ripened with their produce. Threatening, wild animals such as snakes and vultures were absent from this image, as well as swamps, thickets and thorns.

While the pastoral view portrayed nature as a benevolent female, it contained the implication that when plowed and cultivated, it could be used as a commodity and manipulated as a resource. This model also viewed nature (and women) as essentially passive. In this way, pastoral

imagery provided a transition from viewing nature as a nurturing mother to an exploitable environment.

Not only was nature in general viewed as female, but the earth itself was seen as a nurturing mother. This was known as the geocosmic view, which saw the earth as alive, sensitive and responsive to human actions and compared the earth to the living human body. The earth, like humans, possessed blood, breath, sweat and other elimination systems. Leonardo da Vinci (1452-1519), compared the waters of the earth with the flow of blood in the animal (or human) body: "The water runs from the rivers to the sea and from the seas to the rivers, always making the same circuit...It acts like the blood of animals which is always moving, starting from the sea of the heart and mounting to the summit of the head" (quoted in Merchant, 1980 p.24).

Renaissance philosophers held that all things were permeated by life and numerous images of the "living earth" and "female" nature existed in their writings. For instance, Paracelsus (1490-1521) compared the earth to a female, whose womb nurtured all life:

Woman is like the earth and all the elements and in this sense may be considered a matrix; she is the tree which grows in the earth and the child is like the fruit born of the tree...Woman is the image of the tree. Just as the earth, its

fruits, and the elements are created for the sake of the tree and in order to sustain it, so the members of woman, all her qualities, and her whole nature exist for the sake of her matrix, her womb (Ibid. pp. 26-27.)

Although Aristotle did not live during this period, his ideas were influential, especially his concepts of reproduction. The "impregnation" of the female earth by "male" celestial bodies were basic descriptions of biological reproduction in nature. Aristotle held that the movement of the sun, moon, stars and other planets produced semen, which fell in the form of rain or dew onto a "receptive" female earth.

At times, the sun's rays replaced rain or dew as the "male" productive medium, as suggested in a famous passage by Nicolaus Copernicus (1473-1543). Here he describes the union of the "active" male and "passive" female principles, claiming that "... the earth conceives by the sun and becomes pregnant with annual offspring" (Ibid. p.16). Although these views hold that the earth is alive, they contain important implications for exploitation, as the earth is seen as passive, or in other words, controllable.

An opposing view of female nature also existed—one in which nature was chaotic and uncontrollable. Barbara Noske explains: "While both women and nature gave nurture and...

were, as in earlier periods, associated with the Mother image, this gradually gave way to a less favorable image; that of disorder and chaos" (1997, p.47). This view perceived wild nature as capable of producing storms, droughts, plagues, famines, etc. This second image-- nature as disorder-- would have an enormous impact on both nature and women as the Scientific Revolution proceeded to mechanize, rationalize and desacralize European cosmology.

European society required this new mechanical image of nature as it continued the processes of commercialism and industrialization, activities directly damaging the Earth. Deforestation, mining, draining marshes and damming rivers all could easily take place within a dead, inanimate (mechanized) nature. Prior to the scientific 16th century, the nurturing mother and living earth images acted as cultural constraints against these types of activities, but the new mechanical images sanctioned violence against an inanimate earth.

These changes came about slowly, as the old images of nature were swept aside. As expected, alongside the change of imagery was accompanying environmental destruction. Gradually, commercial activities increased as Europe expanded into world markets, thus accelerating degradation

of the natural world. By the 17th century, tensions between technological development and the controlling images of nature as a nurturing, living female being became too great. The old structures became incompatible with the new activities and in time the old structures would give way, as science and commercialism pushed forward.

As the Scientific Revolution and commercial capitalism progressed, the organic framework of the earth was transformed into a mechanical one. Dualistic metaphors of (female/earth) passivity and (male/science) activity were pervasive in the language of the new scientists and reflected a growing logic of domination. Carol Adams argues that the "logic of domination undergirds the creation of the other" (1994, p.80), justifying the new scientists power and control over women and nature.

c. THE SCIENTIFIC REVOLUTION

During the 16th and 17th centuries, nature was forced to submit to the interrogation and experimental techniques of the Scientific Revolution. This revolution took place roughly between the years 1500-1700 and its main figures included Francis Bacon, Nicolas Copernicus, Galileo

Galilei, Sir Isaac Newton and Rene Descartes. Their stated purpose was to advance a "rational and objective" science over nature for the benefit of humankind. But from the perspectives of women, nature and the lower classes of society, the Scientific Revolution can be viewed as primarily benefiting the middle-class, male entrepreneur and, of course, the male scientist.

The new scientific view would see nature as dead, passive matter, but most importantly, saw nature as disordered, thus needing to be controlled. Scientists such as Bacon and Descartes proposed theories and laws, which would explain away nature's mysteries, thus providing society with a sense of order in the natural world. And because these new views of nature came about during a particularly tumultuous period in European history, they were quickly taken up by the masses.

For instance, the new science established a dualistic framework in which to view nature and society. The unity of the organic framework, which saw the cosmos as a reflection of human society, was being replaced by new metaphors. This change would seriously impact both nature and women. Vandana Shiva argues that:

In Bacon's experimental method, which was central to this masculine project, there was a dichotomy between male and female, mind and matter, objective and subjective, rational and emotional and a conjunction of masculine and scientific dominating over nature and women (1988, p. 16).

The new science required the domination of an inanimate and passive female nature, in order to extract her secrets. And because of her symbolic relationship with passive nature, woman too required masculine control. The shift from the organic framework to the new dualistic paradigm thus sanctioned the exploitation of feminine principles in general.

The older, organic views of nature also failed to provide society with a sense of order in the cosmos, as many new discoveries were being made, hence the need for a new metaphor. Johannes Kepler understood this failing well and sensed the need for a new view of the cosmos when he wrote to a friend in 1605: "My aim is to show that the celestial machine [universe] is to be likened not to a divine organism, but to a clockwork" (quoted in Merchant, 1980 pp. 128-129). The new science's metaphor was that of a machine.

The discovery of a new star in 1572 and the sighting of a comet in 1577, both by Tycho Brahe, provided evidence

that the universe was in fact changing, not perfect as many had believed. Furthermore, the telescopic observations of Galileo in the years 1609-1610 showed craters on the moon, sunspots, and moons orbiting Jupiter and the masses of stars in the Milky Way. All of these new discoveries strengthened the belief that nature was blemished, i.e., disordered.

Foremost among the proponents of this new view of nature was the "father of modern science," Francis Bacon. Bacon was in an extremely influential social position and involved in the important developments of his day. Additionally, his language and use of metaphor reflected his class and gendered views toward nature.

Sensitive to the social changes taking place around him, Bacon developed the power of language as a political instrument in order to reduce (female) nature to an economic resource. His language and metaphorical style were instrumental in changing views of nature from a living, nurturing mother into a passive resource to be exploited for human benefit. By projecting female imagery onto nature, Bacon sought to establish a new form of human power over the natural world.

Serving as the attorney general for King James I, Bacon was involved in courtroom proceedings, as it was his duty to bring charges against the defendants. Although he was not directly involved in the witch trials, the courtroom influenced Bacon's philosophy and literary style. Much of the imagery he used in delineating his new scientific methods and objectives stems from his experience in the courtroom. It was no accident that his imagery treated nature as female, (to be investigated by science and controlled through mechanical inventions) reflecting the interrogation of alleged witches and the use of mechanical devices that were used to torture them at the trials.

In a telling passage, Bacon claimed that investigating the secrets of witchcraft might reveal nature's secrets:

Neither am I of opinion in this history of marvels that superstitious narratives of sorceries, witchcrafts, charms, dreams, divinations, and the like, where there is an assurance and clear evidence of the fact, should altogether be excluded...howsoever the use and practice of such arts is to be condemned, yet from the speculation and consideration of them...a useful light may be gained, not only for a true judgement of the offenses of persons charged with such practices, but likewise for the further disclosing of the secrets of nature (quoted in Merchant, 1980 p.168).

As science and society in general became increasingly bent on dominating and controlling female nature, those women who symbolically represented disorder became increasingly targeted as witches. Without a female imagery of nature, a gender-specific witch-hunt would unlikely have taken place. The hatred of disordered female nature both reflected society's misogynous attitudes and the fear of natural forces. By projecting female imagery onto the natural world, the new scientists sought to control the fear they felt of both women and nature.

d. SCIENCE AND POWER

The new science was not conducted through abstract ideas, as in philosophy, but put into practice as well. Bacon sought to "dissect" nature through "art and the hand of man" so that nature may be "forced out of her natural state and squeezed and molded" leading to "human knowledge and... power meet[ing] as one." Bacon frequently described matter (nature) as a common harlot and believed that matter "is not devoid of an appetite and inclination to dissolve the world and fall back into the old Chaos." Nature must

therefore be "restrained and kept in order by the prevailing concord of things" (Ibid. p. 171).

Nature was to be "restrained" in the laboratory, "dissected" by hand and mind and "forced" to reveal her knowledge. Restraint and force aren't terms usually associated with the scientific experimental method, but are obvious descriptions of rape, and the use of these metaphors clearly identifies Bacon's contempt of both women and nature.

Human dominion over nature was an integral feature of the Scientific Revolution's program of experimental science and was to be achieved through the disclosure of nature's "secrets." Contemporaries of Bacon reflected this dominionist mindset, reinforcing aggressive attitudes toward nature. Many spoke of "managing" and "mastering" the earth. Descartes wrote that through the study of science men could "render ourselves the masters and possessors of nature" (quoted in Leiss, 1972 p.81).

Experimental philosopher Robert Boyle distinguished between merely knowing as opposed to dominating nature:

I shall here briefly represent to you...that there are two distinct ends that men may propound to themselves in studying natural philosophy. For some men care only to know nature, others desire to command her... to bring nature to be serviceable

to their particular ends, whether of health, or riches, or sensual delight (quoted in Merchant, 1980 p.189).

Again, sexual metaphor is used to foster aggression toward nature. Sexual imagery thus formed an important part of the subjugation of nature by the men of science.

The need to control and dominate disordered nature reached its apex during the European witch trials. The witch trials clearly illustrate that the relationship between hatred of women and the hatred of nature was not accidental. As symbols of disordered nature, women were feared and ruthlessly sought out.

e. THE MECHANICAL UNIVERSE

For Europeans of the 16th and 17th centuries, order was a fundamental social and intellectual issue. A rapidly changing economy, religious upheaval and advancements in scientific knowledge were all tearing at the fabric of daily life. As the organic view of nature lay dying, the mechanical view stepped into its place. In this way, the new mechanical philosophy achieved a reunification of European cosmology. The self, society and the cosmos were encompassed by a new metaphor, that of the machine. This

new metaphor was developed during the 1620s and 1630s by the French intellectuals Rene Descartes, Pierre Gassendi and Marin Mersenne and later by Thomas Hobbes of England.

New forms of order and power provided stability for the disorder perceived to be spreading throughout European society. In the organic view of nature, "order meant the function of each part within the whole, as determined by its nature, while power was diffused from the top downward through the social or cosmic hierarchies" writes Merchant. She continues: "In the mechanical world, order was redefined to mean the predictable behavior of each part within a rationally determined system of laws, while power derived from active and immediate intervention in a secularized world. Order and power together constituted control" (1980 p.193).

The new science would reveal that matter is made up of atoms, bodies obey the law of inertia, and that colors occur by the reflection of light waves of different lengths. Science would also demonstrate that the sun, not the earth, is at the center of the solar system. The replacement of the organic view with the mechanical version did not occur without struggle, however. The debate over differing views of nature engaged Europe's most celebrated

thinkers at a time when society was fraught with anxiety, confusion, and instability in the intellectual and social arenas.

The mechanists borrowed ideas from the spectrum of organic views of nature that were compatible with order, control, and manipulation, while rejecting those associated with change and uncertainty. Concepts such as the passivity and manipulability of matter (earth), which were conducive to the control of nature, were assimilated into the new framework of nature, while the animistic and organic views were rejected. Merchant argued that the "mechanical philosophies of Mersenne, Gassendi and Descartes all exhibited a strong common reaction against naturism, vitalism, and animistic magic, which in a world of social upheaval and religious conflict, could be seen as aiding and abetting disorder and chaos" (1980 p. 195).

For, Descartes--undoubtedly the most influential of the mechanists--the clock became the symbol of order in the natural world. The machine metaphor of the clock provided explanation for the movement not only of the lower corpuscular world and other natural bodies (i.e., plants and animals) but also for the human body.

In a famous passage, Descartes claimed:

And as a clock, composed of wheels and counterweights, observes not the laws of nature when it is ill made, and points out the hours incorrectly, than when it satisfies the desire of the maker in every respect; so likewise if the body of man be considered as a kind of machine, so made up and composed of bones, nerves, muscles, veins, blood, and skin, that although there were in it no mind, it would still exhibit the same motions which it at present manifests involuntarily (Ibid. p. 226).

The mechanization of the cosmos would leave no body unturned; even humans became compared to clocks. This example illustrates the degree to which the mechanical metaphor pervaded scientific thought during the 16th and 17th centuries.

f. WOMAN AS DISORDER

The image of female nature as disordered, violent, and chaotic became increasingly important during this period. Alongside the need to control and master wild nature, was the desire to control and subdue those women who symbolized disorder: witches. Just as nature brought plagues, famines, and tempests, witches were believed to cause storms, destroy crops and cause illness. The witch, as the

symbol of the violent nature, could not escape the control of man.

As the older, organic view of nature was being slowly discarded, discoveries of the "new science," the social and religious upheavals of the reformation, and the changing economy contributed to people's sense of disorder.

Numerous writers expressed anxiety over the loss of order in society. Richard Hooker lamented that "if nature ceased to observe her own laws, the celestial frame might dissolve, the moon wander from her orbit, the wind die out, the clouds dry up, the earth's fruits wither, and then chaos would ensue" (Ibid. p.128).

Symbolically associated with disordered nature was the "dark side" of women. As noted earlier, women during the sixteenth and seventeenth centuries were seen to be "closer to nature" and were believed to be divested with far more sexual passion than men. The upheavals of the Reformation and the early witch trials heightened these perceptions. Just as wild chaotic nature needed to be subdued, women needed to be kept in their place.

Author Robert Burton described the power of lust in women:

Worse it is in women than in men; when she is...an old widow, a mother long since...she doth very unseemly seek to marry; yet whilst she is so old a crone...a mere carcass, a witch, and scarce feel, she caterwauls and must have a stallion, a champion; she must and will marry again, and betroth herself to some young man (quoted in Merchant, 1980 p.132).

Younger women were not immune to this lust and sought sex as soon as they reached puberty.

Generally women begin...at fourteen years old, then they do offer themselves and some plainly rage...In Africa a man shall scarce find a maid at fourteen, and many among us after they come into the teens do not live without husbands. Mother and daughter sometimes dote on the same man; father and son, master and servant, on one woman (Ibid. pp.132-133).

The perception of women as hypersexual formed a core component of accusations against many witches. Women's hypersexuality was associated with (disordered) nature, thus needed to be controlled. This concern over female sexuality became a prominent feature of the witch trials, just as sexual imagery was a significant feature of the scientists' literature.

g. THE WITCH HUNTS

The perceived disorder wrought by lustful women was exemplified in hundreds of writings, paintings, and other

artwork on the witch trials, which lasted several hundred years in Europe. Most of the images of witches were based on the misogynous tract Malleus Maleficarum or Hammer of the Witches (1486) by the German Dominicans Heinrich Institor and Jacob Sprenger and in a series of artworks by Hans Balding Gruen and Albrect Durer.

Reginald Scot, who was skeptical about witchcraft and a defender of witches, described the stereotypic witch. He defined them as: "women which be commonly old, lame, bleary-eyed, pale, fowl, and full of wrinkles" (quoted in Barstow, 1994 p.16). Considering Scot was sympathetic to the victims, yet offered such a negative stereotype, it should come as no surprise that witch-hunters Boguet and Remy called witches "miserable and damnable vermin" and "[like] a bitch far more hideous to look at than all others" (Ibid p.16).

Despite these misogynous stereotypes, the records reveal that there exists no typical witch. For example, some of the accused were as young as eight or nine, some were in their twenties and thirties, and many were male. Yet Scot's, Boguet's and Remy's descriptions of witches reveal the truth about the majority of the accused: they

were old, unattractive, disliked, and overwhelmingly female.

Contemporary depictions of the witches sabbat presented images of "wild" nature and widespread chaos dominated by women engaged in frenzied, sensuous activity. A 1610 print by Polish engraver I. Ziarnko depicted Satan in the form of a goat preaching to his congregation, while flanked by two witches. The scene showed wild, "indecent" and "obscene" stamping and dancing by the witches and demons to accompanying music, while other witches prepared poisons in a cauldron used for killing men and cattle.

Author Henri Boguet reported on the trials of six women accused of sexual acts with the devil, declaring that "[T]he Devil uses them so because he knows that women love carnal pleasures, and he means to bind them to his allegiance by such agreeable provocations" (quoted in Merchant, 1980 p.136). Boguet reported that witches copulated with the devil at home in their beds and at the sabbat, hence were often discovered in the woods at night engaged in sex acts.

Boguet, like other writers on witches, claimed that the witches were sucked by their familiars- animals (usually pets) that were really Satan or demons in

disguise. Once detained, the women were stripped of their clothing, and were searched for marks of familiars on their bodies. The mark may have been an extra nipple, a mole or a slightly larger than normal clitoris. But to the interrogators, these protuberances were proof of sexual activity with familiars.

The women were then examined for signs of intercourse with the devil. In England, during the years 1644-1645, several hundred women were found to have such marks within the labia majora, and were put to death by attorney Matthew Hopkins, whose campaign to exterminate witches earned him the title "Witch-finder General." At the trials women were forced to confess that intercourse with the devil was painful, due to the ugly form in which he appeared and because of the burning they felt in their stomachs from his "icy cold member."

When the women were found guilty, as they usually were, they were frequently sentenced to death. In England the method of death was hanging and torture was ruled illegal. But on the continent of Europe, and especially in the German lands, extreme torture was often used to extract confessions, and those sentenced to death were burned (alive) at the stake.

Although the above description gives a general understanding of the witch trials, it is important to try to understand who these individual women were and what their lives were really about. Although women, as a group, were targeted specifically in the witch-hunts, it is as individuals that they suffered, therefore it is necessary to look at individual cases of accusation, torture and (usually) death. In this way, one can hopefully sense some of the anxiety, guilt, fear and pain that hundreds of thousands of women experienced during this period.

Walpurga Hausmanin of Dillingen, from Southern Germany offers a glimpse of the woman who typified the witch image. Walpurga was an elderly widow who supported herself as a midwife. She had long been suspected as a sorceress, having been accused of killing a baby girl at birth two years earlier. She was also accused of poisoning the second child of Anna Kromt with a salve she had allegedly prepared.

Walpurga was finally brought to trial in 1587, charged with "the deaths of forty babies, two women in childbirth, eight cows, a horse, and numerous geese and pigs. Her neighbors claimed also that she had caused three adults to languish to the point of death and had brought on a

damaging hailstorm" (Barstow, 1994 pp. 16-17).

Discovering who the real Walpurga was in this record is not easy, for it consists of her own words (given while tortured), the Judge's prompting, and the court recorder's opinions. The record reveals that under "kindly" questioning and torture Walpurga confessed to all the above accusations and explained that the evil acts she carried out were taught to her by the devil, or to be exact, her devil lover "Federlin." It was Federlin who gave her the ointment that killed the babies and caused women to deliver prematurely.

Despite these fantastical accounts and a description of Walpurga flying to the sabbat on a pitchfork, the real Walpurga lay somewhere in this story. Thirty one years before, while widowed in her prime, Walpurga, living in poverty, earned some money cutting corn for a man named Hans Schlumpelger. While working for Hans, Walpurga found herself attracted to Bis, one of Hans' servants. She was said to have enticed Bis "with lewd speeches and gestures" and he agreed to go to Walpurga's house. She awaited Bis "with evil and fleshy thoughts," but Bis did not come, instead, it was "the Evil One in the latter's guise and raiment and indulged in fornication with her" (Ibid. p.17).

Walpurga's story continued on a well-worn path, typical of many witch trials. She testified that when she saw and felt the devil's cloven foot and wooden hand she panicked-- calling on Jesus-- then her lover vanished. But the Evil One returned, copulated with her again and bound her to him through promising to help her overcome her poverty. She agreed to this and "surrendered herself to him body and soul." Receiving the devil's mark below her left shoulder, Walpurga "signed a pact with him in her own blood, as he guided her hand across the paper." Despite being illiterate, Walpurga was controlled by the devil by being reminded of the blood contract. This "prevented her from thinking of God or attending church, actions that might have freed her from his grasp" (Ibid. p.17).

Why did Walpurga confess to this bizarre crime? The fact that she was chained and tortured offers an immediate explanation. Hoping to end her anguish she told the judge what she knew he wanted to hear- the widely accepted belief that the devil was sexually irresistible to women. As mentioned above, women's sexuality and disorder was a primary focal point of many of the witch trials.

Another case in point involves an entire family, the Pappenheimers. This account offers some of the most vivid,

gruesome scenes of the European witch-hunts. Anna Pappenheimer (her married name) was the daughter of a gravedigger, an outcast group in Germany during this period. Having few opportunities because of her social status, she seized the chance to wed Paulus Pappenheimer, an itinerant septic cleaner, and also a member of the underclass.

When the Pappenheimers-- already viewed as outcasts of society-- were named as witches by a condemned criminal, they were quickly arrested and taken to Munich. There they were held in separate cells and were thoroughly interrogated, yet would not admit to sorcery. After being severely tortured, however, the Pappenheimers began to break. Anna eventually confessed to "flying on a piece of wood to meet the devil, having sex with her demon lover," and "murdering children in order to make an ointment from the children's hands." Anna admitted that the ointment and the powder "were used to carry out murder" (Ibid. p.144). After a long, well-publicized trial, Anna, Paulus and her two grown sons were convicted of witchcraft.

The execution of the Pappenheimer family drew a crowd of thousands from the surrounding villages. First, all of the individuals were stripped of their clothing, so that

their flesh could be torn off by red-hot pincers. Then Anna's bloodied breasts were cut off and forced into her mouth and then into the mouths of her children. This gruesome punishment was thus used as a particular form of torment to women. By forcing Anna's severed breasts into her two grown sons' mouths, the executioner made a gruesome mockery of her role as mother and nurse, imposing a terrible humiliation on her.

Anna's chest bled while the family was hauled in carts through the city streets to the site of the stakes. At one point the entire family, agonizing from their wounds, were forced from the carts to kneel before a cross to confess their sins. Their confessions could not save them from their final destiny, however.

Paulus' torture was equally violent, as a heavy iron wheel was dropped on his arms, snapping his bones. Then he was impaled on a stick driven up through his anus. "By this brutish parody of anal intercourse, he received not only intense physical torture, but was branded a sodomite," argues Barstow (1994, p.145). It is clear that it was not sufficient to only physically torture this family, but to make a spectacle of them in order to establish a sense of control.

The four Pappenheimers were then "tied to the stakes, the brushwood pyres set aflame, and they were burned to death." Anna's eleven year old son was forced to watch the dying agonies of his parents and was recorded as crying out "my mother is squirming,"(Barstow, 1994 p.145) as Anna's body writhed over the flames. As a final note on the Pappenheimer family, the only surviving member, Anna's eleven-year-old son, was executed just three months later. This incredible example shows the extent to which some authorities would go in order to control disorder.

By the end of the witch-hunt, at least two hundred thousand Europeans were accused of practicing witchcraft; of this number 80% were women. It has been estimated that out of the two hundred thousand accused, one hundred thousand were put to death, 85% of which were women (Barstow, 1994). These statistics accurately demonstrate that the witch-hunt was gender-specific, as European society sought to control the disorder they perceived in women.

Some of the major events of the European witch-hunt are listed below:

- 1523: One thousand witches burn in a single year in the diocese of Como (Griffin, 1978 p.15).
- 1587-1589: At Trier, 368 witches from 22 villages burned, leaving 2 villages with one women apiece (Barstow, 1994 p.59).
- 1589: 133 witches executed in one day at Quedlinburg (Ibid. p.59).
- 1581-1591: Nine hundred burned in Lorraine (Griffin, 1978 p.15).
- 1609: The whole population of Navarre is declared witches (Ibid. p.16).
- 1611-1618: 390 burned at Ellwangen (Barstow, 1994 p.59).
- 1627-1629: 157 burned at Wurzburg, (Crow, 1968 p.239) including forty-one children (Griffin, 1978 p.16).
- 1629: 274 burned in one year at Eichstaat (Barstow, 1994 p.59).

h. CONCLUSION: CHAPTER 5

The European witch-hunts of the 16th and 17th century stemmed in large part from changing ideas about nature- from a living, nurturing mother to that of disorder and chaos. As the organic views of the Earth faded, new views of nature as dead, passive matter to be dominated and controlled ascended in European cosmology. This view was put forward by men such as Francis Bacon, William Harvey

and Rene Descartes, proponents of The Scientific Revolution.

The new scientists sought mastery over nature and the women that symbolized it- the witches. Witches were believed to hold special powers over men and nature, thus they were greatly feared by scientists (and clergy alike). These women symbolized the chaos and disorder that nature represented, hence, they too needed to be controlled and/or dominated. The secular and religious authorities accused hundreds of thousands of women of being witches and burned many of them to death after forcing them into confession.

The new science sought out and exterminated those symbolic elements of nature which were most threatening- women who were believed to have power over men and who were believed to control nature, by producing hailstorms, droughts, etc. Many male scientists had simply projected onto women the things they feared about themselves (hypersexuality) and the things they feared, and could not control in nature (plagues, storms, etc.) Thus, the fate of women was intimately tied to the fate of nature during the Scientific Revolution.

Dualisms between man and nature reinforced the division between man and woman. Due to these ontological

shifts, all women were viewed as inferior or suspect, not just witches, as the new masculine science pushed these concepts into society at large. The new scientists' removal of the living, nurturing images of the Earth was, by far, the most salient feature of the Scientific Revolution. In the end, however, these scientific obsessions with power and control over nature heralded in an age of environmental destruction and the brutal oppression of women.

CONCLUSION

Race and gender relations have been strongly affected by Western socio-cultural constructions of nature as the Other- this was especially true during the 16th-17th centuries. This period marked both the peak of European colonizing activities and the peak of the European witch-hunts. A strict dualism demarcated humans from nature and an obsession with keeping that dividing line clear defined this period.

The ontological status of women, African and Native Americans as "closer to nature" reflected 16th-17th century Euro-American obsessions with notions of civility,

humanity, animality, and nature. The fear and hatred of nature and the corresponding attachment of "natural" status to women and people of color led to the brutal oppression of each group. Although there were numerous reasons for colonial expansion, slavery and the witch-hunts, the historical fear/hatred of nature certainly formed a part of this activity.

Three marked stages in Western history contributed significantly to negative social constructions of nature: the agricultural revolution, the "religious revolution" and the scientific revolution. These "revolutions" in western social "progress" alienated humanity from nature and engendered fear and hatred toward things "natural." European women, Native Americans and Africans got caught up in this "frenzy of fear and hatred" and were ruthlessly persecuted because of their associations with the natural world.

In addition to the fear and hatred of animals, ethnocentric cultural standards were imposed on indigenous peoples--with different economic, religious and political systems--by the Euro-American colonizers, resulting in the natives being labeled "heathens," "beasts" and "brutes." Women (witches and others) who would not conform to

European male standards of "civility" were branded as "hyper-sexual" or "troublesome." Most were dealt with harshly by the rulers (religious and secular) of the time.

Although the social construction of nature as the Other and the resulting projection of natural imagery onto certain social groups does not fully explain the history of inequity in race and gender relations in the West, it does provide some strong arguments that it helped shape these relations. It also ties together the seemingly disparate exploitation of European women and natives from Africa and the Americas. This argument provides valuable insights into race and gender relations and should form at least a part of the perspective in understanding these complex issues.

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