

## Praise for *Woman and Nature*

"If someone were to ask me 'What do you hope for in a feminist book?' I would say: 'A book which demands of us activity, not passivity; which enlarges our sense of female presence in the world; a book which uses language and sensual imagery to impart a new vision of reality, from a woman-centered location; a book which expands our sense of the connections among us in the bonds of history; a book which drives us wild, that is, helps us break out from tameness and repetition into new trajectories of our own.' *Woman and Nature* is such a book."

—Athenne Rich, *New Woman's Times Feminist Review* book."

"*Woman and Nature* is feminist philosophy written in poetic prose. Susan Griffin explores woman's traditional identification with the earth—both as sustenance for humanity and victim of male ravage. The book is cultural anthropology, visionary prediction, literary indictment and personal claim."

—*San Francisco Examiner & Chronicle*

"Griffin's work suggests that it is exactly the naturalization and justification by Western science of the domination of matter, the human body, sensations, feelings, emotions, and "subjective" experience—and its failure to examine critically the theories and social practices producing this metaphysics or epistemology—that directs the arrogant relation to others' visible in our contemporary ecological havoc and social injustice."

—*Isis*

"A powerful exposition of how women and the natural world have been seen as versions of each other, and violated in strangely similar ways."

—*Utne Reader* "The Canon: 150 Great Works to Set Your Imagination on Fire"

"For those inured to a steady diet of mainstream psychology, Susan Griffin's book will probably seem unpalatable. The ingredients will seem unfamiliar and their processing will seem incomplete. But for radical feminists and for those craving the sharp spice of poetic prose, *Woman and Nature* is a gourmet item."

—*Contemporary Sociology*

"Occasionally a book so fine appears that I want to shout, 'Go buy it immediately!' Such is this brilliantly provocative feminist revisioning of just about everything: history, philosophy, science, women, men, nature . . . Though not precisely history or philosophy, the book is clearly poetry. The most exciting book on feminine experience that I have yet encountered. Clearly it is not a book for everyone: those who demand officially sanctioned revelation should stay away—this book is for mature thinkers only."

—*Horizons*

**WOMAN AND NATURE**

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THE ROARING INSIDE HER

*Susan Griffin*

Sierra Club Books • San Francisco

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These words are written for those of us whose language is not heard, whose words have been stolen or erased, those robbed of language, who are called voiceless or mute, even the earthworms, even the shellfish and the sponges, for those of us who speak our own language, and this book is dedicated in love to Adrienne Rich for her friendship and for her words

## PREFACE TO THE SECOND EDITION

Two decades have passed since I wrote *Woman and Nature: The Roaring Inside Her*. Measured against the scale of evolution, the time it took, for instance, for the first living cells to become trees or animals or human beings, twenty years seems like a very short period of time. Yet the book was written in the midst of a crisis that has deepened in the intervening years. When life as we know it hangs in the balance, even the smallest moments in time take on a greater weight.

The fate of the earth was on my mind twenty years ago. But I was more sanguine about it than I am now. The times were generally more hopeful then—not because the world was a better place but because the atmosphere was charged with vision. In 1974, as I began writing this book, many women and men in my generation were thinking about the manner in which we live and about how we might create a more just world. We were asking probing and insightful questions about race and sexuality, about violence and power, and in the process scrutinized the culture we had inherited for clues to how we might see differently and thus change.

In the mid-seventies, while teaching and writing, I became interested in an old, stereotypical notion about women. Woven everywhere into the tapestry of European art and literature and seemingly an inseparable part of most philosophical and scientific texts—even embedded in the structure of European languages—is the assumption that women are closer to nature than men are. The notion is not intended as a compliment. In the hierarchical geography of European tradition, not only are human beings elevated above the rest of nature, but men are closer to heaven than women. In short, the idea that women are close to nature is an argument for the dominion of men.

During the most heady days of feminism, there were some who turned this idea on its head and argued that indeed women are closer to nature, a proximity making us *superior* to men. By the same token, the taxonomy of virtues through which men dominate—the capacity for reason and cool-headedness—was also reversed. Rationality itself became suspect, and passionate sensuality was enshrined.

I do not agree with the idea that women are closer to nature than are men in either its traditional or inverted form. Everything that exists on Earth, including rational thought, is part of nature. Thus, that one element would be closer to nature than another seems implausible to me. What does, however, seem very possible to me is that one gender may be more aware of being part of nature than another. And yet this difference in awareness must also be treated with subtlety. Today, largely due to the feminist movement, many more women are abandoning traditional feminine roles altogether and in some cases have become as divided from an awareness of natural process than any man. But even women who have a more direct knowledge of the stuff of earthly existence because they play traditional domestic roles are not born with this proclivity. They are shaped to it by society. As Simone de Beauvoir wrote in the mid-twentieth century, "A woman is not born she is made." And the same can be said for the tendency of some men not only to think of themselves as apart from nature but to place themselves at a distance from actual life processes. This behavior has less to do with genetics than with another tendency. When civilizations come to embody certain ideas through the influence of art, science, and institution, we who are the citizens of those civilizations come to resemble those ideas. As Oscar Wilde has written, "Life imitates art."

If society has succeeded in making men and women after a set of ideas that in the end diminishes human nature, we are now perilously close to making the earth after a philosophy that not only limits but even erases nature. As logical as the arguments for controlling women and nature appear to be, they veil a profound illogic, a heated fear, indeed a terror, that serve as the engines for a civilization in retreat from natural processes that must and do include change and loss, vulnerability, the rise and then ebb of powers, mortality. The association between women and nature has not only served to oppress women, it has also acted as a device for denial, a means to evade the simple truth that

human existence is immersed in nature, dependent on nature, inseparable from it. By imagining women as closer to nature, it becomes possible to imagine men as farther away from nature. And in this way, both men and women can indulge in the fantasy that the human condition can be free of mortality, as well as the exigencies and needs of natural limitation.

It is popular now to speak in glowing terms of free markets, as if the marketplace had no relationship to earthly necessity but were instead entirely conceptual and could thus grow as numbers grow, without boundaries and without end. This is the latest fantasy of domination over the earth, as if through the power of will human beings can make natural resources multiply on demand. But loving freedom as we do, we are ignoring another kind of freedom—liberation from a limiting philosophy, from a habit of self-deception that prevents us from treasuring what we actually possess: life.

At the heart of what I discovered as I wrote *Woman and Nature* is a vision of freedom from an imprisoning state of mind. The book is written in poetic prose, a style that allowed me to move underneath the seemingly logical propositions of our culture, not only to discover the machinery of our fear but to find evidence for a wisdom that is at once old and new, forgotten and yet still alive.

If the next twenty years are crucial in the history of the planet, so is the future of this wisdom—logical and sensual, realistic and imaginative—that is in us all and is indispensable to our survival. Read this book playfully, read it to the edges of the pages and then over the margins into other books, other worlds, other possibilities.

SUSAN GRIFFIN

Berkeley

July 1999

## PREFACE

This is an unconventional book and so, it was felt, needed some preface. I began writing this book roughly three years ago, after I was asked to deliver a lecture on women and ecology. I was concerned that the ecological movement had often placed the burden for solving its problems, those that this civilization has with nature, on women. I said in that lecture that women were always being asked to clean up, and to this I added the observation that men consider women to be more material than themselves, or more a part of nature. The fact that man does not consider himself a part of nature, but indeed considers himself superior to matter, seemed to me to gain significance when placed against man's attitude that woman is both inferior to him and closer to nature. Hence this book called *Woman and Nature* grew.

In the process of writing I found that I could best discover my insights about the logic of civilized man by going underneath logic, that is by writing associatively, and thus enlisting my intuition, or uncivilized self. Thus my prose in this book is like poetry, and like poetry always begins with feeling. One of the loudest complaints which this book makes about patriarchal thought (or the thought of civilized man) is that it claims to be objective, and separated from emotion, and so it is appropriate that the style of this book does not make that separation. Since patriarchal thought does, however, represent itself as emotionless (objective, detached and bodiless), the dicta of Western civilization<sup>o</sup> and science on the subjects of woman and nature in this book are written in a parody of a voice with such presumptions. This voice rarely uses a personal pronoun, never speaks as "I" or "we," and almost always

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<sup>o</sup>I have purposely limited the scope of this book to Western civilization.

implies that it has found absolute truth, or at least has the authority to do so. In writing this book, this paternal voice became quite real to me, and I was afraid of it. It sprang out at me in the form of recognized opinion and told me that the reactions I experienced in my female body to its declarations were ridiculous (unfounded, hysterical, biased). You will recognize that voice from its use of such phrases as "it is decided" or "the discovery was made." Much research went into the reconstruction of this voice: I tried to preserve its style and tone accurately.

The other voice in the book began as my voice but was quickly joined by the voices of other women, and voices from nature, with which I felt more and more strongly identified, particularly as I read the opinions of men about us. This is an embodied voice, and an impassioned one. These two voices (though you will find more than two in the text) are set in different type styles; thus a dialogue is implied throughout the book.

I begin the book by tracing a history of patriarchy's judgments about the nature of matter, or the nature of nature, and place these judgments side by side, chronologically, with men's opinions about the nature of women throughout history. From this philosophical beginning the book becomes more actual, treating of the effect of patriarchal logic on material beings. And so the first book, "Matter," continues the analogy drawn between woman and nature into explorations of the earth, trees, cows, show horses and women's bodies as we all exist in patriarchy.

The second book is entitled "Separation," and beginning with the separation of a womb from a woman's body, lists and protests against all those separations which are part of the civilized male's thinking and living—mind from emotion, body from soul—and reveals that separation which patriarchy requires us to make from ourselves. The third book, called "Passage," finally separates our consciousness from the consciousness of patriarchy, and thus the fourth book is called "Her Vision: Now She Sees Through Her Own Eyes."

In "Her Vision," all that we have seen in the first two books from the eye of patriarchy is now reseen. Thus the book is not so much utopian as a description of a different way of seeing. And so the section called "The Zoological Garden" is reflected in "Her Vision" as "The Lion in the Den of the Prophets." I had thought, in writing "Her Vision," that

this book would be like a mirror, and hence tried to put the sections in the same order (except backward) as they appeared in the first two books. But this proved impossible. "Her Vision" would not be so constricted.

While I was writing *Woman and Nature: The Roaring Inside Her*, the spaces I created within it began to be real for me; passing over into work on "Her Vision," I would feel as if I had entered a free zone, and breathe a sigh of relief.

I hope the reader will enter these spaces as I entered them, moving through these ways of seeing with passion, and will hear the voices as I hear them, especially the great chorus of woman and nature, which will swell with time. And I hope the reader will know, too, though this is just a book and thus just a fiction, that the feelings which enter these words are very real, and that in this matter of woman and nature, *we have cause to feel deeply.*

SUSAN GRIFFIN

Berkeley

November 1977

## ACKNOWLEDGMENTS

The ways of thought are never simple to trace; all along, my thinking has been part of the thinking of other women. (And in this I use "think" as it is constructed in Chinese calligraphy: "brain" and "heart" together.)<sup>\*</sup> What I learned of the necessities of daily life from the women of my family, the work necessary to keep house together and raise children—all that women know of naming feeling while we live in a culture that misnames and mistakes what we experience—goes into this book. In particular this book was generated in the midst of a time and space defined by the words and images of other women and this as part of a feminist movement which has made such a time and space possible. This book could not have been written otherwise. And so my greatest debt is to women who are part of this movement, now and a hundred or many hundred years ago.

I will name a few who helped me with this writing. My editor, Fran McCullogh, has been wise and supportive throughout this writing and I am deeply grateful for her brilliance and her grace; Adrienne Rich, through her work and her profoundly generous friendship and her insight, has been present in all this writing, and these two women in the sometimes very difficult years of writing the book truly sustained this effort. Let me also thank Kirsten Grimstad and Susan Rennie for their warm friendship and constant encouragement, and their continually inspiring turns of mind. This must be said also for Frances Jaffe and Mark Linenthal and Beverly Dahlen. June Jordan has been deeply understanding and supportive. Tille Oisen, Kathleen Barry, Kathleen

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<sup>\*</sup>I owe this observation to Diane Wolf, *Chinese Writing* (New York: Holt, Rinehart and Winston, 1975).



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tioned directly in these pages but has shaped these words. I think especially of the paintings of Georgia O'Keeffe, the novels of Virginia Woolf, the poetry of Josephine Miles, so often bearing on these concerns; of Diane di Prima, Joanna Griffin, the writing of Annie Dillard. There is so much that is not visible from others in this book that still is here, and I thank those spirits.

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### MATTER REVISITED

Woman and Nature

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## PROLOGUE



He says that woman speaks with nature. That she hears voices from under the earth. That wind blows in her ears and trees whisper to her. That the dead sing through her mouth and the cries of infants are clear to her. But for him this dialogue is over. He says he is not part of this world, that he was set on this world as a stranger. He sets himself apart from woman and nature.

And so it is Goldlocks who goes to the home of the three bears, Little Red Riding Hood who converses with the wolf, Dorothy who befriends a lion, Snow White who talks to the birds, Cinderella with mice as her allies, the Mermaid who is half fish, Thumbelina courted by a mole. (And when we hear in the Navaho chant of the mountain that a grown man sits and smokes with bears and follows directions given to him by squirrels, we are surprised. We had thought only little girls spoke with animals.)

*We are the bird's eggs, flowers, butterflies, rabbits, cows, sheep; we are caterpillars; we are leaves of ivy and sprigs of wallflower. We are women. We rise from the wave. We are gazelle and doe, elephant and whale, lilies and roses and peach, we are air, we are flame, we are oyster and pearl, we are girls. We are woman and nature. And he says he cannot hear us speak.*

*But we hear.*

**BOOK  
ONE**

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**MATTER**

How Man Regards  
and Makes Use of  
Woman and Nature

So this was how it looked, the determining, the crucial sky, and this was how man moved through it, remote above the dwindled earth, the concealed human life. Vulnerable life, that could scar.

TILLIE OLSEN,  
*Tell Me a Riddle*

## MATTER



It is decided that matter is transitory and illusory like the shadows on a wall cast by firelight; that we dwell in a cave, in the cave of our flesh, which is also matter, also illusory; it is decided that what is real is outside the cave, in a light brighter than we can imagine, that matter traps us in darkness. That the idea of matter existed before matter and is more perfect, ideal.

*Sic transit, how quickly pass, gloria mundi, the glories of this world, it is said.*

Matter is transitory and illusory, it is said. This world is an allegory for the next. The moon is an image of the Church, which reflects Divine Light. The wind is an image of the Spirit. The sapphire resembles the number eleven, which has transgressed ten, the number of the commandments. Therefore the number eleven stands for sin.

It is decided that matter is passive and inert, and that all motion originates from outside matter.

That the soul is the cause of all movement in matter and that the soul was created by God: that all other movement proceeds from violent contact with other moving matter, which was first moved by God. That the spheres in perpetual movement are moved by the winds of heaven, which are moved by God, that all movement proceeds from God.

That matter is only a potential for form or a potential for movement. It is decided that the nature of woman is passive, that she is a vessel waiting to be filled.

It is decided that the existence of God can be proved by reason and that reason exists to apprehend God and Nature.

God is unchangeable, it is said. *Logos* is a quality of God created in man by God and it is eternal. The soul existed before the body and will live after it.

"And I do not know how long anything I touch by a bodily sense will exist," the words of a saint read, "as, for instance, this sky and this land, and whatever other bodies I perceive in them. But seven and three are ten and not only now but always . . . therefore . . . this incorruptible truth of numbers is common to me and anyone at all who reasons."

And it is stated elsewhere that Genesis cannot be understood without a mastery of mathematics.

"He who does not know mathematics cannot know any of the other sciences," it is said again, and it is decided that all truth can be found in mathematics, that the true explanation is mathematics and fact merely evidence.

That there are three degrees of abstraction, each leading to higher truths. The scientist peels away uniqueness, revealing category; the mathematician peels away sensual fact, revealing number; the metaphysician peels away even number and reveals the fruit of pure being.

It is put forward that science might be able to prolong life for longer periods than might be accomplished by nature. And it is predicted:

that machines for navigation can  
be made without rowers so that the  
largest ships on rivers or seas will  
by a single man be propelled with  
greater velocity than if they were  
full of men  
that cars can be made to move with  
out the aid of animals at an un  
believable rapidity  
that flying machines can be con  
structed  
that such things can be  
made without limit

It is decided that vision takes place because of a ray of light emanating from the eye to the thing perceived.

It is decided that God is primordial light, shining in the darkness of first matter, giving it substantial being. It is decided that geometrical optics holds the key to all understanding.

It is said that the waters of the firmament separate the corporeal from the spiritual creation.

That the space above is infinite, indivisible, immutable, and is the immensity of God.

That the earth is a central sphere surrounded by concentric zones, perfect circles of air, ether and fire, containing the stars, the sun and the planets, all kept in motion by the winds of heaven. That heaven is beyond the zone of fire and that Hell is within the sphere of the earth. That Hell is beneath our feet.

It is stated that all bodies have a natural place, the heavy bodies tending toward the earth, the lighter toward the heavens.

And what is sublunary is decaying and corruptible. The earth "is so depraved and broken in all kinds of vice and abominations that it seemeth to be a place that hath received all the filthiness and purgings of all other worlds and ages," it is said.

And the air below the moon is thick and dirty, while the air above "shineth night and day of resplendour perpetual," it is said.

And it is decided that the angels live above the moon and aid God in the movement of celestial spheres. "The good angels," it is said, "hold cheap all the knowledge of material and temporal matters which inflates the demon with pride."

And the demon resides in the earth, it is decided, in Hell, under our feet.

It is observed that women are closer to the earth.



That women lead to man's corruption. Women are "the Devil's Gateway," it is said.

That regarding the understanding of spiritual things, women have a different nature than men, it is observed, and it is stated that women are "intellectually like children." That women are feebler of body and mind than men, it is said: "Frailty, thy name is woman."

And it is stated that "the word woman is used to mean the lust of the flesh."

That men are moved to carnal lust when they hear or see woman, whose face is a burning wind, whose voice is a hissing serpent.

It is decided that in birth the female provides the matter (the menstruum, the yolk) and that the male provides the form which is immaterial, and that out of this union is born the embryo.

And it is written in the scripture that out of Adam who was the first man was taken Eve, and because she was born of man he also named her: "She shall be called Woman."

And it is written in the bestiary that the cubs of the Lioness are born dead but on the third day the Lion breathes between their eyes and they wake to life.

It is decided that Vital Heat is the source of all vital activity, that this heat emanates from God to the male of the species, and that this vital heat informs the form of the species with maleness, whereas the female is too cold to effect this change.

It is decided also that all monstrosities of birth come from a defect in the matter provided by the female, which resists the male effort to determine form.

It is decided that Vital Heat is included in semen, that it is the natural principle in the spirit and is analogous to that element in the stars.

It is decided that the Vital Heat of the sun causes spontaneous generation.

The discovery is made that the sun and not the earth is the center of the universe. And the one who discovers this writes:

"In the middle of all sits Sun enthroned. In this most beautiful

temple could we place this luminary in any better position from which he can illuminate the whole at once? He is rightly called the Lamp, the Mind, the Ruler of the Universe; Hermes Trismegistus names him the visible God, Sophocles' Electra calls him the All-Seeing. So the Sun sits as upon a royal throne ruling his children the planets which circle round him. . . . Meanwhile the earth conceives by the Sun, and becomes pregnant with an annual rebirth."

And it is decided that the Sun is God the Father, the stars God the Son, and the ethereal medium the Holy Ghost.

Mutability on the earth, it is said, came to the Garden of Eden after the Fall. That before the Fall there was immortal bliss on earth, but that after the Fall "all things decay in time and to their end do draw."

That the face of the earth is a record of man's sin. That the height of mountains, the depth of valleys, the sites of great boulders, craters, seas, bodies of land, lakes and rivers, the shapes of rocks, cliffs, all were formed by the deluge, which was God's punishment for sin.

"The world is the Devil and the Devil is the world," it is said.

And of the fact that women are the Devil's Gateway it is observed that sin and afterward death came into the world because Eve consorted with the devil in the body of a serpent.

That the power of the devil lies in the privy parts of men.

That women act as the devil's agent and use flesh as bait.

That women under the power of the devil meet with him secretly, in the woods (in the wilderness), at night. That they kiss him on the anus. That they offer him pitch-black candles, which he lights with a fart. That they anoint themselves with his urine. That they dance back to back together and feast on food that would nauseate "the most ravenously hungry stomach." That a mass is held, with a naked woman's body as an altar, feces, urine and menstrual blood upon her ass. That the devil copulates with all the women in this orgy, in this ritual.

That these women are witches.

That "Lucifer before his Fall, as an archangel, was a clear body, composed of the purest and brightest air, but that after his Fall he was veiled with a grosser substance and took a new form of dark and thick air."

That "Virgin's urine is quite unclouded, bright and thin, and almost lemon color," whereas "the urine of the woman who has lost her virginity is very muddy and never bright or clear. . . ."

And that though it is written that there is no wickedness to compare to the wickedness of a woman, it is also written that good women have brought "beatitude to men, saved nations, lands and cities," and that "Blessed is the man who has a virtuous wife, for the number of his days shall be doubled."

And that a virtuous wife is one who obeys her husband, as the Church obeys Christ.

And it is said that there are certain woods which exist free from the "penalty of Adam," where there are "tongues in trees, books in running brooks, sermons in stones and good in everything."

It is now discovered that the celestial substance, like the substance of the earth, is mutable.

And it is decided that though the celestial substance is mutable, yet immutable laws govern all mutability, and that the invariability of God's will can be deduced from the perfection of His laws which rule the natural world.

It is posited that the spaces between the planetary orbits each correspond to Euclid's five perfect solids: that from Saturn to Mercury each corresponds to a cube, a tetrahedron, a dodecahedron, an icosahedron and an octahedron.

For this reason it is said that there are only six planets and that there could be only six planets (no more and no less).

It is announced that the music of the spheres may be discovered through mathematical laws.

The cause of the universe, it is said, lies in mathematical harmony, which exists in the mind of the creator.

It is said that all shapes, celestial and terrestrial, are in reality geometrical shapes.

A compass is devised and a set of rules drawn for reducing the irregular to the regular and for simplifying a combination of regular shapes to a single figure.

It is argued that the heliocentric system, since it requires only thirty-four epicycles (as opposed to the eighty required by the geocentric system), is more simple and that therefore it must be true.

It is said, "Nature doth not that by many things which can be done by a few."

That "Nature is not redundant."

That "Nature is pleased with simplicity and affects not the pomp of superfluous causes."

"Vain pomp and glory of this world, I hate ye," it is said.

(And extravagance and excess are seen to be apparent in women: women have the defect of "inordinate affections and passions" it is written and women's sorrows are "either too extreme or not to be believed" it is said and "women being moved to anger" are "more envious than a serpent, more malicious than a tyrant, more deceitful than the devil," and of women's wrath it is said they "are made of blood," and of women's mind it is said that it "shifts oft like the inconstant wind," and it is said that "all witchcraft comes from carnal lust which is in women insatiable.")

And it is said that all sin originated in the flesh of the body of a woman and lives in her body. (And the old text reads that Christ was born of a Virgin in order that the disobedience caused by the serpent might be destroyed in the same manner in which it had originated.)

*And we are reminded that we have brought death into the world.*

Now it is disputed and then it is made clear that angels do not possess bodies but only assume them. That they do not occupy any point in space but are virtually present and operating at that point.

And from this some suppose that angels are thin.

And it is wondered how thin angels are (and how many angels could occupy, at one time, the space on the head of a pin).

And it is said that nature can be understood only by reduction, that only by reducing her to numbers does she become clear.

That without mathematics "one wanders in vain through a dark labyrinth."

It is decided that that which cannot be measured and reduced to number is not real.

It is questioned whether or not motion is real.

It is discovered that motion can be measured by measuring the space through which movement moves and the time in which the moving takes place.

It is decided that motion is real.

(But it is said again that all motion came originally from God and that God has given the universe a fixed quantity of movement.)

It is decided that all motion results from bodies acting directly on other bodies, that one body cannot affect another at a distance.

And it is stated that all matter is made up of smaller particles of matter, whose motions determine the appearance of the universe. That God alone sees things as they are, that He sees the particles directly. That if anyone were to know the position of all the particles at any given time he could predict the future.

It is said that the sensation of color is produced by the action of these particles on the retina of the eye. That the particles are real but that the sensation they produce is not.

That color is not real. Odor is not real. Dreams not real. Pleasure and pain not real. Nor nightmares. Nor chamber music.

And of the difference of women from men it is said that women are more sensual than they.

It is said that women exist for pleasure.

"How fair and pleasant art thou, O love, for thy delights," it is written.

The human mind, it is written, was made by God to understand "not whatever you please, but quantity."

"For what is there in the human mind besides figures and magnitudes?" it is asked.

And it is seen that the senses are deceptive. And the ancient texts reveal that of understanding there are two kinds: one authentic and the other bastard, and sight, hearing, smell, taste and touch are all bastard understandings.

And it is said that women are the fountain, the flood and the very root of deception, falsity and lies.

Woman, for instance, was formed from a defective rib of man's breast, it is said, which was bent contrary to him, and so therefore it is in woman's nature to deceive.

And it is advised that if one would follow a woman to her dressing room one might discover the truth. Beneath her paint, her wigs, her jewels, her robes, is a monstrous creature so odious and ugly that one finds there "Serpents rather than saints."

It is ascertained that sensations are confused thoughts and that imagination and memory because they derive from sensation should be distrusted.

The word "hysterical" is taken from the word *hyster*, meaning womb, because it is observed that the womb is the seat of the emotions (and women are more emotional than men).

That crying is womanish, it is observed, and that dramatic poetry, since it causes crying, ought to be avoided, that it "has a most formidable power of corrupting even men of high character."

And it is written that women have the defect of "inordinate affections and passions" and overlively imaginations, and for this reason young girls should not be taught Italian and Spanish, since books written in both those languages have a "dangerous effect" on women.

And it is cautioned that husbands should not counsel with their wives nor allow them to see their accounting books.

Those

"Who, moving others are themselves as stone

Unmoved, cold and to temptation slow;

They rightly do inherit heaven's graces

And husband nature's riches from expense"

it is written.

And it is also written that woman "is not fully the master of herself" and that "only one woman in thousands has been endowed with the God-given aptitude to live in chastity and virginity."

And the old texts read that where there is death there too is sexual coupling and where there is no death there is no sexual coupling either.

And it is decided that God does not die.

It is decided that God is the maker but that he has no hands. It is decided that He created Harmony and Beauty but that He has no ears, no eyes. That He is not corporeal nor is He matter, but He is ultimate reality. That he exists absolutely and infinitely. That he is dependent on no other being. That He was not born. That He has no mother. He is the Father. He will not die.

And it is said that God is a mathematician. That the human mind understands some propositions in geometry and arithmetic but that in "these the Divine Wisdom knows infinitely more propositions because it knows them all."

That God has allowed us to see "by creating us after His own image so that we could share in his own thoughts."

*Cogito, I think, ergo, therefore, sum, I am, it is said.*

And it is written that "not the woman but the man is the image of God."

And that "the image of God is in man and it is one." That "Women were drawn from man, who has God's jurisdiction as if he were God's vicar, because he has the image of the one God."

That as God is the principle of the universe so is man, in likeness to God, the principle of the human race.

It is decided that the minds of women are defective. That the fibers of the brain are weak. That because women menstruate regularly the supply of blood to the brain is weakened.

All abstract knowledge, all knowledge which is dry, it is cautioned, must be abandoned to the laborious and solid mind of man. "For this reason," it is further reasoned, "women will never learn geometry."

There is a controversy over whether or not women should be taught arithmetic.

To a woman who owns a telescope it is suggested that she rid herself of it, that she "stop trying to find out what's happening on the moon."

It is decided that matter cannot know matter.  
That matter "is but a brute thing and only capable of local motion."  
That matter has no intellect and no perception.

And it is stated that nature should be approached only through reason.

1382 Thomas Brawardine in *Treatise on the Proportions of Velocities* in *Moving Bodies* proposes a mathematical law of dynamics universally valid for all changes in velocity.

1431 Joan of Arc, aged 22, "placed high on the fire so the flames would reach her slowly," dies.

(She is asked why she wears male costume.)

1468 The Pope defines witchcraft as *crimen exceptum*, removing all legal limit to torture.

1482 Leonardo da Vinci moves to Milan, and begins his notebooks on hydraulics, mechanics, anatomy; he paints *Madonna of the Rocks*.

(Does she see the body of St. Michael, they ask her? Did he come to her naked?)

1523 One thousand witches burn in a single year in the diocese of Como.

1543 Vesalius publishes *De Humani Corporis Fabrica*.

1543 Copernicus publishes *De Revolutionibus Orbium Coelestium*.

(She is asked if she is in a state of grace. She is asked if St. Margaret speaks English.)

1571 Johannes Kepler born.

1572 Augustus the Pious issues *Consultationes Saxonicæ*, stating that a good witch must be burned because she has made a pact with the devil.

(She confesses that she falsely pretended to have revelations from God and his angels, from St. Catherine and St. Margaret.)

1585 Witch burnings in two villages leave one female inhabitant each.

1589 Francis Bacon is made clerk of the Star Chamber.

(He says that nature herself must be examined.)

1581-1591 Nine hundred burned in Lorraine.

(That nature must be bound into service, he persuades.)

- 1600 Gilbert's *De Magnetete* published.
- 1603 William Harvey assists at the examination of the witches.
- 1609 Galileo, on hearing a rumor of the invention of a glass magnifying distant objects, constructs a telescope.  
(It is urged that nature must be hounded in her wanderings before one can lead her and drive her.)
- 1609 Kepler publishes *Astronomia Nova*.
- 1609 The whole population of Navarre is declared witches.  
(He says that the earth should be put on the rack and tortured for her secrets.)
- 1615 William Harvey lectures on the circulation of the blood at the Royal College of Physicians.
- 1619 Kepler publishes his third law, *De Harmonice Mundi*.
- 1619 The first black slaves are introduced in America.  
(She is asked if she signed the devil's book.  
She is asked if the devil had a body.  
She is asked whom she chose to be an incubus.)
- 1622 Francis Bacon publishes *Natural and Experimental History for the Foundation of Philosophy*.
- 1622-1623 Johann George II, Prince Bishop, builds a house for the trying of witches at Bamberg, where six hundred burn.
- 1628 One hundred fifty-eight burned at Wirtzburg.
- 1637 Descartes publishes *Discours de la Méthode*.  
(She is asked what oath she made. What finger she was forced to raise. Where she made a union with her incubus. What food she ate at the sabbat. What music was played, what dances were danced. What devil's marks were on her body. Who were the children on whom she cast spells; what animals she bewitched. How she was able to fly through the air.)
- 1638 Galileo publishes *Two New Sciences*.
- 1640 Carbon dioxide obtained by Helmont.
- 1644 Descartes publishes *Principia Philosophiae*.
- 1670 Rouen witch trials.
- 1687 Newton publishes *Principia*.

- (She confesses that every Monday the devil lay with her for fornication. She confesses that when he copulated with her she felt intense pain.)
- (She confesses that after having intercourse with the devil she married her daughter to him.)
- 1666 Newton procures "a triangular glass prism to try the celebrated phenomena of colors."
- 1704 Newton publishes *Opticks*.
- 1717 Halley reveals that the world is adrift in a star swirl.
- 1738 Dean of Faculty of Law at Rostock demands that witches be executed by fire and sword.
- 1745 Witch trial at Lyon, five sentenced to death.
- 1749 Sister Maria Renata executed and burned.
- 1775 Anna Maria Schmagel executed for witchcraft.  
(She confesses she passed through the keyhole of a door. That she became a cat and then a horse. She confesses she made a pact with the devil, that she asked for the devil's help.)  
(*We confess we were carried through the air in a moment.*)

And it is stated that the rational soul, which is immaterial, bears the image of its divine maker, has will, is endowed with intellect and is more noble and more valuable of being than "the whole corporeal world."

That Adam is soul and Eve is flesh.

It is argued now that animals do not think. That animals move automatically like machines. That passion in animals is more violent because it is not accompanied by thought. That our own bodies are distinguished from machines only by "a mind which thinks without reference to any passion."

And it is further argued that if animals could think, they might have immortal souls.  
But it becomes obvious that animals do not have immortal souls (and cannot think), since if one animal had an immortal soul, all

might, and that "there are many of them too imperfect to make it possible to believe it of them, such as oysters, sponges, etc."  
And it is said that the souls of women are small.

It is decided that matter is dead.

That the universe acts as a machine which can be described by describing the actions of particles of matter upon other particles according to immutable mechanical laws.

That the secret of the universe may be revealed only through understanding how it works. That behind the material "how" may lie the first cause, which is immaterial.

That the particular (like the parts of a machine) may be understood without reference to the whole.

That the "celestial machine is to be likened not to a divine organism but rather to clockwork."

And it is discovered:

That the weights of two bodies are proportional to their masses.

That every body perseveres in its state of rest or uniform motion in a straight line, except as compelled to change that state by impressed forces.

That change of motion is proportional to the moving force impressed and takes place in the direction of the straight line in which such force is impressed.

That reaction is always equal and opposite to action.

Inertia is named.

And it is said that the maker of the universe was skilled in mechanics.

And it is discovered of light that the sines of the angles of refraction and incidence bear a true ratio and it is argued "was the eye contrived without skill in optics?"

And it is discovered that the heart circulates the blood through the body like a hydraulic pump.

And it is said that just as a king is the foundation of a kingdom, so the "heart of animals is the foundation of their life, the sovereign of everything within them, the sun of their microcosm, that upon which all growth depends, from which all power proceeds."

And it is decided that the moment of death occurs at the moment when the heart stops beating.

And it is determined that air has weight. That its volume is proportional inversely to its pressure.

That a heavy weight and a light weight falling reach the ground simultaneously.

That God is skilled in gravity.

And the parabola is discovered as a result of continuous horizontal movement and inexorable gravity.

And the ellipse is discovered to be the path of the planets.

Everything in the universe, it is perceived, moves according to the same laws: the earth, the moon, the wind, the rain, blood, atoms.

And it is asserted that God constructed his clock to run autonomously. And it is argued whether or not God fixes his clock.

And it is stated that God does not learn. That God knows everything. That God made the laws of the universe and that there is nothing He cannot do. That He created natural law but that He is above natural law and need not obey it.

Yet it is finally agreed that God does not speak to us. (God has no mouth.) That God does not respond to our prayers. (He has no ears.) That God knows everything but He does not choose to respond.

And it is decided that what makes God divine is his power.

That "a God without dominion . . . is nothing but Fate and Nature."

That we adore God for his power.

And Eve is said to have said to Adam:

My author and Disposer, what thou bidst

Unargu'd I obey; so God ordains

God is thy law, thou mine: to know no more

Is woman's happiest knowledge and her praise.

And it is written in the law that "Women should be subject to their men."

And we learn

And it is advised that women not be allowed to teach nor should they baptize. That "even the Virgin Mary" was not allowed to baptize.

that our speech is unholly

And it is stated that nature should be approached only through reason, that one should be taught by nature "not in the character of a

pupil who agrees to everything the master likes, but as an appointed judge, who compels the witness to answer the question which he himself proposes."

(And it is written that women, on discovering that they have ovaries, are liable to become arrogant through this knowledge.)

*And we seek dumbness*

And it is decided that human knowledge and human power are one. That "in the womb of nature" are "many secrets of excellent use."

And it is written that "it is annoying and impossible to suffer proud women, because in general Nature has given men proud and high spirits, while it has made women humble in character and submissive. . . ."

*We practice muteness*

And it is written that in the inferior world of brutes and vegetables man was created to act as the viceroy of the great God of heaven and earth, and that he should then name the brutes and the vegetables. For there is power in words, it is said, and it is put forward that by knowing the names of natural things, man can command them, that he who calls the creatures by their true names has power over them.

(Thus it is decided that earth shall be called land; trees, timber; animals to be called hunted, to be called domesticated; her body to be named hair, to be named skin, to be called breast, vulva, clitoris, to be named womb.)

And it is pointed out that man fell at one and the same time from both innocence and dominion, and it is promised that while faith will restore innocence, science can restore dominion.

By "knowing the force and action of fire, water, air, the stars, the heavens and all other bodies that surround us," it is declared, "men can be the masters and possessors of nature."

And so then it is predicted that life will be prolonged, youth restored, age retarded, and incurable disease cured, and pain mitigated, and one body transformed to another, new species created, new instruments of destruction, such as poisons, invented, the time of germination accelerated, composts for the earth fabricated, new foods fabricated, new threads made, paper, glass, artificial minerals and elements, and that there will be means to convey sounds great distances

over lines, stronger and more violent engines of war, and that men will fly in the air, and go under water in great ships.

And now the nature of time and of space is wondered at, and it is said that there are two spaces, one vulgar, changeable, relative, the other absolute, changeless, eternal. And that absolute space is the mind of God, it is suggested. (And it is cautioned that the vulgar know only vulgar space.)

Such a thing, therefore, as absolute motion is said to exist in absolute space. And time flows universally, it is said, and always will.

But "Man has been but a few years dweller on the earth," it is reflected, and it is put forward that the life of the earth like the life of man is short.

The changes to be seen on the surface of the earth, it is stated, took place swiftly and violently. That this earth was formed not by one cataclysm, but by cataclysm following cataclysm, each the sign of God's will, each marking the end of one age and the beginning of another.

And the marks of these ages can be traced in the strata of rocks holding imprints from the bodies of perished animals and perished plants, it is shown, and it is declared that all the boulders, even enormous fragments from the Alps, were rolled by the sea in one great tidal wave which spread over the splintered valleys. And the chains of mountains, it is said, were made by violent upheavals of the earth, sand, stone. That because of this violence, no life persisted from one age to another. (And the only link between the species is in the mind of God.)

And the sun will soon burn itself out.

It is decided that man is the last of a series of species made according to a plan by which the whole animal kingdom was constructed.

(Yet it is said that the appearance of man was "a geological event of vast importance . . . utterly unaccounted for by . . . the laws of nature.")

"There is in this universe a stair," it is declared.

And woman is "the idlest part of God's Creation," it is said.

(And it is sung that only slaves love women, for the love of women is dangerous, and to drudge in "fair Aurelia's womb" is to find death.)

(And the theory is held that savage races have fallen through sin from civilization, that the further removed from the Garden of Eden, the more animalized is a race of people.)

All nature, it is said, has been designed to benefit man. That coal has been placed closer to the surface of the earth for his use. That animals run on four feet because it makes them better beasts of burden. That teeth were created for chewing, and that women "exist solely for the propagation of the race."

That nature has made it natural for a woman to seek only to be a good wife and mother, and "nature's darling" woman stays at home, it is pointed out. (Yet the woman who neglects her home is unnatural, it is observed, "a monster more horrible than Frankenstein." That since nature has closed the avenues of intellectual distinction to women, it is reasoned, education for the female is unnatural.)

"Nature is the art of God," it is declared.

(And it is decided to name all the species. That in naming, man is given a glimpse into the secret cabinet of God. And so all the species are named according to their sexual parts.)

And we are assured that we have no reason to fear being overlooked or neglected by this artful creator since he takes extreme care even in so small and insignificant a detail of creation as the hinges of an earwig. But still, the motives of the creator are questioned regarding the creation of rudimentary organs, and it is debated whether or not any malevolence came to play in the making of parasites.

And now there is doubt. For it is postulated that in the rocks of the earth, it is discovered that there is no evidence for a beginning or an end to time here. And it is slowly realized that not cataclysms but wind shaped stone, that water drops indeed wear granite away, that water can carry soil and make mountains, that water passes from land to sea to land, that as the earth is worn away it is built again, and finally it is agreed that "nature lives in motion."

And now in the "traces of vanished limbs, soldered wing cases and buried teeth," secrets are revealed and facts discovered which "undetermine the stability of the species."

And that God made each living thing is questioned.

For instance, it is observed that teeth appear in situations where they do not bite, wings where they do not fly. (That ducks use wings as paddles, penguins as fins, and the ostrich spreads its plumes like sails to the breeze.) And the passage by which nature joins the lizard to the snake is now observed.

That each species was not fashioned separately by God, it is concluded, and the species are not immutable.

(And of this, it is put forward that "it is derogatory that the Creator . . . should have created each of the myriad of creeping parasites and slimy worms which have swarmed . . . this globe.")

That animals originated not from the ark but in the environment in which they live now by modification from earlier forms, it is now clear, and it is said that species form species and nature makes nature.

Thus it is implied that there are species which once existed and exist no longer, which are extinct, and the bones of animals no longer living in the pampas are said to be akin to the bones of llamas now alive there.

(And in 1852 the last spectacled cormorant is seen.)

Still, it is testified that this evolution reveals an "immanent purpose to perfect the creation" and that animals are diverted from reaching perfection by the mutability of the world.

(And it is wondered if the orang-utan might have been diverted from perfection by the wilderness.)

Yet the possibility is entertained that nature evolves species without design, and there are those who reason that the forces of nature are blind, that they are blind will, without reflection or morality. That this will is a will to live and infects all natural forms, from the growth of plants to the drive for mating, and the hunger for food in animals and man.

Yes, nature is merciless and insatiable, it is said, red in tooth and claw, it is written.

(And it is also written that nature lives and breathes by crime. Hungers at her pores for bloodshed. Aches in her nerves for sin. Yearns for cruelty. That she kindles death out of life, and feeds with



fresh blood the innumerable and insatiable mouths suckled at her milkless breast. That she takes pain to shapen her pleasure. That she stabs, poisons, crushes and corrodes. That nature is weary of life. That her eyes are sick of seeing; her ears heavy with hearing. That she is burned up with creation. That she labors in the desire for death.)

And it is stated that woman's nature is more natural than man's, that she is genuine with the "cunning suppleness of a beast of prey," the tiger's claw under the glove, the naïveté of her egoism, her uneducability and inner wildness.

And the scope and movement of her desires and virtues are said to be incomprehensible.

*And we learn to be afraid*

("Woman! The very name's a crime," it is written.)  
*of our nature*

That opposed to the will is idea. That idea negates nature.

And it is made clear that the evolution of the brain and hence the ability to reason set man apart from the other animals, and gave him the control over his own evolution.

That only through reason can one refuse to be a slave to nature.

And it is stated that "the genitals are the real focus of the will and consequently, the opposite pole of the brain."

And that the organs compete with one another for a supply of blood.

It is recorded that woman's generative organs exercise a strange power over her heart, her mind and her soul.

That woman is what she is in character, charm, body, mind and soul because of her womb alone. ("That after menopause a woman is "degraded to the level of a being who has no further duty to perform in this world.") That woman is a natal mechanism.

Thus it is advised that too much mental activity can cause an "ovarian neuralgia," during which neither the brain nor the womb receives enough blood.

That the thinking woman, by "deflecting blood to the brain from the generative organs . . . lost touch with the sacred primitive rhythms that bound her to the deepest law of the cosmos."

(And the young man who would develop his intellect and his physique is cautioned to avoid as far as possible all loss of sexual fluid.)

For the good of the human race it is prescribed that girls complete their education by the age of sixteen or seventeen and then marry. Higher education, it is said, will render a defective development of the sexual organs.

(And it is suggested that higher education had already caused the reduced size of the pelvis in women.)

Woman's greatest achievement, it is declared, is to be the mother of a great man.

1735, Linnaeus names the plants and animals in *Systema Naturae*.  
1762, Rousseau publishes *Contrat Social* and *Émile*. 1792, Mary Wollstonecraft publishes *A Vindication of the Rights of Woman*. 1798, Victor, the wild child of Aveyron, an uncivilized boy with the behavior of an animal, is captured by three sportsmen in the woods of Caune.  
1812, Cuvier publishes *Recherches sur les Ossements Fossiles de Quaternaires*. 1835, the *Beagle* reaches the Galapagos archipelago.  
1845, Dr. Sims invents the speculum. 1848, Revolution in France.  
1848, Karl Marx and Friedrich Engels distribute the *Communist Manifesto*. 1848, Woman's Rights Convention at Seneca Falls. 1853, Dr. L. P. Burnham performs the first successful hysterectomy in America. 1856, Bessemer turns out the first ton of cast iron steel from his converter.

Through evolution, "All corporeal and mental endowments will tend to progress toward perfection," it is written.

"The brain stands vertically poised on the summit of the backbone. Beyond there is no further progress."

And it is observed that woman is less evolved than man. Men and women differ as much, it is observed, as plants and animals do. And men and animals correspond just as women and plants correspond, for women develop more placidly, like plants, and have an "indeterminant unity of feeling."

That her evolution resulted in a higher and shriller voice, a smaller larynx, fewer red corpuscles and a less complex nervous system.

*Our voices diminish*

(That the later development of the abbreviated foot in women must have been a throwback, since the short foot is clearly "unworthy of a noble animal.")

*We become less*

And it is observed that the woman's brain mass is smaller.

*We become less*

That lacking in reason and morality, women are a kind of middle step between the child and the man, who is the true human being.

*And they say that muteness is natural in us*

(That in the womb the fetus goes through all the stages of human evolution.)

That mentally women are prostrate before the male sex.

That indeed the thoughts of women (and "the inferior races") are said to be filled with special and personal experience but not with general truths. And it is pointed out that neither women, nor those of the "lower races," are able to abstract ideas from concrete cases.

"Science offends the modesty of all real women," it is written. "It makes them feel as if one wanted to peep under their skin—yet, worse, under their dress and finery."

And it is stated that abstract thought causes physical pain in women, that their incapacity for intellectual thought is a secondary sexual characteristic.

(That the female organism transmits instincts, habits and intuition, and those features of the species established by heredity, to her offspring.)

(That "the male of the species has centralized in himself most of the activities independent of the sexual motor.")

That men "undergo . . . a severe struggle in order to maintain themselves and their families" and that this struggle may increase their intelligence and hence "an inequality between the sexes," it is written.

1859, Charles Darwin publishes *The Origin of Species*. 1864, Navaho tribe forced from the Canyon de Chelly by the U. S. military and marched to a reservation. 1864, Contagious Disease Act in England requires all women suspected of prostitution to register as such. 1872, Married Women's Property Act, giving married women the right to own property, repealed. 1872, Alexandre de Lodyguine makes lamps with short, straight carbon filaments. 1872, Battey performs the first clitoridectomy in America. 1894, at the official academy of art in

London, women are finally admitted to life drawing classes, but only when the model is partially draped. 1913, Emmeline Pankhurst's first hunger and thirst strike at Holloway Prison.

And it is said that without the male, "civilization would be impossible"

That mankind has evolved away from the bestial and closer to the angel

Arise and fly

The reeling fawn, the sensual feast

It is declared

move upward, working out the beast

And let the ape and tiger die.

That all animals are merely fetal stages of man, it is decided.

And striving to be man, the worm

Mounts through all the spires of form

it is sung.

It is declared then that man is an animal, and he is the most perfect animal.

That according to the laws of survival, a creature wills himself and his species to perfection.

("What was her womanhood," it is written, "that it could stand against the energy of his manly will.")

That "the stronger and the better equipped . . . eat the weaker and . . . the larger species devour the smaller."

And it is stated that if women were not meant to be dominated by men, they would not have been created weaker.

(That woman is as far from man as man is from the forest monkeys, it is reflected.)

That the able survive

As for instance the wolf who is the swiftest and the slimmest.

That nature has selected this wolf and his offspring to live.

That stags have horns and cocks spurs

Because among males it is always the victor who is allowed to breed. That the species are shaped by death.

It is said that the world (outside the home) is a "vast wilderness." And that man goes naked and alone into this world, where he is surrounded by savages.

That he is subjected to "a rage of competitive battle."  
That the whirl and contact with the world is the inheritance of his sex.

(And therefore it is suggested that sons be raised with bodily constitutions possessing extraordinary powers of endurance. That the young man must be constantly seeking manly thoughts to feed his mind. That in his education he must sacrifice some of the delights of culture in order to fit himself for competition.)

On the other hand, it is said that woman's place is in the home. That in evolution woman missed the powerful intellectual stimulus competition creates among men.  
(That as the male brain became increasingly larger than that of the female, so men began to dominate human society.)

Women are the weaker sex, it is said, and therefore those women have survived who best succeeded in pleasing men.

And that because of this weakness, nature has made woman a better liar. "For, as nature has endowed the lion with claw and fang, elephant and boar with tusks, the bull with horns and the jellyfish with obscuring liquid—in the same way she has endowed women with deceit."

(That those women who betrayed anger at ill treatment from the male were less likely to survive than those who could conceal their anger.)

(That indeed nature has provided men with beards so that they might conceal their emotions, but that women, being naturally deceptive, have no beards.)

And it is postulated that those women skilled in intuition survived, since a woman able to detect instantly a rising passion in her savage husband would be more likely to escape danger from him.  
(That girls should emphasize culture in their educations, it is suggested.)

And it is said that nature endows woman with a superabundant beauty so that she might attract a male, but that this beauty vanishes after she has bred one or two children, just as the ant loses her wings after fertilization.

And it is warned that men do not like and would not seek to mate with an independent factor.

That society can be thankful that neither the emancipated woman nor the prostitute propagates her own kind.

It is decided that the ovum is passive and the sperm is adventurous. That in sperm is the concentrated power of man's perfect being.

*Totus homo semen est*, it is said.

That runts, feeble infants and girls are produced by debilitated sperm.

That the sperm functions to vitalize the ovum.

That the ovum transmits instinct, habits, intuition and laws of conduct.

And that the sperm is the means by which the newer variations of nature are implanted in the conservative ovum.

*We are nature, we are told*

(That the male mind, just as the male organism creates variation, has the power of discovering new experience, and new laws of nature, which become, in their turn, new laws of action.)

*We are nature, we are told, without intelligence*

"All organic beings are exposed to severe competition," it is written. And it is observed that all creatures are pressed into a struggle for existence

That all the plants of a given country are at war with one another  
That it is the tendency of all beings to multiply faster than their source of nourishment

(Indeed, it is written that the human race tends to outrun subsistence and is kept in bounds only by famine, pestilence or war.)

And this struggle is called a natural government, and this warfare is said to lead to perfection.

(And it is suggested that war serves "for the real health of humanity and the building of strong races.")

(And it is declared that the history of human society is the history of class struggle. That the collisions between the classes will end in the victory of the proletariat.)

(And the development of large corporations, it is pointed out, is also merely the survival of the fittest, merely the working out of a law of nature and a law of God.)

And it is postulated that each organism is a product of a struggle for existence among the molecules.

That the human body is a product of warfare among its parts.

Woman is "a milk-white lamb that bleats/For man's protection," it is sung.

And it is written that "every woman is always more or less an invalid."

That during menses women suffer a languor and depression which disqualifies them for thought or action.

And it is said that pity is the offspring of weakness and that women and animals, being weaker, feel more pity.

And the poets are said to have learned pity from women.

And the scientist observes that women appear to be more tender and less selfish than men.

(But pity is said to be an emotion closer to the state of nature; that pity depends on the ability to identify with another creature; but that a rational state of mind gives birth to isolation through reflection; that the rational man on seeing suffering can say, "Die, if you will. I am safe.")

But it is also written that "the sick are the greatest danger for the sound," the "great danger of man . . . sick women especially."

That a man whose house is infested with a woman is weaker for it.

For men must work and women must weep, it is sung.

That woman elicits pity

But that those who would sympathize with women will have the same fate as the zookeeper who sympathized with the lioness as she defended her cubs. He was eaten, it is written.

It is decided that man evolved from the great apes.

That under the surface of the earth one finds the first inhabitants of the land

Whose protruding jaws and low forehead betray a savage animal, and that this skull resembles that of the Negro, the Mongol, the Hottentot and the Australian.

That all the stages of the evolution of men and of human society still exist.

That the struggle for existence continues still among the different races.

And that "the white man is improving off the face of the earth even races nearly his equal."

Of the men who live in the gloom of the forest, it is whispered, one might as easily pass "for an Orang-Utang as a man."

(Hottentots are brutal, it is said, and their speech is a farrago of bestial sounds like the chatter of apes.)

(There are tribes in South America, it is told, whose language is so deficient they cannot converse in the dark.)

(Negroes, it is reported, like orang-utans and chimpanzees, are deficient to teach after puberty.)

(And among the lower races, it is observed, the pendulous abdomen, want of calves, flatness of the thighs, all features of the ape, are common.)

And woman, it is observed, like the Negro, is flat-footed, with a prominent inclination of the pelvis making her appear less erect, and her gait less steady.

That as regards his intellectual faculties, the Negro partakes of the nature of the child or the female or the senile white.

That woman's brain is smaller and the shape of her head closer to that of infants and those of the "lower races."

And it is put forward that "wherever one sees an approach to the animal type the female is nearer to it than the male." That in the *female* Hottentot one can see the monkey more clearly.

(From voyages about the globe, it is whispered, one hears stories of women mating with monkeys or bears and bearing progeny.)

Slavery is said to be a condition of every higher civilization.

A woman should be an enthusiastic slave to the man to whom she has given her heart, it is declared.

"I am a woman again—a woman, at your feet," a woman is said to have said.

And both the emancipated woman and the Negro freedman are said to exhibit symptoms of insanity or nervousness.

Finally, it is declared that "the generous sentiments of slaveholders are sufficient guarantee of the rights of women the world over."

But as to women and men, it is noticed that the existence of two parents enlarges the possibility for variation.

And it is observed that the struggle for existence leads not only to extinction but also to a diversity of form, that it "enlarges nature's domain."

The gene is discovered.

It is said that the progeny does *not* inherit the habit of the parent.

(That the gene is isolated and impenetrable by either will or design, That the mutations which create new species are spontaneous and cannot be calculated, it is admitted.)

Still, it is hoped that the theory of mutation may make it possible to discover the exact moment when men became immortal.

(*Yet we read the words "animals our fellow brethren in pain, disease, suffering and famine" and we hear that they may share our origins, that "we may all be melted together."*)

1892 Artificial silk is produced from wood pulp.

1884 The steam turbine is developed.

1884 The first steel-frame skyscraper is built.

The redder blood of sailors in the tropics and the warmth of water in a storm are observed.

Heat and motion are said to be the same. It is said that energy can be neither created nor destroyed.

The engineer discovers work.

Heat, energy and work are measured.

1884 Cocaine is discovered.

1883 The high-speed gasoline engine is developed.

"Where are the limits," it is written, "before which human power will come to stop? commonplace individuals can never imagine them beyond their own horizon but nevertheless

every day that horizon is widened. Every day its limits are put back . . . ."

1882 A central power station is built in New York City.

1876 Barbed wire is manufactured on a large scale.

1865 The first oil pipeline laid.

"The enjoyment, the commodities of life which had been reserved only for men of fortune are now enjoyed by artisans . . . In a few more years they will be shared equally with all classes. . . ."

1860 A gas engine is invented.

1846 The electric arc is patented.

1839 The electric telegraph is patented.

"And just where the direct force of material power has shown itself insufficient to accomplish its work and to persevere in progress; where his will seems to be broken against insurmountable obstacles . . . ."

1838 A steamship first crosses the Atlantic in fifteen days.

"just then a drop of water turned into steam acts to supplement this weakness, to create for him a power of which we cannot now, nor yet for a long time to come, measure the extent . . . ."

1829 Stephenson's "Rocket" locomotive railway carriage achieves the speed of thirty miles per hour.

"By means of that same steam, rivers, seas are navigated. It transports us with inconceivable speed to all the extremities of the world in floating palaces which shelter the poor man, the rich man . . . ."

1769 James Watt patents the steam engine.

" . . . in our own valleys and across our hills wind and spread long ribbons of iron, along which rush, rapid as thought, those formidable machines which seem to eat up space with a spontaneous impatience and which seem almost alive in their breathing and in their movement."

The energy of a man is said to be like the power of the iron horse.  
(And the train to the track is said to be like the man to his wife.)

It is discovered that animal heat results from the combustion of nutriment. (And it is calculated that if both the sexes were given one pound of bread to convert to vital energy, the male would produce more energy.)

Rules for mobilizing and multiplying personal energy are published. Men "are naturally and practically indolent and . . . need powerful stimulants and heavy pressure to awaken their powers and call forth exertions," it is said.

Cures are invented to quicken "torpid energies" and prevent the "current of mental life from becoming utterly stagnant."

(Women are not good candidates for these cures, it is said.)

It is put forward that men should concentrate their energies on a particular point.

Under proper control the body becomes obedient to the potent sway of the mind, it is said, but he who indulges in lascivious thoughts is in danger of letting his body become his master.

(And it is said of men who lose control that all their energy is concentrated in their sexual organs.)

Entropy is discovered.

And it is decided that entropy, the amount of energy no longer available for work, always increases. That energy always decreases.

(That therefore the earth cannot be more than two hundred million years old. That the sun will burn itself out.)

"The energies of our system will decay," it is written. "Man will go down into the pit, and his thoughts will perish."

It is said that promiscuous intercourse with women leads to seminal weakness.

That the "generative energy . . . when we are loose, dissipates and makes us unclean," but that "when we are continent," we are invigorated.

And it is said that the young man who would best develop his energies should avoid all loss of sexual fluid.

Through those two great black eyes  
the events of your soul  
O pitiless demon! Pour me less  
Flame . . .

Sturdy manhood, it is said, loses its energy and bends under the too frequent expenditure of this "important secretion."

Alas and dissolute Megæra  
I cannot become Proserpine  
in the hell of your bed . . .

The victim of masturbation, it is said, passes from one degree of imbecility to another . . .

to break your courage and reduce you  
to desperation . . .

. . . until all the powers of the system, mental, physical, moral, are blotted out forever.

I shall go . . .

And it is said also that the practice of building castles in the air . . .

to the land where trees and men full of sap  
slowly swoon

. . . of allowing the thoughts to wander when alone . . .

. . . beneath the passionate heat of the climate;  
strong locks be the swell that carries me away!  
O ebony sea, you hold a dazzling dream . . .

. . . is dangerous and leads to dissipation.

I shall plunge my head, which loves intoxication  
into this dark ocean . . . O fertile idleness!  
Infinite rocking of scented leisure!

It is observed that no nation has ever existed on the face of the earth which did not crumble under the use of its perverted energies when the gospel reached it.

Only lust creates semen, it is said, pure love never any.

("Prostitution," it is sung, "moves in the bosom of the filthy city like a worm stealing man's food.")

And the soldier on a campaign is warned to save his energy for the honor of his country, to stay away from the temptation of wine and beware the temptation of women.

"Only science," it is now written, "exact science about human nature . . . will deliver man from his present gloom, and will purge him from his contemporary shame in the sphere of interhuman relationships."

The behavior of dogs is said to be affected by "associations." (At the sight and smell of food, it is discovered, a dog will salivate. If a bell is rung when the food is presented, it is further ascertained, the dog will soon salivate when he hears the bell ring.)

Of charges of electricity, it is said that the space around them is conditioned. That space which has the condition of the possibility of force is called a field.

(When a change occurs in an electric field, there is said to be created a magnetic field, and when a change occurs in a magnetic field an electric field appears.)

Electromagnetism is discovered.

(And it is said that electromagnetic waves travel with the speed of light.)

And the electromagnetic field is said to have a structure and a history that can be determined.

All kinds of stimuli can be associated with food, it is determined: noises, colors, shapes, touches to various parts of the body, electric shock.

This association is called a "conditioned reflex."

(And it is put forward that human nature can be explained as a series of conditioned reflexes.)

*And it is said of us that we have no understanding.*

1851 Herbert Spencer publishes *Social Statics*.

1884 Smokeless powder is developed.

1905 Bernard Sachs, author of *A Treatise on the Nervous Diseases of Children*, recommends that masturbation in children be treated by cauterizing the spine and to the genitals.

All matter, it is declared now, can be reduced to ninety-one elements.

For each of these elements there is an atom, it is said, and these ninety-one atoms are the building blocks of the universe: hard, impenetrable, unchanging, irreducible, revealed, under the scrutiny of science, to be ultimate reality.

(Movements of molecules are detected in the paths of pollen dancing in stillled water. Inanimate matter moves.)

It is said that there is nothing in this world one can be so certain of as oneself, that one knows oneself ultimately.

X-rays are discovered. (X, it is explained, is a symbol for the unknown.)

Radium is isolated. (It is observed that one gram of radium creates one hundred calories of heat in one hour: the sun radiates light; it will burn itself out much more slowly.)

Radioactivity is explained as the disintegration of the atom. The atom, it is agreed finally, is not immutable.

The unconscious is discovered.

(And the unconscious, it is explained, is that part of the self unknown to the conscious self, at any given moment.)

From the phosphorescent effects on the glass walls of a charged tube, a particle of energy is discovered. This particle is smaller than the atom, it is said, and it is in the atom, it is suggested, and this particle is called the electron.

(The atom is not inanimate.)

The energy of the self is hidden, it is revealed, in a "dark and inaccessible" region of the mind, filled with sexual longings. This region of the mind can be detected in dreams, in slips of the tongue, concealed

memories, in associations, accidental falls, words misspelled, names forgotten, in the idle humming of melodies, scribbles, in loss. (That all these are symptoms. That the paralyzed limb is a symptom of this energy.) This energy of the mind is named the libido.

(It is revealed that women have a weaker libido.)

The geography of the atom is explored. Its parts are named the electron, the proton and the neutron. It is thought that the atom might resemble the solar system, smaller particles circling a larger center.

The self is made up of three parts, it is said, the superego, the ego and the id.

And that although women have less libido, it is said, their animal instincts are less subject to control; they have less superego also. That women also have less ego, that (like children and primitive peoples) they are less aware of the necessities of life.

That women have less of a sense of justice, that their thoughts are more colored by feelings than those of men.

(That women are less objective.)

That men are responsible for civilization, it is stated.

Activity is the share of the man, it is said. Small boys build vertical, outward shapes, it is reasoned, and as men they move into the outside world to shape reality.

Passivity is the share of the woman, it is pointed out, and small girls build enclosures, direct their energies inward. That they feel abandoned by the outward movement of the man, that they resent civilization, that in the wake of its progress they cause discord.

That to be female is to cling to the home, to sameness, to tradition.

*And as we lift our heads we are reminded again and again of tradition*

It is noted that man is confined to this earth.

And that confinement, it is said, shapes our perceptions. (A group of scientists performs a set of experiments inside an elevator. It is an ideal elevator, without air resistance or friction.)

It is realized now that the electromagnetic field is real and thus the truth of mechanical law is called into question.

And the understanding that because we move with the velocity of the earth turning, time moves differently for us, is arrived at, and it is said

That a single event is different to different observers if they move at different speeds.

That near the speed of light, a moving clock changes its rhythm and a measuring rod its length.

(The elevator breaks loose from its cable. It falls in a gravitational field. But the scientists do not know of any gravity. Their world is confined to the space inside the elevator.)

Time and space have no meaning unless it is first determined where one is.

(Since all bodies in a gravitational field fall at the same rate of acceleration, all bodies in the elevator move uniformly, at rest or in motion. "Sooner or later," it is said, "the elevator will collide with the earth, destroying the observers and their experiments.")

And now it is revealed that time slows down at higher speeds. And one can imagine that the heartbeat of a man speeding near the velocity of light would slow down and he would grow old more slowly and he would die later.

(The scientists conclude that they are in a system in which the mechanical laws of inertial systems are true, and that their measurements are true absolutely.)

And one hears that what is simultaneous to some observers may not be to others. That the laws of natural processes cannot be known independently of any real reference point.

(But observers outside the elevator see the elevator is accelerating in a gravitational field. And it is impossible to say that either conclusion is absolutely true.)

"The two frightening ghosts," it is written, "absolute time and an inertial system, have disappeared."

The idea of time, it is said, originates in the ego. But in the id, there is no time (and the id itself is not changed by time).

(A young woman suffering from great thirst cannot swallow water. At each attempt to drink, her throat closes.)

In the dream, it is told, the child continues his existence in the man. (Thinking of her attempts to drink water, she is made to remember her past.)



That one may take a trip backward in time, into the territory of the id.

(She remembers the picture of a dog drinking from her nurse's water glass. She is disgusted, and these words having been spoken, she is free to drink.)

That in the id all wishes and memories still exist, unchanged, "immortal." That the past lives in the mind.

Space and time are forms of intuition, it is now said, which cannot be separated.

Gravity, it is stated, is a curve in space-time. Space-time, it is conceived, curves around matter. And the universe is shaped by its content: stars, moon, earth, galaxies, shape the space around them.

And there is no such thing, it is agreed, as empty space, or time without change.

(The universe is curved back on itself, it is said. The Euclidean propositions are not true.)

We are shaped by what we see, it is said, there is no objectivity, what we see is shaped by what we are, by our past, and our past has shaped us.

Matter, it is now seen, is an event.

(Mass changes at greater speeds; energy has weight.)

It is articulated that matter is a form of energy. That there is no difference in kind between matter and energy, except that matter stores greater energy, and energy has a smaller mass.

(From the formula mass equals energy divided by the speed of light squared, it is said that one can calculate the mass of energy.)

(From the formula energy is equal to mass multiplied by the speed of light squared, it is said that one can calculate the energy in matter.)

The distinction between matter and energy is temporary, it is stated, and no real surface can be found between matter and the field of energy around it.

Between the id, the ego and the superego, it is said that no firm boundaries can be drawn. That the three parts of the self merge into one another.

It is said that boys and girls, before the emergence of the ego, are similar. But after this emergence, the girl is more passive, it is said,

that she seeks to merge her image with the man, that she seeks identity in love.

And it is said that the thoughts of women are formless and wandering; that the female in her mind bends back upon herself, is self-absorbed and narcissistic.

"and it was like leap year now yes 16 years ago my God after that long kiss I near lost my breath yes he said I was a flower of the mountain yes so we are flowers all a woman's body yes that was one true thing he said in his life and the sun shines for you today yes that was why I liked him because I saw he understood or felt what a woman is . . ."

And it is said that it is impossible to picture the subatomic world, and that the electron cannot be described.

(It is said that women show a bias for the mysterious.)

Discontinuity is discovered and it is said that light moves in particles.

And yet it is said light also moves in waves.

And the electron, too, is discovered to be both a wave and a particle.

A duality pervades nature, it is decided.

(As to how much space an electron takes up, or where it is at any given time, it is said, those questions are "as meaningless as . . . how much room a fear, an anxiety, or an uncertainty take up.")

And it is written that psychology is unable to solve "the riddle of femininity."

*Häupter in Hieroglyphennützen,*

Heads in hieroglyphic bonnets

(That the behavior of the ovum and the sperm are models for the behavior of man and woman in love, it is decided.)

*Häupter in Turban und schwarzem Barett,*

Heads in turbans and black berets

(That the nature of woman is determined by her biology.)

*Pertickenhäupter und tausend andere*

Heads in wigs and a thousand other

(That the female must undergo a second birth and renounce her clitoris for her vagina, and renounce activity for passivity.)

(That passivity now has the upper hand, it is written.)

*Arme schützende Menschenhäupter*  
Wretched, sweaty hands of humans.

It is confessed that what a woman wants is unknown.

It is said that from what is known of the nature of matter, there is no way to make a picture, no image is possible.

And it is written that the idiosyncrasies of a mental life cannot be pictured.

(That the nature of the universe is not accessible to the untrained mind, nor the nature of the psyche to the uninitiated.)

Under the gaze of science, it is said, all the basic units of matter shed their substance.

It is declared that it is absolutely and forever impossible to determine the position and velocity of an electron at the same time. (That the observer changes what is observed.)

Thus it is clear that science will never know the position of all the particles in the universe and that science cannot forecast the history of the universe for all time.

The behavior of the single atom remains mysterious. No reason can be found for why one atom rather than another begins to disintegrate. No laws can be formulated for the behavior of the atom.

It is asked whether or not it is a quality of nature to be vague and lawless, or whether it is a limitation of our vision which makes nature seem elusive.

(The memories of women suffering from hysteria are said to be false. Those who said they were raped by their fathers, it is decided, were seduced by their mothers.)

It is asked if the universe would exist if it were not perceived.

It is said that "all the choir of heaven and furniture of earth . . . have not any substance without the mind."

Still, prediction is a goal of science, it is said.

And it is determined that since the single electron cannot be defined, electrons will be studied as groups.

That the probable behavior of a single electron can be derived from a picture of the behavior of the group, that the nature of the electron will be defined as part of a structure of electrons.

The behavior of populations is studied.

It is calculated in the year 1950 that of 12,170 women between the ages of twenty-five and thirty-four, 4,160 worked outside the home and 7,870 worked inside the home.

The domestic pattern is discovered. It is determined that organization around the function of the housewife is a principal pattern governing the female role.

Waves of probability are discovered. Probabilities of velocity are measured.

(If statistically one third of all electrons have a speed of 1000 to 1100 seconds, the probability of finding one electron at that speed is one third, it is said.)

(Yet it is admitted it is impossible to find one electron at any speed.) Bits of matter, thus, are said to have "tendencies to exist" and atomic events are said to have "tendencies to occur."

The universe, it is now declared, is finite.

Space and time have limitations; space is shaped by mass, time by events. No mass can travel faster than the speed of light. The sun is burning itself out, the stars are dying embers, the heat of the cosmos turning cold, matter dissolving to radiation, energy dissipated into space.

There will be no light, no change. Time itself will end. Existence will diffuse like a vapor into the insatiable void.

It is said that small boys live in awe and fear of their fathers.

(The concept of providence is said to be an infantile re-creation of the father.)

That from the love the boy feels for his mother comes a desire to murder the father, but that in turn the boy lives in fear of the father, believing his father will castrate him.

(That in order to abate his anxieties, man took up an "attack upon nature . . . forcing it to obey human will," it is written.)

And it is said that girls are born castrated.

That she does not have a penis is said to be a "momentous discovery" in the destiny of a girl. This wound to herself is said to develop like a scar. And it said that she will pass from self-hatred to hatred of her mother and then hatred of all women.

(It is said that women invented plating and weaving to hide their genitals. That even nature caused the growth of pubic hair for this purpose.)

And it is decided that woman becomes debased in the eyes of small boys when they see she does not have a penis.

*We open our mouths. We try to speak. We try to remember.*

That the clitoris is a prototype for inferiority is held to be self-evident.

And it is said that small girls develop an envy of the penis and that women bear a natural hostility toward men, a jealousy.

1896 Dementia praecox is diagnosed.

1911 The cure for dementia praecox is said to be found in the restoration to consciousness of certain memories, and the illness is renamed schizophrenia.

In illnesses of the mind, it is said, symptoms are projected like foreign bodies into the normal state. The ego is split, and like the splitting of a crystal, it fragments along lines predetermined by its structure.

(A young woman at her father's deathbed dreams her arms are venomous snakes. She fears the snakes will kill her father. After his death, she forgets this dream. Later, she cannot move her arms.)

The atom is bombarded with the neutron and is split, releasing other neutrons, which in turn split more atoms, fire, light and sound. The chain reaction is invented.

1941 Plutonium is discovered.

1945 Hiroshima, Nagasaki, are destroyed by atomic explosion.

Antimatter is found.

A particle with a charge opposite to the electron is found. And it is said that when the positron meets the electron, both are annihilated in radiant energy.

And it is speculated that the supernova results from chance meetings of galaxies of matter and antimatter.

An instinct toward death is said to exist in the human psyche.

It is said that "besides the instinct preserving organic substance and binding it to even larger units," there is another instinct, "which would seek to dissolve these units," to bring them back to death.

That when harrassed, this instinct for destruction in men seeks power over nature.

That in woman her body predisposes that she turn this instinct for destruction inward.

("a new fantastic toilette, Russian half-boots of violet-blue velvet trimmed with ermine, a robe of the same material, held up by narrow strips and tassels of the same fur . . .")

That the female cell, the ovum, in the act of fecundation, being wounded, is primordially masochistic.

(. . . a matching, close-fitting, short patrolot, also richly trimmed and lined with ermine; a high cap of ermine in the style of Catherine the Second . . .")

That the infant girl wishes to be eaten, devoured by her father, that later she wishes to be beaten or whipped by him, that young girls dream of rape, that the grown woman wishes to be pierced.

That women have a lust for pain.

(. . . with a small plume of heron feathers, held in place by a diamond pin, her red hair loose down her back . . .)

And it is also written that when a woman steps out of the sphere of passivity, when she becomes too active, she endangers the men around her.

("Thus she ascends on the driver's seat, and holds the reins herself," it is written. "How she lashes on the horses. The carriage flies along like mad.")

The meson is discovered, the lambda, the sigma, the eta, the muon, pion, cascade, kaon, are discovered.

Thirty kinds of elementary particles are discovered.

It is suggested that the elementary particles may not be fundamental. Man's notion of nature is again threatened. Her face is changing, it is said. And it is suggested that a structure invisible to measurement is beneath the particles.

But it is also argued that there are no elementary particles. Every question about the essential nature of things, it is said, leads to another question.

Of the nature of earth, rock, river, cloud, light, wind, breath, flesh, of mules, of horses, of birds, of the body of woman, womb, breast, vulva, hair, it is acknowledged these are still unknown.

It is written that we are both spectator and part.

And time does not flow universally. The universe is amorphous, without fixed design, always subject to change. There is no absolute space. Time and space are one.

*We are the rocks, we are soil, we are trees, rivers, we are wind, we carry the birds, the birds, we are cows, mules, we are horses, we are Solid elements, cause and effect, determinism and objectivity, it is said, are lost. matter. We are flesh, we breathe, we are her body: we speak.*

## LAND

HER CHANGING FACE



### Territory

I saw everything as no man had ever seen before. . . . I felt like an explorer in medicine who first views a new and important territory.

MARION SIMS, M. D. (on the invention of the speculum)

Consider Him who chose to be born of a virgin. . . . Freely he penetrates viscera known only to Himself and with greater joy enters paths where none has ever been. These limbs, He feels, are His own: unsoiled and unshared by any man. . . .

FORTUNATUS (bishop of Poitiers, 530-609), *Opera Poetica*

. . . a country that hath yet her maiden head, never sakt, turned, nor wrought.

SIR WALTER RALEIGH, "Discovery of Guiana"

Sea. Mountain. River. Plain. Forest. Gorge.  
Field. Meadow. Rock. Plateau. Desert. Mountain.  
Valley. Sea. He is the first. Truly he has come farther than any man before him. His eyes have beheld what has not been seen before. What newness he is blessed with, what freshness! None of the beauty of this land has been brought down, no part soiled. He is the first to tread here. Only the mark of his shoes effaces the soil. Pine. Otter. Canyon. Musk ox. She gives up her secrets. He is the first to know, and he gives names to what he sees. He records the existence of these things. He is thinking to preserve these moments for posterity. He draws a map of his way across this land. And he charts the shape of the place. Behind the mountain range. On the other side of the valley. Down the riverstream. Across the gorge. He finds the un-

known irresistible. He believes what is hidden in this land calls to him. He feels undiscovered grasses tremble in wait for him, he imagines mysterious lakes glistening revelation, he knows there are meadows, ignorant of his being, which will open to him. He has a taste for knowledge. Missouri River. Council Bluffs. Sioux City. Despite all dangers, he penetrates farther. Cheyenne River. Knife River. White Earth River. He vanquishes darkness. He vanquishes despair. Bearpaw Mountains. Big Belt Mountains. Great Falls. He places his life in the balance. Clark Pass. Yet he is brave. Lewis Hellgate. Yet he is ardent. Snake River. And the wilderness embraces him. He is taken up by wildness. He becomes wild. Now the secrets of this place are his and each of his footsteps is a triumph. Windstorm. In facing down danger, he has become more than himself. Thunderstorm. He is conqueror. Lightning. He has pierced the veiling mountains, ridden the rivers, spanned the valley, measured the gorge: he has discovered. Now nothing of this place is unknown, and because of his knowledge, this land is forever changed. This was his dream.

### *The Struggle*

She should never have looked at me  
If she meant I should not love her!

LORD BYRON, "Christina"

... he will find enough to damp his ardor.

FRANCIS PARKMAN, *The Oregon Trail*

He writes that the scenery is tame, graceful and pleasing. That there is an abundance of streams, level plains too wide for the eye to measure, green undulations like the motionless swells of the ocean. Yet whoever looks on the land, he writes, will find enough to damp his ardor. His wagons will stick in the mud, he writes, his horse will break loose, harness give way, axletree break. His bed will be of mud of the richest consistency, and he will find little to eat since this country strangely produces little game. He may travel for a fortnight, he writes, without seeing the hoofprint of a deer, or the sign of a prairie hen. Yet he will find wolves and they will howl at night and skull around him by day. His horse will step in badger holes. Le-

gons of frogs will croak and bellow from every marsh and mud puddle, and mosquitoes will rob him of sleep. Snakes, too, will glide under his horse's feet or visit his tent at night. And when he is thirsty, after a long day's ride over the prairie under the scorching sun, when he finally comes to a pool of water and stops to drink, he will find tadpoles in the bottom of his cup. And every afternoon, with a pro-voking regularity, he can expect a thunderstorm which will drench him to the skin.

### *The Abyss*

She claims him with her great blue eyes  
She binds him with her hair,  
Oh, break the spell with holy words,  
Unbind him with a prayer!

JOHN GREENLEAF WHITTIER, "The Witch of Wenham"

This wild abyss,  
The womb of nature and perhaps her grave.

JOHN MILTON, *Paradise Lost*

He wandered like a forgotten ghost that has passed into the land  
of the spirits.

JOHN JAMES AUDUBON, "The Lost One"

Suddenly he finds he cannot see. He is surrounded by fog and the grass is taller than he is. With every step, his ignorance deepens. He is lost. He cannot see his way out. Huge gray trees spread giant boughs over him. Rank grass extends on all sides. No living being crosses his path. The land is like oblivion. His cabin is lost to him. He runs on, hour after hour. But with each movement he loses more the sense of where he is. Chill and heavy dews descend. Night falls. Now he is in the midst of darkness and he is filled with terror. His body is filled with fatigue. He is hungry. Now he hears animals about him, but he cannot kill them. In the midst of abundance, he will starve. He has lost all knowledge. He knows only his own smallness, his own need, and that he must appear small to the animals, the trees, grasses, skies. He is helpless. (He prays to almighty God.) He wanders like a ghost into the land of the forgotten. With each step this place pierces through him to reveal more clearly his desperation.

## Guide

As soon as they saw the squaw wife of the interpreter, they pointed to her and informed those who continued yet . . . The sight of this Indian woman, wife to one of our interpreters, confirmed those peoples of our friendly intentions, as no woman ever accompanies a war party of Indians in this quarter.

*The Journals of Lewis and Clark*, cited by Hebard, *Sacajawea*

There are no institutions, no politics, no government, where my sex and I have not been dominated, subdued and robbed of our potential and talents as we are excluded from patriarchal privilege.

What then does it mean for a woman to be loyal in patriarchy?

KATHLEEN BARRY, "Did I Ever Have a Chance?"

She knew her skill and she knew it well. She could speak more than one language. She spoke their language, and she spoke her own, which they could not speak (The father, it was recorded, frequently disposed of his infant daughters in marriage to grown men, for the use of their sons.) She had learned all the customs of their people and of her own people, which they did not know. (The compensation, it was written, given in such cases consisted of horses or mules delivered to the father.) She could ride horses in any terrain, navigate rivers, she could do all that they could do, and she could do more. She bore a child. She foraged for food. She fed them what she had dug from underground, which they had never before tasted. (Sacajawea, they noted, had been disposed of before she was captured by the Minnetarees. Her husband, more than twice her age, had two other wives. Though he did claim her as his wife, because she had had a child by another man he did not want her.) She knew this land which they had never seen before, for which they had no maps. She told them she had lived in this land as a child, that she had been taken from this place, from her girlhood. Where they were afraid they could not go on, she was familiar. (As a child, she had been captured.) She led them (by the Minnetarees) through this territory (from these Indians, it is said) she helped them (Charbonneau either purchased her) secure horses (or won her by gambling) she went on with them (and afterward) leading them out of the territory (he married her) to which she was born. She was well liked by them. They adopted her son and he learned their ways. (They sent a party to the sea) and if certain words blistered her

lungs (and reported seeing a whale) if some words burnt through her tongue (and they wrote) if some words (the Indian woman had begged) had eaten like fire in her belly (to see the "large fish") still she showed no such pain (and was, therefore, permitted to join the party to the beach) and she had survived.

## Possession

Indians told him stories of a fabulous island called Bimini where gold, delicious fruits, and all that man might desire could be found in abundance. Furthermore, the island had a fountain which had the virtue of restoring youth to any old man who drank from it or bathed in it.

LOUIS B. WRIGHT and ELAINE FOWLER, *The Moving Frontier*

When you look at them with their clothes on you imagine all sorts of things; you give them an individuality like, which they haven't got of course. There's just a crack there between the legs. . . . It's an illusion! . . . all that mystery about sex and you discover that it's nothing—just a blank . . . there's nothing there . . . nothing at all. . . .

HENRY MILLER, *Tropic of Cancer*

Coming through finally to the end, having traversed the entire expanse to this territory, as if to an opening suddenly, he came to a sea, a wide ocean, another horizon, again a new possibility greeted him as silently as all the forests he had braved: He is disappointed. This land he has devoted himself to has turned out to be a delusion. She is a house of mirrors. Now the sea beckons, as did her plains, her mountains, her passes, valleys, deserts. And beyond this sea, now finally, in an awakened state, he knows will simply be another land, begging entrance, so that he might submerge himself in her darkness, to find what secrets? Only this silence again. To himself quietly he admits there is no fountain, no endless lining of gold, no secret marked for him. He will age like every other traveler before him, like men who are born and die, only having traveled the length of a woman's body. Any part of his body he has lost in this, he sees now, will not come back to him. He is cast over with weariness and yet the land, he sees, is not tired, she is constantly renewed, as if his passage meant nothing to her, and her indifference seems to him a relentless cruelty of nothingness in the face of his search. But he will have something. On this bluff,

high above the sea, he leaves a flag. This land will bear his name. After him will come other men who will pronounce these syllables and acknowledge his ownership. And they will change the face of this land.

### *Primogeniture*

In law, rule of inheritance whereby land descends to oldest son.  
*Columbia Desk Encyclopedia*

*We shall tell you who gained and who lost In this way for there were those the fathers who held knew that their names and those who did not would live on those who were known and that the great estates and those testifying to their glory and fame who were unknown would live on those whose lives were vanished and that the power which spread from those holdings of land those whose labor would continue, generation after generation like the labor of the fields, of the soil, to be great in the minds of the living would pass like the passing of breath from the living.*

### *Use*

On the arable land the cultivators will be increasingly mechanized, the management and operation of the machines being the responsibility of one group of workers. Field sizes will have been reshaped and enlarged to make cultivation easier. . . . Weeds will be almost entirely controlled by means of herbicides. . . . Crop varieties bred to meet the needs of mechanized farming. . . . The crops will be protected against pests and diseases, from seed time to harvest, by insecticides and fungicides.

SIR WILLIAM SLATER, "Farming as a Science-Based Industry," *The World in 1984*, vol. 1 (1964)

The very use man makes of woman destroys her most pernicious power: weighed down by maternities, she loses her erotic attraction.

SIMONE DE BEAUVOIR, *The Second Sex*

Putting virgin soil under cultivation initiates a breakdown of what may be called the "body" of the soil.

WILLIAM A. ALBRECHT, "Physical, Chemical, Biological Changes in Soil Community," *Man's Role in Changing the Face of the Earth*

He breaks the wilderness. He clears the land of trees, brush, weed. The land is brought under his control; he has turned waste into a gar-

den. Into her soil he places his plow. He labors. He plants. He sows. By the sweat of his brow, he makes her yield. She opens her broad lap to him. She smiles on him. She prepares him a feast. She gives up her treasures to him. She makes him grow rich. She yields. She conceives. Her lap is fertile. Out of her dark interior, life arises. What she does to his seed is a mystery to him. He counts her yielding as a miracle. He sees her workings as effortless. Whatever she brings forth he calls his own. He has made her conceive. His land is a mother. She smiles on the joys of her children. She feeds him generously. Again and again, in his hunger, he returns to her. Again and again she gives to him. She is his mother. Her powers are a mystery to him. Silently she works miracles for him. Yet, just as silently, she withholds from him. Without reason, she refuses to yield. She is fickle. She dries up. She is bitter. She scorns him. He is determined he will master her. He will make her produce at will. He will devise ways to plant what he wants in her, to make her yield more to him.

He deciphers the secrets of the soil. (He knows why she brings forth.) He recites the story of the carbon cycle. (He masters the properties of chlorophyll.) He recites the story of the nitrogen cycle. (He brings nitrogen out of the air.) He determines the composition of the soil. (Over and over he can plant the same plot of land with the same crop.) He says that the soil is a lifeless place of storage, he says that the soil is what is tilled by farmers. He says that the land need no longer be fallow. That what went on in her quietude is no longer a secret, that the ways of the land can be managed. That the farmer can ask whatever he wishes of the land. (He replaces the fungi, bacteria, earthworms, insects, decay.) He names all that is necessary, nitrogen, phosphorus, potassium, and these he says he can make. He increases the weight of kernels of barley with potash; he makes a more mealy potato with muriate of potash, he makes the color of cabbage bright green with nitrate, he makes onions which live longer with phosphates, he makes the cauliflower head early by withholding nitrogen. His powers continue to grow.

Phosphoric acid, nitrogen fertilizers, ammonium sulfate, white phosphate, potash, iron sulfate, nitrate of soda, superphosphate, calcium cyanamide, calcium oxide, calcium magnesium, zinc sulfate, phenobarbital, amphetamine, magnesium, estrogen, copper sulfate, meprobamate, thalidomide, benzethonium chloride, Valium, hexachlorophene, diethylstilbestrol.

What device she can use to continue she does. She says that the pain is unbearable. *Give me something*, she says. What he gives her she takes into herself without asking why. She says now that the edges of what she sees are blurred. The edges of what she sees, and what she wants, and what she is saying, are blurred. *Give me something*, she says. What he gives her she takes without asking. She says that the first pain is gone, or that she cannot remember it, or that she cannot remember why this began, or what she was like before, or if she will survive without what he gives her to take, but that she does not know, or cannot remember, why she continues.

He says she cannot continue without him. He says she must have what he gives her. He says also that he protects her from predators. That he gives her dichlorodiphenyltrichloroethane, dieldrin, chlorinated naphthalenes, chlordan, parathion, Malathion, selenium, pentachlorophenol, arsenic, sodium arsenite, amitrole. That he has rid her of pests, he says.

And he has devised ways to separate himself from her. He sends machines to do his labor. His working has become as effortless as hers. He accomplishes days of labor with a small motion of his hand. His efforts are more astonishing than hers. No longer praying, no longer imploring, he pronounces words from a distance and his orders are carried out. Even with his back turned to her she yields to him. And in his mind, he imagines that he can conceive without her. In his mind he develops the means to supplant her miracles with his own. In his mind, he no longer relies on her. What he possesses, he says, is his to use and to abandon.

### Exploration

The development of the middle west did exact its price of natural resources. . . . As husbandry gave way westward to wheat growing, the land was looked on less as homestead and more as speculation, to be cropped heavily and continuously for grain, without benefit of rotation and manuring, and to be sold at an advantageous price, perhaps to reinvest in new and undepleted land.

CARL SAUER, "The Agency of Man on the Earth"

Mars speaks with red silence. Once we could not have answered. Only a few short years ago we knew that we sat on a world that would birth and death us, find and forget us. But now this host of

once lost children grown up to be saved adults, gives answer. Mars, we hear. Mars, we move. Mars, we arrive.  
RAY BRADBURY, "A Martian Chronicle—With Chicken Soup"

It is said that in his old age (Automatically, at their command the shovel extends) he fears he is losing his powers (and extracts a sample) that the aging of his body (of soil) makes him frantic (which is placed) and thus frantically (in an incubation chamber) he searches (aboard the spacecraft) for a young woman. (The soil is kept) Some say (perfectly dry) being close to youth (and is incubated) makes him younger (for five days at 50 degrees) or at least he feels younger (under an arc lamp that simulates Martian sunlight). Others say (A quartz window) that proving he can still (filtered out ultraviolet light) attract a young woman (that might have caused) restores him (spurious signals). And still others point out (On radioed command from earth) that in capturing (the test chamber was filled) a young, even a virginal woman (with Martian atmosphere) he has proven his prowess (Then the experimenters) once again. (sent up a radio command) But in all cases (that added a whiff of radioactive carbon) he must (dioxide and carbon monoxide) be free of his wife (to act as tracers in the experiment) at least temporarily (On earth, green plants) for her age (take in carbon dioxide) reminds him of his age (and if there were life on Mars) and of his limitations (vapor in the chamber would contain) his encroaching weakness (traces of carbon) and death.



## TIMBER

WHAT WAS THERE FOR THEM



### *What They Found*

... Many a business depends for its success on some girl who is smart enough to see to it that her boss gets his work done, who sometimes even does his work for him, who keeps everybody satisfied and happy, and who has enough foresight to control new situations as they occur.

How do you go about finding such a jewel? ...

RICHARD and RUBIN, *How to Select and Direct the Office Staff*

Suddenly the settlers of the Oregon country found a fortune on their doorsteps. The Green Desert took on a new luster, with treasure hanging from every branch.

ELLIS LUCIA, *The Big Woods*

Saw logs are a form of circulating capital. . . .

JOSEPH ZAREMBA, *Economics of the American Lumber Industry*

He is like a man in a dream who has discovered a treasure. He has come upon a forest untrod by human beings for hundreds of years. A dream. Transformation. In a trance, he makes figures. The numbers of the trees. Their size. Three to four million board feet for every forty acres, he whispers to himself. Centuries of growth. Centuries of rainfall. The very moisture of the air is golden. This is the Comstock of the timber world, he declares.

Fir, Cedar, Hemlock, Sequoia, ripe for the cutting. Gradually, what this greenery can be becomes clear to them. They are astonished. Breathless. Wherever they turn they see timber, timber, timber. They call this green gold.

Machinery, boilers, engines, pump augers, axes, chain saws, hauled in from the city. Sawmills, cookhouses, bunkhouses built. The woods

are alive. (Glasses tinkle beyond the swinging doors, squeals of girls, the rousing shouts from the saloons, empty oaken kegs in the alleys, the thick forest of tall masts in the harbor, this last and greatest timber bonanza.)

By autumn, trees falling, moving upstream. (Wrenched from the Western wilderness) Two thousand board feet a day, three million, six hundred and seventy-three thousand, seven hundred and ninety-seven board feet a year. Sixty-four thousand shingles, forty-two thousand, one hundred and three feet of piling, two hundred and twenty-three masts and spars. (They see \$70,999.) And each year increasing.

### *How the Forest Should Look*

There is but one way in which the office manager can control scientifically; that is by standardization. . . . The office manager should, therefore, continually direct his efforts to having each operation. . . always done in exact accordance with the manner he has prescribed.

LEFFINGWELL and ROBINSON, *Textbook of Office Management*

Proper regrowth and efficient forest management of our present and prospective forested areas will assure sufficient lumber for domestic requirements and a profitable export trade.

NELSON C. BROWN, *Lumber*

Foresters will have worked out more precisely the types of forest to establish on different soils to give the greatest sustained yield, and species of trees used will have been bred for this purpose.

E. M. NICHOLSON, "Orchestrating the Use of Land," *The World in 1984*, vol. 1 (1984)

The trees in the forest should be tall and free from knot-causing limbs for most of their height. They should not taper too much between the butt and the top last saw log. They should be straight. (Among applicants, a person with high intelligence should be sought. She should be an expert typist. A stenographer. She should be diplomatic, neat and well dressed.)

Trees growing in the forest should be useful trees.

For each tree ask if

it is worth the space it grows in.

Aspen, Scrub Pine, Chokeberry, Black Gum, Scrub Oak, Dogwood, Hemlock, Beech are weed trees which should be eliminated. A thousand cubic feet of one species can be worth more than the same quantity of another. (Standard procedures for clerical work should be initiated. Find out the purpose of each kind of work, ask, "Is this work necessary?") Find out which species are of highest value to the consumer, and plant these.

For harvesting trees, it is desirable that a stand be all of the same variety and age. Nothing should grow on the forest floor, not seedling trees, not grass not shrubbery. (In one case,

nineteen girls all working on the same operation were using ten different methods.) Clearcutting the virgin stand and replanting the desired species is recommended.

In the well-managed forest poor and surplus trees have been thinned to make room for good trees. In such a forest there is no room for overripe trees, past their best growing years, for diseased trees or damaged trees, branchy or badly shaped trees.

(Is she accurate? Neat in her work and personal habits? Is she loyal? Can she be trusted? Is she courteous?)

Does she have a pleasing telephone personality?  
The forest is more easily managed if it is large and the trees should be planted close together so they will grow straight and tall to reach the light. (There should be one central stenographic pool to render service for the entire office instead of small groups of uncontrolled stenographers throughout the office.)

(Is she emotionally stable? Is she responsible? Versatile? Creative? Consistent? Confident? Does she have a good memory? Is she alert to the needs of others? Does she

try her best? Can she spell? Does she learn from) The forest should be close to a sawmill. (When the work is centralized each stenographer will produce more than would otherwise be the.) Trees bred to grow more rapidly, to be more healthy, sounder, taller, thicker, straighter and of more use to the consumer should gradually replace their inferiors. (The study of human aptitudes, the selection

of the human element best fitted to perform any task) in this way the forest will yield, and yield again what is desired.

### Class

The study of human aptitudes, the selection of the human element best fitted to perform any particular task, is therefore an essential principle of the science of management, which from its very nature is not and cannot be wholly confined to inanimate objects.

LEFFINGWELL and ROBINSON, *Textbook of Office Management*

Wood for use in the manufacture of shingles should have the following properties: (1) durability (2) freedom from splitting in nailing (3) dimensional stability (4) light. . . .

PANSHIN, HARRAR, BAKER and PROCTOR, *Forest Products*

(Third-Class Clerk: Pure routine concentration, speed and accuracy. Works under supervision. May or may not be held responsible for results.

Second-Class Clerk: No supervision of others, exhaustive knowledge of details.

First-Class Clerk: More responsibility.

Senior Clerk: Occasionally independent thinking and action, technical varied work, exceptional clerical ability and extensive knowledge of business. Must be dependable, trustworthy and resourceful.)

For paper (Does she catch on easily?) Spruce, Southern Yellow Pine, Hemlock (Learns very rapidly, catches on easily, learns without difficulty). For toothpicks, White Birch (needs repeated instructions, dull). For baskets, Beech, Elm, hard and soft Maple, Black and Yellow Birch (How does she control her emotions?) For railway ties,

White Oak, Douglas Fir, Tamarack, Southern Pine, Gum, Beech, Maple (Too easily moved to anger or depression. Tends to be overemotional) For mine timbers, Douglas Fir (usually well-balanced, well-balanced, unusual balance) Red Oak, Maple, Beech (of responsiveness and control, unresponsive) Birch, Ash Chestnut (apathetic) For veneers (Tends to be unresponsive) Beech, Birch, Maple, Cottonwood.

### The

### Measure

Nationwide we estimate that we have 37.5 billion board feet of uncut timber under contract . . .

A. W. GREELY, Associated Chief of the Forest Service in a letter to Joseph McGrath, Vice-President of the National Association of Home Builders

She picks up a piece of fabric with each hand from two piles to her left and right. (11,000,000,000 fence posts) She brings the pieces together and superimposes the corners to correspond. (10,000,000,000 railroad ties) With her knee she raises the machine foot. (450,000,000 telephone poles) She positions the right-hand corner in the machine  $\frac{1}{4}$  inch beyond the edge of the foot. She lowers the foot. She stitches along the fabric edge to the next corner, both her hands guiding the fabric to maintain an accurate stitch line (2,400,000 board feet cut in 160 years) her feet controlling the machine; she continues similarly with the rest of the garment.

We can recite the names to you of Loblolly Pine in the coastal plain of the Southeast, and in the Monongahela Woods of West Virginia we can tell you about the growing of Hemlock, Yellow Birch, Sugar Maple, Magnolia, Basswood, what color the leaves turn if they turn, and their odor and the bark smell too, and in the southern highlands of the Blue Ridge Mountains we remember Scarlet and Black Oaks, we remember Cherry, we remember Beech and Birch Beech, and Holly.