

# What is Social Ecology?

We are clearly beleaguered by an **ecological crisis** of monumental proportions-a crisis that visibly stems from the ruthless exploitation and pollution of the planet. We rightly attribute the social sources of this crisis to a competitive marketplace spirit **that reduces** the entire world of life, including humanity, to merchandisable objects, to mere commodities with price tags that are to be sold for profit and economic expansion. The ideology of this spirit is expressed in the notorious marketplace maxim: “Grow or die!”- a maxim that identifies limitless growth with “progress” and the “mastery of nature” with “civilization.” The results of this tide of exploitation and pollution have been grim enough to yield serious forecasts of complete planetary breakdown, a degree of devastation of soil, forests, waterways, and atmosphere that has no precedent in the history of our species.

In this respect, our market-oriented society is unique in contrast with other societies in that it places no limits on growth and egotism. The antisocial principles that “rugged individualism” is the primary motive for social improvement and competition the engine for social progress stand

sharply **at** odds with **all** past eras that valued selflessness as the authentic trait of human nobility and cooperation as the authentic evidence of social **virtue**, **however much** these prized attributes were **honored in the breach**. **Our marketplace society has, in effect**, made the worst features of earlier times into its more honored values and exhibited a degree of brutality in the global wars of this century that makes **the** cruelties of history seem mild by comparison,

In our discussions of modern ecological and social crises, we tend to ignore a more underlying mentality of domination that humans **have** used for centuries to justify the domination of each other and, by extension, of nature. I refer to an image of the natural world **that** sees nature itself as “blind,” “mute,” “cruel,” “competitive,” and “stingy,” a seemingly demonic “realm of necessity” that opposes “man’s” striving for freedom and self-realization. Here, “man” seems to confront a hostile “**otherness**” against which he must oppose his own powers of toil and guile. History is thus presented to us as a Promethean drama in which “man” heroically defies and willfully asserts himself against a brutally hostile and unyielding natural world. Progress is seen as the extrication of humanity from the muck of a mindless, unthinking, and brutish domain or what Jean Paul **Sartre** so contemptuously called the “slime of history,” into the presumably clear light of reason and civilization.

This image of a demonic and hostile nature goes back to the Greek world and even earlier, to the Gilgamesh Epic of Sumerian society. But it reached its high point during the past two centuries, particularly in the Victorian Age, and persists in our

thinking today. Ironically, the idea of a “blind,” “mute,” “**cruel**,” “competitive,” and “stingy” nature forms the basis for the very social sciences and humanities that profess to provide us with a civilized alternative to nature’s “**brutishness**” and “law of claw and fang.” Even as these disciplines stress the “unbridgeable gulf” between nature and society in the classical tradition of a dualism between the physical and the mental, economics literally defines itself as the study of “scarce resources” (read: “stingy nature”) and “unlimited needs,” essentially rearing itself on the interconnection between nature and humanity. By the same token, sociology sees itself as the analysis of “man’s” ascent from “animality.” Psychology, in turn, particularly in its Freudian form, is focused on the control of humanity’s unruly “internal nature” through rationality and the imperatives imposed on it by “civilization”—with the hidden agenda of sublimating human powers in the project of controlling “external nature.”

Many class theories of social development, particularly **Marxian** socialism, have been rooted in the belief that the “domination of man by man” emerges from the need to “dominate nature,” presumably with the result that once nature is subjugated, humanity will be cleansed of the “slime of history” and enter into a new era of freedom. However warped these self-definitions of our major social and humanistic disciplines may be, they are still embedded in nature and humanity’s relationships with the natural world, even as they try to bifurcate the two and impart a unique autonomy to cultural development and social evolution.

Taken as a whole, however, it is difficult to convey

the enormous amount of mischief this image of nature has done to our ways of thinking, not to speak of the ideological rationale it has provided for human domination. More so than any single notion in the history of religion and philosophy, the image of a “blind,” “mute,” “cruel,” “competitive,” and “stingy” nature has opened a wide, often unbridgeable chasm between the social world and the natural world, and in its more exotic ramifications, between mind and body, subject and object, reason and physicality, technology and “raw materials,” indeed, the whole gamut of dualisms that have fragmented not only the world of nature and society but the human psyche and its biological matrix.

From Plato’s view of the body as a mere burden encasing an ethereal soul, to René Descartes’ harsh split between the God-given rational and the purely mechanistic physical, we are the heirs of a historic dualism: between, firstly, a misconceived nature as the opponent of every human endeavor, whose “domination” must be lifted from the shoulders of humanity (even if human beings themselves are reduced to mere instruments of production to be ruthlessly exploited with a view toward their eventual liberation), and, secondly, a domineering humanity whose goal is to subjugate the natural world, including human nature itself. Nature, in effect, emerges as an affliction that must be removed by the technology and methods of domination that excuse human domination in the name of “human freedom.”

This all-encompassing image of an intractable nature that must be tamed by a rational humanity has given us a domineering form of reason, science,

and technology—the fragmentation of humanity into hierarchies, classes, state institutions, gender, and ethnic divisions. It has fostered nationalistic hatreds, imperialistic adventures, and a **global philosophy of rule** that identifies order with dominance and submission. In slowly corroding every familial, economic, aesthetic, ideological, and cultural tie that provided a sense of place and meaning for the individual in a vital human community, this antinaturalistic mentality has filled the awesome vacuum created by an utterly nihilistic and antisocial development with massive urban entities that are neither cities nor villages, with ubiquitous bureaucracies that impersonally manipulate the lives of faceless masses of atomized human beings, with giant corporate enterprises that spill beyond the boundaries of the world’s richest nations to conglomerate on a global scale and determine the material life of the most remote hamlets on the planet, and finally, with highly centralized State institutions and military forces of unbridled power that threaten not only the freedom of the individual but the survival of the species.

The split that clerics and philosophers projected centuries ago in their visions of a soulless nature and a denatured soul has been realized in the form of a disastrous fragmentation of humanity and nature, indeed, in our time, of the human psyche itself. A direct line or logic of events flows almost unrelentingly from a warped image of the natural world to the warped contours of the social world, threatening to **bury society in a “slime of history”** that is not of nature’s making but of **man’s**—specifically, the early hierarchies from which

economic **classes emerged; the systems of** domination, initially of woman by man, that have yielded highly rationalized systems of exploitation; and **the** vast armies of warriors, priests, monarchs, and bureaucrats who emerged from the simple status **groups of** tribal society to become the institutionalized tyrants of a market society.

That this authentic jungle of "claw and fang" we call the "free market" is an extension of human competition into **nature**—an ideological, self-serving fiction that parades under such labels as social Darwinism and sociobiology—hardly requires emphasis any longer. Lions are turned into "Kings of the Beasts" only by human kings, be they imperial monarchs or corporate ones; ants belong to the "lowly" in nature only by virtue of ideologies spawned in temples, palaces, manors, and, in our own time, by subservient apologists of the powers that be. The reality, as we shall see, is different, but a nature conceived as "hierarchical," not to speak of the other "brutish" and very bourgeois traits imputed to it, merely reflects a human condition in which dominance and submission **are** ends in themselves, which has brought the very existence of our biosphere into question.

Far from being the mere "object" of culture (technology, science, and reason), nature is always with us: as the parody of our self-image, as the cornerstone of the very disciplines which deny it a place in our social and self-formation, even in the protracted infancy of our young which renders the mind open to cultural development and creates those extended parental and sibling ties from which an organized society emerged.

And nature is always with us as the conscience of the transgressions we have visited on the **planet**—and the terrifying revenge that awaits us for our violation of the ecological balance.

What distinguishes social ecology is that it negates the harsh image we have traditionally created of the natural world and its evolution. And it does so not by dissolving the social into the natural, like sociobiology, or by imparting mystical properties to nature that place it beyond the reach of human comprehension and rational insight. Indeed, as we shall see, social ecology places the human mind, like humanity itself, within **a natural** context and explores it in terms of its own natural history, so that the sharp cleavages between thought and nature, subject and object, mind and body, and the social and natural are overcome, and the traditional dualisms of western culture are transcended by an evolutionary interpretation of consciousness with its rich wealth of gradations over the course of natural history.

[**Social** ecology "radicalizes" nature, or more precisely, our understanding of natural phenomena, by questioning the prevailing marketplace image of nature from an ecological standpoint: nature as a constellation of communities that are neither "blind" nor "mute," "cruel" nor "competitive," "stingy" nor "necessitarian" but, freed of all anthropocentric moral trappings, a participatory realm of interactive life-forms whose most outstanding attributes are fecundity, creativity, and directiveness, marked by **complementarity** that renders the natural world the grounding for an ethics of freedom rather than domination.]

Seen from an ecological standpoint, life-forms are related in an ecosystem not by the "rivalries" and **"competitive" attributes imputed to them by Darwinian orthodoxy**, but by the mutualistic attributes emphasized by a growing number of contemporary ecologists- an image pioneered by Peter **Kropotkin**. Indeed, social ecology challenges the very premises of "fitness" that enter into the Darwinian drama of evolutionary development with its fixation on "survival" rather than differentiation and fecundity. As William **Trager** has emphasized in his insightful work on symbiosis:

The conflict in nature between different kinds of organisms **has been popularly expressed in phrases like the "struggle for existence"** and the "survival of the fittest." Yet few people **realized** that mutual cooperation between organisms-symbiosis-is **just** as important, and that the 'fittest' **may be the one** that helps another to survive.'

It is tempting to go beyond this pithy and highly illuminating judgement to explore an ecological notion **of** natural evolution based on the development of ecosystems, not merely individual species. This is a concept of evolution as the dialectical development of **ever-variegated**, complex, and increasingly fecund contexts of plant-animal communities as distinguished from the traditional notion of biological evolution based on the atomistic development of single life-forms, **a characteristically entrepreneurial concept of the isolated "individual," be it animal, plant, or bourgeois**-a creature which

fends for itself and either **"survives" or "perishes" in a marketplace "jungle."** As ecosystems **become more complex and** open a greater variety of evolutionary pathways, due to their own richness of diversity and increasingly flexible forms of organic life, it is not only the environment that "chooses" what "species" are "fit" to survive but species themselves, in mutualistic complexes as well as singly, that introduce a dim element of "choice"-by no means "intersubjective" or "willful" in the human meaning of these terms.

Concomitantly, these ensembles of species alter the environment of which they are part and exercise an increasingly active role in their own evolution. Life, in this ecological conception of evolution, ceases to be the passive **tabula** rosa on which eternal forces which we loosely call "the environment" inscribe the destiny of "a species," an atomistic term that is meaningless outside the context of an ecosystem within which a life-form is truly definable with respect to other species.\*

Life is active, **interactive**, procreative, relational, and contextual. It **is** not a passive lump of "stuff," a form of metabolic "matter" that awaits the action of "forces" external to it and is mechanically "shaped" by them. Ever striving and always producing new life-forms, there is a sense in which life is **self-directive** in its own evolutionary development, not passively reactive to an inorganic or organic world that impinges upon it from outside and "determines"

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\*The traditional emphasis on an "active" environment that determines the "survival" of a passive species, altered in a cosmic game of chance by random mutations, is perhaps another reason why the term "environmentalism," as distinguished from social ecology, is a very unsatisfactory expression these days.

its destiny in isolation from the ecosystems which it constitutes and of which it is a part.

And this much is clear in social ecology: our studies of "food webs" (a not quite satisfactory term for describing the interactivity that occurs in an ecosystem or, more properly, an ecological **community**) **demonstrate** that the complexity of biotic interrelationships, **their** diversity and intricacy, is a crucial factor in assessing an ecosystem's stability. In contrast to biotically complex temperate zones, relatively simple desert and arctic ecosystems are very fragile and break down easily with the loss or **numerical** decline of only a few species. The thrust of biotic evolution over great eras of organic evolution has been toward the increasing diversification of species and their interlocking into highly complex, basically mutualistic relationships, without which the widespread colonization of the planet by life would have **been** impossible.

Unity in diversity (a concept deeply rooted in the western philosophical tradition) is not only the determinant of an ecosystem's stability; it is the source of an ecosystem's fecundity, of its innovativeness, of its evolutionary potential to create **newer, still more complex life-forms and biotic interrelationships, even in the most inhospitable areas** of the planet. Ecologists have not sufficiently stressed the fact that a multiplicity of life-forms and organic interrelationships in a biotic community **opens new evolutionary pathways of development, a greater variety of evolutionary interactions, variations, and degrees of flexibility in the capacity**

to evolve, and is hence crucial not only in the community's stability but also in its innovativeness in the natural history of life.

The ecological principle of unity in diversity grades into a richly mediated social principle, hence my use of the term social ecology.\* Society, in turn, attains its "truth," its self-actualization, in the form of richly articulated, mutualistic networks of people based on community, roundedness of personality, diversity of stimuli and activities, an increasing wealth of experience, and a variety of tasks. Is this grading of ecosystem diversity into social diversity, based on humanly scaled, decentralized communities, merely analogic reasoning?

My answer would be that it is not a superficial analogy but a deep-seated continuity between nature and society that social ecology recovers from traditional nature philosophy without its archaic dross of cosmic hierarchies, static absolutes, and

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\*My use of the word "social" cannot be emphasized too strongly. Words like "human," "deep," and "cultural," while very valuable as general terms, do not explicitly pinpoint the extent to which our image of nature is formed by the kind of society in which we live and by the abiding natural basis of all social life. The evolution of society out of nature and the ongoing interaction between the two tend to be lost in words that do not tell us enough about the vital association between nature and society and about the importance of defining such disciplines as economics, psychology, and sociology in natural as well as social terms. Recent uses of "social ecology" to advance a rather superficial account of social life in fairly conventional ecological terms are particularly deplorable. Boob like Habits of the Heart which glibly pick up the term serve to coopt a powerful expression for rather banal ends and tend to compromise efforts to deepen our understanding of nature and society as interactive rather than opposed domains.

cycles. In the case of social ecology, it is not in the particulars of **differentiation** that plant-animal communities are ecologically united with human communities; rather, it is the logic of differentiation that makes it possible to relate the mediations of nature and society into a continuum.

What makes unity in diversity in nature more than a suggestive ecological metaphor for unity in diversity in society is the underlying fact of wholeness. By wholeness I do not mean any finality of closure in a development, any "totality" that leads to a terminal "reconciliation" of all "Being" in a complete identity of subject and object or a reality in which no further development is possible or meaningful. Rather, I mean varying degrees of the actualization of potentialities, the organic unfolding of the wealth of particularities that are latent in the as-yet-undeveloped potentiality. This potentiality can be a newly planted seed, a newly born infant, a newly formed community, a newly emerging society-yet, given their radically different specificity, they are all united by a processual reality, a shared "metabolism" of development, a unified catalysis of growth as distinguished from mere "change" that **provides** us with the most insightful way of understanding them we can possibly achieve. Wholeness is literally the unity that finally gives order to the particularity of each of these phenomena; it is what has emerged from the process, what integrates the particularities into a unified form, what renders the unity an operable reality and a "being" in the literal sense of **the** term-an order as the

actualized unity of its diversity from the flowing and **emergent** process that yields its self-realization, the fixing of its directiveness into a clearly contoured form. and the creation in a dim sense of a "self" that is identifiable with respect to **the "others"** with which it interacts. Wholeness is the relative completion of a phenomenon's potentiality, the fulfillment of latent possibility as such, all its concrete manifestations aside, to become more than the realm of **mere** possibility and attain the "truth" or fulfilled reality of possibility. To think this way-in terms of potentiality, process, mediation, and wholeness-is to reach into the most underlying nature of things, just as to know the biography of a human being and **the** history of a society is to know them in their **aut hentic** reality and depth.

**The** natural world is no less encompassed by this processual dialectic and developmental ecology than the social, although in ways that do not involve will, degrees of choice, values, ethical goals, and the like. Life itself, as distinguished from the nonliving, however, emerges from the inorganic latent with all the potentialities and particularities it has immanently produced from the logic of its own nascent forms of self-organization. Obviously, so does society as distinguished from biology, humanity as distinguished from animality, and individuality as distinguished from humanity in the generic sense of the word. But these distinctions are not absolutes. They are the unique and closely interrelated phases of a shared continuum, of a process that is united precisely by its own differentiations just as the phases through which an embryo develops are both distinct

from and incorporated into its complete gestation and its organic specificity.

This continuum is not simply a philosophical construct. It is an earthy anthropological fact which lives with us daily as surely as it explains the emergence of humanity out of mere animality. Individual socialization is the highly **nuanced** "biography" of that development in everyday life and in everyone as **surely** as the anthropological socialization of our species is part of its history. I refer to the biological basis of all human socialization: the protracted infancy of the human child that renders its cultural development possible, in contrast to the rapid growth of nonhuman animals, a rate of growth that quickly forecloses their ability to form a culture and develop sibling affinities of a lasting nature; the instinctual maternal drives that extend feelings of care, sharing, intimate consociation, and finally love and a **sense** of responsibility for one's own kin into the institutional forms we call "society"; and the sexual division of labor, age-ranking, and kin-relationships which, however culturally conditioned and even mythic in some cases, formed and still inform so much of social institutionalization today. These formative elements of society rest on biological facts and, placed in the contextual analysis I have argued for, require ecological analysis.

In emphasizing the nature-society continuum with all its gradations and "mediations," I do not wish to leave the impression that the known ways and forms in which society **emerged** from nature and still embodies the natural world in a shared process of cumulative growth follow a logic that is "inexorable"

or "preordained" by a telos that mystically guides the unfolding by a supranatural and suprasocial process. Potentiality is not necessity: the logic of a process is not a form of inexorable "law"; the truth of a development is what is implicit in any unfolding and defined by the extent to which it achieves stability, variety, fecundity, and enlarges the "realm of freedom," however dimly freedom is conceived.

No specific "stage" of a process necessarily yields a still later one or is "presupposed" by it—but certain obvious conditions, however varied, blurred, or even idiosyncratic, form the determining ground for still other conditions that can be expected to emerge. Freedom and, ultimately, a degree of subjectivity that make choice and will possible along rational lines may be desiderata that the natural world renders possible and in a "self"-directive way plays an active role in achieving. But in no sense are these desiderata predetermined certainties that must unfold, nor is any such unfolding spared the very real possibility that it will become entirely regressive or remain unfulfilled and incomplete. That the potentiality for freedom and consciousness exists in nature and society; that nature and society are not merely "passive" in a development toward freedom and consciousness, a passivity that would make the very notion of potentiality mystical just as the notion of "necessity" would make it meaningless by definition; that natural and social history bear existential witness to the potentiality and processes that form subjectivity and bring consciousness more visibly on the horizon in the very natural history of mind—all constitute no guarantee that these latent desiderata



are certainties or lend themselves to systematic elucidation and teleological explanations in any traditional philosophical sense.

Our **survey** of organic and social experience may stir us to interpret a development we know to have occurred as reason to presuppose that potentiality, **wholeness**, and **graded** evolution are realities after all, no less real than our own existence and personal histories, but presuppositions they remain. Indeed, no outlook in philosophy can ever exist that is free of presuppositions, any more than speculation can exist that is free of some stimulus by the objective world. The only truth about "**first** philosophy," from Greek times onward, is that what **is** "**first**" in any philosophical outlook are the presuppositions it adopts, the background of unformulated experience from which these presuppositions emerge, and the intuition of a coherence that must be validated by reality as well as speculative reason.

One of the most provocative of the graded continuities **between** nature and society is the nonhierarchical **relationships** that exist in an ecosystem, and the extent to which they provide a grounding for a nonhierarchical society.\* It is

● Ciaimr of hierarchy as a **ubiquitous** natural fact cannot be **ignored** by still further **widening** the chasm between nature and society-or "natural necessity" and "cultural **freedom**" as it is more elegantly worded. Justifying **social** hierarchy in terms of natural hierarchy is one of the most persistent **assaults** on an egalitarian **social** future that religion and **philosophy** have made over the ages. It has surfaced **recently** in **sociobiology** and **reinforced** the **antinaturalistic stance** that permeates 80 many **liberatory** Ideologies in the modern era. To **say** that culture **is** **precisely** the "emancipation of man from nature" Is to revert to

meaningless to speak of hierarchy in an ecosystem and in the succession of ecosystems which, in contrast to a monadic species-oriented development, form the true story of natural evolution. There is no "king of the beasts" and no "lowly serf"-presumably, the lion and the ant-in ecosystem relationships. Such terms, including words like "cruel nature," "fallen nature," "domineering nature," and even "mutualistic nature" (I prefer to use the word "complementary" here) are projections of our own social relationships into the natural world. Ants are as important as lions and eagles in ecosystems: indeed, their recycling of organic materials gives them a considerable "eminence" in the maintenance of the stability and integrity of an area.

As to accounts of "dominance-submission" relationships between individuals such as "alpha" and "beta" males, utterly asymmetrical relationships tend to be grouped under words like "hierarchy" that are more **analogic**, often more metaphoric, than real. It becomes absurd, I think, to say that the "dominance" *of* a "queen bee," who in no way knows that she is a "queen" and whose sole function in a beehive is reproductive, is in any way equatable **with** an "alpha" male baboon, whose "status" tends to suffer grave diminution when the baboon **troop** moves from the plains to the forest. By the same token, it is absurd to equate "patriarchal harems" among red deer with "matriarchal" elephant herds,

Sartre's "alltime of history" notion of the natural world that not only separates society from nature but mind from **body** and **subjectivity** from objectivity.

which simply expel but is when they reach puberty and in no **sense** "dominate" them. One could go through a whole range of **asymmetrical** relationships to show that, even among our closest primate **relatives**, which include the utterly "pacific" **orangutans as** well as the seemingly "aggressive" chimpanzees, words like "dominance" and "submission" mean very different relationships depending upon the species one singles out and the circumstances under which they live.

I cannot emphasize too strongly that hierarchy in society is an institutional phenomenon, not a biological one. It is a product of organized, carefully crafted power relationships, not a product of the "morality of the gene," to use E. O. Wilson's particularly obtuse **phrase** in his **Sociobiology**. Only **institutions**, formed by long periods of human history and sustained by well-organized bureaucracies and military forces, could have placed absolute rule in the hands of mental defects like Nicholas II of Russia and Louis XVI of France. We can find nothing even remotely comparable to such institutionalized systems of command and obedience in other species, much less in ecosystems. It verges on the absurd to draw fast-and-loose comparisons between the "division of labor" (another anthropocentric phrase when placed in an ecological context) in a beehive, whose main function is reproducing bees, not making honey for breakfast tables, and human society, with its highly contrived State forms and organized bureaucracies.

What renders social **ecology** so important in comparing ecosystems to societies is that it decisively challenges the very function of hierarchy as a way

of **ordering reality, of dealing with** differentiation and variation-with "otherness" as such. Social ecology ruptures the association of order with hierarchy. It poses the question of whether we can experience the "other," not hierarchically on a "**scale** of one to ten" with a continual emphasis on "inferior" and "superior," but ecologically, as variety that enhances the unity of phenomena, enriches wholeness, and more closely resembles a food-web than a pyramid. That hierarchy exists today as an even more fundamental problem than social classes, that domination exists today as an even more fundamental problem than economic exploitation, can be attested to by every conscious feminist, who can justly claim that long before man began to exploit man through the formation of social classes, he began to dominate woman in patriarchal and hierarchical relationships.

We would do well to remember that the abolition of classes, exploitation, and even the State is no guarantee whatever that people will cease to be ranked hierarchically and dominated according to age, gender, race, physical qualities, and often quite frivolous and irrational categories, unless liberation focuses as much on hierarchy and domination as it does on classes and exploitation. This is the point where socialism, in my view, must extend itself into a broader libertarian tradition that reaches back into the tribal or band-type communities ancestral to what we so smugly call "civilization," a tradition, indeed an abiding human impulse, that has surged to the surface of society in every revolutionary period, only to be brutally contained by those purely societal forms called "hierarchies."

Social ecology raises all of these issues in a **fundamentally** new light, and establishes entirely new **ways of** resolving them. I have tried to show that nature **is** always present in the human condition, and in the very ideological constructions that deny its presence in societal relationships. The notion of dominating nature literally defines all our social disciplines, including socialism and psychoanalysis. It is the apologia **par** excellence for the domination of human by human. Until that apologia is removed from our **sensibilities** in the **rearing** of the young, the **first step** in **socialization** as such, and replaced by an ecological **sensibility** that **sees** "otherness" in terms of **complementarity** rather than rivalry, we will never achieve human emancipation. Nature lives in **us ontogenetically** as different layers of experience which analytic rationalism often conceals from us: in the sensitivity of our cells, the remarkable autonomy of our organ systems, our so-called layered **brain** which experiences the world in different ways and attests to different worlds, which analytic reason, left to its own imperialistic claims, tends to close to us—indeed, in the natural history of the nervous system and mind, which bypasses the chasm between mind and body, or subjectivity and objectivity, with an organic continuum in which body grades into mind and objectivity **into** subjectivity. Herein **lies** the most compelling refutation of the traditional dualism in religion, philosophy, and sensibility that gave ideological credence to the myth of a "dominating" nature, borne by the suffering and brutalization of a dominated humanity.

Moreover, this natural history of the nervous system and mind is a cumulative one, not merely a

successive one—a history whose past lies in our everyday present. It is not for nothing that one of America's greatest physiologists, Walter B. Cannon, titled his great work on homeostasis *The Wisdom of the Body*. Running through our entire experiential apparatus and organizing experience for us are not only the categories of Kant's first Critique and **Hegel's** Logic, but also the **natural** history of sensibility as it exists in us hormonally, from our undifferentiated nerve networks to the hemispheres of our brains. We metabolize with nature in production in such a way that the materials with which we work and the tools we use to work on them enter reciprocally into the technological imagination we form and the social matrix in which our technologies exist. Nor can we ever permit ourselves to forget, all our overriding ideologies of class, economic interest, and the like notwithstanding, that we socialize with each other not only as producers and property owners, but also as children and parents, young and old, female and male, with our bodies as well as our minds, and according to graded and varied impulses that are as archaic as they are fairly recent in the natural evolution of sensibility.

Hence, to become conscious of this vast ensemble of natural history as it enters into our very beings, to see its place in the graded development of our social history, to recognize that we must develop new sensibilities, technologies, institutions, and forms of experiencing that give expression to this wealth of our inner development and the complexity of our biosocial apparatus is to go along with a deeper grain of evolution and dialectic than is afforded to us by the "epistemological" and "linguistic" turns of recent

philosophy.\* On this score, just as I would argue that **science is the** history of science, not merely its latest **"stage,"** and **technology** is the history of technology, not merely **its** latest designs, so reason is the history of reason, not merely its present analytic and communicative dimensions. Social history includes natural history as a graded dialectic that is united not only in a continuum by a shared logic of differentiation and complementarity; it includes natural history in the socialization process itself, in the natural as well as the social history of experience, in the imperatives of a harmonized relationship between humanity and nature that presuppose new ecotechnologies and ecocommunities, and in the desiderata opened by a decentralized society based on the **values** of complementarity and community.

The **ideas** I have advanced so far take their point of **departure** from a radically different image of nature than the prevailing western one, in which

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**\*Our disastrous one-sided and rationalized "civilization" has boxed this wealth of inner development and complexity awry, relegating it to preindustrial lifeways that basically shaped our evolution up to a century or two ago. From a sensory viewpoint, we live atrophied, indeed, starved liver compared to hunters and food cultivators, whose capacity to experience reality, even in a largely cultural sense, by far overshadows our own. The twentieth century alone bears witness to an appalling dulling of our "sixth senses" as well as to our folk creativity and craft creativity. We have never experienced so little so loudly, so brashly, so trivially, so thinly, so neurotically. For a comparison of the "world of experience we have lost" (to reword Peter Laslett's title), read the excellent personal accounts of so-called Bushmen, or San people, the Ituri Forest pygmies, and the works of Paul Shepard on food-gatherers and hunters-not simply as records of their lifeways but of their epistemologies.**

philosophical dualism, economics, sociology, psychology, and even socialism have their roots. As a social ecologist, I see nature as essentially creative, directive, mutualistic, fecund, and marked by complementarity, not "mute," "blind," "cruel," "stingy," or **"necessitarian."** This shift in focus from a marketplace to an ecological image of nature obliges me to challenge the **time-honored** notion that the domination of human by human is necessary in order to "dominate nature." In emphasizing how meaningless this rationale for hierarchy and domination is, I conclude-with considerable historical justification, which our own era amply illuminates with its deployment of technology primarily for purposes of social control-that the idea of dominating nature stems from human domination, initially in hierarchical forms as feminists so clearly understand, and later in class and statist forms.

Accordingly, my ecological image of nature leads me to drastically redefine my conception of economics, sociology, psychology, and even socialism, which, ironically, advance a shared dualistic gospel of a radical separation of society from nature even as they rest on a militant imperative to "subdue" nature, be it as "scarce resources,\*" the realm of "animality," "internal nature," or "external nature." Hence, I have tried to re-vision history not only as an account of power over human beings that by far outweighs any attempt to gain power over things, but also as power ramified into centralized states and urban environments, a technology, science, and rationality of social control, and a

message of "liberation" that conceals the most awesome features of domination, notably, the traditional socialist orthodoxies of the last century.

At the juncture where nature is conceived either as a ruthless, competitive marketplace or a creative, **fecund biotic** community, two radically divergent **pathways** of thought and sensibility emerge, following contrasting directions and conceptions of the human future. One ends in a totalitarian and antinaturalistic terminus for society: centralized, statist, technocratic, corporate, and sweepingly repressive. The other ends in a libertarian and ecological beginning for society: decentralized, stateless, artistic, collective, and sweepingly **emancipatory**. These are not tendentious words. It is by no means certain that western humanity, currently swept up in a counterrevolution of authoritarian values and adaptive impulses, would regard a libertarian vision as less pejorative than a totalitarian one. Whether or not my own words seem tendentious, the full logic of my view should be seen: the view we hold of the natural world profoundly shapes the image we develop of the social worlds, even as we assert the "**supremacy**" and "autonomy" of culture over nature.

In what sense does social ecology view nature as a grounding for an ethics of freedom? If the story of natural evolution is not understandable in Locke's atomistic account of a particular species' evolution, if that story is basically an account of ecosystem evolution toward ever more complex and flexible evolutionary pathways, then natural history itself cannot be seen simply as "necessitarian," "governed" by "inexorable laws" and imperatives. Every

**organism is in some sense** "willful," insofar as it seeks to preserve **itself**, to maintain its identity, to resist a kind of biological entropy that threatens its integrity and complexity. However dimly, every organism transforms the essential attributes of **self-maintenance** that earn it the status of a distinct form of life into a capacity to choose alternatives that favor its survival and well-being—not merely to react to stimuli as a purely physico-chemical ensemble.

This dim, germinal freedom is heightened by the growing wealth of ecological complexity that confronts evolving life in synchronicity with evolving ecosystems. The elaboration of possibilities that comes with the elaboration of diversity and the growing multitude of alternatives confronting species development opens newer and more fecund pathways for organic development. Life is not passive in the face of these possibilities for its evolution. It drives toward them actively in a shared process of mutual stimulation between organisms and their environment (including the living and non-living environment they create) as surely as it also actively creates and colonizes the niches that cradle a vast diversity of life-forms in our richly elaborated biosphere. This image of active, indeed striving, life requires no Hegelian "Spirit" or Heraklitean Logos to explain it. Activity and striving are presupposed in our very definition of metabolism. In fact, metabolic activity is coextensive with the notion of activity as such and imparts an identity, indeed, a rudimentary "self," to every organism. Diversity and complexity, indeed, the notion of evolution as a diversifying history, **superadd** the dimension of variegated alternatives and pathways to the simple

fact of choice-and, with choice, the rudimentary fact of **freedom**. For freedom, in **its** most **germinal** form, is also a **function** of diversity and complexity, of a "realm of necessity" that is diminished by a growing and expanding multitude of alternatives, of a widening horizon of evolutionary possibilities, which life in its ever-richer forms both creates and in its own way "pursues," until consciousness, the gift of nature as well as society to humanity, renders **this** pursuit willful, **self-reflexive**, and consciously **creative**.

Here, in this ecological concept of **natural evolution**, **lies** a hidden message of freedom based on the "inwardness of life," to use Hans Jonas's excellent expression, and the ever greater diversification produced by natural evolution. Ecology is united with society in new terms that reveal moral tension in natural history, just as Marx's simplistic image of the "savage" who "wrestles with nature" reveals a moral tension in social history.

We must beware of being prejudiced by our own fear of prejudice. Organismic philosophies can surely yield totalitarian, hierarchical, and eco-fascistic results. We have good reason to be concerned over so-called nature philosophies that give us the notion of Blut und Boden and "dialectical materialism," which provide the ideological justification for the horrors of Nazism and Stalinism. We have good reason to be concerned over a mysticism that yields social **quietism** at best and the aggressive activism of reborn Christianity and certain Asian gurus at worst. We have even better reason to be concerned over the **eco-fascism** of Garrett **Hardin's** "lifeboat ethic" with

its emphasis on scarce resources and the so-called tragedy of the commons, an ethic which services genocidal theories of imperialism and a global disregard for human misery. So, too, sociobiology, which roots all the savage features of "civilization" in our genetic constitution. Social ecology offers the coordinates for an entirely different pathway in exploring our relationship to the natural world-one that accepts neither genetic and **scientific** theories of "natural necessity" at one extreme, nor a romantic and mystical zealotry that reduces the rich variety of reality and evolution to a cosmic "oneness" and **energetics** at the other extreme. For in both cases, it is not only our vision of the world and the unity of nature and society that suffers, but the "natural history" of freedom and the basis for an objective ethics of liberation as well.

We cannot avoid the use of **conventional** reason, present-day modes of science, and modern technology. They, too, have their place in the future of humanity and humanity's metabolism with the natural world. But we can establish new contexts in which these modes of rationality, science, and technology have their proper place-an ecological context that does not deny other, more qualitative modes of knowing and producing which are participatory and **emancipatory**. We can also foster a new sensibility toward otherness that, in a **nonhierarchical** society, is based on **complementarity** rather than rivalry, and new communities that, scaled to human dimensions, are tailored to the ecosystem in which they are located and open a new, decentralized, self-managed public

**realm for new forms of selfhood as well as directly democratic forms of social management.**

**November 12, 1984**

# SOCIETY AND ECOLOGY

The problems which many people face today in “defining” themselves, in knowing “who they are” — problems that feed a vast psychotherapy industry — are by no means personal ones. These problems exist not only for private individuals; they exist for modern society as a whole. Socially, we live in desperate uncertainty about how people relate to each other. We suffer not only as individuals from alienation and confusion over our identities and goals, our entire society, conceived as a single entity, seems unclear about its own nature and sense of direction. If earlier societies tried to foster a belief in the virtues of cooperation and care, thereby giving an ethical meaning to social life, modern society fosters a belief in the virtues of competition and egotism, thereby divesting human association of all meaning — except, perhaps, as an instrument for gain and mindless consumption.

We tend to believe that men and women of earlier times were guided by firm beliefs and hopes — values that defined them as human beings and gave purpose to their social lives. We speak of the Middle Ages as an “Age of Faith” or the Enlightenment as an “Age of Reason.” Even the pre-World War II era and the years that followed it seem like an alluring time of innocence and hope despite the Great Depression and the terrible conflicts that stained it. As an elderly character in a recent,



rather sophisticated, espionage movie put it: what he missed about his younger years during World War II were their "clarity" — a sense of purpose and idealism that guided his behaviour.

That "clarity," today, is gone. It has been replaced by ambiguity. The certainty that technology and science would improve the human condition is mocked by the proliferation of nuclear weapons and by massive hunger in the Third World, and by poverty in the First World. The fervent belief that liberty would triumph over tyranny is belied by the growing centralization of states everywhere and by the disempowerment of people by bureaucracies, police forces, and sophisticated surveillance techniques — in our "democracies" no less than in visibly authoritarian countries. The hope that we would form "one world," a vast community of disparate ethnic groups that would share their resources to improve life everywhere, has been shattered by a rising tide of nationalism, racism, and an unfeeling parochialism that fosters indifference to the plight of millions.

We believe that our values are worse than those held by people of only two or three generations ago. The present generation seems more self-centred, privatized, and mean-spirited by comparison with earlier ones. It lacks the support systems provided by the extended family, community, and a commitment to mutual aid. The encounter of the individual with society seems to occur through cold bureaucratic agencies rather than warm, caring people.

This lack of social identity and meaning is all the more stark in the face of the mounting problems that confront us. War is a chronic condition of our time; economic uncertainty, an all-pervasive presence; human solidarity, a vaporous myth. Not least of the problems we encounter are nightmares of an ecological apocalypse — a catastrophic breakdown of the systems that maintain the stability of the planet. We live under the constant threat that the world of life will be irrevocably undermined by a society gone mad in its need to grow — replacing the organic by the inorganic, soil by concrete, forest by barren earth, and the diversity of life-forms by simplified ecosystems. In short, a turning back of the evolutionary clock to an earlier, more inorganic, mineralized world that was incapable of supporting complex life-forms of any kind, including the human species.

Ambiguity about our fate, meaning, and purpose thus raises a rather startling question: is society itself a curse, a blight on life generally? Are we any better for this new phenomenon called "civilization" that seems to be on the point of destroying the natural world produced over millions of years of organic evolution?

An entire literature has emerged which has gained the attention of millions of readers: a literature that fosters a new pessimism toward civilization as such. This literature pits technology against a presumably "virginal" organic nature; cities against countryside; countryside against "wilderness"; science against a "reverence" for life; reason against the "innocence" of intuition; and, indeed, humanity against the entire biosphere.

We show signs of losing faith in all our uniquely human abilities — our ability to live in peace with each other, our ability to care for our fellow beings and other life-forms. This pessimism is fed daily by sociobiologists who locate our failings in our genes, by antihumanists who deplore our "antinatural" sensibilities, and by "biocentrists" who downgrade our rational qualities with notions that we are no different in our "intrinsic worth" than ants. In short, we are witnessing a widespread assault against the ability of reason, science, and technology to improve the world for ourselves and life generally.

The historic theme that civilization must inevitably be pitted against nature, indeed, that it is corruptive of human nature, has re-surfaced in our midst from the days that teach back to Rousseau — this, precisely at a time when our need for a truly human and ecological civilization has never been greater if we are to rescue our planet and ourselves. Civilization, with its hallmarks of machine and technique, is viewed increasingly as a new blight. Even more basically, society as a phenomenon in its own right is being questioned so much so that its role as integral to the formation of humanity is seen as something harmfully "unnatural" and inherently destructive.

Humanity, in effect, is being defamed by human beings themselves, ironically, as an accursed form of life that all but destroys the world of life and threatens its integrity. To the confusion that we have about our own muddled time and our personal identities, we now have the added confusion that the human condition is seen as a form of chaos produced

the role of the human mind in the evolution of life?

by our proclivity for wanton **destruction** and our ability to **exercise this** proclivity all the more effectively because we possess **reason, science,** and technology.

Admittedly, few **antihumanists, "biocentrists,"** and **misanthropes,** who theorize about the human condition, are **prepared** to follow the **logic of their premises to such an absurd point.** What is **vitaly important** about this medley of moods and unfinished ideas is that the **various** forms, institutions, and relationships that make up what we should call **"society"** are **largely ignored.** Instead, just as we use vague words like **"humanity"** or zoological terms like **homosapiens** that **conceal** vast differences, often bitter antagonisms, that exist between **privileged** whites and people of colour, **men** and women, rich and poor, **oppressor** and **oppressed;** so do we, by the same token, use vague words like **"society"** or **"civilization"** that conceal vast differences between **free, nonhierarchical,** class, and stateless societies on the one hand, and others that are, in varying degrees, **hierarchical,** class-ridden, statist, and authoritarian. Zoology, in effect, replaces **socially oriented ecology.** Sweeping **"natural laws"** based on population **swings** among animals replace conflicting economic and social **interests** among people.

Simply to **pit** **"society"** against **"nature,"** **"humanity"** against the **"biosphere,"** and **"reason,"** **"technology,"** and **"science"** against less developed, often primitive forms of human interaction with the natural world, prevents us from examining the **highly complex differences and divisions within society so necessary** to define our problems and their solutions.

Ancient Egypt, for example, had a significantly **different** attitude toward nature than ancient Babylonia. Egypt assumed a **reverential** attitude toward a host of essentially **animistic nature** deities, many of which were physically part human and part animal, while Babylonians created a pantheon of very human political deities. But Egypt was no **less hierarchical** than Babylonia in its treatment of **people** and was **equally, if not more, oppressive** in its view of human individuality. **Certain hunting** peoples may have been as **destructive of wildlife,** despite their **strong animistic** beliefs, as urban **cultures** which staked out an **over-arching** claim to reason. When these many differences are simply swallowed up together with a vast variety of social **forms** by a

word called **"society,"** we do **severe violence** to thought and even simple intelligence. **Society per se** becomes something **"unnatural."** **"Reason,"** **"technology,"** and **"science"** become things that are **"destructive"** without any regard to the social factors that condition their use. Human attempts to alter the environment are seen as threats—as though our **"species"** can do little or nothing to improve the planet for life generally.

Of course, we are not **anyless** animals than other mammals, but we are more than herds that browse on the African plains. The way in which we are more — namely, the **kinds** of societies that we form and how we are divided against each other into hierarchies and classes — **profoundly** affects our **behaviour** and our effects on the natural world.

Finally, by so radically separating humanity and **society** from nature or **naively** reducing them to mere zoological entities, we can no longer see how human nature is **derived** from nonhuman nature and social evolution from natural evolution. Humanity becomes estranged or alienated not only from itself in our **"age of nation,"** but from the natural world in which it has always been rooted as a complex and thinking life-form.

Accordingly, we are fed a steady diet of reproaches by **liberal** and **misanthropic** environmentalists alike about how **"we"** as a species are **responsible** for the breakdown of the environment. One does not have to go to enclaves of mystics and gurus in San Francisco to find this **species-centred,** asocial view of ecological problems and their sources. New York City will do just as well. I shall not easily forget an **"environmental"** presentation staged by the New York Museum of Natural History in the **seventies** in which the public was exposed to a long series of exhibits, each depicting examples of pollution and ecological disruption. The exhibit which closed the presentation carried a startling sign, **"The Most Dangerous Animal on Earth,"** and it consisted simply of a huge mirror which reflected back the human viewer who stood before it. I clearly recall a **black child** standing before the mirror while a **whiteschool** teacher tried to explain the message which this **arrogant** exhibit tried to convey. There were no exhibits of **corporate** boards or **directors** planning to deforest a mountainside or government officials acting in collusion with them. The exhibit primarily conveyed one, basically **misanthropic,** message: **people as**

such, not a rapacious society and its wealthy beneficiaries, are responsible for environmental dislocations — the poor no less than the personally wealthy, people of colour no less than privileged whites, women no less than men, the oppressed no less than the oppressor. A mythical human "species" had replaced classes; individuals had replaced hierarchies; personal tastes (many of which are shaped by • predatory media) had replaced social relationships; and the disempowered who live meagre, isolated lives had replaced giant corporations, self-serving bureaucracies, and the violent paraphernalia of the State.

### THE RELATIONSHIP OF SOCIETY TO NATURE

Leaving aside such outrageous "environmental" exhibitions that mirror privileged and underprivileged people in the same frame, it seems appropriate at this point to raise a highly relevant need: the need to bring society back into the ecological picture. More than ever, strong emphases must be placed on the fact that nearly all ecological problems are social problems, not simply a primarily the result of religious, spiritual, a political ideologies. That these ideologies may foster an anti-ecological outlook in people of all strata hardly requires emphasis. But rather than simply take ideologies at their face value, it is crucial for us to ask from whence these ideologies develop.

Quite frequently, economic needs may compel people to act against their best impulses, even strongly fall natural values. Lumberjacks who are employed to clear-cut a magnificent forest normally have no "hatred" of trees. They have little or no choice but to cut trees just as stockyard workers have little or no choice but to slaughter domestic animals. Every community or occupation has its fair share of destructive and sadistic individuals, to be sure, including misanthropic environmentalists who would like to see humanity exterminated. But among the vast majority of people, this kind of work, including such onerous tasks as mining, are not freely chosen occupations. They stem from need and, above all, they are the product of social arrangements over which ordinary people have no control.

To understand present-day problems — ecological as well as economic and political — we must examine their social causes and remedy them through social methods. "Deep," "spiritual," anti-

humanist, and misanthropic ecologies gravely mislead us when they refocus our attention on social symptoms rather than social causes. If our obligation is to look at changes in social relationships in order to understand our most significant ecological changes, these ecologies steer us away from society to "spiritual," "cultural," or vaguely defined "traditional" sources. The Bible did not create European anti-naturalism; it served to justify an antinaturalism that already existed on the continent from pagan times, despite the animistic traits of pre-Christian religions. Christianity's antinaturalistic influence became especially marked with the emergence of capitalism. Society must not only be brought into the ecological picture to understand why people tend to choose competing sensibilities — some, strongly naturalistic; others, strongly antinaturalistic — but we must probe more deeply into society itself. We must search out the relationship of society to nature, the reasons why it can destroy the natural world, and, alternatively, the reasons why it has and still can enhance, foster, and richly contribute to natural evolution.

Insofar as we can speak of "society" in any abstract and general sense — and let us remember that every society is highly unique and different from others in the long perspective of history — we are obliged to examine what we can best call • "socialization," not merely "society." Society is a given arrangement of relationships which we often take for granted and view in a very fixed way. To many people today, it would seem that a market society based on trade and competition has existed "forever," although we may be vaguely mindful that there were pre-market societies based on gifts and cooperation. Socialization, on the other hand, is a process, just as individual living is a process. Historically, the process of socializing people can be viewed as a sort of social infancy that involves a painful rearing of humanity to social maturity.

When we begin to consider socialization from an in-depth viewpoint, what strikes us is that society itself in its most primal form stuns very much from nature. Every social evolution, in fact, is virtually an extension of natural evolution into a distinctly human realm. As the Roman orator and philosopher, Cicero, declared some two thousand years ago: "...by the use of our hands, we bring into being within the realm of Nature, a second nature for ourselves." Cicero's observation,

to be *sure*, is very incomplete; the primeval, presumably *untouched* "realm of Nature" or "first nature," as it has been *called*, is *reworked* in whole or part into "second nature" not only by the "use of our hands." Thought, language, and complex, very important biological changes also play a crucial and, at times, a decisive role in developing "second nature" within "first nature."

I use the term "reworking" advisedly to focus on the *fact* that "second nature" is not simply a phenomenon that develops outside of "first nature" — hence the special value that should be attached to Cicero's use of the expression "within the realm of Nature..." To emphasize that "second nature" or, more precisely, society (to use this word in its broadest possible sense) emerges from *within* primeval "first nature" is to reestablish the fact that social life always has a naturalistic dimension, however much society is pitted against nature in our thinking. Social ecology clearly expresses the fact that society is not a sudden "eruption" in the world. Social life does not necessarily face nature as a combatant in an unrelenting war. The emergence of society is a natural fact that has its origins in the biology of human socialization.

The human socialization process from which society emerges — be it in the form of families, bands, tribes, or more complex types of human intercourse — has its source in parental relationships, particularly mother and child bonding. The biological mother, to be *sure*, can be replaced in this process by many surrogates, including fathers, relatives, or, for that matter, all members of a community. It is when social parents and social siblings — that is, the human community that surrounds the young — begin to participate in a system of care, that is ordinarily undertaken by biological parents, that society begins to truly come into its own.

Society thereupon advances beyond a mere reproductive group toward institutionalized human relationships, and from a relatively formless animal community into a clearly structured social order. But at the very inception of society, it seems more than likely that human beings were socialized into "second nature" by means of deeply ingrained blood ties, specifically maternal ties. We shall see that in time the structures or institutions that mark the advance of humanity from a mere animal community into an authentic society began to undergo far-reaching changes and these changes become issues of paramount

importance in social ecology. For better or worse, societies develop around status groups, hierarchies, classes, and state formations. But reproduction and family care remain the abiding biological bases for every form of social life as well as the originating factor in the socialization of the young and the formation of a society. As Robert Briffault observed in the early half of this century, the "one known factor which establishes a profound distinction between the constitution of the most rudimentary human group and all other animal groups [is the] association of mothers and offspring which is the sole form of true social solidarity among animals. Throughout the class of mammals, there is a continuous increase in the duration of that association, which is the consequence of the prolongation of the period of infantile dependence," a prolongation which Briffault correlates with increases in the period of fetal gestation and advances in intelligence.

The biological dimension that Briffault adds to what we call society and socialization cannot be stressed too strongly. It is a decisive presence, not only in the origins of society over ages of animal evolution, but in the daily recreation of society in our everyday lives. The appearance of a newly born infant and the highly extended care it receives for many years reminds us that it is not only a human being that is being reproduced, but society itself. By comparison with the young of other species, children develop slowly and over a long period of time. Living in close association with parents, siblings, kin groups, and an ever-widening community of people, they retain a plasticity of mind that makes for creative individuals and ova-formative social groups. Although nonhuman animals may approximate human forms of association in many ways, they do not create a "second nature" that embodies a cultural tradition, nor do they possess a complex language, elaborate conceptual powers, or an impressive capacity to restructure their environment purposefully according to their own needs.

A chimpanzee, for example, remains an infant for only three years and a juvenile for seven. By the age of ten, it is a full-grown adult. Children, by contrast, are regarded as infants for approximately six years and juveniles for fourteen. A chimpanzee, in short, grows mentally and physically in about half the time required by a human being, and its capacity to learn or, at least to think, is already fixed by comparison with a human being, whose mental abilities may expand

for decades. By the same token, chimpanzee associations are often idiosyncratic and fairly limited. Human associations, on the other hand, are basically stable, highly institutionalized, and they are marked by a degree of solidarity, indeed, by a degree of creativity, that has no equal in nonhuman species as far as we know.

This prolonged degree of human mental plasticity, dependency, and social creativity yields two results that are of decisive importance. First, early human association must have fostered a strong predisposition for interdependence among members of a group — not the “rugged individualism” we associate with independence. The overwhelming mass of anthropological evidence suggests that participation, mutual aid, solidarity, and empathy were the social virtues early human groups emphasized within their communities. The idea that people are dependent upon each other for the good life, indeed, for survival, followed from the prolonged dependence of the young upon adults. Independence, not to mention competition, would have seemed utterly alien, if not bizarre, to a creature reared over many years in a largely dependent condition. Care for others would have been seen as the perfectly natural outcome of a highly acculturated being that was, in turn, clearly in need of extended care. Our modern version of individualism, more precisely, of egotism, would have cut across the grain of early solidarity and mutual aid — traits, I may add, without which such a physically fragile animal like a human being could hardly have survived as an adult, much less as a child.

Second, human interdependence must have assumed a highly structured form. There is no evidence that human beings normally relate to each other through the fairly loose systems of bonding we find among our closet primate cousins. That human social bonds can be dissolved or de-institutionalized in periods of radical change or cultural breakdown is too obvious to argue here. But during relatively stable conditions, human society was never the “horde” that anthropologists of the last century presupposed as a basis for rudimentary social life. On the contrary, the evidence we have at hand points to the fact that all humans, perhaps even our distant hominid ancestors, lived in some kind of structured family groups, and, later, in bands, tribes, villages, and other

forms. In short, they bonded together (as they still do), not only emotionally and morally, but also structurally in contrived, clearly definable, and fairly permanent institutions.

Nonhuman animals may form loose communities and even take collective protective postures to defend their young from predators. But such communities can hardly be called structured, except in a broad, often ephemeral, sense. Humans, by contrast, create highly formal communities that tend to become increasingly structured over the course of time. In effect, they form not only communities, but a new phenomenon called *societies*.

If we fail to distinguish animal communities from human societies, we risk the danger of ignoring the unique features that distinguish human social life from animal communities — notably, the ability of society to change for better or worse and the factors that produce these changes. By reducing a complex society to a mere community, we can easily ignore how societies differed from each other over the course of history. We can also fail to understand how they elaborated simple differences in status into firmly established hierarchies, or hierarchies into economic classes. Indeed, we risk the possibility of totally misunderstanding the very meaning of terms like “hierarchy” as highly organized systems of command and obedience — these, as distinguished from personal, individual, and often short-lived differences in status that may, in all too many cases, involve no acts of compulsion. We tend, in effect, to confuse the strictly institutional creations of human will, purpose, conflicting interests, and traditions, with community life in its most fixed forms, as though we were dealing with inherent, seemingly unalterable, features of society rather than fabricated structures that can be modified, improved, worsened — or simply abandoned. The trick of every ruling elite from the beginnings of history to modern times has been to identify its own socially created hierarchical systems of domination with community life as such, with the result being that human-made institutions acquire divine or biological sanction.

A given society and its institutions thus tend to become reified into permanent and unchangeable entities that acquire a mysterious life of their own apart from nature — namely, the products of a seemingly fixed “human nature” that is the result of genetic programming at the

very inception of social life. Alternatively, a given **society and its institutions may** be dissolved into nature as **merely another form** of animal community with its "alpha males," "guardians," "leaders," and "horde"-like forms of existence. When annoying issues like war and social conflict are raised, they are ascribed to the activity of "genes" that presumably give rise to war and even "greed."

In either case, be it the notion of an abstract society that exists apart from nature or an equally abstract natural community that is indistinguishable from nature, a dualism appears that sharply separates society from nature, or a crude reductionism appears that dissolves society into nature. These apparently contrasting, but closely related, notions are all the more seductive because they are so simplistic. Although they are often presented by their most sophisticated supporters in a fairly nuanced form, such notions are easily reduced to bumper-sticker slogans that are frozen into hard, popular dogmas.

### SOCIAL ECOLOGY

The approach to society and nature advanced by social ecology may seem more intellectually demanding, but it avoids the simplicities of dualism and the crudities of reductionism. Social ecology tries to show how nature slowly phases into society without ignoring the differences between society and nature on the one hand, as well as the extent to which they merge with each other on the other. The everyday socialization of the young by the family is no less rooted in biology than the everyday care of the old by the medical establishments rooted in the hard facts of society. By the same token, we never cease to be mammals who still have primal natural urges, but we institutionalize these urges and their satisfaction in a wide variety of social forms. Hence, the social and the natural continually permeate each other in the most ordinary activities of daily life without losing their identity in a shared process of interaction, indeed, of interactivity.

Obvious as this may seem at first in such day-to-day problems as caretaking, social ecology raises questions that have far-reaching importance for the different ways society and nature have interacted over time and the problems these interactions have produced. How did a divisive, indeed, seemingly combative, relationship between humanity and nature emerge? What were the institutional forms and ideologies

that rendered this conflict possible? Given the growth of human needs and technology, was such a conflict really unavoidable? And can it be overcome in a future, ecologically oriented society?

How does a rational, ecologically oriented society fit into the processes of natural evolution? Even more broadly, is there any reason to believe that the human mind itself a product of natural evolution as well as culture — represents a decisive highpoint in natural development, notably, in the long development of subjectivity from the sensitivity and self-maintenance of the simplest life-forms to the remarkable intellectuality and self-consciousness of the most complex?

In asking these highly provocative questions, I am not trying to justify a strutting arrogance toward nonhuman life-forms. Clearly, we must bring humanity's uniqueness as a species, marked by rich conceptual, social, imaginative, and constructive attributes, into synchronicity with nature's fecundity, diversity, and creativity. I have argued that this synchronicity will not be achieved by opposing nature to society, nonhuman to human life-forms, natural fecundity to technology, or a natural subjectivity to the human mind. Indeed, an important result that emerges from a discussion of the interrelationship of nature to society is the fact that human intellectuality, although distinct, also has a far-reaching natural basis. Our brains and nervous systems did not suddenly spring into existence without a long antecedent natural history. That which we most prize as integral to our humanity — our extraordinary capacity to think on complex conceptual levels — can be traced back to the nerve network of primitive invertebrates, the ganglia of a mollusk, the spinal cord of a fish, the brain of an amphibian, and the cerebral cortex of a primate.

Hence, too, in the most intimate of our human attributes, we are no less products of natural evolution than we are of social evolution. As human beings we incorporate within ourselves aeons of organic differentiation and elaboration. Like all complex life-forms, we are not only part of natural evolution; we are also its heirs and the products of natural fecundity.

In trying to show how society slowly grows out of nature, however, social ecology is also obliged to show how society, too, undergoes differentiation and elaboration. In doing so, social ecology must examine those junctures in social evolution where splits occurred which

slowly brought society into opposition to the natural world, and explain how this opposition emerged from its inception in prehistoric times to our own era. Indeed, if the human species is a life-form that can consciously and richly enhance the natural world, rather than simply damage it, it is important for social ecology to reveal the factors that have rendered many human beings into parasites on the world of life rather than active partners in organic evolution. This project must be undertaken not in a haphazard way, but with a serious attempt to render natural and social development coherent in terms of each other, and relevant to our times and the construction of an ecological society.

Perhaps one of social ecology's most important contributions to the current ecological discussion is the view that the basic problems which pit society against nature emerge from *within* social development itself — not *between* society and nature. That is to say, the divisions between society and nature have their deepest roots in divisions within the social realm, namely, deep-seated conflicts between human and human that are often obscured by our broad use of the word "humanity."

This crucial view cuts across the grain of nearly all current ecological thinking and even social theorizing. One of the most fixed notions that present-day ecological thinking shares with liberalism, Marxism, and conservatism is the historic belief that the "domination of nature" requires the domination of human by human. This is most obvious in social theory. Nearly all of our contemporary social ideologies have placed the notion of human domination at the centre of their theorizing. It remains one of the most widely accepted notions, from classical times to the present, that human freedom from the "domination of man by nature" entails the domination of human by human as the earliest means of production and the use of human beings as instruments for harnessing the natural world. Hence, in order to harness the natural world, it has been argued for ages, it is necessary to harness human beings as well, in the form of slaves, serfs, and workers.

That this instrumental notion pervades the ideology of nearly all ruling elites and has provided both liberal and conservative movements with a justification for their accommodation to the status quo, requires little, if any, elaboration. The myth of a "savage" nature has always been used to justify the "savagery" of exploiters in their brutal treatment of the exploited — and it has provided the excuse for the political

opportunism of liberal, as well as conservative, causes. To "work within the system" has always implied an acceptance of domination as a way of "organizing" social life and, in the best of cases, a way of freeing humans from their presumed domination by nature.

What is perhaps less known, however, is that Marx, too, justified the emergence of class society and the State as stepping stones toward the domination of nature and, presumably, the liberation of humanity. It was on the strength of this historical vision that Marx formulated his materialist conception of history and his belief in the need for class society as a stepping stone in the historic road to communism.

Ironically, much that now passes for antihumanistic, mystical ecology involves exactly the same kind of thinking — but in an inverted form. Like their instrumental opponents, these ecologists, too, assume that humanity is dominated by nature, be it in the form of "natural laws" or an ineffable "earth wisdom" that must guide human behaviour. But while their instrumental opponents argue the need to achieve nature's "surrender" to a "conquering" active-aggressive humanity, anti-humanist and mystical ecologists argue the case for achieving humanity's passive-receptive "surrender" to an "all-conquering" nature. However much the two views may differ in their verbiage and pieties, *domination* remains the underlying notion of both: a natural world conceived as a taskmaster — either to be controlled or obeyed.

Social ecology springs this trap dramatically by re-examining the entire concept of domination, be it in nature and society or in the form of "natural law" and "social law." What we normally call domination in nature is a human projection of highly organized systems of social command and obedience onto highly idiosyncratic, individual, and asymmetrical forms of often mildly coercive behaviour in animal communities. Put simply, animals do not "dominate" each other in the same way that a human elite dominates, and often exploits, an oppressed social group. Nor do they "tub" through institutions of systematic violence as social elites do. Among apes, for example, there is little or no coercion, but only erratic forms of dominant behaviour. Gibbons and orangutans are notable for their peaceable behaviour toward members of their own kind. Gorillas are often equally pacific, although one can single out "high status," mature, and physically strong males among "lower status," younger and physically weaker ones. The

"alpha males" celebrated among chimpanzees do not occupy very fixed "status" positions within what are fairly fluid groups. Any "status" that they do achieve may be due to very diverse causes.

One can merrily skip from one animal species to another, to be sure, falling back on very different, asymmetrical reasons for searching out "high" versus "low status" individuals. The procedure becomes rather silly, however, when words like "status" are used so flexibly that they are allowed to include mere differences in group behaviour and functions, rather than coercive actions.

The same is true for the word "hierarchy." Both in its origins and its strict meaning, this term is highly social, not zoological. A Greek term, initially used to denote different levels of deities and, later, of clergy (characteristically, Hierapolis was an ancient Phrygian city in Asia Minor that was a centre for mother goddess worship), the word has been mindlessly expanded to encompass everything from beehive relationships to the erosive effects of running water in which a stream is seen to wear down and "dominate" its bedrock. Caring female elephants are called "matriarchs" and attentive male apes who exhibit a great deal of courage in defense of their community, while acquiring very few "privileges," are often designated as "patriarchs." The absence of an organized system of rule — so common in hierarchical human communities and subject to radical institutional changes, including popular revolutions — is largely ignored.

Again, the different functions that the presumed animal hierarchies are said to perform, that is, the asymmetrical causes that place one individual in an "alpha status" and others in a lesser one, is understated when it is noted at all. One might, with much the same aplomb place all tall sequoias in a "superior" status over smaller ones, or, more annoyingly, regard them as an "elite" in a mixed forest "hierarchy" over "submissive" oaks, which, to complicate matters, are more advanced on the evolutionary scale. The tendency to mechanically project social categories onto the natural world is as preposterous as an attempt to project biological concepts onto geology. Minerals do not "reproduce" the way life-forms do. Stalagmites and stalactites in caves certainly do increase in size over time. But in no sense do they grow in a manner that even remotely corresponds to growth in living beings. To take

superficial resemblances, often achieved in alien ways, and group them into shared identities, is like speaking of the "metabolism" of rocks and the "morality" of genes.

This raises the issue of repeated attempts to read ethical, as well as social, traits into a natural world that is only potentially ethical insofar as it forms a basis for an objective social ethics. Yes, coercion does exist in nature; so does pain and suffering. However, cruelty does not. Animal intention and will are too limited to produce an ethics of good and evil or kindness and cruelty. Evidence of inferential and conceptual thought is very limited among animals, except for primates, cetaceans, elephants, and possibly a few other mammals. Even among the most intelligent animals, the limits to thought are immense in comparison with the extraordinary capacities of socialized human beings. Admittedly, we are substantially less than human today in view of our still unknown potential to be creative, caring, and rational. Our prevailing society serves to inhibit, rather than realize, our human potential. We still lack the imagination to know how much our finest human traits could expand with an ethical, ecological, and rational dispensation of human affairs.

By contrast, the known nonhuman world seems to have reached visibly fixed limits in its capacity to survive environmental changes. If mere adaptation to environmental changes is seen as the criterion for evolutionary success (as many biologists believe), then insects would have to be placed on a higher plane of development than any mammalian life-form. However, they would be no more capable of making so lofty an intellectual evaluation of themselves than a "queen bee" would be even remotely aware of her "regal" status — a status, I may add, that only humans (who have suffered the social domination of stupid, inept, and cruel kings and queens) would be able to impute to a largely mindless insect.

None of these remarks are meant to metaphysically oppose nature to society or society to nature. On the contrary, they are meant to argue that what unites society with nature in a graded evolutionary continuum is the remarkable extent to which human beings, living in a rational, ecologically oriented society, could embody the creativity of nature — this, as distinguished from a purely adaptive criterion of evolutionary success. The great achievements of human thought, art, science, and



technology serve not only to monumentalize culture, they serve also to monumentalize natural evolution itself. They provide heroic evidence that the human species is a warm-blooded, excitingly versatile, and keenly intelligent life-form — not a cold-blooded, genetically programmed, and mindless insect — that expresses nature's greatest powers of creativity.

Life-forms that create and consciously alter their environment, hopefully in ways that make it more rational and ecological, represent a vast and indefinite extension of nature into a fascinating, perhaps unbounded, lines of evolution which no branch of insects could ever achieve — notably, the evolution of a fully self-conscious nature. If this be humanism — more precisely, ecological humanism — the current crop of antihumanists and misanthropes are welcome to make the most of it.

Nature, in turn, is not a scenic view we admire through a picture window — a view that is frozen into a landscape or a static panorama. Such "landscape" images of nature may be spiritually elevating but they are ecologically deceptive. Fixed in time and place, this imagery makes it easy for us to forget that nature is not a static vision of the natural world but the long, indeed cumulative, history of natural development. This history involves the evolution of the inorganic, as well as the organic, realms of phenomena. Wherever we stand in an open field, forest, or on a mountain top, our feet rest on ages of development, be they geological strata, fossils of long-extinct life-forms, the decaying remains of the newly dead, or the quiet stirring of newly emerging life. Nature is not a "person," a "caring Mother," or, in the crude materialist language of the last century, "matter and motion." Nor is it a mere "process" that involves repetitive cycles like seasonal changes and the building-up and breaking-down process of metabolic activity — some "process philosophies" to the contrary notwithstanding. Rather, natural history is a cumulative evolution toward ever more varied, differentiated, and complex forms and relationships.

This evolutionary development of increasingly variegated entities, most notably, of life-forms, is also an evolutionary development which contains exciting, latent possibilities. With variety, differentiation, and complexity, nature, in the course of its own unfolding, opens new directions for still further development along alternative lines of natural

evolution. To the degree that animals become complex, self-aware, and increasingly intelligent, they begin to make those elementary choices that influence their own evolution. They are less and less the passive objects of "natural selection" and more and more the active subjects of their own development.

A brown hare that mutates into a white one and sees a snow-covered terrain in which to camouflage itself is acting on behalf of its own survival, not simply "adapting" in order to survive. It is not merely being "selected" by its environment; it is selecting its own environment and making a choice that expresses a small measure of subjectivity and judgment.

The greater the variety of habitats that emerge in the evolutionary process, the more a given life-form, particularly a neurologically complex one, is likely to play an active and judgmental role in preserving itself. To the extent that natural evolution follows this path of neurological development, it gives rise to life-forms that exercise an ever-wider latitude of choice and a nascent form of freedom in developing themselves.

Given this conception of nature as the cumulative history of more differentiated levels of material organization (especially of life-forms) and of increasing subjectivity, social ecology establishes a basis for a meaningful understanding of humanity and society's place in natural evolution. Natural history is not a "catch-as-catch-can" phenomenon. It is marked by tendency, by direction, and, as far as human beings are concerned, by conscious purpose. Human beings and the social worlds they create can open a remarkably expansive horizon for development of the natural world — a horizon marked by consciousness, reflection, and an unprecedented freedom of choice and capacity for conscious creativity. The factors that reduce many life-forms to largely adaptive roles in changing environments are replaced by a capacity for consciously adapting environments to existing and new life-forms.

Adaptation, in effect, increasingly gives way to creativity and the seemingly ruthless action of "natural law" to greater freedom. What earlier generations called "blind nature" to denote nature's lack of any moral direction, turns into "free nature," a nature that slowly finds a voice and the means to relieve the needless tribulations of life for all species in a highly conscious humanity and an ecological society. The

"Noah Principle" of preserving every existing life-form simply for its own sake — a principle advanced by the antihumanist, David Ehrenfeld — has little meaning without the presupposition, at the very least, of the existence of a "Noah" — that is, a conscious life-form called humanity that might well rescue life-forms that nature itself would extinguish in ice ages, land desiccation, or cosmic collisions with asteroids. Grizzly bears, wolves, pumas, and the like, are not safer from extinction because they are exclusively in the "caring" hands of a putative "Mother Nature." If there is any truth to the theory that the great Mesozoic reptiles were extinguished by climatic changes that presumably followed the collision of an asteroid with the earth, the survival of existing mammals might well be just as precarious in the face of an equally meaningless natural catastrophe unless there is a conscious, ecologically oriented life-form that has the technological means to rescue them.

The issue, then, is not whether social evolution stands opposed to natural evolution. The issue is how social evolution can be situated in natural evolution and why it has been thrown — needlessly, as I will argue — against natural evolution to the detriment of life as a whole. The capacity to be rational and free does not assure us that this capacity will be realized. If social evolution is seen as the potentiality for expanding the horizon of natural evolution along unprecedented creative lines, and human beings are seen as the potentiality for nature to become self-conscious and free, the issue we face is why these potentialities have been warped and how they can be realized.

It is part of social ecology's commitment to natural evolution that these potentialities are indeed real and that they can be fulfilled. This commitment stands flatly at odds with a "scenic" image of nature as a static view to awe mountain men or a romantic view for conjuring up mystical images of a personified deity that is so much in vogue today. The splits between natural and social evolution, nonhuman and human life, an intractable "stingy" nature and a grasping, devouring humanity, have all been specious and misleading when they are seen as inabilities. No less specious and misleading have been reductionist attempts to absorb social into natural evolution, to collapse culture into

nature in an orgy of irrationalism, theism, and mysticism. to equate the human with mere animality, or to impose a contrived "natural law" on an obedient human society.

Whatever has turned human beings into "aliens" in nature are social changes that have made many human beings "aliens" in their own social world: the domination of the young by the old, of women by men, and of men by men. Today, as for many centuries in the past, there are still oppressive human beings who literally own society and others who are owned by it. Until society can be reclaimed by an undivided humanity that will use its collective wisdom, cultural achievements, technological innovations, scientific knowledge, and innate creativity for its own benefit and for that of the natural world, all ecological problems will have their roots in social problems.