Freedom and Necessity in Nature: A Problem in Ecological Ethics

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One of the most entrenched ideas in western thought is the notion that nature is a harsh realm of necessity, a domain of unrelenting lawfulness and compulsion. From this underlying view, two extreme either/or attitudes have emerged. Either humanity must yield with a religious, a more recently, “ecological” humility to the dicta of “natural law” and take its abject place side by side with the lowly ants on which it “arrogantly” treads or it must “conquer” nature with its technological and rational astuteness — an enterprise, I may add, that may very well entail the subjugation of human by human in a shared project to ultimately “liberate” all of humanity from the compulsion of “natural necessity.”

This quasi-religious quietism, typified by certain schools of “anti-humanism” and sociobiology, and the more conventional activism, typified by the liberal and Marxian image of an omniscient humanity cast defiantly in a Promethean posture, often interpenetrate each other with quixotic results. Modern science unwittingly takes on an ethical mantle of its own — despite all its claims of value-free “objectivity” — when it commits itself to a concept of nature as comprehensible, as “orderly” in the sense that nature’s “laws” are causally unyielding and hence necessitarian.¹

The Greeks viewed this orderly structure of the natural world as evidence of an inherently rational nature, of the existence of nous or logos, that produced a subjective, if not spiritual, presence in natural phenomena as a whole. Yet with only a minimal shift in emphasis, this very same notion of an “orderly” nature can also yield the dismal conclusion that “freedom is the recognition of necessity” (to use Frederick Engels’ rephrasing in Anti-Dühring of Hegel’s definition). In this latter case, freedom is subtly turned into its opposite: the mere consciousness of what we can or cannot do.

¹Characteristically, one thinks of the pathetic argument advanced in psychoanalysis of an inherent (read: “natural”) dimension of the human psyche that is guided solely by self-interest and the impulse for immediate gratification which education and “civilization” redirects toward creative ends.
Such an internalized view of freedom, subject to the higher dicta of “Spirit” (Hegel) or “History” (Marx), not only served Luther in his break with the Church’s hierarchy; it provided an ideological justification for Stalin’s worst excesses in the name of “dialectical materialism” and his brutal industrialization of Russia under the aegis of society’s “natural laws of development.” It may also yield a forthright Skinnerian notion of an overly determined world in which human behaviour is reducible to mere responses to external or internal stimuli.

Leaving these extremes aside, western conventional wisdom still sees nature as a “realm of necessity” — morally, as well as materially — which constitutes a challenge to humanity’s survival and well-being. Despite the considerable intellectual heritage which embraces both dystopian thinkers like Hobbes and utopian ones like Marx, the very self-definition of major disciplines embodies this tension, indeed, this conflict.

Economics has been forged in the crucible of a “necessitarian,” even a “stingy” nature that opposes its “scarce resources” to humanity’s “unlimited needs.” Sociology has been guided by the need to explain the emergence of “rational man” from “brute animality,” a project that still awaits its fulfilment in a rational society that presumably will succeed a mindless natural world from which contemporary “irrationalities” are said to emerge. Psychology, certainly in its psychoanalytic forms, and pedagogy stress the importance of controlling human “internal nature” with the bonus that the sublimination of individual energy will find its expression in the subjugation of external nature.

Theories of work, society, behaviour, even sexuality, turn around an image of a necessitarian nature that must in some sense be manipulated to serve human ends — presumably on the old theory that what is human is “rational” per se and what is natural is “irrational” in that it lacks any elements of choice and freedom. Nor has nature philosophy been less tainted by this necessitarian image. Indeed, more often than not, it has served as an ideological justification

The terrible tragedy of the present social era is not only that it is polluting the environment but also that it is simplifying natural ecocommunities, social relationships, and even the human psyche. The pulverization of the natural world is being followed by the pulverization of the social world and the psychological. In this sense, the conversion of soil into sand in agriculture can be said, in a metaphoric sense, to apply to society and to the human spirit. The greatest danger we face apart from nuclear immolation is the homogenization of the world by a market society and its objectification of all human relationships and experiences.

If history is a bloody “slaughter bench,” to use Hegel’s phrase, it is covered not only by the blood of “civilization’s” innocent victims but also by that of the angry men and women who have left us a legacy of freedom. The legacy of freedom and the legacy of domination have been mingled up to now in a dialectic that mutually defined them and affected the horizon of both a shared horizon in which freedom and domination were mutually intermingled. If we are to rescue ourselves from the homogenizing effects of a market society, it is necessary that history, humanity’s waning memory, be rescued from this society’s pollution and simplification of the past, a process that has already gone very far in Marxism, liberalism and pop culture.

More than at any time in the past, the two legacies must be disengaged from each other and set in opposition to each other. The loss of the legacy of freedom and the lessons it imparts to future struggles for freedom will produce irreparable results — for we will have lost not only our sense of natural development and the graded evolution which gave rise to society. We will have become completely immersed in a concept of the social that has no past beyond the present and no future beyond the extrapolation of the present into the years ahead. The idea that there can be fundamental and qualitative change in the present era will have been lost in a “knowness” that is eternal in every respect but its quantitative expansion and contraction.
it to woman’s “place in the kitchen” — violates not only the biosocial medium for the individual’s own phasing into society; it preserves the Cartesian dualism that has been used not only to seek the domination of nature but the domination of human by human — particularly of woman by man.

In our own time, we are bearing witness to the total commodification of the remnant domestic and civil worlds, to their reduction to a common world of things in which a market economy threatens to become a market society. No restoration of a domestic or civil society is possible or even desirable. Rather, the future in any rational sense depends upon the development of an ecological society that will integrate the virtues of domestic and civil life in a new, balanced, and moral social dispensation a social dispensation that transcends both past and present.

Conclusion

To know “the world we have lost,” to use Peter Laslett’s words, is to lay the ground for hope and social reconstruction, indeed, to establish criteria drawn from the past that will provide us with the coordinates for a harmonious future. The fecundity and potentiality for freedom that variety and complexity bring to natural evolution, indeed, that emerge from natural evolution, can also be said to apply to social evolution and psychic development. The more diversified a society and its psychic life, the more creative, and the greater the opportunity for freedom it is likely to offer — not only in terms of new choices that open up to human beings but also in terms of the richer social background that diversity and complexity create. As in natural evolution, so too in social evolution we must go beyond the image that diversity and complexity yield greater stability — the usual claim that ecologists make for the two-and-emphasize that they yield greater creativity and freedom.

Overcoming Dualism

To overcome the problem of the conflict between necessity and freedom—basically, between nature and society—we must go beyond the building of bridges between the two, such as we find in value systems that are based on purely utilitarian attitudes toward the natural world. The argument that our abuse of nature subverts the material conditions for our own survival, although surely true, is crassly instrumental. It assumes that our concern for nature rests on our self-interest, rather than on a feeling for the community of life of which we are part, albeit in a very unique and distinctive way.

Given such an argument, our relationship with nature is neither better nor worse than the success with which we plunder the natural world without harming ourselves. This is a warrant for undermining the natural world provided we can find workable or adequate substitutes for existing life-forms and ecological relationships, however synthetic, simple, or mechanical they may be. Time has shown that it is precisely this view that has played a major role in the present ecological crisis a crisis that results not only for a hierarchical society, modelled on a hierarchically structured “natural order.”

This image and its social implications, generally associated with Aristotle, still lives in our midst as a cosmic justification for domination in general — in its more noxious cases, for racial and sexual discrimination, and in its most nightmarish form, for the outright extermination of entire peoples. Raised to the level of a moral calling “man” emerges from this massive ideological apparatus as a being beyond nature, a creature in whom “Spirit” or “God” has imparted a supranatural quality of a transcendental kind and mission to govern an ordered universe that has its inception in a supernatural world.
from physical disruption but also from a serious derangement of our ethical and biotic sensibilities.

In any case, bridge-building preserves a dualism that works with the nature/society split but presumably “reconciles” it structurally by merely “bridging” a gulf that accounts for the division between the natural and social worlds. This kind of mechanical thinking also gives rise to splits between body and mind, reality and thought, object and subject, country and town, and, ultimately, society and the individual. It is not far-fetched to say that the primary schism between nature and humanity, a schism that may well have its original source in the hierarchical subordination of women to men, has nourished splits of enormous scope in everyday life as well as in our theoretical sensibilities.

To overcome these dualisms simply by reducing one element of the duality to the other is no less a serious fallacy. The universal “night in which all cows are black,” to use Hegel’s phrase in the *Phenomenology of Spirit*, purchases unity at the expense of the very real variety and qualitative differences that surround us and nourish creative thinking. Such reductionism yields a crude mechanistic spiritualism that is merely the counterpart of the prevailing mechanistic materialism. In both cases, the need for a nuanced interpretation of complex phenomena that takes delicate distinctions and gradations into account in any explanation of development is sacrificed to a simplistic dualism that dismisses the need to emphasize the phases that enter into any process. Alternatively, it embraces an equally simplistic “oneness” that overrides the immense wealth of differentia to which the present biosphere is heir — the rich, fecund and interconnected constituents that make up our evolution and that are still preserved in nearly all existing phenomena.

It is surprising that ecology, one of the most organic of our contemporary disciplines, is itself so lacking in organic ways of thinking. I refer to the need to inwardly derive differentia from each other, the full from the germinal, the more complex from the simpler — in short, to think biologically, not merely to “deduce” conclu-
community or a market community, a society infused by life or a society infused by gain.

It is enough to recognize that nature, conceived as a realm of potential freedom, is basically part of that choice to demonstrate that an ecological sensibility is always a social one and a social view point is always, at least implicitly, an ecological one. Whatever our choice may be, even the rejection of an ecological viewpoint affirms its existence, and in the very act of rejection will be expressed by the "revenge" nature will claim for being factored out of social development.

Finally, the recognition that nature is a realm of potential freedom that phases into society as a realm of authentic freedom raises an important issue for theories about the emergence of society, particularly from a feminist perspective.

Woman’s domestic world has been dishonoured and dealt with shabbily by man’s civil world. From Aristotle’s day to fairly recent times the domestic world has been seen as little more than a privatized domain of biological "necessity" that exists exclusively to satisfy the male’s “animal” needs for food, shelter, reproduction, and physical renewal. The male’s civil world, in turn, has been traditionally counterposed to the female’s domestic world as the realm of culture, rational consociation, and freedom.

This duality has made it difficult to see woman’s domestic sphere, once the authentic center of tribal society, as the cradle of society itself, the all-important phase where the biological is transmuted everyday into the social and the natural into the cultural — more by a process of integration than by substitution. Here the duality between biology and society or nature and culture is not only overcome: the social and cultural worlds are literally formed out of the biological needs for care and institutionalized consociation.

The graded continuum between nature and society is thus "filled out" processually by the mediating domain of women’s domestic world and the mystery that produced society as the "leap" dispelled. Anthropologically, woman’s domestic world was the arena from hypotheses in typical mathematical fashion, or simply to tabulate and classify “facts.” Whether as ecologists or accountants, we tend to share the same mode of reasoning so prevalent today, one that is largely analytical and classificatory rather than processual and developmental. Appropriate as analytical, classificatory and deductive modes of reasoning may be for disassembling or reassembling automobile engines or constructing buildings, they are woefully inadequate in ascertaining the phases that make up a process, each conceived in its own integrity, yet part of an ever-developing continuum.

It is becoming a cliche to fault "separation" as the source of apartness in our highly fragmented world. We must see that every process is also a form of “alienation” in the very non-Marxist sense of differentiation in which the whole is seen as the richly varied fulfillment of its latent potentialities.2

Underlying this distinction between alienation conceived as opposition on the one hand and self-expression or self-articulation on the other is an all-pervasive epistemology of rule that sorts difference as such (indeed, the “other” in all its forms) into an ensemble or pyramid of antagonistic relationships structured around obedi-

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2Despite some recent nonsense to the effect that the "Frankfurt School" reconnoitered a nonhierarchical and ecological view of society’s future, in no sense were its most able thinkers, notably Max Horkheimer and Theodor W. Adorno, resolutely critical of hierarchy and domination. Rather, their views were clearly pessimistic: reason and civilization, for better or worse, entail the need by "uncompromising individuals [who] may have been in favour of unity and cooperation... to build a strong hierarchy... The history of the old religions and schools like that of the modern parties and revolutions teaches us that the price for survival is practical involvement, the transformation of ideas into domination." Max Horkheimer and Theodor W. Adorno, Dialectic of Enlightenment (New York, Herder & Herder, 1972. originally published in 1944). pp 213, 215. The power of these thinkers lies in the problematical nature of their work, not in the solutions they had to offer. Attempts to make them into “social ecologists,” much less precursors of “bioregionalism” and the like involve a gross misreading of their ideas, or worse, an attempt to impute ideas to them without a serious study of their works.
ence and command. The modern ethical procedure for assembling all phenomena into an “order of one to ten” and “benefits versus risks,” each “summed up” by ascertaining a “bottom line” (the businesses here, is as delicious as the image of marriage, child-rearing, and education as “investment”) testifies to a conception of variety not as unity, but as a problem of conflict. That the “other” can be seen as part of a whole, however differentiated in one degree or another, eludes the modern mind in a flux of experience that knows only division as conflict or dissolution.

The real world is indeed divided antagonistically and herein lies its tainted character which must be remedied by struggle as well as reconciliation. But if the thrust of evolution has any meaning, it is that a continuum is precisely processual in that it is graded as well as united, a flow of derived phases as well as a shared development from the simpler to the more complex. The reality of conflict must never override the reality of differentiation as the long-range character of development in nature and society.

Participatory Evolution

What then, does it mean to speak of complexity, variety, and unity-in-diversity in the overall thrust of developmental processes? Ecologists have generally treated diversity as a source of ecological stability, an approach, I may add, that was still rather new some twenty-five years ago. Experiences in agriculture showed that the treatment of single crops by pesticides could easily reach alarming proportions and seemed to suggest that the more diversified a crop, the more plant and animal species interacted to produce natural checks on pest populations. Today, this notion, like the value of organic methods of agriculture, has become commonplace in present-day ecological and environmental thinking — a view which this writer pioneered together with a few rare colleagues like Charles S. Elton.

a participatory society to the service of complex and interactive ecocommunities, creative people to the service of a more organic community, and mind to the service of a more subjectivized nature. To say that nature belongs in humanity just as humanity belongs in nature is to express the need for a highly reciprocal relationship between the two instead of one structured around subordination and domination. Neither society nor nature dissolve into each other. Rather, social ecology tries to recover the distinctive attributes of both in a continuum that gives rise to a substantive ethics, wedding the social to the ecological without denying the integrity of each.

Ecological Society

Life must again be returned to Life — vividly, expressively, actively — not by retreating into the passive animism of early humanity, much less the inert matter of Newtonian mechanism. Society must recover the plasticity of the organic in the sense that every dimension of experience must be infused with the vitality of life and an ecological sensibility. It makes all the difference in the world if we cultivate food, for example, in order to maintain the soil as well as our physical well-being. Inasmuch as agriculture is always a culture, the difference in our methods and intentions is no less cultural than the composition of a book on engineering. Yet in the first case, our intentions are informed by an ecological sensibility; in the second, by economic considerations at best and greed at worst. So, too, in the production of objects. It makes all the difference in the world if craftpersons work along the grain of the materials on which they exercise their creative powers or warp the materials in order to serve the ends of mass production. In these examples, our choice is either an ecological or an economic one and in both cases is profoundly influenced by social institutions. Hence the inseparability of the social from the ecological. In the end, our choice — that primal exercise of freedom — will be between an eco-
individuality, a growing subjectivity that yields reason — all are desiderata that provide the ground for an objective ethics. They are also the real principles of any graded evolution, one that not only renders that past explicable but also renders the future meaningful.

An ecological ethics of freedom cannot be divorced from a technics that harmonizes our relationship with a nature — a creative, not destructive, “metabolism” with nature. An ecotechnology is a moral technology. There is a profoundly ethical dimension to the attempt to bring soil, flora, and fauna (or what we neatly call the food chain) into our lives, not only as “wholesome” sources of food but as part of a broad movement in which consumption is no less a creative process than production — originating in the soil and returning to it in a richer form all the components that make up the food cycle. Here, consumption goes beyond the pure economic domain of the buyer-seller relationship, indeed, beyond the domain of mere material sustenance, and enters into the ecological domain as a mode of enhancing the fecundity of an ecocommunity. An ecological technology — for consumption no less than production — serves to increase natural complexity, not simplify it, as is the case with modern technics.

By the same token, an ecological ethics cannot be divorced from a politics of participation, a politics that fosters self-empowerment rather than state empowerment. Such a politics must become a truly peopled politics, organic in the sense that political participation is literally protoplasmic and peopled by assemblies, face-to-face discussion that is reinforced by the veracity of body language as well as the reasoning process of discourse. The political ethics that follows from this ground is meant to create a moral community, not simply an “efficient” one; an ecological community, not simply a contractual one; a social praxis that enhances diversity, not only a political culture that invites the widest public participation.

Within this nexus of ideas, commitments, and sensibilities, human freedom can be brought to the service of natural fecundity.

But the notion that biotic — and, as we shall see, social evolution has been marked until recently by the development of ever more complex species and ecocommunities (or “ecosystems,” to use a very unsatisfactory term) raises an even more challenging issue. Diversity maybe regarded as a source not only of greater ecocommunity stability, it may also be regarded in a very fundamental sense as an ever-expanding, albeit nascent, source of freedom within nature, a medium for objectively anchoring varying degrees of choice, self-directiveness, and participation by lifeforms in their own evolution. I wish to propose that the evolution of living beings is no passive process, the product of chance conjunctions between random genetic changes and “selective” environmental “forces,” that the “origin of species” is no mere result of external influences that determine the “fitness” of a life-form to “survive” as a result of random factors in which life is merely an “object” of an indeterminable “selective” process.

I wish to go beyond the increasingly popular notion that symbiosis is quite as important as “struggle” to contend that the increase in diversity in the biosphere opens increasingly new evolutionary pathways, indeed, alternative evolutionary directions in which species play an active role in their own survival and change. However rudimentary and nascent it may be, choice is not totally absent in biotic evolution. Indeed, it increases as individual animals become structurally, physiologically, and, above all, neurologically more complex. Mind has its own evolutionary history in the natural world and, as the neurological capability of life-forms to function more actively and flexibly increases, so too does life itself help create new evolutionary directions that lead to enhanced self-awareness and self-activity.

Finally, choice becomes increasingly evident as the ecological contexts within which species evolve — the communities and interactions they form — themselves become more complex so that they open new avenues for evolution, a greater ability to act self-selectively, forming the bases for some kind of choice, fostering pre-
cisely those species that can participate in ever-greater degrees in their own evolution, basically in the direction of more complex life-forms. Indeed, species and the ecocommunities in which they interact to create more complex forms of evolutionary development are, in increasing degree, the very “forces” that are often treated as the external agents that account for evolution as a whole.

I wish to propose that this view, which I call a “participatory evolution,” is very much at odds with the prevalent Darwinian or neo-Darwinian syntheses in which a non-human life-forms are seen primarily as “objects” of selective forces exogenous to them. It is also at odds with Henri Bergson’s “creative evolution” with its semi-mystical *elan vital*. Ecologists, no less than biologists, have yet to come to terms with the notion that symbiosis (not only “struggle”) and participation (not only “competition”) factor in the evolution of species. The prevalent view of nature still stresses the “cruelty” and “necessitarian” character of the natural world, a view that is as moral as it is physical in its overtones. An immense literature, no less artistic than scientific, stresses the “unseeing muteness” of a nature that bears no witness to the suffering of life and has no ears to the cry of pain in the “struggle for existence.” “Cruel” nature in this imagery offers no solace for extinction — merely an all-embracing darkness of meaningless motion to which humanity can only oppose the light of its culture and mind, in short, a stoic worldview that ethnically expires in a sigh of resignation and loneliness.

We may reasonably ask whether human will and freedom, at least as self-consciousness and self-reflection, have their own natural history in developments within nature itself—or whether they are simply *sui generis*, a self-aggrandizing rupture with the whole principle of development, such that will and freedom are so unprecedented and so self-contained in their uniqueness that they contradict our conception that all phenomena are emergent: that phenomena are graded from antecedent potentialities that lie behind and within every “product” of a processual kind. Such a claim to uniqueness is as self-serving as it is self-aggrandizing. It under-

artifacts and uniquely human achievements aside? It is myopic to reduce nature to mere “slime” when, because of the very sensibility that deals with the natural world as such, we are sinking into it with a vengeance. The ecological principles that enter into biotic evolution do not disappear from social evolution any more than the natural history of mind can be dissolved into Kant’s ahistorical epistemology. Quite the contrary: the societal and cultural can be seen as ecologically derivative, as the men’s houses and the women’s homes in tribal communities so clearly illustrate. The relationship can also be seen as a cumulative one while still remaining highly original and creative in its own right. Perhaps most significantly, the societal and the cultural can be seen as a clerivative — and cumulative — in terms of a nature that is definable as a realm of freedom and subjectivity, yet without ceasing to be the most self-conscious and self-reflexive expression of that natural development.

Herein lies the ground for an ecological ethics of freedom that provides an objective directiveness to the human enterprise. We have no need to degrade nature or society into a crude biologistism at one extreme or a crude dualism at the other. A diversity that nurtures freedom, an interactivity that enhances participation, a wholeness that fosters creativity, a community that strengthens 

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8 The insidious nature of expressions like “woman’s place in the division of labor” is seen in the denial implicit in these terms of woman’s contribution to the making of human culture. When culture and woman’s development of it along sororal lines is reduced to labor — or even, more generously, to the economy — the whole problematic of cultural development becomes safe and sanitized, not to speak of liberalized and Marxified. We no longer have to concern ourselves with the early role sororal cultures played in history, the alternatives they opened to the emergence of a male-oriented warrior civilization, the terrible role this civilization played in history (natural as well as social), and the sensibilities it introduced. “Woman’s place in the division of labor” becomes merely an economic problematic not a cultural and moral one. Hence it can be comfortably resolved by raising women’s incomes, managerial and professional status, quotas in industry — by doing everything that avoids recognizing woman as a reproducer of life rather than a producer of commodities.
in social and ethical implications), on the blood tie as the earliest social and cultural bond that extends beyond immediate parental care (still another biological fact of social importance that enters into clan and tribal communities), on the so-called “sexual division of labour” (no less biological in its origins than social in its elaborations into gender-oriented cultures), and on age as the basis of status and the origins of hierarchy (but no less a biological fact in its early phases).

The historic effort, political as well as ideological, to rid us of this prehuman “slime” of our natural origins has served only to make us its unknowing victims in the sense that we have followed its most necessitarian instead of libertarian paths of development: toward the nascent elements of struggle that inhere in the prey-predator relationship, toward the celebration of death in what E.E. Thompson has called “exterminism” rather than its acceptance in the larger cycle of life, toward a process of destructuring the elaborate foodwebs that are a metaphor for natural complexity rather than their elaboration. Our civilization has turned into one vast hurricane of destruction and threatens to turn back the evolutionary clock to a simpler world where the survival of a viable human species will be impossible.

With a growing knowledge of the need for care, fondling, and attention that fosters healthy human consociation, with technical disciplines that open the way for a creative “metabolism” between humanity and nature, and with a host of new insights into the presence of nature in so much of our own development toward “civilization,” can it be denied any longer that nature is still with us — indeed, that it has returned to us ideologically as a challenge to our exploitation of “natural resources” and our simplification of the biosphere? That we can no longer speak meaningfully of a “new” or “rational” society without also tailoring our social relationships and institutions to the eco-communities in which our social communities are located? In short, that any viable future society must be an ecological society, all its presumable “autonomous” cultural writes our claim to be justified in dealing with the natural world as we choose—indeed, in Marx’s words in the Grundisse to regard it merely as “an object for mankind, purely a matter of utility…”

The dim choices that animals exercise in their own evolution are not the will that human beings exhibit in their social lives. Nor is the nascent freedom conferred by natural complexity the same as the rational decisions that human beings bring to the service of their own development. Our prejudice against the concept of complicity between evolving life-forms and the environmental forces that “select” them has its pedigree in the Newtonian mechanism that still clings to evolutionary theory into our own time. The “inert” matter and mechanical operations, hypostasized by Newton and the Enlightenment thinkers have their counterpart in the contemporary image of all non-human life-forms as basically inert. All anti-Cartesian protestations to the contrary, non-human life-forms are still viewed as little more than machines. Structurally, we may fill them out with protoplasm, but operationally they are imparted with as little meaning as we impute to mechanical devices, a judgment that is not without its economic utility. Despite the monumental nature of his work, Darwin did not organicallyize evolutionary theory. He conferred a sense of evolution on the “origin of species,” but species in the minds of his acolytes still stood somewhere between inorganic machines and mechanically functioning organisms.

No less significant are the empirical origins of Darwin’s own work, a work that is deeply rooted in the Lockean atomism that nourished nineteenth-century British science as a whole. Allowing for a reasonable amount of shading and nuance that exists in all great books, The Origin of Species is an account of origins in a fairly isolated sense, notably, the way in which a species originates, evolves, adapts, survives, changes, or pays the penalty of extinction.

Any one species can stand for the world of life as a whole in isolation from the life-forms that normally interact with it. Although
predators depend upon their prey, to be sure, the strand from ancestor to descendant stands in lofty isolation such that early eohippus rises, step-by-step, from a plebeian dog-like estate to the aristocratic grandeur of a sleek race horse. This paleontological diagramming of bones from what were formerly “missing links” to the culminating beauty of *Equus caballus* more closely resembles the adaptation of Robinson Crusoe from an English seafarer to a self-sufficient island dweller than the reality of a truly emerging being.

This reality is contextual in an ecological sense. The modern horse did not evolve alone. It lived not only among its predators and prey but in creatively interactive relationships with a great variety of plants and animals. It evolved in ever-changing ecocommunities such that the “rise” of *Equus caballus* occurred conjointly

3Darwin did not deny the role of animal interactivity in evolution, particularly in the famous Chapter III of *The Origin of Species*, where he suggests that “ever-increasing circles of complexity” check populations that, left uncontrolled, would reach pest proportions. But he sees this as a “Battle within battles [which] must be continually recurring with varying success.” (p.58)

Moreover, "The dependency of one organic being on another" — is secondary to the struggle "between individuals of the same species." (p.60) Like most Victorians, Darwin had a strongly providential and moral side to his character: awe may console ourselves,” he tells reassuringly, "that the war of nature is generally prompt, and that the vigorous, the healthy, and the happy survive and multiply," (p.62) Indeed: "How fleeting are the wishes and efforts of man! how short his time! and consequently how poor will be his results, compared with those accumulated by Nature’s productions during whole geological periods! Can we wonder, then, that Nature’s productions should be far 'truer' than man’s productions: that they should be infinitely better adapted to the most complex conditions of life, and should plainly bear the stamp of a far higher workmanship?" (p.663 citations from Modern Library Edition, New York) These remarks do not make Darwin an ecologist, but are the marvelous asides to a thesis that emphasizes variation, selection, fitness, and above all, struggle. Yet one cannot help but be entranced by a moral sensibility that would have been magnificently responsive to the message of modern ecology and deserves none of the onerous rubbish that has been imputed to the man because of social Darwinism.
versity; the wider and more complete participation of all components in a whole; ever more fecund potentialities that expand the horizon of freedom, self-directiveness, and self-reflexivity. Society ceases to be *sui generis*. Like mind — which has its own natural history in the evolution of the human nerve network from simple invertebrates through ever-complex ganglia, the spinal cord, “layered” brains and cortices (each functionally incorporating the others such that they exist as a unified apparatus in human beings as well as neurologically less complex animals) — social life too, emerges from the loosely banded animal community to form the highly institutionalized human community.°

Ultimately, it is the institutionalization of the human community that distinguishes society from the non-human community — whether for the worse as in the case of weak, unfeeling tyrants like Nicholas II or Louis XVI who were raised to commanding positions by bureaucracies, armies, and social classes or, for the better, in forms of self-governance and management that empower the people as a whole. We see no such contrived institutional infrastructures in non-human communities, although the rudiments of a social bond do exist in the mother-offspring relationship and in common forms of mutual aid.

The social bond that human parents create with the young as the biocommunity phases into the social community is fundamental to the emergence of society and it is retained in every society as an active factor in the elaboration of history. It is not only that prolonged human immaturity develops the lasting ties so necessary for human interdependence, a fact which Robert Briffault so forcefully pointed out in *The Mothers*. It is also that care, sharing, participation, and complementarity develop this bond beyond the material division of labour, which has received so much emphasis in economic interpretations of social origins.

This social bond gives rise to a fascinating elaboration of the tentative parent-offspring relationship: love, friendship, responsi-

with other herbivores that shared, maintained, and even played a major role in creating their grasslands. The string of bones that traces eohippus to Equus is really evidence of the succession of the ecocommunities in which the animal and its ancestor interacted with each other.

One could more properly modify *The Origin of Species* to read as the evolution of ecocommunities as well as the evolution of species.° Indeed, to place the community in the foreground of evolution is not to deny the integrity of species, their capacity for variation, and their development. Quite to the contrary: species become vital participants in their own evolution active beings, not merely passive components which thus takes full account of their self-directive and nascent freedom in the natural process.

Will and reason are not *sui generis*. They have their origins in the growing choices conferred by complexity, the alternative pathways opened by the growth of complex ecocommunities, and the development of increasingly complex neurological systems — in short, processes that are both internal and external to life-forms. They appear germinally in the communities which life-forms establish as active agents in their own evolution, a view that cuts across the grain of conventional evolutionary theory in which non-human life-forms are seen as little more than passive objects of natural selection apart from their ability to produce random variations. Even genetic changes seem to occur in patterns that cohere into organs and organ systems whose capacity to serve biotic needs are hard to understand as products of mere chance events.

Does this warrant the need to introduce an *elan vital* or a hidden hand that has entered into western thought as “Spirit,” “God,” or “Mind,” a predetermining agent that presides over the development of life-forms? I think not even if only because the concept of such a hidden hand restores the very dualities that underpin hierarchy and the conception of all differentiation as conflict. We may well ask ourselves if we have ever understood life itself as a creative and coative phenomenon when we see it as little more than a factor in...
production, a “natural resource,” placed in the service of wealth rather than a reproductive process, promised in the very way life is constituted.

Again, we encounter a western sensibility that is alien to processual thought, development, and its phases, an inability to see nature as a phenomenon whose basic organization challenges our mechanistic and analytic modes of thought. Dualism inheres in our mental operations so profoundly that the conative striving of life-forms toward freedom and self-awareness tends to slip into supernature rather than nature, reductionism rather than differentiation, succession rather than culmination.

This much is clear: The way we position ourselves in our view of the natural world is deeply entangled with the way we view the social world. In large part, the former derives from the latter and serves, in turn, to reinforce social ideology. Every society extends its own perception of itself into nature, whether as a tribal cosmos that is rooted in kinship communities, a feudal cosmos that originates in and; underpins a strict hierarchy of rights and duties, a bourgeois cosmos structured around a market society that fosters human rivalry and competition, or a corporate cosmos, diagrammed as flow charts, feedback systems, and hierarchies that mirror the operational systems of modern corporate society.

That some of these images reveal an aspect of nature, whether as a community or a cybernetic flow of energy, does not justify the universal, almost imperialistic, claims that they stake out over the world as a whole. Ultimately, only a society that has come into its “truth,” to use Theodor Adorno’s term — an ecological society—can free us from the limits that oppressive and hierarchical societies impose on our understanding of nature.

Social ecology, in effect, stands at odds with the notion that culture alone is the realm of freedom. Indeed, it tries to root the cultural in the natural and to ascertain the gradations that unite them. To identify society as such with the present society, to see in capitalism an “emancipatory” movement precisely because it frees us from nature is not only to ignore the roots of nature in society; it is also an attempt to identify a perverted capitalist society with “humanism” and thereby to give credence to certain atavistic trends in ecological thinking that appear under the name of “antihumanism.”

The power of social ecology lies in the association it establishes between society and ecology, the social conceived as a fulfillment of the latent dimension of freedom in nature, and the ecological conceived as the organizing principle of social development — in short, the guidelines for an ecological society.

The great divorce between nature and society — or between the “biological” and the “cultural,” as Europeans like to put it — is overcome by shared concepts of development as such; increasing di-

The extent to which an ecological approach spares us some of the worst absur-
dities of sociobiology and biological reductionism is illustrated by the highly popularized notion that our deep-seated “reptilian” brain is responsible for our aggressive, “brutish,” and cruel behavioral traits. This argument may make for good television dramas like “Cosmos” but it is ridiculous science. Like all the great animal groups, most Mesozoic reptiles were almost certainly gentle herbivores, not carnivores — and even many of the carnivores were probably neither more nor less aggressive, “brutish,” or “cruel” than mammals. The images we have of *Tyranosaurus rex* (the generic name is a delicious example of sociological nonsense created by taxonomists) may seem inordinately frightening, but they grossly distort reptilian lifeforms on which the carnivore preyed. If anything, the majority of Mesozoic reptiles were probably very pacific and easily frightened, all the more because they were not particularly intelligent vertebrates. What remains unacknowledged in this imagery of fierce, fire-breathing, and “unfeelingly cruel” reptiles is the implicit assumption of different psychic sensibilities in reptiles and mammals, the latter presumably being more “sensitive” and “understanding” than the former. Thus we are talking about a psychic evolution in non-human beings that goes together with the evolution of intelligence. Yet confronted with the unstated premises of such evolutionary trends, few scientists would find them comfortable.
toll at the expense of an organismic form of reasoning based on derivation, as rooted in a dialectical outlook.

Social ecology, by definition, takes on the responsibility of evoking, elaborating, and giving an ethical content to the natural core of society and humanity. The steady denaturing of humanity by “biocentricity” in all its forms or by the reduction of human beings to commodities is not a metaphor; it is compellingly real and in both cases involves the denaturing of humanity into a mere object.

The commodification of humanity takes its most pernicious form in the manipulation of the individual as a means of production and as a means of consumption.

Here, human nature is either employed (in the literal sense of the term) as a technique in production or a technique in consumption, a mere device whose creative powers and authentic needs are equally perverted into objectified phenomena. As a result, we have today not only the “fetishization of commodities” (to use Marx’s famous formulation) but the fetishization of needs. Human beings thus become separated from the natural world and from their own nature in a real split that replaces the theoretical one attributed to Descartes. In this sense, the claim that capitalism is a totally “unnatural order” is only too accurate.

To recover human nature is to “renature” it, to restore its continuity with the creative process of natural evolution, its freedom and participation in that evolution conceived as a realm of incipient freedom and as a participatory process. Here, it is freedom and participation — not necessity and the hierarchical organization of relationships — that must be emphasized, an emphasis that involves a radical break with the conventional western image of nature.

Ecological Ethics: An Objective Ground

Granting the limitations which every society in its own one-sidedness imposes on our thinking, herein lies an objective ground for an ethics, indeed, for formulating a vision of the “true society” that is neither hierarchical at one extreme nor relativistic at the other. I speak of an ethics that neither justifies atavistic appeals to “blood and soil” and modernistic appeals to “law” (“dialectical” or “scientific”) on the one hand, nor the wayward consensus that justifies capital punishment during one year and confinement during another. Freedom becomes an end in itself — as self-reflexivity, self-management, and, most excitingly, as a creative and active process that, with its ever-expanding horizon and growing wealth of diversity, resists the moral imperatives of a rigid definition and the jargon of temporally conditioned biases.

“Reverence” for nature, the mythologizing of the natural world, and the so-called “biocentric” hypostasizing of the natural over the human all degrade nature by denying the natural world its universality as that which exists everywhere, free of all dualities like “Spirit” and “God,” indeed, a nature that encompasses the very congregation of worshipers, idolators and “antihumanists” who subtly deny their own specificity as part of nature.

A “revered” nature is a separated nature in the bad sense of the term. Like the idols which human beings create from the depths of their imagination and worship from afar with the mediation of priests and gurus, and in temples with incantations and rituals, this separated nature becomes reified, a contrived phenomenon.

Hence freedom is no longer resolvable into a strident Hegelian negativity or a trite instrumental positivity. Rather, in its openendedness, it contains both and transcends them as a continuing process. Freedom thus resists precise definition just as it resists terminal finality. It is always becoming, hopefully surpassing what it was in the past and developing into what it can be in the future. Neither a Hegelian “Absolute” nor identity philosophy has any meaning in the realm of freedom, a realm that is not constrained by any fixed boundaries apart from its respect for individual rights.
that helps set the natural world apart from the human during the very act of genuflecting and voicing incantations before a mystified “it.” Much has been said about the alienation produced by work, anomie, fear, and insecurity: but a nature reconstructed into forms apart from itself, however “reverentially,” is no less an alienated nature than the Marxian image of nature as a “mere object of utility.”

Herein lies the paradox of “biocentricity” and “antihumanism,” indeed, any “centricity” toward nature: the alienation and reification of nature to a point where the “reverence” for the natural world negates any existential respect for the diversity of life. Preliterate peoples are no less locked into this paradox than their so-called civilized cousins. Happily, they are simply incapable, whether by inclination, technical development or tradition, of inflicting too much harm on the natural world, although they are not immune to this charge as the extermination of so many great mammals of the late Pleistocene seems to indicate.

What is perhaps more irksome than this overblown “biocentricity” that denies humanity’s real place in nature is the vision of a natural world — overburdened by “reverence” and dissolved into a mystical “oneness” — that preserves and even fosters the traditional split between nature and society, the basic source in my view of philosophy’s theoretically elaborate separation of the concept from the real world. One thinks, here, of the traditions created by Plato in the ancient world and Kant in the modern.

A nature that is reverentially hypostasized is a nature that is set apart from its own place in humanity in the very real sense that human reason, too, is an expression of nature rendered self-conscious, a nature that finds its voice in one of its own creations. It is not only we who must have our own place in nature but nature which must have its place in us in an ecological society and in an ecological ethics based on humanity’s catalytic role in natural evolution.

Nor should we ignore the fact that the “reverence for nature,” so poetically cultivated by the Romantic tradition, has been warped by “biocentrically” oriented “antihumanists” and acolytes of “natural law” into the insidious image of a humanity that is “dominated by nature” — the converse of the old liberal and Marxian image of a nature “dominated” by man. In both cases, the theme of domination is re-instated in ecological discourse. If liberal and Marxist theorists prepared the ideological bases for “controlling” and plundering the natural world, “antihumanists” and “natural law” devotees may be preparing the ideological bases for controlling and plundering the human spirit. Indeed some “natural law” acolytes have already justified the use of authoritarian measures to control population growth and to legitimate the forcible expulsion of urban dwellers from large, congested cities as though a society that harnesses human beings can be expected to leave the natural world intact.

A humanity that has been rendered oblivious to its own responsibility to evolution — a responsibility that brings reason and the human spirit to evolutionary development, diversity, and ecological guidance such that the accidental, the hurtful and the fortuitous in the natural world are diminished — is a humanity that betrays its own evolutionary heritage.” It surrenders its species-distinctiveness and its uniqueness. It is grossly misleading to invoke “biocentricity,” “natural law,” and “antihumanism” for ends that deny what is most distinctive in all human natural attributes.

I speak of humanity’s ability to reason, to foresee, to will and to act insightfully on behalf of directiveness within nature and enhance nature’s own development. It is also an insult to nature to separate these subjective attributes from nature, to deal with them as though they did not emerge out of evolutionary development and are not implicitly part of nature in a deeper sense than the “law of fang and claw” that we so flippantly impute to natural evolution as a metaphor for the “cruelty” and “harshness” of that evolutionary process. Nature, in short, is defamed in the very process of being hypostasized over humanity at one extreme or subordinated to humanity at the other. Here, the faulty reasoning based on “deduction,” so commonplace today in conventional logic, claims its