

THE PROVOCATIVE NATIONAL BESTSELLER

The Ecology of Commerce

A Declaration of Sustainability



Paul Hawken

AUTHOR OF *GROWING A BUSINESS* AND *THE NEXT ECONOMY*

"A daring, urgent vision of a kind of 21st century Canaan that Hawken yet believes we can reach." —*San Francisco Chronicle*

The Ecology of Commerce

A Declaration of Sustainability

Paul Hawken



HarperBusiness

A Division of HarperCollinsPublishers

A hardcover edition of this book was published in 1993 by HarperBusiness, a division of HarperCollins Publishers.

THE ECOLOGY OF COMMERCE. Copyright © 1993 by Paul Hawken. All rights reserved. Printed in the United States of America. No part of this book may be used or reproduced in any manner whatsoever without written permission except in the case of brief quotations embodied in critical articles and reviews. For information address HarperCollins Publishers, Inc., 10 East 53rd Street, New York, NY 10022.

HarperCollins books may be purchased for educational, business, or sales promotional use. For information, please write: Special Markets Department, HarperCollins Publishers, Inc., 10 East 53rd Street, New York, NY 10022.

First paperback edition published 1994.

Designed by C. Linda Dingler

The Library of Congress has catalogued the hardcover edition as follows:

Hawken, Paul.

The ecology of commerce : a declaration of sustainability / Paul Hawken.—1st ed.
p. cm.

Includes bibliographical references and index.

ISBN 0-88730-655-1

1. Social responsibility of business. 2. Sustainable development. 3. Economic development—Environmental aspects. I. Title.

HD60.H393 1993

658.4'08—dc20

93-31111

ISBN 0-88730-704-3 (pbk.)

04 03 02 01 ♦/RRD H 20 19

The author and publisher have agreed to each donate a sum equal to the cost of planting one tree for every tree consumed in the production of this book to the Earth Island Institute, or a similar such nonprofit organization dedicated to forestry preservation.

Preface

Books originate in strange moments and places. This one began in the Waldorf-Astoria ballroom. A company I represented had been nominated for the Council on Economic Priorities "Environmental Stewardship Award." Although there are many environmental awards being handed out these days (DuPont, for example, received a Stratospheric Ozone Award from the Environmental Protection Agency that same year), CEP's tough stance on social and environmental responsibility gave our honor some weight. The list of initiatives our company had taken was long, and we weren't surprised to have been nominated, but when George Plimpton announced we'd won, I walked to the podium, looked out at the sea of pearls and black ties, and fell mute. Instead of thanking everyone, I stood there in silence, suddenly realizing two things: first, that my company did not deserve the award, and second, that no one else did, either.

What we had done was scratch the surface of the problem, taken a few risks, put a fair amount of money where our mouths were, but, in the end, the impact on the environment was only marginally different than if we had done nothing at all. The recycled toner cartridges, the sustainably harvested woods, the replanted trees, the soy-based inks, and the monetary gifts to nonprofits were all well and good, but basi-

cally we were in the junk mail business, selling products by catalogue. All the recycling in the world would not change the fact that doing business in the latter part of the twentieth century is an energy intensive endeavor that gulps down resources.

I don't mean to decry the efforts made by companies to reduce their negative impact on the environment. I applaud them greatly. But it was clear to me in that moment that there was no way to "there" from here, that all companies were essentially proscribed from becoming ecologically sound, and that awards to institutions that had ventured to the environmental margins only underlined the fact that commerce and sustainability were antithetical by design, not by intention. Management is being told that if it wakes up and genuflects, pronouncing its *amendes honorable*, substituting paper for polystyrene, we will be on the path to an environmentally sound world. Nothing could be farther from the truth. The problem isn't the half measures, but the illusion they foster that subtle course corrections can guide us to a good life that will include a "conserved" nature and cozy shopping malls. The companies that are changing their ways, reducing pollution, redesigning their products and methods of manufacture, have many different motives. In some cases, they would like to escape regulatory liabilities; in others, they would like to avoid perceived or future liabilities; in yet others, they are trying to change the nature of business and move toward "socially responsible" commerce.

The problems to be faced are vast and complex, but come down to this: 5.8 billion people are breeding exponentially. The process of fulfilling their wants and needs is stripping the earth of its biotic capacity to produce life; a climactic bust of consumption by a single species is overwhelming the skies, earth, waters, and fauna. As Lester Brown patiently explains in his annual survey, *State of the World*, every living system on earth is in decline. Making matters worse, we are in the middle of a once-in-a-billion-year blowout sale of hydrocarbons. They are being combusted into the atmosphere at a rate that will effectively double-glaze the planet within the next fifty years, with unknown climatic results. The cornucopia of resources that are being extracted, mined, and harvested is so poorly distributed that 20 percent of the earth's people are chronically hungry or starving. The top quintile in developed countries, about 1.1 billion people, currently metabolize 82.7% of the world's resources, leaving the balance

of 17.3% of the resources for the remaining 4.5 billion. Since business in its myriad forms is primarily responsible for this plunder, it is appropriate that a growing number of companies ask themselves, how do we conduct business honorably in the latter days of industrialism and the beginning of an ecological age? Companies are coming to realize that they may succeed according to conventional standards and still be violating profoundly important biological and natural systems. The question is, can we create profitable, expandable companies that do not destroy, directly or indirectly, the world around them?

Many companies today no longer accept the maxim that the business of business is business. Their new premise is simple: Corporations, because they are the dominant institution on the planet, must squarely address the social and environmental problems that afflict humankind. Organizations such as Business for Social Responsibility and the Social Venture Network, corporate ethics consultants, groups such as the Environmental Defense Fund, magazines such as *Business Ethics*, nonprofits including the Council on Economic Priorities and the Coalition for Environmentally Responsible Economics, investment funds such as Calvert and Covenant, and thousands of unaffiliated companies are drawing up new codes of conduct for corporate life that integrate social, ethical, and environmental principles.

Despite all this good work, we still must face a sobering fact. If every company on the planet were to adopt the best environmental practices of the "leading" companies—say, Ben & Jerry's, Patagonia, or 3M—the world would still be moving toward sure degradation and collapse. So if a tiny fraction of the world's most intelligent managers cannot model a sustainable world, then environmentalism as currently practiced by business today, laudable as it may be, is only a part of an overall solution. Rather than a management problem, we have a design problem, a flaw that runs through all business. When this thought came to me on the podium, I felt as if we were getting an award for a breakthrough when all we had done was to solve the tiniest part of a big puzzle.

Although proponents of socially responsible business are making an outstanding effort at reforming the tired old ethics of commerce, they are unintentionally giving companies a new reason to produce, advertise, expand, grow, capitalize, and use up resources. The rationale is that they are doing good. But flying a jet across the country, renting

a car at an airport, air-conditioning a hotel room, gassing up a truck full of goods, commuting to a job—these acts degrade the environment whether the person doing them works for the Body Shop, Greenpeace, or Siemens.

To create an enduring society, we will need a system of commerce and production where each and every act is inherently sustainable and restorative. Business will need to integrate economic, biologic, and human systems to create a sustainable method of commerce. As hard as we may try to become sustainable on a company-by-company level, we cannot fully succeed until the institutions surrounding commerce are redesigned. Just as every act in an industrial society leads to environmental degradation, regardless of intention, we must design a system where the opposite is true, where doing good is like falling off a log, where the natural, everyday acts of work and life accumulate into a better world as a matter of course, not a matter of conscious altruism. That is what this book tries to imagine.

To solve the problem, we need to define it concretely. Chapters 1 through 3 and 6 through 8 address this. These chapters are not mere litanies of environmental disasters; they are necessary prefaces to the solutions. Although I think the problems are actually more severe than we realize, embedded in each one of them is a realizable and crucial design solution.

In order to achieve those solutions, we must begin with a set of objectives. I would start with these.

1. *Reduce absolute consumption of energy and natural resources in the North by 80 percent within the next half century.* This is not as difficult as it sounds. In material terms, it amounts to making things last twice as long with about half the resources. We already have the technology to do this in most areas, including energy usage.

2. *Provide secure, stable, and meaningful employment for people everywhere.* Moving toward sustainability and not addressing job creation will exacerbate economic hardship and further degrade resources. Asking people to reduce consumption without increasing employment will create a world as destructive as the one they would replace.

3. *Be self-actuating as opposed to regulated or morally mandated.* Some people sincerely believe that the rate we're losing life on earth calls for the imposition of higher "rights" than those constitutionally recognized in democracies. Even if we agree that we should put aside cer-

tain human liberties for a greater good, there is still a crucial flaw in this argument. Government has a critical role to play, but that role must coincide with the natural impulses in society. Humans want to flourish and prosper, and they will eventually reject any system of conservation that interferes with these desires.

4. *Honor market principles.* No "plan" to reverse environmental degradation can be enacted if it requires a wholesale change in the dynamics of the market. We have to work with who we are – which includes our strong instinct to shop the market and buy products of comparable quality at the lowest price. We can't just ask people to pay more to save the planet. They won't do it in some cases—and can't in most.

5. *Be more rewarding than our present way of life.* We need to invite people into a world that delivers the goods, not subtracts them; that intrigues without threatening; in which they can participate, enjoy, and create. Present-day limits need to become opportunities.

6. *Exceed sustainability by restoring degraded habitats and ecosystems to their fullest biological capacity.* The dirty secret in environmentalism is that there is no such thing as sustainability. Habitats can endure over millennia, but it's practically impossible to calculate the sustainability of specific fisheries, tracts of land, and actual forests. We have also probably already passed the point where present planetary resources can be relied on to support the population of the next forty years. Any viable economic program must turn back the resource clock and devote itself actively to restoring damaged and deteriorating systems—restoration is far more compelling than the algebra of sustainability.

7. *Rely on current income.* Sustainable human communities should act like natural ones, living within a natural ebb and flow of energy from the sun and plants. This doesn't mean being cold and hungry in winter, but redesigning all industrial, residential, and transportation systems so that everything we use springs easily from the earth and returns back to it.

8. *Be fun and engaging, and strive for an aesthetic outcome.* Government, business, and environmental organization cannot create a sustainable society. It will only come about through the accumulated effects of daily acts of billions of eager participants. Some think humans are predatory by nature. I cast my vote with those who feel humans take the shape of their culture, and that shifts in culture can

occur in rare moments with remarkable speed and vigor. Good design can release humankind from its neurotic relationship to absurd acts of destruction, and aim it toward a destiny that is far more "realistic" and enduring. The urge to create beauty is an untapped power, and it exists in commerce as well as in society.

Chapters 4 and 5, and chapters 9 through 11 present specific routes to accomplish these objectives. As you read them, imagine yourself a designer, remaking a world where commerce and environmental restoration are synonymous. What would such a system look like? How would it feel to work in it? What are the obstacles preventing us from doing the right thing? How do we change or remove those barriers?

As you seek your own answers to these questions, keep this critical point in mind: Our human destiny is inextricably linked to the actions of all other living things. Respecting this principle is the fundamental challenge in changing the nature of business.

Contents

Preface	xi
1. A Teasing Irony	1
2. The Death of Birth	19
3. The Creation of Waste	37
4. Parking Lots and Potato Heads	57
5. Pigou's Solution	75
6. The Size Thing	91
7. Private Lives and Corporate Rights	105
8. When an Ethic Is Not an Ethic	123
9. The Opportunity of Insignificance	137
10. Restoring the Guardian	161
11. Pink Salmon and Green Fees	177
12. The Inestimable Gift of a Future	201
Acknowledgments	221
Notes	223
Index	241

1

A Teasing Irony

I have come to believe that we in America and in the rest of the industrialized West do not know what business really is, or, therefore, what it can become. Perhaps this is a strange remark, given that free-market capitalism is now largely unchallenged as the economic and social credo of just about every society on earth, but I believe it's correct. Despite our management schools, despite the thousands of books written about business, despite the legions of economists who tinker with the trimtabs of the \$21 trillion world economy, despite and maybe because of the victory of free-market capitalism over socialism worldwide, our understanding of business—what makes for healthy commerce, what the role of such commerce should be within society as a whole—is stuck at a primitive level.

The ultimate purpose of business is not, or should not be, simply to make money. Nor is it merely a system of making and selling things. The promise of business is to increase the general well-being of humankind through service, a creative invention and ethical philosophy. Making money is, on its own terms, totally meaningless, an insufficient pursuit for the complex and decaying world we live in. We have reached an unsettling and portentous turning point in industrial civilization. It is emblematic that the second animal ever to be

"patented" is a mouse with no immune system that will be used to research diseases of the future, and that mother's milk would be banned by the food safety laws of industrialized nations if it were sold as a packaged good. What's in the milk besides milk and what's suppressing our immune system is literally industry—its by-products, wastes, and toxins. Facts like this lead to an inevitable conclusion: Businesspeople must either dedicate themselves to transforming commerce to a restorative undertaking, or march society to the undertaker.

I believe business is on the verge of such a transformation, a change brought on by social and biological forces that can no longer be ignored or put aside, a change so thorough and sweeping that in the decades to come business will be unrecognizable when compared to the commercial institutions of today. We have the capacity and ability to create a remarkably different economy, one that can restore ecosystems and protect the environment while bringing forth innovation, prosperity, meaningful work, and true security. As long as we continue to ignore the evolutionary thrust and potential of the existing economy, the world of commerce will continue to be in a state of disorder and constant restructuring. This is not because the worldwide recession has been so deep and long, but because there is a widening gap between the rapid rate at which society and the natural world are decaying and the agonizingly slow rate at which business is effecting any truly fundamental change.

This turbulent, transformative period we now face might be thought of as a system shedding its skin; it signals the first attempts by commerce to adapt to a new era. Many people in business, the media, and politics do not perceive this evolutionary step, while others who do understand fight it. Standing in the way of change are corporations who want to continue worldwide deforestation and build coal-fired power plants, who see the storage or dumping of billions of tons of waste as a plausible strategy for the future, who imagine a world of industrial farms sustained by chemical feed-stocks. They can slow the process down, make it more difficult, but they will not stop it. Like a sunset effect, the glories of the industrial economy may mask the fact that it is poised at a declining horizon of options and possibilities. Just as internal contradictions brought down the Marxist and socialist economies, so do a different set of social and biological forces signal

our own possible demise. Those forces can no longer be ignored or put aside.

That the title of this book, *The Ecology of Commerce*, reads today as an oxymoron speaks to the gap between how the earth lives and how we now conduct our commercial lives. We don't usually think of ecology and commerce as compatible subjects. While much of our current environmental policy seeks a "balance" between the needs of business and the needs of the environment, common sense says there is only one critical balance and one set of needs: the dynamic, ever-changing interplay of the forces of life. The restorative economy envisioned and described in this book respects this fact. It unites ecology and commerce into one sustainable act of production and distribution that mimics and enhances natural processes. It proposes a newborn literacy of enterprise that acknowledges that we are all here together, at once, at the service of and at the mercy of nature, each other, and our daily acts.

A hundred years ago, even fifty years ago, it did not seem urgent that we understand the relationship between business and a healthy environment, because natural resources seemed unlimited. But on the verge of a new millennium we know that we have decimated ninety-seven percent of the ancient forests in North America; every day our farmers and ranchers draw out 20 billion more gallons of water from the ground than are replaced by rainfall; the Ogallala Aquifer, an underwater river beneath the Great Plains larger than any body of fresh water on earth, will dry up within thirty to forty years at present rates of extraction; globally we lose 25 billion tons of fertile topsoil every year, the equivalent of all the wheatfields in Australia. These critical losses are occurring while the world population is increasing at the rate of 90 million people per year. Quite simply, our business practices are destroying life on earth. Given current corporate practices, not one wildlife reserve, wilderness, or indigenous culture will survive the global market economy. We know that every natural system on the planet is disintegrating. The land, water, air, and sea have been functionally transformed from life-supporting systems into repositories for waste. There is no polite way to say that business is destroying the world.

Having served on the boards of several environmental organizations, I thought I understood the nature and extent of the problems

we face. But as I prepared to write this book, I reviewed much of the new literature in the field and discovered that the more I researched the issues, the more disquieting I found the information. The rate and extent of environmental degradation is far in excess of anything I had previously imagined. The situation was like the textbook illusion in which the viewer is presented with a jumble of halftone dots that reveals the image of Abraham Lincoln only when seen from a distance. Each of the sources I worked with was one such dot, not meaningless in itself, but only a part of the picture. The problem we face is far greater than anything portrayed by the media. I came to understand well the despair of one epidemiologist who, after reviewing the work in her field and convening a conference to examine the effects of chlorinated compounds on embryonic development, went into a quiet mourning for six months. The implications of that conference were worse than any single participant could have anticipated: The immune system of every unborn child in the world may soon be adversely and irrevocably affected by the persistent toxins in our food, air, and water.

A subtler but similarly disquieting development was reported by the *New York Times* in 1992 in an article entitled "The Silence of the Frogs." At an international conference on herpetology (the study of amphibians and reptiles), while 1,300 participants gave hundreds of official papers on specialized subjects, none had focused on the total picture. Pieced together informally in the hallways and in the lunch lines at the conference was the fact that frogs are disappearing from the face of the earth at an inexplicably rapid rate. Even more disturbing was the conclusion that these populations are crashing not merely in regions where there are known industrial toxins, but also in pristine wilderness areas where there is abundant food and no known sources of pollution. The implications of such a die-off go beyond frogs. The human endocrine system is remarkably similar to that of fish, birds, and wildlife; it is, from an evolutionary point of view, an ancient system. If endocrine and immune systems are failing and breaking down at lower levels of the animal kingdom, we may be similarly vulnerable. The reason we may not yet be experiencing the same types of breakdown seen in other species is because we gestate and breed comparatively rather slowly. On complex biological levels such as ours, bad news travels unhurriedly, but it eventually arrives. In other words, something unusual and inauspicious may be occurring globally at all

levels of biological development: a fundamental decline that we are only beginning to comprehend and that our efforts at "environmentalism" have failed to address.

From this perspective, recycling aluminum cans in the company cafeteria and ceremonial tree plantings are about as effective as bailing out the *Titanic* with teaspoons. While recycling and tree planting are good and necessary ideas, they are woefully inadequate. How can business itself survive a continued pattern of worldwide degradation in living systems? What is the logic of extracting diminishing resources in order to create capital to finance more consumption and demand on those same diminishing resources? How do we imagine our future when our commercial systems conflict with everything nature teaches us?

Constructive changes in our relationship to the environment have thus far been thwarted primarily because business is not properly designed to adapt to the situation we face. Business is the practice of the possible: Highly developed and intelligent in many respects, it is, however, not a science. In many ways business economics makes itself up as it progresses, and essentially lacks any guiding principles to relate it to such fundamental and critical concepts as evolution, biological diversity, carrying capacity, and the health of the commons. Business is designed to break through limits, not to respect them, especially when the limits posed by ecological constraints are not always as glaring as dead rivers or human birth defects, but are often expressed in small, refined relationships and details.

The past one hundred years have seen waves of enterprise sweep across the world, discovering, mining, extracting, and processing eons worth of stored wealth and resources. This flood of commerce has enriched capital cities, ruling families, powerful governments, and corporate elites. It has, therefore, quite naturally produced a dominant commercial culture that believes all resource and social inequities can be resolved through development, invention, high finance, and growth—always growth. For centuries, business has been able to claim that it is the organizational key to "unlocking the hidden wealth of creation for distribution to the masses." By and large that has been true. But now, rather than distributing the wealth of the present, we are stealing the wealth of the future to enrich a society that seems nonetheless deeply troubled about its "good fortune." While democratic capitalism still emanates an abundant and optimistic vision of

humankind and its potential, it also retains the means to negate this vision in ways that are as harmful as any war.

It is lamentable to extinguish a species by predation and killing, whether the perceived gain is leather, feather, pelt, or horn. But how will we explain that the disappearance of songbirds, frogs, fireflies, wildflowers, and the hundreds of thousands of other species that will become extinct in our lifetime had no justification other than ignorance and denial? How will we explain to our children that we knew they would be born with compromised immune systems, but we did nothing? When will the business world look honestly at itself and ask whether it isn't time to change?

Having expropriated resources from the natural world in order to fuel a rather transient period of materialistic freedom, we must now restore no small measure of those resources and accept the limits and discipline inherent in that relationship. Until business does this, it will continue to be maladaptive and predatory. In order for free-market capitalism to transform itself in the century to come, it must fully acknowledge that the brilliant monuments of its triumph cast the darkest of shadows. Whatever possibilities business once represented, whatever dreams and glories corporate success once offered, the time has come to acknowledge that business as we know it is over. Over because it failed in one critical and thoughtless way: It did not honor the myriad forms of life that secure and connect its own breath and skin and heart to the breath and skin and heart of our earth.

Although the essential nature of commerce has not altered since the very first exchange of coin for corn, the power and impact of corporate capitalism have increased so dramatically as to dwarf all previous forms of international power. No empire—Greek, Roman, Byzantine, British, or any other—has had the reach of the modern global corporation, which glides easily across borders, cultures, and governments in search of markets, sales, assets, and profits. This institutional concentration of human energy and creativity is unparalleled in history.

But if capitalism has pillaged, it has also delivered the goods, and in quantities that could not have been imagined just two generations ago. Providing that abundance is one of the central goals of doing business, and those who believe in capitalism believe that goal must be facilitated at every opportunity. Government is key to this strategy.

The conservative view of free-market capitalism asserts that nothing should be allowed to hinder commerce. Sacrifices might be called for here and there, but in the end, the environment, the poor, the Third World will all benefit as business more fully realizes its potential. In the new world order of the post-communist age, free-market capitalism promises to be the secular savior, echoing theologian Michael Novak's homage: "No system has so revolutionized ordinary expectations of human life—lengthened the life span, made the elimination of poverty and famine thinkable, enlarged the range of human choice—as democratic capitalism." This view of business was fervently embraced by the recent Republican administrations, who found in Novak's words an unimpeachable affirmation of many of their programs of deregulation.

Invoking the sanctity of the free market to prove that present business practices are sound and constructive, and using it to rebut every charge of ecological malfeasance is, at its heart, dishonest. Historically, we have given industry great latitude for its miscalculations because there was no science sufficiently developed to inform society of industrialism's effects. One hundred years ago, industrial cities were coated with grime and cut off from the sun by permanent palls of smoke; the citizens were beset by disease; the very conditions under which workers toiled and died were inhumane and exploitative. These conditions had their analog in the industrial processes of waste and despoliation, and were the direct costs of the Industrial Revolution. It took many decades before an appreciation of the social and environmental damage spread beyond a small circle of Marxists and muckrakers to society as a whole. Today, businesspeople readily concede the abuses of the early days of this Revolution, but they do not wholly and genuinely acknowledge the more threatening abuses perpetuated by current practices. Troubling untruths lie uneasily within a colossal economic system that denies what we all know while it continues to degrade our world, our society, and our bodies. Business economists can explain in detail the workings of the modern corporation, its complex interrelation with financial markets, how its holdings might be valued on a discounted cash-flow basis, or the dynamics of global competitive advantages. These pronouncements and equations promise hope but they cannot explain—much less justify—the accelerating extinction of species, the deterioration of human health, the stress and anguish of