The Next Economy

"Paul Hawken's brilliant analysis will make all who read it see the world differently."– John Naisbitt, author of MEGATRENDS

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The Next Economy

Also by Paul Hawken

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TO PALO, ANASTASIA,
IONA, AND AIDAN

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Introduction

Most people view the growing economic crisis as evidence of something gone wrong. Depending on one's economic philosophy, one can put the blame on various groups and institutions. Conservatives point to the government, monetarists blame the Federal Reserve Bank, Marxists blame the capitalist system, politicians blame their predecessors, consumers blame big business and OPEC, and big business has blamed consumers, OPEC, and government. Like a losing team, we see only our failure, and as a result, we have turned on one another.

Economic opinion has diverged because the economic events of the past decade do not fit into any economic theory. We are bewildered by an economy in which some suffer while others grow rich, in which some towns are worse off than they were during the Depression and others are booming. The economy defies not only prognostication but categorization. Some things are working while others clearly are not. In 1981 and 1982 more businesses started up than at any other time in history. In 1982 more businesses failed than at any time since the Depression.

There is another way to look at present economic events. We have entered a period between economies, or, to be more precise, between economic structures, and the troubled economy reflects the passage from one structure to the next. Current economic problems are no more a sign of failure than adolescence is the failure of childhood. While coming of age may not be the most apt metaphor for our crisis, it at least expresses the trauma that can accompany rapid change when proper understanding is lacking.

The reason it is difficult to step back and see an underlying pattern is that many things *are* wrong. We have gone from double-digit inflation and recession under President Carter to double-digit unemployment and recession under President Reagan. Unquestionably, we are witnessing the relative decline of what I call the mass economy, the economy of the industrial age, a period during which nations amassed enormous manufacturing capabilities that depended on the large-scale extraction of resources, particularly fossil fuels. The mass economy was a *formative* economy in which virtually all of the work that human beings once did by hand or with the assistance of animals became mechanized through the use of machinery, technology, and energy. This mechanization included the development of the automobile, steel, rubber, chemical, electrical, heavy equipment, and machine tool industries as well as the thousands of businesses required to support them. Infusing the mass economy was what economist Robert Heilbroner calls the "thrusting, restive search of the participants . . . for their material advancement."

The success of the mass economy in producing a profligate amount of goods has in turn changed the formula for success. Energy, the resource that accomplishes most of the work in an industrial economy, is more expensive than it was ten, twenty, even one hundred years ago. Because it costs more to get things done, industrial countries face a choice. They can consume more energy and drive its price higher, making goods more expensive and causing inflation and declining wages; or they can make the economy more informative by developing methods of production and patterns of consumption that use less energy and capital resources and more knowledge. Inevitably, we have chosen and will choose the latter. It is this transition from a mass economy to an informative economy that is causing world economic crisis.

The crisis of the developed nations is concentrated at the top of the economy, not at the bottom. Historian Fernand Braudel divides the economy of capitalist nations into three distinct segments, the top one of which encompasses the large governing institutions of international banks, multinationals, and centralized political administration. Under this is the market economy, the making and selling of goods—businesses, stores, shops, and farms. Submerged further, but just as important, is what Braudel calls "material life," the constant and undefined activity of sharing and barter, the giving and taking and making of objects and services between people in local areas. This most basic level—a "rich zone, like a layer covering the earth"—and the market economy above it have changed dramatically in the past decade in response to higher prices for energy, higher costs for capital, and declining wages. We are changing our behavior, and as we do, the top of the economy, whose existence depends on its ability to control and manipulate the lower levels, is in crisis. Big businesses are threatened, banks face insolvency, and governments are rapidly turned over as successive economic failures destroy the confidence of voters. While governments and politicians debate their course of action, consumers, householders, and businessmen are already adapting.

Adaptation to the rising cost of energy is creating the informative economy. Industry is inventing more efficient manufacturing processes and redesigning products so that they use lighter, more durable materials and require smaller amounts of capital investment as well as less energy to produce. American cars weigh 30 percent less than they did a decade ago, last longer, and are more fuel-efficient. New housing is smaller, uses fewer building materials, and needs less heating and cooling. Consumers wanting to preserve their standard of living are choosing those products that conform to this adaptation while shunning those that ignore it. The result is less consumption of material and energy (mass).

One way to reduce consumption is through microelectronics. The industrial age mechanized manual labor; now semiconductors and microprocessors are bringing technology to the mind—analysis, communication, design, and decision-making. The microprocessor imparts to manufacturing processes, products, and services much of the power of the human nervous system. Automobile engineers have discarded the bulky carburetor for electronic fuel injection in order to reduce waste and increase efficiency. The Boeing 767, part of the new generation of fuel-efficient aircraft, could not have been designed without computers. Such repetitive service occupations as bank teller and telephone operator are being replaced by silicon-chip microprocessors. This is how information is replacing mass—by revolutionizing the design, creation, and function of goods and services. Whether in satellites or subcompact cars, toasters or tractors, semiconductor technology is reducing the size, cost, and energy requirements of products while making them more sophisticated, intelligent, and useful.

Whether the conservation of mass is accomplished through the new techniques of computer technology or the old virtues of workmanship and design, the informative economy comprises those individuals, companies, and institutions who understand that every unit of physical resource, regardless of whether it is a gallon of oil, a ton of steel, or a stand of timber, will need greatly increased intelligence (informed activity) to transform raw material into the components of truly economic goods or the instruments of effective services. The ratio between mass and information is changing and it must continue to change. Our prosperity depends on it.

This book is a description of the next economy and how to make the transition to it. Most economists look at the economy piecemeal and try to create a composite meaning. I propose to attempt to look at the whole of our economic life in order to understand our individual activity. It is not an attempt to tear down the walls of the industrial age, or to snipe at it with the advantage of hindsight. Rather, it is a look at what our reactions are to the tumultuous economic changes of the past decade. The book offers an alternative definition of intelligent economic behavior, not as a proposal but as an observation of present reality. It is clear that bearing up under economic difficulties are resourceful human beings adapting quickly to new circumstances, while above us, as always, to use John Maynard Keynes's famous epigram, are otherwise "practical men [who are] the slaves of some defunct economist."

Chapter 1

The Decline of the Mass Economy

Part of the economy dies every day and is replaced by something new. This ceaseless activity of beginnings and endings, of new products and old habits, reflects how we change as a people, as a culture, and as a nation. During the past ten years, the economy has changed faster than at any previous time in our history, including the Great Depression, and has become so surprising, confusing, and unsettling that it is now the central concern in the lives of people and their government.

The overriding anxiety affecting daily economic life is the fear that our investments, livelihood, employer, or business could become a part of that which dies. Given this uncertainty, the economic decisions we make are difficult at best, risky at least. Should one buy a house, go back to school, change a job, move away, expand production? Knowing whether or not we are going into a recession is not enough. During the three recessions since 1974, some industries have failed while others have flourished. We need to know what will thrive and what will die—and why. Without that knowledge, the best education and effort are useless. More specifically, we need to know, within a field or industry, why some companies prosper and others stagnate.

The present economic tumult can best be understood when one considers the fact that two different, overlapping economies exist side by side in the United States: the economy of mass production and consumption of material goods, and a new, "informative" economy that reduces the amount of materials consumed by industry and individuals by raising and enhancing the intelligence and information contained within goods and services. In mature industrial societies such as our own, consumers are experiencing the decline of the mass economy and the rise of the informative economy. To understand how the informative economy is emerging, it is important to understand why the mass economy is declining, since the success of the first is a direct result of the structural changes and limits of the second.

The "mass" economy is the economy of the industrial age. Specifically, the mass economy occupied the period from 1880 until today, a time during which oil, the internal combustion engine, and the widespread generation and distribution of electrical power transformed nations into complex industrialized, consumer-oriented societies. The word *mass* is apt because the dominating economic force during this time was the substitution of fossil fuels for human energy in order to produce mass (physical goods) for the masses (consumers). Throughout this period, individuals, companies, and nations accumulated great amounts of goods, capital, and property. Inexpensive energy and cheap transportation enabled regional companies to become national companies, and their names became household words; industrial empires of enormous power and scale were assembled. Until 1973, up to which time the cost of energy fell while the consumption of energy rose, industrialized nations were able to amass great wealth.

The age of the mass economy was marked by expansion, mass production, the degradation of the environment, technological innovation, affluence, an ethic of consumption, high wages, the specialization and division of labor, the declining durability of goods, and the professionalization of services.

The mass economy is being replaced by an economy based on the changing ratio between the mass and information contained in goods and services. Mass means the energy, materials, and embodied resources required to produce a product or perform a service. While the mass economy was characterized by economies of scale, by many goods being produced and consumed by many people, the informative economy is characterized by people producing and consuming smaller numbers of goods that contain more information. What is this information? It is design, utility, craft, durability, and knowledge added to mass. It is the quality and intelligence that make a product more useful and functional, longer-lasting, easier to repair, lighter, stronger, and less consumptive of energy.

The decline of the mass economy was the result of one important shift: the changing relation in value among labor (people), capital (money), and resources (energy). This change far outweighs any economic theory of what is happening. It will have a far greater impact than inflation, high interest rates, taxes, underemployment, and slow or zero economic growth because this changing relationship is both the *cause* and *cure* of these symptoms. The shift started in 1973, when energy and capital rose in value (or cost) while the value of a worker's time began to decline. We are experiencing the impact of this shift as economic contraction, which in turn is causing these effects:

HIGH CAPITAL COSTS: The rising cost of capital means that money is more expensive to obtain, hold, and use. This can be reflected in either high interest rates or inflation, or both. In the 1970s we experienced high inflation, and so far in the 1980s we've had high interest rates. This trend will continue until the transition from the mass to the informative economy is completed. The high cost of capital has had dramatic effects on the housing and auto industries. It has increased the purchasing cost for the consumer without increasing industry's revenues. This has reduced overall demand, weakened industry, and prompted consumers to keep cars and houses longer.

THE LIQUIDATION OF LARGE CORPORATIONS: Businesses that depend on mass markets, cheap transportation, and predictable consumers are losing out to smaller, more nimble companies. As the mass economy wanes, corporations with large amounts of debt will have to either sell off assets or pay out inordinate amounts of cash in interest charges. Many corporations are currently paying out more in interest than in dividends, and some are borrowing more money each year than they are generating in profits. When inflation is taken into account, many of the Fortune 500 companies are smaller now than they were ten years ago.

CONTRACTION OF GOVERNMENT: Another large institution that is shrinking is government, both state and local. Like those of large corporations, government revenues are diminishing, and the end of the expansion of the mass economy means that the future growth of governments, in terms of additional tax revenues, is severely limited. Governments face the dilemma of either increasing taxes, which would further choke economic recovery and therefore revenues, or not increasing taxes, which would result in a decline in revenues because of economic stagnation. For example, in 1982 the state of Michigan had to get a letter of credit from a consortium of Japanese banks in order to receive market interest rates on its notes. Without the guarantee, the state would not have been able to afford the loan because its credit rating had dropped below the level of what many financial institutions define as credit worthiness.

THE END OF MASS MARKETS: Mass markets existed as long as the economy expanded and consumer markets grew. With markets stagnant and individual incomes slowly declining, people are buying cautiously, demanding more from products—the demand for more information per unit of mass—and are no longer so responsive to advertisements and corporate blandishments. In the future, one size