

None of the individuals or institutions named above are responsible for any shortcomings in this book, nor do they necessarily agree with everything (or anything!) we have said. In Herman Daly's case this disclaimer should be explicitly extended to his current employer, the World Bank, even though this book was written while he was on the faculty of Louisiana State University.

## Introduction

*Words ought to be a little wild, for they are the assault of thoughts upon the unthinking.*

J. M. Keynes

### The Wild Facts

In our time, it is the facts themselves that are more than a little wild and that constitute an assault on unthinking economic dogma. We need little help from wild rhetoric. The wild facts are summarized in calm words in the various *State of the World* reports put out by the World-watch Institute, and especially in the first essay of the 1987 volume by Lester Brown and Sandra Postel, entitled "Thresholds of Change." Some of the facts are:

1. There is a hole in the earth's protective shield of ozone. More ultra-violet radiation now reaches the earth and will predictably increase skin cancer, retard crop growth, and impair the human immune system. In an unprecedentedly wise response, representatives from thirty-one nations have agreed to a quantitative limit on the production of chlorofluorocarbons, the probable cause of the ozone depletion.

2. There is evidence that the CO<sub>2</sub>-induced greenhouse effect has already caused perceptible warming of the globe. As recently as 1983, noticeable change was not expected for another 50 years. Now the warming is being connected by careful students to the 1988 drought in the Midwest.

3. Biodiversity is declining as rates of species extinction increase due to takeover of habitat, especially of the tropical rainforests, which support half the world's species on only 7% of its land area (Goodland 1987).

In addition, acid rain kills temperate zone forests and raises the acidity of lakes above the tolerance thresholds for many species. Because of

industrial accidents, people in Chernobyl, Goiania (Brazil), and Bhopal are dying from air pollution, toxic waste contamination of ground water, and radiation poisoning.

All of these facts appear to us to be related in one way or another to one central underlying fact: the scale of human activity relative to the biosphere has grown too large. In the past 36 years (1950–86), population has doubled (from 2.5 to 5.0 billion). Over the same time period, gross world product and fossil fuel consumption have each roughly quadrupled. Further growth beyond the present scale is overwhelmingly likely to increase costs more rapidly than it increases benefits, thus ushering in a new era of “uneconomic growth” that impoverishes rather than enriches. This is the fundamental wild fact that so far has not found expression in words sufficiently feral to assault successfully the civil stupor of economic discourse. Indeed, contrary to Keynes, it seems that the wildness of either words or facts is nowadays taken as clear evidence of untruth. Moral concern is “unscientific.” Statement of fact is “alarmist.”

In *An Inquiry into the Human Prospect* (1974), economist Robert Heilbroner reflected about the meaning of this pressure of the human economy on the biosphere. He considered especially the political traumas that will be faced when economic growth is no longer possible. In a 1980 revision of his *Inquiry*, he projected a continuing (but gradually slowing) growth economy until the middle of the first decade of the next century. When that ends, he sees (as in the earlier 1974 edition) the need for highly authoritarian governments to control the transition to economic decline (Heilbroner 1980, p. 167 ff.).

We appreciate Heilbroner's rare willingness as an economist to connect the growth economy and the physical limits of the ecosphere. This is at the heart of our project as well. But we believe that thought, foresight, and imagination can lead to a much less disruptive transition. Whereas Heilbroner assumes there are no realistic alternatives to capitalism and socialism (both growth economies), we do not agree. This book seeks to outline just such a realistic alternative. To conceive of such a radically different economy forces us both to think through the discipline of economics as well as beyond it into biology, history, philosophy, physics, and theology. Part of the assault of the wild facts has been against the very disciplinary boundaries by which knowledge is organized (produced, packaged, and exchanged) in the modern university.

## The Ambiguity of the Economic Achievement

The wild facts of today and their conflict with standard economic theory both have a well-known history. During the past two centuries, the economy has transformed the character of the planet and especially of human life. It has done so chiefly by industrialization. Industry has vastly increased the productivity of workers, so vastly that in spite of the great population increases in industrialized nations, the goods and services available to each have increased still more. The standard of living has soared from bare subsistence to affluence for most people in the North Atlantic nations and Japan. Singapore, Hong Kong, Taiwan, and South Korea share in this prosperity. These are immense accomplishments.

During the same period, the study of the economy has matured, approaching the status of a science. Economics alone among the social studies is sometimes accorded that label by natural scientists. A Nobel prize is given in economics as in physics and biology. Other students of human society often envy and emulate the economists, much as economists emulate physicists.

Public policy has been deeply affected by the ideas and proposals of economists. Without this help the economy could not have grown to anything like the extent it has. Economists have reason to believe that if politicians and government bureaucrats would pay closer attention to their arguments, the purposes of government could be more efficiently realized. Again and again they are able to show the waste of resources that follows from regulatory measures that ignore market principles. Even Eastern European economists are now arguing for greater reliance on the market, for reasons similar to those given by their Western counterparts.

But the industrial economy has consequences for the greater economy of life. Psychologists have been disturbed by what is happening to individuals. In 1937, Karen Horney cited the pressures on Americans created by their industrial, competitive, materialistic society. She noted that three basic value conflicts had arisen: “aggressiveness grown so pronounced that it could no longer be reconciled with Christian brotherhood; desire for material goods so vigorously stimulated that it can never be satisfied, and expectations of untrammelled freedom soaring so high that they cannot be squared with the multitudes of restrictions and responsibilities that confine us all” (Henderson 1978, p. 25). Walter Weisskopf (1971) more recently has engaged in an extensive study of

what the economy has done to human beings morally and existentially. He sees that it has worked against objective judgments of value and encouraged moral relativism. It has also emphasized a few aspects of human existence at the expense of others, and thus caused alienation.

Other critics have pointed out the negative social effects of economic progress. In moving words, Karl Polanyi, a great economic historian, described the social developments associated with the rise of the market as the "Satanic Mill." The opening sentence of his 1944 work states: "At the heart of the Industrial Revolution of the eighteenth century there was an almost miraculous improvement in the tools of production, which was accomplished by a catastrophic dislocation of the lives of the common people" (Polanyi [1944] 1957, p. 33). Joseph Schumpeter was equally troubled. He sees economic thought as a part of the utilitarian philosophy that dominated the nineteenth century. "This system of ideas, developed in the eighteenth century, recognizes no other regulatory principle than that of individual egoism. . . . The essential fact is that, whether as cause or consequence, this philosophy expresses only too well the spirit of social irresponsibility which characterized the passion, and the secular, or rather secularized, state in the nineteenth century. And in the midst of moral confusion, economic success serves only to render still more serious the social and political situation which is the natural result of a century of economic liberalism" (Schumpeter 1975).

Recently it has been ecologists especially and those whom they have aroused who have turned on the economy as the great villain. They see that the growth of the economy has meant the exponential increase of raw material inputs from the environment and waste outputs into the environment, and they see that little attention has been paid by economists either to the exhaustion of resources or to pollution. They complain that economists have not only ignored the source of inputs and the disposition of outputs, but also that they have encouraged the maximization of both, whereas living lightly in the world requires that throughput should be kept to the minimum sufficient to meet human needs.

Most economists have ignored these criticisms. They are convinced that the great majority of people are far more interested in the economic goods whose production economists have encouraged than in any psychological or environmental losses. They suspect that those who speak of the suffering accompanying industrialization exaggerate. They show that the industrializing nations grew rapidly in wealth, a wealth in

which most shared, albeit unevenly. And they are convinced that those who worry about the future of the environment underestimate the capacity of a prosperous economy to take care of that, too. Where there is capital and ingenuity there will be technological breakthroughs. Now that the environment is a concern, inventive genius will be directed to solving these new challenges.

### Toward a Paradigm Shift in Economics<sup>1</sup>

When a discipline is both this successful and this severely criticized, one may assume that its assumptions and methods apply well in some spheres and poorly in others. The key assumptions in this case have to do with *Homo economicus*, that is, the understanding of the nature of the human being. Economic theory builds on the propensity of individuals to act so as to optimize their own interests, a propensity clearly operative in market transactions and in many other areas of life. Economists typically identify intelligent pursuit of private gain with rationality, thus implying that other modes of behavior are not rational. These modes include other-regarding behavior and actions directed to the public good.

The assumption that rationality largely excludes other-regarding behavior has deep, although conflicting, roots in the Western theological understanding of human nature. Theologians have held that other-regarding action is an ethical ideal, but many, especially after St. Augustine, have seen self-regarding behavior as dominant in the actual "fallen" condition. This fallenness was strongly accented by the Reformers and their followers, encouraging general suspicion of claims to genuinely other-regarding action in Protestant cultures. It is not surprising that the philanthropist Robert Owen, living in such a culture, rejected Christianity for its individualism (Polanyi [1944] 1957, 128). Catholic theology followed St. Thomas in giving more credence to socially concerned, community-building aspects of human activity.

In Calvinism, the skepticism about human virtue was connected with the suspicion of earthly authority in both church and state. The relation to God was conceived as immediate and decisive. This led to a claim to personal autonomy in both secular and religious affairs and restrictions on government interference. In Roman Catholic cultures, the emphasis

1. The term "paradigm" is difficult to define, and its applicability in the social sciences has been questioned. See Richard J. Bernstein, *The Restructuring of Economic and Political Theory* (1976, 84–106). We believe the term can be useful in relation to economics, but admittedly we use it loosely.

on community was connected with hierarchical organization in both church and society.

Modern economic theory originated and developed in the context of Calvinism. Both were bids for personal freedom against the interference of earthly authority. They based their bids on the conviction that beyond a very narrow sphere, motives of self-interest are overwhelmingly dominant. Economic theory differed from Calvinism only in celebrating as rational what Calvinists confessed as sinful.

Calvinism encourages other-regarding behavior as truly Christian even while warning against believing too readily in its reality. Catholicism encourages other-regarding behavior as a natural virtue. When Christianity was dominant, these forces checked blatantly self-seeking activity, although they certainly did not prevent it. But economists have taught us to think that checks on self-interest are both unnecessary and harmful. It is through rational behavior, which means self-interested behavior, that all benefit the most. Well-meaning attempts by government to oppose or check such behavior actually do more harm than good. As this belief displaces traditional Christian thinking, and as the market in which these principles are applied takes over a larger and larger role in society, the psychological, sociological, and ecological problems noted by critics of the economists have become more acute.

Economics contributed to freeing individuals from hierarchical authority, as well as to providing more abundant goods and services. These have been achievements of such importance that it has seemed wise to most persons of good will to treat the negative effects as secondary, as a necessary price for a crucial advance. For a long time that may have been an appropriate stance. But with each passing year, the positive accomplishments of the economy have become less evident and the destructive consequences larger. There is a growing sense that it is time for a change. The change may well take the form of a paradigm shift. The recognition of the importance of paradigm shifts in physics generated by the work of Thomas Kuhn has opened the way for thinking about paradigm shifts in the social sciences as well.

Shlomo Maital (1982) reports on a poll of professors of economics at fifty major universities. One question asked was, "Is there a sense of lost moorings in economics?" Two-thirds of the respondents answered affirmatively (p. 17). Maital believes the discipline is at a crisis. "Evidence contradictory to the conventional wisdom of economics continues to accumulate." "As dissonant evidence mounts and assails cherished propositions of a discipline, virtuoso acrobatics of that discipline's believers

put things right again" (p. 262). To Maital, all this is a sign that a paradigm shift is on its way.

Lester Thurow (1983) concludes *Dangerous Currents* on a similar note. "Economics cannot do without simplifying assumptions, but the trick is to use the right assumptions at the right time. And the judgment has to come from empirical analysis (including those employed by historians, psychologists, sociologists and political scientists) of how the world is, not of how our economics textbooks tell us it ought to be" (p. 237). Elsewhere in the book, he notes: "Psychology, sociology, and politics all have theories that might produce a set of expectations very different from those ascribed to *Homo economicus*. Patterns of socialization, cultural and ethnic history, political institutions, and old-fashioned human will power all affect our expectations" (p. 226). Thurow points in the direction of a new paradigm when he says: "Societies are not merely statistical aggregations of individuals engaged in voluntary exchange but something much more subtle and complicated. A group or community cannot be understood if the unit of analysis is the individual taken by himself. A society is clearly something greater than the sum of its parts" (pp. 222–223). He distinguishes, following Stephen Marglin, "private-personal preferences" from "individual-social" ones (p. 224), and chides economists for trying to work with the first alone.

Human beings are extremely complex and can be studied from many points of view. Each point of view abstracts from the concrete actuality and focuses on particular aspects of human behavior. *Homo religiosus* is the human being considered as religious; *Homo politicus*, as political; and *Homo economicus*, as economic. Our book focuses on *Homo economicus* while trying not to forget that human beings can also be viewed, among other things, as religious and political. It undertakes to follow Thurow's injunction to avoid viewing *Homo economicus* in terms of private-personal preferences alone. Accordingly, instead of *Homo economicus* as pure individual we propose *Homo economicus* as person-in-community.<sup>2</sup> This is more consonant with the other social sciences and

2. There is nothing original about this term. According to Max L. Stackhouse (1985) the "Christian sociologists" responded to the industrial revolution in the United States "in conversation with the best social theories available to them . . . and equally fully committed to the biblical witness as the source and norm for their efforts," and "articulated a doctrine of 'person in community' that attempted to establish decisive boundaries for Christian thinking about economic life" (p. 132). For current efforts in the Protestant context to find a third way, see Ulrich Duchrow, *Global Economy: A Confessional Issue for the Churches?* (1987, pp. 158–162): "It is

with the evidence that economists are themselves uncovering. It does not deny that in the market the actions of person-in-community approximate to those attributed to *Homo economicus* in the received theory. But normative conclusions about the goal of economic life should not be drawn from this fact alone. Polanyi notes that in capitalist society, "instead of economy being embedded in social relations, social relations are embedded in the economic system" ([1944] 1957, p. 57). It is this reversal that an economics for community cannot tolerate.

We cannot claim that our model fully meets Maital's requirements for a new paradigm. He writes: "No science will agree to junk its tried and true axioms, even when they become trying and untrue, until a new and more powerful set of axioms is available" (1982, p. 262). We are not offering a new set of axioms. Indeed, we will suggest in Chapter 2 that this view of economics as a system of deductions from axioms is part of the problem. But we do believe that economics can rethink its theories from the viewpoint of person-in-community and still include the truth and insight it gained when it thought in individualistic terms. It need not "junk" its axioms. Many of them can continue to function, only with more recognition of their limits. The change will involve correction and expansion, a more empirical and historical attitude, less pretense to be a "science," and the willingness to subordinate the market to purposes that it is not geared to determine. This is part of what we want to show.

### The New Paradigm and the Old Options

The first question in many people's minds when confronted with an economic proposal is how to locate it on a scale from left to right. Dudley Seers offers a diagram, which we reproduce in figure I.1, that expresses what many people have at least vaguely in mind (Seers 1983, pp. 46-48).

Leaving out the extremes of anarchism and fascism, there are important issues debated along this line. But Seers is quite correct in arguing that the larger issues are better represented when another axis is introduced. He does this in terms of nationalism and antinationalism (see fig. I.2).

Seers discusses not only national economy but also the European

false to say there are no alternatives. There are new economic approaches which make the meeting of the basic needs of concrete human beings and ecological sustainability the starting point for the economic system." Duchrow finds support for this direction in the work of institutional economists, especially Christian Leipert and R. Steppacher.

Figure I.1

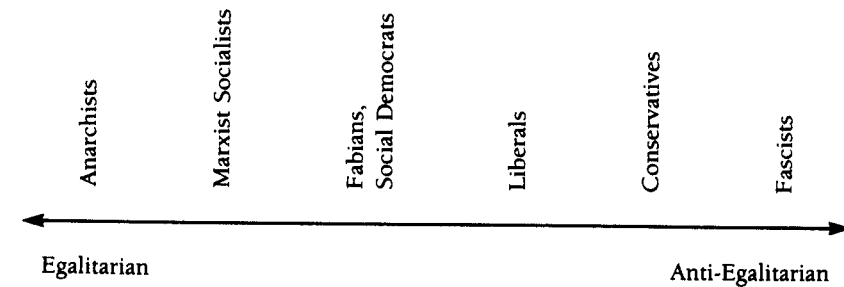
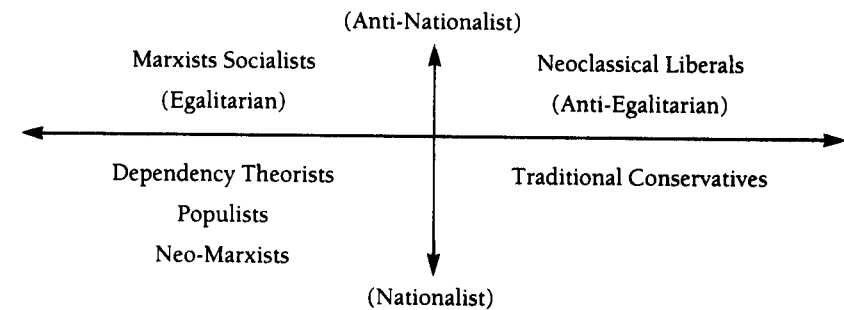


Figure I.2



economic community. Hence his title, "The Political Economy of Nationalism," is a bit misleading. It associates his ideas more closely with the long tradition of economic nationalism in the nineteenth century than is warranted by his fresh reading of the situation. We would like to carry his qualifications of traditional nationalism much further. Nations are only one of the levels at which community is to be prized and served. In Chapter 9 these various levels will be discussed at some length. Our diagram would replace "nationalist" and "antinationalist" by such words as "communitarian" and "anticommunitarian." Nevertheless, nations are a desirable form of community and in many instances today, the only ones that have the power to assert themselves effectively against anticomunitarian forces. For practical purposes, therefore, the alternatives posed by Seers are important and will play a considerable role in our analyses and proposals. With these caveats, we accept his formulation. Our attention, like his, is focused on the vertical axis.

Viewing matters in this light, Seers writes at length of the close similarities of Marxism and standard Western economics in a chapter startlingly entitled "Marxism and Other Neo-Classical Economics." Among other commonalities, both oppose nationalism in particular and, at least

implicitly, attention to community in general. Because we believe that the extent to which an economy supports or destroys healthy communities is more important than where it is to be located from left to right, we, like Seers, refuse to see our proposals as somewhere on the horizontal line of his diagram.<sup>3</sup> The greatest obstacle to gaining a hearing for proposals like Seers's and ours is the continuing widespread assumption that all positions must be located along the line from left to right. It is an *idée fixe* that every economy must be socialist, capitalist, or a compromise between the two. Unless the reader relaxes this assumption, this book cannot be understood. To pave the way for such relaxation we offer our understanding of how this situation came about and of the limited options remaining when these parameters are assumed to be exhaustive.

This whole way of thinking was brought into being by the problems and promises of the industrial age. It is for an industrial society that capitalism and socialism are supposed to be the only options, and it is their common participation in the methods and structures of industrialism that determines the extensive similarities between the two systems.<sup>4</sup> Some features of industrialism are necessary in any society in which manufacturing plays a large role. Other features are not. Since we intend to offer an alternative to both forms of industrialism, we need to explain how we understand its basic features.

The well-known features of industrialism include the use of new energy sources: coal first, followed by petroleum and natural gas; use of new materials: iron and steel; new inventions: the steam engine, the spinning jenny; advances in transportation and communication: the steamship, the locomotive, telegraph, and radio; new techniques: the factory system of production; and the increasing application of science to technology. Along with this in England went the enclosure of the commons that "freed" rural labor for the urban industrial factories. Later came the increasing mechanization of agriculture.

3. A similar polemic against regarding the alternatives as capitalism and socialism has been made by Benjamin R. Barber in "Against Economics: Capitalism, Socialism, but Whatever Happened to Democracy?" (1986). He calls for democratic control over the economy, which would require community control. He seems to have the national level of community in mind.

4. Others have noted that Marxism and capitalism are but two forms of a modern industrial society that is more determinative of the human and ecological conditions than is any difference between them. See Robert Nisbett, *The Sociological Imagination* (1966). Also Robert Heilbroner (1980) writes that both capitalist and socialist societies have organized work, life, and even thought "in ways that accommodate men to machines rather than the much more difficult alternative" (p. 94).

The invention of the factory system stands out in this list as the one item that was truly an economic rather than a technical invention. The factory is not a new tool but an organization of production that eliminates the periods of idleness in the use of tools, machines, and men that are characteristic of agrarian and artisan production. In the artisan's shop the saw, chisel, file, and so forth are all idle while the hammer is being used. In the factory all tools are simultaneously in use in the hands of specialized workers; production is "in line" rather than "in series." But production in line requires a large scale of total output before it becomes feasible. The division of labor is limited by the extent of the market, as Adam Smith told us. But transportation, urbanization, and international trade provided a market of sufficient scale. In agriculture, of course, harvesting equipment must be idle during seedtime, and planting equipment idle during harvest. Seasonality in agricultural production limits the applicability of factory organization on the farm. We can be sure, for better or for worse, that the economic impetus of modern genetic engineering will be to reduce seasonality, to design plants and animals capable of being fitted into a factory system of production. This is already evident in "chicken farms," which are really chicken factories.

The feature of the industrial revolution whose implications are insufficiently appreciated is the shift to fossil fuel energy and mineral materials. This is a shift from harvesting the surface of the earth to mining the subsurface; or, in Georgescu-Roegen's (1971) terms, it is a shift from dependence on energy currently coming from the sun to stored energy on the earth. This shift is extremely significant because these two ultimate sources of life sustenance differ in their patterns of scarcity. Radiant energy from the sun is practically infinite in total amount (stock), but it is strictly limited in its flow rate—that is, the amount that arrives on earth during any period. Energy stored in fossil fuels and minerals is strictly limited in its total amount (stock), but relatively unlimited in its flow rate—that is, we can use it up at a rate largely of our own choosing. We cannot use tomorrow's sunlight today, but in a sense we can use tomorrow's petroleum, coal, iron, and helium today. The industrial revolution has shifted dependence from the relatively abundant to the relatively scarce source of the ultimate resource: low-entropy matter-energy.

The idea that low-entropy matter-energy is the ultimate natural resource requires some explanation. This can be provided easily by a short exposition of the laws of thermodynamics in terms of an apt image borrowed from Georgescu-Roegen. Consider an hour glass. It is a closed system in that no sand enters the glass and none leaves. The amount of

sand in the glass is constant—no sand is created or destroyed within the hour glass. This is the analog of the first law of thermodynamics: there is no creation or destruction of matter-energy. Although the quantity of sand in the hour glass is constant, its qualitative distribution is constantly changing: the bottom chamber is filling up and the top chamber becoming empty. This is the analog of the second law, that entropy (bottom-chamber sand) always increases. Sand in the top chamber (low entropy) is capable of doing work by falling, like water at the top of a waterfall. Sand in the bottom chamber (high entropy) has spent its capacity to do work. This hour glass cannot be turned upside down: waste energy cannot be recycled, except by spending more energy to power the recycle than would be reclaimed in the amount recycled. As explained above, we have two sources of this ultimate natural resource, the solar and the terrestrial, and our dependence has shifted from the former toward the latter.

This shift was not consciously made, but it was certainly no accident. The newly discovered terrestrial resources had advantageous properties. Fossil fuel is a more concentrated energy source than sunlight, or even wood. Iron and steel have properties of strength and durability that, unlike wood and stone, permit construction of the machines and boilers capable of harnessing the more intense energy sources. Technology exploited these new qualities. Furthermore, the new materials and energy came from under the ground. That meant that they did not (until the advent of strip mining) compete for land surface area capable of capturing sunlight. As populations grew, the land previously devoted to growing fodder for draft animals was devoted to growing more food. The new mechanical oxen were fed with fossil fuels from underground and far away. In the enthusiasm for growth and the unlimited faith in technology, the realization that the benefits of industrialism came at a price, namely increasing dependence on the scarcer source of ultimate means, was submerged.

The industrial revolution is still being repeated in traditional societies today and is almost synonymous with "economic development." Its evolution has been toward larger scale and greater specialization, with the consequences of increasing integration and interdependence and of increasing vulnerability to systemic failure. At the same time, industrialization has given a higher standard of consumption to more people than any other mode of production, so its universal dominance is hardly surprising.

Although industrialism grew up historically under capitalist institu-

tions, it has proven to be compatible with socialist institutions as well. The conflict between capitalism and socialism is not about the desirability or possibility of industrialism. That is taken for granted by both sides. The conflict is over which economic system can better produce a growing quantity of goods and services and equitably spread the benefits of the industrial mode of production. Whatever their ideological differences both systems are fully committed to large-scale, factory-style energy and capital-intensive, specialized production units that are hierarchically managed. They also rely heavily on nonrenewable resources and tend to exploit renewable resources and waste absorption capacities at nonsustainable rates.

Capitalism consists of private ownership of the means of production along with allocation and distribution provided by the market. Individual maximization of profit by firms and maximization of satisfaction (utility) by consumers provides the motive force, while competition, the existence of many buyers and sellers in the market, provides the famous invisible hand that leads private interest to serve the public welfare. Collective action by government is limited to (a) providing the institutional precondition of property rights enforced by law, (b) providing certain public goods or natural monopolies and prohibiting the formation of private monopolies, (c) maintaining aggregate demand at a level that gives an "acceptable" combination of inflation and unemployment; (d) providing a minimum social welfare safety net to keep people from destitution; and (e) intervening to correct "externalities" (situations in which voluntary exchange between two individuals, although mutually beneficial to them, has important effects on third parties).

Socialism is defined by government ownership of the means of production with allocation and distribution by central planning, but with some reliance on the market when central planning gets overwhelmed. Motive force comes from a combination of moral and material incentives. Reliance on the market comes in degrees, and Polish economist Jan Drewnowski (1961) has distinguished first-, second-, and third-degree market economies. In a first-degree market economy, quantities of consumer goods are fixed by planners, but households are free to purchase or not. The planned mix of goods may be rationed by queues or by prices, but the planner does not adjust quantities in accordance with this information on shortages and surpluses. In the second-degree market economy, the planner does adjust quantities of consumer goods according to observed shortages and surpluses, or according to changes in price if that is allowed. However, the planner only reallocates current

resources among existing plants. No new capital investment takes place as a result of consumer demand signals. In the third-degree market economy, the pattern of new investment also responds to the pattern of consumer demand, but the overall volume of investment, the decision of how much to consume and how much to invest, is still made centrally by the planners.

When household decisions on saving versus consumption are allowed to determine the aggregate social investment, then we would have a "fourth-degree" market economy, which would require capitalist rather than socialist institutions, since households must own the means of production if they are going to invest in them as individuals. But the first-, second-, and third-degree market economies are consistent with socialist institutions. Just as in the capitalist world we have considerable variation in collective influence, extending to indicative planning and extensive social welfare sectors in such countries as France or Sweden, so in the communist countries there exists a wide range of market influence extending to the relatively decentralized economies of Hungary and Yugoslavia.

The issues raised along the spectrum of socialist and capitalist options are real. Therefore once we have made clear that these are for us secondary to the question of community, it behooves us to locate ourselves with respect to them. Our position is that centralized economic planning is inefficient, that allocations are better effected in the market than by bureaucratic planning. The role of government is to set fair conditions within which the market can operate. It is also responsible for setting the overall size (scale) of the market. The market is not the end of society and is not the right instrument through which the ends of society should be set. We favor private ownership of the means of production. We favor the widest possible participation in that ownership, including worker ownership of factories, against its concentration in a few hands.

Nevertheless, our opposition to Marxism is not automatic opposition to all policies and proposals stemming from socialist thinkers. Where those policies and proposals require centralized planning for their implementation, we remain skeptical. But we hope to be open to ideas from every source, and when the thinkers are passionately committed to justice and the relief of suffering, we intend to listen with special care. We find that today many who come from the socialist tradition have shifted attention away from centralized planning, indeed that they share our suspicion of centralization and our concern for community. Some

explicitly support, as we do, decentralization of political and economic power, worker ownership of factories or participation in their management, and the subordination of the economy to social goals, democratically defined. Socialism of this sort is not what we have described above.<sup>5</sup> Instead it is a partner in fresh thinking about the possibilities of humane life in community.<sup>6</sup>

5. As an example of radical social thinking with congenial views, see Samuel Bowles and Herbert Gintis, *Democracy and Capitalism: Property, Community, and the Contradictions of Modern Social Thought* (1986). The democratic control of the economy they advocate involves decentralization rather than centralized planning. The recent work of Michael Harrington hardly focuses on socialism as we have treated it. His ideas about a shorter work week, empowering citizens, and worker participation in industrial decisions are highly congenial to us. See Michael Harrington, *The Next Left* (1986). He himself comments on the similarities between the programs of the sophisticated Right and Left (p. 15). Their difference, he says, is that the Right wants to move from the top down, and the Left from the bottom up. By this definition we are on the Left. This is quite different from centralized planning. But we find the Left as well as the Right to be lacking in appreciation of ecological limits to economic expansion.

6. Our hope is to move forward to a new type of economy different from either capitalism or socialism as they have been understood in the past. But for those who still find it difficult to think of an economy that does not fit on this spectrum, we suggest that they consider feudalism. Feudalism, surely, is neither capitalist nor socialist, yet it endured longer in Europe than either of these is likely to do. Feudalism is the *bête noir* of both, and that will help to indicate how one can be opposed to both. The feudal system was more communitarian than either socialism or capitalism in both theory and practice. It has been badly maligned since the Enlightenment by those whose interest required the extirpation of the continuing power of community in human life. Even economically the mature medieval society was far more successful and affluent, as well as more just and humane, than moderns have been willing to acknowledge. John Stuart Mill noted that the widespread proprietorship of the late Middle Ages gave England a "yeomanry who were vaunted as the glory of England while they existed, and have been so much mourned ever since they disappeared" (1973, p. 256). It was of course the application of capitalism to agriculture that destroyed these products of feudal society. Marshall also writes favorably of features of the feudal society: "In the Middle Ages . . . the great body of the inhabitants frequently had the full rights of citizens, deciding for themselves the foreign and domestic policy of the city, and at the same time working with their hands and taking pride in their work. They organized themselves into Guilds, thus increasing their cohesion and educating themselves in self-government" (1925, p. 735).

We do not recite these points in order to call for a return to feudalism. It had many faults, and in any case it is not directly applicable to an industrial society. But we do believe that surveying a wider range of economic systems can open our eyes to new possibilities. Of these, feudalism is worthy of careful consideration.



### The Third Model

This interest in a third model based on concern for human community is not new. It was vigorously pursued by the Roman Catholic Church in the nineteenth century. The Catholic critique of both capitalism and socialism is quite similar to our own. Richard E. Mulcahey summarizes this criticism:

Individualism sees in society no real unity. What it calls "society" is a mere mechanism, the interplay of the actions of individuals seeking their own ends; or it is a mere sum of economic relations. It postulates a natural order based on unrestrained freedom, on whose unhindered effect the welfare of all depends. The national economy is viewed as a sum of isolated units, which are bound together only by mere exchange relationships. . . . In socialism the concept of the unity of society is distorted. The collective society which it requires presents the unity of "oneness" rather than a union of the many. The individual is only an "associate," not an autonomous personality. [Mulcahey 1952, p. 161]

Mulcahey is describing and affirming the economic theory of Heinrich Pesch, a Roman Catholic economist whose work both informed and was informed by papal encyclicals. Pesch understood economics as "the science of the economic life (the process of providing material goods) of a people, considered as a social unit, bound together by the politico-social community life" (Mulcahey 1952, pp. 13–14). Mulcahey states, "Pesch's solidaristic system rejects the one-sidedness of a mere aggregate concept of the economy and of a single economy controlled by society, and proposes an economic order and a moral-organic unity and community of many independent private economic units" (p. 27). Pesch thus aims at "the full carrying out of the idea of community" (p. 161).

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The most careful comparison of English life at the end of the feudal era with modern life has been made by Peter Laslet in *The World We Have Lost* (1965). Those interested in a sustained argument for the superiority of the medieval system should see Hilaire Belloc (1913). Belloc contrasts the medieval system of ownership of the means of production with the capitalist and Marxist systems. In the medieval system, it is owned by the many; in capitalism, by the few; in Marxism, by the state. Leopold Kohr (1957) argues that mature medieval economies did better than ours. Nicholas Georgescu-Roegen (1950) has shown that feudalism, under conditions of overpopulation and low productivity, will allow more people to live than would capitalist institutions—in other words, in poor countries feudalism allows fewer people to starve than does capitalism. Our own hope is to recover some of the communal advantages of premodern society in a postmodern form, that is, without sacrificing the gains in individual freedom, human rights, and political equality achieved in the modern period (see Gould 1978, chap. 1).

It would be easy to suspect that Catholic teaching is simply calling for a return to more authoritarian and hierarchical patterns. But this is not true. Central to Catholic teaching is the "principle of subsidiarity." According to Pius XI, "It is an injustice, a grave evil and a disturbance of right order for a larger and higher organization to arrogate to itself functions which can be performed efficiently by smaller and lower bodies" (1931, p. 80). Commenting on this, Bernard W. Dempsey writes: "Each higher society is *subsidiary*, that is, designed to be of help to the lesser societies beneath it. It is not the other way around: the *persons* who comprise the more fundamental societies are not means to serve the *societies*. Nor are the closely knit natural communities such as the municipality to be used as means by the larger but more remote organizations like the regional or provincial government (our 'states') or the national state" (1958, p. 281).

These Roman Catholic doctrines are remarkably similar to those of Thomas Jefferson, who wrote: "The article nearest to my heart is the division of counties into wards. These will be pure and elementary republics, the aim of all of which taken together composes the State, and will make of the whole a true democracy as to the business of the wards, which is that nearest and daily concern. The affairs of the larger sections, of counties, of States, and of the Union, not admitting personal transactions by the people, will be delegated to agents elected by themselves, and representation will be substituted where personal action becomes impracticable" (Dumbauld 1955, pp. 97–98).

Alexis de Tocqueville also emphasized the importance of community in American life. In the explanation of why American democracy worked, he noted, "too much importance is attributed to legislation, too little to customs." These customs were nurtured in local communities, and it was "the influence of customs that produces the different degrees of order and prosperity which may be distinguished in the several Anglo-American democracies" (1945, p. 334).

After noting these views of Jefferson and de Tocqueville, Edward Schwarz comments: "Unfortunately, most political leaders and writers today have forgotten these communitarian concerns of Jefferson, de Tocqueville, and early Americans in general. The irony is that a wide range of evidence is now affirming empirically what these traditional theorists could assert only instinctively. It now appears certain that a strong, local community is essential to psychological well-being, personal growth, social order, and a sense of political efficacy. These conclusions are now emerging at the center of every social science discipline" (1982, p. 264).

Schwarz exaggerates at one point. John C. Raines is more careful: "That the social is primary in regard to the human has become by now less a claim than a taken-for-granted starting point in most American sociology and anthropology. But it is a starting point that has little penetrated American political and economic thought" (1982, p. 295).

The emphasis on community was important when Pesch was writing sixty years ago. Today it has become urgent. Amitai Etzioni devoted the first half of *An Immodest Agenda* to analyzing the critical situation in the United States resulting from the dissolution of community into individuals. He rightly notes that "the individual and the community make each other and require each other" (1983, p. 25). Further, he writes, "A society and its members require mutual civility for sheer survival. Unless the retreat to ego is overcome and community institutions reconstituted, the level of conflict and frustrations will rise, and the limited energy channeled to shared concerns will make for an ineffectual 'can't do' society, continued deterioration, and even, ultimately, the possibility of destruction" (p. 185). Unfortunately, when he turns to economics in the second half of the book, he seems to ignore its role in the undercutting of community through its own individualistic ideology and practice.

There is one major respect in which our approach is markedly different from that of Pesch and the papal encyclicals. Certain issues have become critical today that were little anticipated during Pesch's lifetime. Today it is important to think of the community served by the economy as enduring indefinitely through time. It is also important to see that the human communities Pesch envisioned are part of a larger community that includes the other creatures with whom human beings share the world. The industrial economy is only a part of what Wendell Berry has called the Great Economy—the economy that sustains the total web of life and everything that depends on the land. It is the Great Economy that is of ultimate importance.

### The Program for This Book

Like Pesch, we are approaching economics for community from the side of the market economy, discussing the revisions required in neoclassical theory and in actual capitalist practice in order that the destruction of community be ended. Precisely for this reason, it is inevitable that our book should appear to be an attack on the current discipline. In one sense it is. We do emphatically believe that humanity is in need of an

approach to its economic problems that differs markedly from that supported by most of the practitioners of the present discipline, and since we think these practitioners are sensitively and honorably expressing the implications of current theory, it is this theory we criticize. We believe the failures of the discipline of economics as now practiced have to be shown before there is much chance of reconstructing economics on a different basis.

But while the book is a severe critique of the contemporary discipline of economics, our purpose is not to reject the core of its teaching. On the contrary, we are convinced of the general soundness of the account of markets and of the affirmation of their excellence for certain purposes that is at the heart of classical and neoclassical theory alike. We believe many public purposes could be better served by the application of market principles than by the patchwork of government regulations now so prevalent. Our intention is not that economic theory begin over again, but that it be reconstructed on the basis of a paradigm that both clarifies the excellence of its past work and sets it in a larger context. Newtonian science continues to play an extremely important role in the context of the Einsteinian worldview. The analysis of the market can continue to play an extremely important role within a context that sees the purpose of the economy as the service of community.

Of the authors of this book, one is an economist, one a theologian. Both of us have strong ecological concerns. We have come to our economic views through disturbance about what standard development is doing in the Third World. Both of us are Protestants. Both have been influenced by the philosophy of Alfred North Whitehead.

We recognize that much of this book falls outside the boundaries of what is regarded as the discipline of economics, but we feel that the economy, the Great Economy, is far larger than what that discipline studies. We think that our collaborative work is a type of reflection in which citizens from many backgrounds need to share. Decisions that will be made soon in this country will shape the world of our children and grandchildren, probably irreversibly. They should not be made within the restricted context that now governs the academic discipline of economics.

The book is divided into four parts. Part One views economics as it is. The great achievement of economics is to have become a "science." That involves two major elements: it has the characteristics of an academic discipline and it has chosen the deductive model. Immersion in the science makes it very difficult to remember the degree of abstractness in-