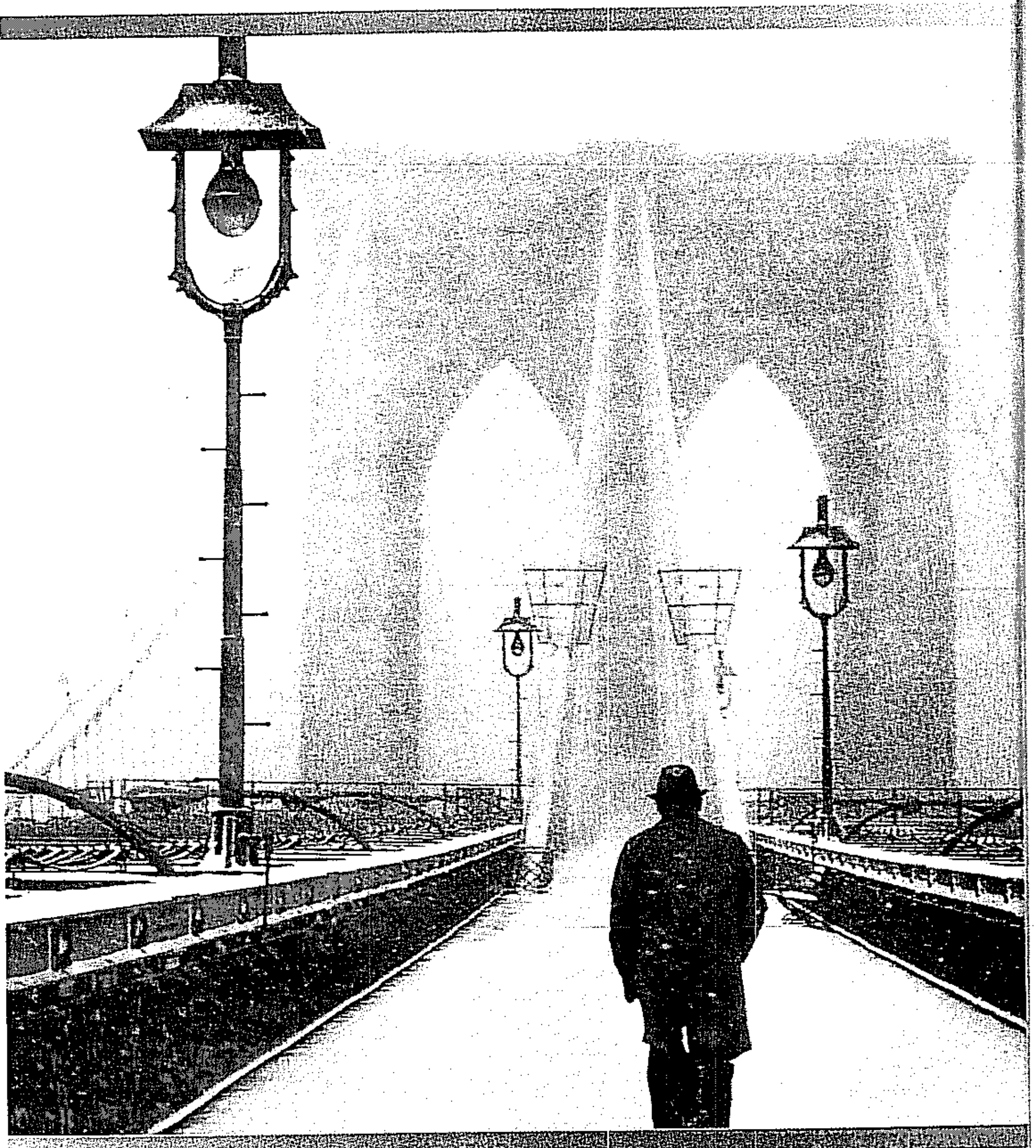


1

The Economic Way of Thinking

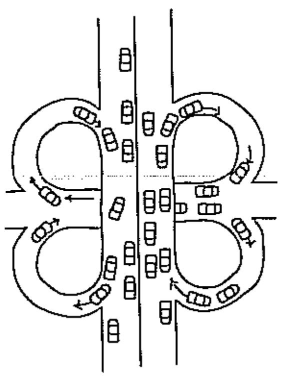
Good mechanics can locate the problem in your car because they know how your car functions when it *isn't having any problems*. A lot of people find economic problems baffling because they do not have a clear notion of how an economic system works when it's working well. They are like mechanics whose training has been limited entirely to the study of malfunctioning engines.

When we have long taken something for granted, it's hard even to see what it is that we've grown accustomed to. That's why we rarely notice the existence of order in society and cannot recognize the mechanisms of social coordination upon which we depend every day. A good way to begin the study of economics, therefore, might be with astonishment at the feats of social cooperation in which we daily engage. Rush-hour traffic is an excellent example.

RECOGNIZING ORDER

You are supposed to gasp at that suggestion. "Rush-hour traffic as an example of social *cooperation?* Shouldn't that be used to illustrate the law of the jungle or the *breakdown* of social cooperation?" Not at all. If the association that pops into your mind when someone says "rush-hour traffic" is "traffic jam," you are neatly supporting the thesis that we notice only failures and take success so much for granted we aren't even aware of it. The dominant characteristic of rush-hour traffic is not jam but movement, which is why people venture into it day after day and almost always reach their destinations. It doesn't work perfectly, of course. (Name one thing that does.) But the remarkable fact at which we should learn to marvel is that it works at all.

Thousands of people leave their homes at about eight in the morning, slide into their automobiles, and head for work. They all choose their own routes without any consultation. They have diverse skills, differing attitudes toward risk, and varying degrees of courtesy. As these passenger automobiles in their wide assortment



of sizes and shapes enter, move along, and exit from the intersecting corridors that make up the city's traffic veins and arteries, they are joined by an even more heterogeneous mixture of trucks, buses, motorcycles, and taxicabs. The drivers all pursue their separate objectives, with an almost single-minded devotion to their own interests, not necessarily because they are selfish but simply because none of them knows anything about the objectives of the others. What each one does know about the others is confined to a few observations on the position, direction, and velocity of a changing handful of vehicles in the immediate environment. To this they add the important assumption that other drivers are about as eager to avoid an accident as they themselves are. There are general rules, of course, that everyone is expected to obey, such as stopping for red lights and staying close to the speed limit. That's about it, however. The entire arrangement as just described could be a prescription for chaos. It ought to end in heaps of mangled steel.

What ensues instead is a smoothly coordinated flow, a flow so smooth, in fact, that an aerial view from a distance can almost be a source of aesthetic pleasure. There they are—all those independently operated vehicles down below, inserting themselves into the momentary spaces between other vehicles, staying so close and yet rarely touching, cutting across one another's paths with only a second or two separating a safe passage from a jarring collision, accelerating when space opens before them and slowing down when it contracts. The movement of rush-hour traffic, or indeed of urban traffic at any time of day, really is an astounding feat of social cooperation.

THE IMPORTANCE OF SOCIAL COOPERATION

The traffic example is particularly effective in making us see how much social cooperation we totally fail to notice, because everyone is familiar with traffic but almost no one thinks of it as a cooperative endeavor. But the example is also useful in making the point that we depend on mechanisms of coordination for far more than what we usually think of as "economic" goods. If we had no working procedures to induce cooperation, we could enjoy none of the benefits of civilization. "In such a condition," as Thomas Hobbes (1588–1679) observed in an often-quoted passage of his *Leviathan*,

> there is no place for industry, because the fruit thereof is uncertain; and consequently no culture of the earth; no navigation, nor use of the commodities that may be imported by sea; no commodious building; no instruments of moving and removing such things as require much force; no knowledge of the face of the earth; no account of time; no arts; no letters; no society; and, which is worst of all, continual fear, and danger of violent death; and the life of man, solitary, poor, nasty, brutish, and short.[1]

Because Hobbes believed that people were so committed to self-preservation and personal satisfaction that only force (or the threat of it) could keep them from constantly assaulting one another, his writings emphasize only the most basic form of social cooperation: abstention from violence and robbery. He seems to have supposed that, if people could merely be induced not to attack one another's persons or property, then positive cooperation—the kind that actually produces industry, agriculture, knowledge, and art—would develop of its own accord. But will it? Why should it?

HOW DOES IT HAPPEN?

By what means do the members of a society induce one another to take precisely those complexly interconnected actions that will eventually produce the multitude of goods, tangible and intangible, that we all enjoy? Even a society of saints must use some procedures for inducing positive cooperation *of the right kind* if the life of each saint is to be more than "solitary, poor, nasty, brutish, and short." Saints must, after all, somehow find out exactly what ought to be done and when and where it ought to be done before they can play an effective part in helping others.

Hobbes probably failed to see the importance of this question for understanding life in the "commonwealth" because the society he knew was far simpler, more bound by custom and tradition, and less subject to rapid and disruptive change than the societies in which we have grown up. Not until well into the eighteenth century, as a matter of fact, did any significant number of thinkers begin to wonder why it was that society "worked"—that individuals pursuing their own interests on the basis of extremely limited information nonetheless managed to produce not chaos but a remarkably ordered society.

One of the most perceptive and surely the most influential of these eighteenth-century thinkers was Adam Smith (1723–1790). Smith lived in an age when most educated people believed that only the diligent attentions of political rulers could prevent a society from degenerating into disorder and poverty. Smith did not agree. But in order to refute the accepted opinion of his day, he had to describe the mechanism of social coordination that he saw operating in society—a mechanism that not only functioned, in his judgment, without the constant attention of government, but also worked so powerfully that it often canceled the effects of contrary governmental policies. Adam Smith published his analysis

[1]Hobbes, *Leviathan, or the Matter, Forme and Power of a Commonwealth Ecclesiastical and Civil*, 1651.

in 1776 as *An Inquiry into the Nature and Causes of the Wealth of Nations* and thereby established his claim to the title Founder of Economics. He did not *invent* "the economic way of thinking." But he developed it more extensively than any of his predecessors had done, and he was the first writer to use it in a comprehensive analysis of social change and social cooperation.

AN APPARATUS OF THE MIND

What exactly do we mean by *the economic way of thinking?* To begin with, it is exactly what the term suggests: an approach, rather than a set of conclusions. John Maynard Keynes phrased it aptly in the statement quoted in the front of this book:

> The Theory of Economics does not furnish a body of settled conclusions immediately applicable to policy. It is a method rather than a doctrine, an apparatus of the mind, a technique of thinking which helps its possessor to draw correct conclusions.

But what is this "technique of thinking"? It's a little hard to describe in any way that is both brief and clear. You will come to see what it is by practicing it yourself. Perhaps it can best be summarized as a set of concepts designed to bring out the implications of one fundamental presupposition: *All social phenomena emerge from the actions and interactions of individuals who are choosing in response to expected benefits and costs to themselves.*

That's a rather sweeping assertion. *All* social phenomena? The fact is, and it might as well be admitted at the outset, that economists harbor imperialist ambitions. They believe that their theory explains a lot more than what people usually have in mind when talking about "the economic sector" of society. The economic way of thinking subverts such traditional distinctions as those between business and government or between institutions operating to make a profit and so-called nonprofit institutions. If we have found a way to explain the behavior of International Business Machines and the American Farm Bureau Federation, why shouldn't it also explain the behavior of the Internal Revenue Service and the Department of Agriculture in the United States government? Isn't every branch and agency of government made up, just like any other social group, of individuals who choose on the basis of expected benefits and costs to themselves?

Don't misunderstand. Economic theory does not assume that people are selfish, or materialistic, or shortsighted, or irresponsible, or interested exclusively in money. None of these is implied by the assumption that individuals choose on the basis of expected benefits and costs to themselves. Everything depends on what people take to be benefits and costs and the relative values they place upon these benefits and costs. Economic theory does not deny the reality or importance of generosity, public spirit, or any other virtue.

Economizing actions

The economic way of thinking, when put to work, displays two aspects, one focusing on *actions* and the other on *interactions*. The focus on actions emphasizes *economizing*. To economize means to allocate available resources in a way that extracts from those resources the most of whatever the economizer wants. Scarcity makes economizing necessary. Although someone with access to unlimited resources would not have to economize, keep in mind that time is a scarce resource, at least for mortals, so that even people with more money than they know how to spend must economize. Because a week on the ski slopes in Utah is a week that cannot be spent on the beaches of Acapulco, you must choose, no matter how large your money income. As we shall see in the chapters ahead, the economic way of thinking clarifies the economizing process, the actions of choosing under the constraints that scarcity imposes.

It also clarifies a lot of puzzling but important *inter*actions. If the core problem for economic actions is scarcity, the core problem for economic *inter*actions is *a multiplicity of diverse and even incommensurable individual projects.* We deal with scarcity by economizing. We deal with the fact that we require the cooperation of millions of other people whom we don't even know by participating in a coordinating process. The urban traffic example illustrates both aspects. When they are planning their route, thinking about a lane change, or deciding whether to speed up or slow down as the traffic light turns amber, commuters are engaged in economizing actions. But their actions get coordinated through a process that is much more than the simple sum of each driver's behavior. No driver (and no central traffic planner!) controls this process with all its interactions, and yet the process manages to coordinate all those individual decisions.

In modern industrial societies, people's economizing actions occur in the context of extreme specialization. Specialization, or what Adam Smith called the division of labor, is a necessary condition for the increases in production that have so expanded "the wealth of nations" in recent centuries. But specialization in the absence of coordination is the road to chaos, not wealth. How is it possible for millions of people to pursue the particular projects in which each of them is interested, on the basis of their own unique resources and capabilities, in almost total ignorance of the interests, resources, and capabilities of almost everyone else upon whose cooperation their own projects depend for success?

Commercial society as defined by Adam Smith

Economic theory will turn out to be most illuminating when used to answer this question, to explain the often mysterious working of what Adam Smith called *commercial society*. "When the division of labour has been once thoroughly established," Smith observed early in *The Wealth of Nations*,

> it is but a very small part of a man's wants which the produce of his own labour can supply. He supplies the far greater part of them by exchanging that surplus part of the produce of his

own labour, which is over and above his own consumption, for such parts of the produce of other men's labour as he has occasion for. Every man thus lives by exchanging, or becomes in some measure a merchant, and the society itself grows to be what is properly a commercial society.

Interactions: exchange

The successful coordination of activity in such a society, where everyone lives by specializing and exchanging, is a task of extraordinary complexity. Think for a moment about the activities that had to be precisely coordinated in order for you to enjoy this morning's breakfast. Farmers, truck drivers, construction workers, bankers, and supermarket checkers are just a few of the multitude of people whose efforts contributed to the production, processing, transportation, and distribution of your breakfast cereal or toast. How were all these people induced to do exactly the right thing at precisely the right time and place? Economic theory originated and developed largely out of efforts to answer that question. And despite all its imperialistic adventures in recent years, economics still does most of its useful work in explaining the functioning of commercial society, which is what most people probably have in mind when they talk about "the economy."

COOPERATION THROUGH MUTUAL ADJUSTMENT

Economic theory asserts that the economizing actions people take in the pursuit of their own interests create the alternatives available to others, and that social coordination is a process of continuing mutual adjustment to the changing net advantages that their interactions generate. That is a very abstract argument. We can make it more concrete by referring once more to traffic flow.

Picture a freeway with four lanes in each direction and with all the entrances and exits on the right. Why don't all the drivers stay in the far-right lane? Why do some of them go to the trouble of driving all the way over to the far left when they know they'll have to come back to the right lane to exit? Anyone who has driven on a freeway knows the answer: The traffic flow is impeded in the far-right lane by slow-moving vehicles entering and exiting; so people in a hurry get out of the right lane as quickly as possible.

Which of the other lanes will they choose? Although we can't predict the action of any single driver, we know that the drivers will disperse themselves quite evenly among the three other lanes. But why does this happen? How does it happen? The answer is also the explanation of what we meant just now by *a process of continuing mutual adjustment to the changing net advantages that their actions generate*. Drivers are alert to the net advantages of each lane and therefore try to move out of any lanes that are moving slowly and into those that are moving faster. This speeds up the slow lanes and slows down the fast lanes until all lanes are moving at the same rate, or, more accurately, until no driver perceives any net advantage to be gained by changing lanes. It all happens quickly, continuously, and far more effectively than if someone at the entrances passed out tickets *assigning* each vehicle to a particular lane.

That, according to the economic way of thinking, is how the social world works. Individuals choose their actions on the basis of the net advantages they expect. Their actions alter, however minutely, the relative benefits and costs of the options that others perceive. When the ratio of expected benefit to expected cost for any action increases, people do more of it. When the ratio falls, they do less. The fact that almost everyone prefers more money to less is an enormous aid in the process, an extremely important lubricant, if you will, in the mechanism of social coordination. Modest changes in the monetary cost and monetary benefit of particular options can induce large numbers of people to alter their behavior in directions more consistent with what other people are concurrently doing. And this is the primary system by which we obtain cooperation among the members of society in using what is available to provide what people want.

Those who object to the prominence of monetary incentives in commercial societies have seized upon an important point, but it is probably not the point they were intending to make. People do things for all kinds of reasons, out of all kinds of motives. What is unique about commercial societies is that in these societies people *change* their behavior largely in response to monetary incentives. This occurs not because commercial societies foster an obsession with money, but because the offer of a little more or a little less money is by and large the most effective way to adjust incentives in a way that secures coordination and cooperation.

The easiest way to persuade people whom you don't even know (and most of our social transactions *are* with people we don't know!) is to offer more or less money. Those who complain about the predominant role of monetary motives in a commercial society are overlooking the fact that money, for the most part, merely tips the scales. It tips the scales precisely because it's money, which is generalized command over resources. In the absence of some universally accepted scale tipper, we could not have low-cost exchange, which means we could never have developed the extensive division of labor that has made us so wealthy. Our civilization depends on the fact that an ounce of monetary persuasion, because it reaches almost everyone, produces a ton of responsive action.

THE BIASES OF ECONOMIC THEORY

The admission a few pages back that economics has imperialist ambitions may not disturb you as much as the admission now that the economic way of thinking is a biased perspective. It does not offer an unprejudiced view of society, in which all the facts are presented and all values are given the same weight. Think again about what we suggested was the fundamental presupposition of economic theory, that all social phenomena emerge from the actions and interactions of individuals who are choosing in response to expected benefits and costs to themselves.

People choose.

Isn't that a biased perspective? Consider the emphasis on *choice*. Economic theory is so preoccupied with choice that some critics have accused it of assuming people choose to be poor or choose to be unemployed. When we come to the issues of poverty and unemployment, you can decide for yourself whether this is a fair criticism or a misunderstanding. But there can be no doubt that economic theory attempts to explain the social world by assuming that events are the product of people's choices.

Only individuals choose.

Closely related to this focus on choice is the emphasis economic theory gives to the *individual*. Because only individuals actually choose, economists try to dissect the decisions of such collectives as governments, universities, or corporations until they locate the choices of individual persons who make them up. Does economic theory miss the significance of group action and social bonds by unduly emphasizing the individual? Whatever the force of this charge, the economic way of thinking definitely does make the individual the ultimate unit of explanation.

Individuals choose after weighing benefits and costs.

Economic thinking is also criticized by some as false or misleading because of its emphasis on the economizing process, on calculation and consistency of ends and means. Economists assume that people do not act capriciously, that they compare the expected costs and benefits of available opportunities before they act, and that they learn from and therefore do not repeat their mistakes. But are people really that calculating? Aren't our actions guided more by unconscious urges and unexamined impulses than all this would admit? And is every action really a means to some end? Although economists do not claim that people know everything or never make mistakes, the economic way of thinking does indeed assume that people's actions follow from comparisons of costs and benefits. And it does emphasize the instrumental character of human action while neglecting the fact that many important activities—a spirited conversation, perhaps, or a friendly game of tennis—are not engaged in as a means to some end.

Another charge often leveled against the economic way of thinking is that it harbors a *promarket* bias. This criticism, too, calls attention to a genuine and significant characteristic of economic theory, although this characteristic may not be altogether what it seems to be. Economic theory originated as a study of markets, of complex exchange processes, and economists have learned a great deal over the years about the conditions under which exchange works poorly or well. The economist's alleged promarket bias is probably better seen as a preference for those social institutions and "rules of the game" that make exchange a positive-sum game, a process from which all participants derive benefit.

RULES OF THE GAME

All interactions presuppose some "rules of the game."

That's a term you're going to meet repeatedly in this book: the *rules of the game*. Whether the "game" is business, government, science, family, school, traffic, basketball, or chess, it can't be played satisfactorily unless the players know at least roughly what the rules are and generally agree to follow them. Most social interaction is directed and coordinated by the rules that participants know and follow.

When the rules are in dispute or inconsistent or simply not clear, the game tends to break down. The countries of central and eastern Europe that were trying in the 1990s to move from centrally planned and bureaucratically controlled systems of production to decentralized, market-coordinated systems faced no greater obstacle than the absence of clear and accepted rules for the new game they were attempting to play. If you have ever traveled in a foreign country with a culture radically different from your own and a language that you didn't understand, you have some sense of what happens when the rules of the game in a society are suddenly and dramatically upset. People don't know exactly what is expected of them or what they can expect from others. Social cooperation declines quickly in such a setting, as mutually beneficial exchanges under the rules give way to hesitant attempts to find out what the rules are and, in the worst cases, destructive struggles to establish rules that will work in one's own favor.

Property rights are rules of the game.

Property rights form a large and important part of the rules governing most of the social interactions in which people regularly engage. By deciding exactly *what is whose under which circumstances*, they provide the members of a society with dependable information and incentives. But a system of satisfactorily clear property rights cannot be created overnight; it will almost inevitably be the product of an evolution over time, in which law, custom, morality, technology, and daily practice interact to establish reliable patterns. A movement away from socialism entails the abolition of old property rights but not necessarily the creation of new ones. The consequence may be chaos rather than market coordination. The road from bureaucratic control of the economy to market control has been a treacherous one for the nations of the former Soviet bloc, with many potholes, washouts, earthslides, and unmapped sections.

If you would like a vivid illustration from your own experience of the difference that property rights make, reflect once again on urban traffic. But this time think about traffic *congestion*. Urban traffic is not always a process of smooth coordination, a fact well-known to all those American drivers who have begun to list traffic congestion as one of the pressing social problems of our time. Why is this? Why are more people complaining with increasing vehemence about the growing amount of time they must spend in traffic jams? And why doesn't someone do something to correct the situation?

Why do motorists tie themselves up in traffic?

The answer is not, as many immediately assume, an expanding population. When the population of an area grows, the checkout lines at the grocery store don't become longer and people don't start stuffing themselves more tightly into houses and apartments. Instead we typically see the supply of groceries and suitable housing expand right along with the growing population. Why is it that this does not happen in the case of motorized traffic? Why do we observe with growing frequency such glaring mismatches between the number of motor vehicles in operation and the capacity of the corridors in which they can operate? The basic difference between groceries and housing on the one hand and streets and highways on the other is the system of property rights and associated rules of the game that have come to characterize streets and highways in contrast to most of the other goods that we regularly use. If you don't see the difference that can make, be patient. It will be a recurring theme in the chapters ahead.

BIASES OR CONCLUSIONS?

Let's go back to those four prominent (and interrelated) biases inherent in the economic way of thinking. Are they really biases or prejudices? Why couldn't we call them convictions (or even conclusions) and simply say that economists explain social phenomena by postulating interaction among the calculated choices of individuals, because this enables them to understand those phenomena? Do we say that astronomers are biased because they assume that all the light they observe has traveled toward them at 186,000 miles per second, or that biologists are biased because they assume that DNA molecules control the development of organisms?

The questions we're raising now are important and interesting.[2] But we cannot follow them further without pushing this introductory chapter to an intolerable length. It has long seemed obvious to the author (a prejudice or a conclusion?) that the search for knowledge of any kind necessarily begins with some *commitments* on the part of the inquirer. We cannot approach the world with a completely open mind, because we weren't born yesterday. And completely open minds would in any event be completely empty minds, which can learn nothing at all. All discussion, every inquiry, and even each act of observation are rooted in and grow out of convictions. We cannot begin everywhere or with everything. We must begin somewhere with something. We proceed from where we find ourselves and on the basis of what we believe to be true, important, useful, or enlightening. We may, of course, be wrong in any of these judgments. Indeed, we are always wrong to some extent, since every "true" statement necessarily leaves out a great deal that is also true and thus errs by omission.

We cannot avoid this risk, as some people suppose, by steering clear of theory. People who sneer at "fancy theories" and prefer to rely on common sense and everyday experience are often in fact the victims of extremely vague and sweeping hypotheses. Consider this actual letter to a newspaper from a young person in Pennsylvania who was once "one of a group of teenage pot smokers. Then a girl in the crowd got pregnant. Her baby was premature and deformed and needed two operations." The newspaper's adviser to the teenage lovelorn printed that letter approvingly, as evidence that the price of smoking marijuana is high.

Perhaps it is. But suppose the writer of that letter had written: "Then the Pittsburgh Steelers won the Super Bowl, and the Philadelphia Flyers took the Stanley Cup." Everyone would object that those events had nothing to do with the group's pot smoking. *But how do we know that?* If the mere fact that the young girl's misfortunes followed her pot smoking is evidence of a causal relationship, why can't we also infer a causal relationship in the case of the Steelers and the Flyers?

NO THEORY MEANS *POOR* THEORY

The point is a simple but important one. We cannot discover, prove, or even suspect any kind of causal relationship without having a theory in mind. Our observations of the world are in fact drenched with theory, which is why we can usually make sense out of the buzzing confusion that assaults our eyes and ears. Actually we observe only a small fraction of what we "know," a hint here and a suggestion there. The rest we fill in from the theories we hold: small ones and broad ones, vague and precise ones, well tested and poorly tested, widely held and sometimes peculiar, carefully reasoned and dimly recognized.

I. M. D. Little, a distinguished British economist who worked for a time as an adviser to the British treasury, later wrote an article describing his experiences and discussing the usefulness of economic theory in the world of policymaking. Here is an interesting paragraph:

> Economic theory teaches one how economic magnitudes are related, and how very complex and involved these relationships are. Noneconomists tend to be too academic. They abstract too much from the real world. No one can think about economic issues without some theory, for the facts and relationships are too involved to organize themselves: they do not simply fall into place. But if the theorist is untutored, he is apt to construct a very partial theory which blinds him to

[2] The thoughtful student who would like to pursue these issues further should be sure to read *The Structure of Scientific Revolutions* by Thomas S. Kuhn (Chicago: University of Chicago Press, 1962). This highly readable essay on the history and philosophy of science has had an enormous influence on the thinking of social scientists about the respective roles of assumption and evidence in their investigations.

some of the possibilities. Or he falls back on some old and over-simple theory, picked up from somewhere or other. He is also, I believe, apt to interpret the past naively. *Post hoc ergo propter hoc*[3] is seldom an adequate economic explanation. I was sometimes shocked by the naive sureness with which very questionable bits of economic analysis were advanced in Whitehall. Of course, economists may be too academic in another sense: they may not appreciate administrative difficulties, or may lack a sense of political possibility. But, then, there is no danger of these things being overlooked.[4]

"*Noneconomists* tend to be too academic. They abstract too much from the real world." That isn't the way you usually hear it. But Little is probably correct. "I don't know anything about fancy economic theory," the confident amateur begins, "but I do know this. . . ." And what he says next demonstrates all too often that he was quite right in denying any knowledge of economic theory, but quite wrong in supposing that this preserved him from error. Those who try to reason about complex economic interrelationships without theory usually manage only to reason with very poor theory.

None of this should be interpreted as a wholesale defense of economists, who sometimes like to dazzle the public with complex theorems and exercises in pure logic instead of addressing the questions people are actually asking. Even in the teaching of economics, we have often behaved as if all the students enrolled in an introductory course were aiming at a Ph.D. in the subject, and that it was our duty to begin their preparation for the doctoral exams. That's probably why introductory courses typically offer so many more ideas than students can possibly digest.

This textbook developed out of a growing suspicion that when students found economic theory mystifying and tedious, it was largely because we economists were trying to teach them too much. This book very consciously sets out, therefore, to achieve more by attempting less. It is organized around a set of concepts that collectively make up the economist's basic kit of intellectual tools. The tools are all related to the fundamental assumption we have discussed and are surprisingly few in number. But they are extraordinarily versatile. They unlock such mysteries as foreign exchange rates, business firms that make profits by accepting losses, the nature of money, and different prices charged for "identical" goods—mysteries that are generally conceded to be in the economist's province. But they also shed light on a wide range of issues that are not ordinarily thought of as economic at all—traffic congestion, environmental pollution, the workings of government, and the behavior of college administrators—to mention just a few that you will encounter in the chapters ahead.

It's important to realize, however, that economic theory *by itself* cannot answer any interesting or important social questions. The economic way of thinking has to be supplemented with knowledge drawn from other sources: knowledge about history, culture, politics, psychology, and the social institutions that shape people's values and behavior. Learning the mere techniques of economic analysis is far easier than mastering the art of applying them sensibly and persuasively to actual social problems in their infinite complexity.

But this is not the time to worry about the fact that intelligent applications of economic theory will always be difficult and uncertain. The primary goal of this book is to get you started in the practice of thinking the way economists think, in the belief that once you start you will never stop. Economic thinking is addictive. Once you get inside some principle of economic reasoning and make it your own, opportunities to use it pop up everywhere. You begin to notice that much of what is said or written about economic and social issues is a mixture of sense and nonsense. You get in the habit of sorting the sense from the nonsense by applying the basic concepts of economic analysis. You may even, unfortunately, acquire the reputation of being a cynic, for people who habitually talk nonsense like to cry "cynic" at anyone who points out what they are doing.

ONCE OVER LIGHTLY

The economic way of thinking was developed by social theorists largely to explain how order and cooperation emerge from the apparently uncoordinated interactions of individuals pursuing their own interests in substantial ignorance of the interests of those with whom they are cooperating.

The fundamental assumption of the economic way of thinking is that all social phenomena emerge from the actions and interactions of individuals who are choosing in response to expected benefits and costs to themselves. Individuals economizing in the face of scarcity create the alternatives available to others, and their interactions are coordinated by a process of continuing mutual adjustment to the changing net advantages that their actions generate.

The perspective of economic theory on human actions and interactions places a strong emphasis on choices by individuals who continually compare expected benefits and costs. While this is a biased or limited perspective, theory of some kind is indispensable for anyone who wants to understand the complex phenomena of social life.

The economic way of thinking also emphasizes the importance for effective social cooperation of agreement on the rules of

[3]Literally, "After this, therefore because of this": the logical fallacy of assuming that A must have caused B if A preceded B in time. The argument of the penitent Pennsylvania pot smoker is an example.

[4]I. M. D. Little, "The Economist in Whitehall," *Lloyds Bank Review* (April 1957).

the game. Property rights, which determine what is whose under which circumstances, provide the basic rules governing social interaction in any commercial society—Adam Smith's term for a society characterized by extensive specialization and exchange.

QUESTIONS FOR DISCUSSION

1. How much do people have to know about one another in order to cooperate effectively? Contrast the situation of two family members who are planning to take a vacation together with the situation of motorists who are simultaneously using intersecting streets. How are "collisions" avoided in each case? What do you know about the interests, the personality, or the character of the people whose cooperation supplied your breakfast this morning?
2. What do you predict would happen if Los Angeles decided to reserve one lane on each of its freeways for "urgent vehicles," with an urgent vehicle defined as any vehicle whose driver might be late for an important event if the vehicle were to be delayed by congestion in the regular lanes? Do you think drivers would stay out of the urgent vehicle lane? Or would it become just as congested as all the other lanes? Would such an idea be more likely to succeed in practice if drivers were generally less selfish and more considerate?
3. When Mother Teresa accepted the Nobel Prize for Peace in October 1979 and decided to use the $190,000 award to construct a leprosarium, was she acting in her own interest? Was she behaving selfishly?
4. A newspaper item reported that two-thirds of all mothers who work outside the home "do it for the money, not by choice." Are those really alternatives? Either for the money or by choice?
5. At the present time U.S. commercial airlines will carry an infant under age two at no charge if the infant sits on the lap of a fare-paying adult, but will charge for an extra seat if the plane is full and the parents want the child placed in a child-restraint seat. If the government requires that all infants fly in child-restraint seats, the infant will have to have a ticket of its own to make sure that a seat is available. Should the government impose such a requirement? "There is no real choice about the matter," some have argued, "because a child's life is of far more value than the price of an airline ticket." Do you agree with that argument? What are the actual alternatives?
6. "In truth, the presence or absence of poverty in this economically advanced society is now a matter open to public choice." Do you agree? Can we choose to abolish poverty in the United States simply because we have enough wealth to do so? Is "public choice" different in any important respects from individual choice?
7. How important are monetary motives? A story in *The Wall Street Journal* of May 1, 1995, reported the results of a survey conducted by Kaplan Educational Centers of its students preparing to take the Law School Aptitude Exam. They were asked what attracted them to a career in law. Only 8 percent said they were attracted by the financial rewards. But 62 percent thought that *others* were attracted by the financial rewards. How would you interpret this disparity?
8. Why do most people want larger money incomes? Former British Prime Minister Margaret Thatcher once suggested that people are motivated by money not because they are greedy, but because money gives them more control over their lives. What do *you* think most people are ultimately after when they make sacrifices in order to increase their money incomes?
9. What happens when the rules of the game (written or unwritten) decree that important meetings won't start until everyone is present and that late arrivals will incur no penalty? Is it in anyone's interest to be punctual? Are these rules of the game likely to prove satisfactory over time?
10. What are some of the more important rules that coordinate the actions of all those playing the "game" of this economics course? Who decided where and when the class would meet, who would teach it, who would enroll as students, what the textbook would be, when the exams would be given, and so on? Who decides where each student will sit? Do you find it odd that two students rarely try to occupy the same seat?
11. In the early 1980s, when the Polish people had to stand in long lines in order to purchase most consumer goods, the government ordered that every third place in line be reserved for pregnant women or disabled persons. This was presumably done to reduce their discomfort. Do you think it resulted in less standing in line by pregnant women? Do you suppose any women became pregnant in order to be able to cut into the long lines?
12. What do we mean when we say, "That's just a coincidence; it doesn't prove anything"? How does theory enable us to distinguish relevant evidence from mere coincidence?
13. Would you say that physicians who don't believe acupuncture works are biased if they reject it without trying it? If someone told you that you can get a perfect grade in this course without studying just by regularly chanting the mantra "invisible hand," would you believe them? Would it be a sign of bias or prejudice on your part if you totally ignored this advice even though you are extremely eager for a high grade in the course?
14. Char Cole bought four steaks at the butcher shop on Friday afternoon. Later that evening three friends came over for a barbecue. Do you suppose her purchase of the steaks *caused* the friends to come over? How can you decide which event was more likely the cause and which the effect? If you read that the crime rate increased in a certain city during a time when the purchase of handguns had also increased, would you suspect a causal connection? Which would more likely be the cause and which the effect? How does *theory* shape your answer?
15. Someone has calculated that American women with four years of college have twice as many babies on average as women with five years of college. Assume the data are correct. What conclusions would you draw? Would you infer that going to college for a fifth year reduces female fertility? Would you caution a woman who has just completed four years of college not to take a fifth year if she is determined to have children? What theories are you using?
16. Orville Wright once observed that "learning the secret of flight from a bird was a good deal like learning the secret of magic from a magician. After you know what to look for, you see things that you did not notice when you did not know exactly what to look for." How does one learn what to look for?

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