The Economic Way of Thinking

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LEARNING OBJECTIVES

- Convey the definition of economics.
- Introduce the concept of economizing behavior.
- Develop an understanding of importance of individual decision-making.
- Introduce property rights as rules of the economic game.
- Gain a sense of appreciation of the invisible hand of social interactions.

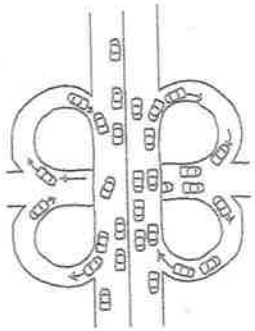
Good mechanics can locate the problem in your car because they know how your car functions when it *isn't having any problems*. A lot of people find economic problems baffling because they do not have a clear notion of how an economic system works when it's working well. They are like mechanics whose training has been limited entirely to the studying 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 processes 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 plans, with an almost single-minded devotion to their own interests, not necessarily because they are selfish but simply because none of them knows in detail the plans 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. And sometimes it does—but that is the rare exception.



Instead we witness 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. It is guided as if by an "invisible hand." 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. Rather than anarchy and chaos, 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

Everyone is familiar with traffic but almost no one thinks of it as cooperative. We depend on processes of coordination for far more than what we usually think of as "economic" goods. Without institutions that encourage cooperation, we couldn't enjoy the benefits of civilization. "In such a condition," as Thomas Hobbes observed in an often-quoted passage of his book, *Leviathan* (1651), "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."

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?

How do people encourage one another to take precisely those complexly interconnected actions that will eventually produce the multitude of goods and services 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.

Three hundred and fifty years have passed since Hobbes examined society. 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, with extremely limited information, nonetheless managed to produce not chaos but a remarkably ordered, productive society.

One of the most perceptive and surely the most influential of these eighteenth-century thinkers was Adam Smith. Smith lived in an age when most educated people believed that only the careful planning 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 process of social coordination that he saw operating in society—a process 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 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 many 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—The Skill of the Economist

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. It is a technique of thinking about the complex world around us.

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 derived from one fundamental presupposition: *All social phenomena emerge from the actions and interactions of individuals who are choosing in response to expected additional benefits and costs to themselves.*

That's a rather sweeping assertion. All social phenomena? You bet. The fact is, and it might as well be admitted at the outset, that economists believe that their theory explains a lot more than what people usually have in mind when talking about "the economic sector" of society. Economics is not only about money and profit, business and finance. Nor is it only a study of people's competitive behaviors. In fact, economics studies all kinds of choices and the unintended consequences—the unanticipated side effects—of choices. Rush-hour traffic and international trade can both be studied using the economic way of thinking; so, too, can nonprofit businesses and socially concerned charities and government bureaus. If we have found a way to explain the behavior of people at Wal-Mart and GM, 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 on these benefits and costs. Economic theory does not deny the reality or importance of generosity, public spirit, or any other virtue. Economists would be foolish if they denied these facts. Indeed, Adam Smith also wrote an entire book on virtue!

Economizing actions

The economic way of thinking, when put to work, displays three aspects, one focusing on *actions*, the second on *interactions*, and the third on *consequences*, whether those consequences are intended or unintended. The focus on actions emphasizes *economizing* and *trade-offs*, or sacrifices. To economize means to use resources in a way that extracts from them 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. Even Facebook's Mark Zuckerberg must choose how to best use his time and wealth—shall he search next month for more investment opportunities or take a vacation on a remote island? Even he can't have everything all at once. Even he faces trade-offs. In fact, he even faces trade-offs—choices—when deciding what to do with the next hundred million dollars he earns. Shall he stuff it in his mattress, invest it in another online venture, or, like before, donate it all to fix the broken Newark public school system? His options may be very different from yours, but like you, Zuckerberg still faces scarcity. Scarcity means making a sacrifice, a trade-off, to get more of what you want. 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 interactions is *a multiplicity of diverse and even incompatible 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 yellow, commuters are engaged in economizing actions. They are making choices—doing what each thinks is best under the circumstances. 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. Although the process is never perfect, most people successfully reach their destinations.

And this leads us to consider the idea of *unintended consequences*. Each and every driver intends to reach his or her destination, each makes decisions along the way, and each interacts with others on the road. The overall flow of traffic, however, is not intended by anyone. It is not in any single driver's control. Nor does some fictional central traffic planner tell everybody exactly what to do to ensure an orderly flow. The complex pattern of traffic emerges spontaneously, as an unintended consequence of people "merely driving." Much of what motivates the economic way of thinking is in asking the question "How can such an orderly pattern of events emerge, not on purpose, but as a by-product of people pursuing their own separate interests?"

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?

Economic theory is remarkable 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*,

Commercial society as defined by Adam Smith

> 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. (It gets even more fantastic: Think of all the miners who unearthed the iron ore that made the steel that made the trucks that drove the bricks that built the factory that made the tractor that the farmer used to harvest the wheat. We can write an entire book on the countless individuals and organizations that made the farmer's tractor itself, and we still wouldn't have accounted for them all.) 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 argues that your choices, your plans, change the opportunities 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 are instead trying to understand the overall patterns that might arise—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.

Similar to lines at checkout counters

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.

The same basic principles are at work in the rest of society. 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. This is what the market economy is all about.

"Higher gas prices expected to reduce Labor Day travel"

Signals

People need information to successfully accommodate and adjust to others. We need to be able to communicate our actions and plans. It's all pretty straightforward on the road. Exit signs inform us of our options. Stoplights inform us of when to proceed, slow down, or stop. The lights help each of us to know what to do next. (Have you ever come upon an intersection where the stoplights failed to work? How would you proceed? Or imagine if all lights were accidentally on green—and the drivers didn't know it!) Information signals also come in the form of turn signals (most obviously), brake lights, and so on. Often without even realizing it—as with the brake lights—you are communicating with drivers directly behind you (informing them to slow down) and that piece of information is communicated to yet many others behind them, too. We often don't pay attention to how our simple actions are broadcast out to countless others. A similar process occurs in the economy. Producers and consumers, buyers and sellers, firms and job seekers must all find ways to coordinate their plans of action. One of the themes of this book, and a task that economists are prepared to explain, is how market-formed prices communicate useful information to participants in the economy. Prices help us figure out what to produce, how to produce, and for whom to produce. They help clarify our options and trade-offs. Without them we'd be groping in the dark.

Economic systems—the customs and practices through which citizens pursue and coordinate their projects and plans—are shaped by the "rules of the game," a phrase you're going to meet repeatedly in this book. The rules of the economic game go a long way in explaining whether people will use scarce resources effectively or wastefully.

Rules affect incentives. Take Major League Baseball, for example. Why do National League pitchers practice bunting while American League pitchers don't engage in batting practice at all? Because the rules of the game are different with respect to pitchers: National League pitchers step up to the plate during the game; the American League substitutes designated hitters for its pitchers. The designated hitter rule provides little or no incentive for an American League pitcher to become a better batter.

All interactions presuppose some "rules of the game."

Whether the "game" is traffic, business, government, science, family, school, baseball, test taking, or dating, it can't be played satisfactorily unless the players know at least roughly what the rules are and generally agree to follow them. The rules must be reasonably stable. Although rules can and will change over time, they must have a fair degree of stability so that they can be known and relied on (imagine the problems that would emerge were the designated hitter rule to be dropped during the middle of an American League ball game or even during midseason). Often it takes time for participants to understand and adjust appropriately to new rules of the game. Consider, for example, the recent expansion of the strike zone by umpires in Major League Baseball. Players have adjusted their expectations of what counts as a ball and a strike and will adjust their batting strategies in light of the evolution of the rule. Pitchers and catchers are adjusting their strategies as well.

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. This is true not only of a child's game of Go Fish or a professional ball game but for production and trade as well. In the 1990s, the countries of central and eastern Europe that were trying 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 travelled 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 can fall apart 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 as 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. A market-exchange economy is based on *private property rights*—rights assigned to specific individuals in the form of legal ownership. They clearly specify who legally owns what. As a private property right owner, no other person may use or alter the physical characteristics of your property without your permission. The neighbor down the street is not allowed to drive your car without your permission, nor is he allowed to jump on the car, repaint it, flatten the tires, or even put in a better stereo system without your approval. (Nor, of course, are you allowed to drive all over his beautiful front yard without his permission.) Moreover, private property rights can be *voluntarily traded or exchanged* for similar rights to other goods and services. The purchase of your car, or a bag of groceries for that matter, is, in the economic way of thinking, an exchange of property rights. You are now assigned ownership of the car, groceries, and so on, and the seller is now assigned ownership of the cash payment.

Property rights are rules of the game.

In former socialist economies, citizens often enjoyed private property rights to consumer goods (clothing, food, radios, etc.), but the means of production—natural resources, land, factories, machinery, and other material inputs in the production process—were typically designated as *social property rights*. Here, *ownership is legally assigned to "society" as a whole, and therefore to nobody in particular. Social property rights are not freely exchangeable*. With these rules, it is unclear who is legally allowed to do what with the goods owned by society. Who decides (and through which process of agreement) that a socially owned factory should produce cars or trucks or ships or bombs, or that the factory should be doubled in size, reduced in size, or even continue to operate at all? Can "society as a whole" *really* be expected to make these decisions—not only for a single factory but for *all* of the socially owned means of production—in ways that would tend to encourage economic growth and prosperity?

By deciding exactly what belongs to whom under which circumstances, private property rights 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, earth slides, and unmapped sections over the past 20 years.

In the economic way of thinking, the emergence of clearly defined and enforced property rights does encourage the effective use of already existing scarce resources. Clear property rights also spark efforts to discover new resources, to innovate by introducing new cost-cutting technologies, to develop new talents and skills. We shall also demonstrate in the next chapter that the voluntary exchange of property rights can also expand the opportunities and wealth of the trading parties. Of course, economic decay is possible. An outright reduction in resources can reduce a country's production possibilities (consider, for example, the massive destruction of lives and property from the earthquake in Iran in 2003, or the bombing of Baghdad that same year, or the unprecedented effects of Hurricane Katrina in the United States in 2005, or the tsunami that slammed into Japan in 2011).

The Biases of Economic Theory: A Weakness or a Strength?

Okay, so you're on your way to thinking like an economist. One warning: Our theory about society is neither perfect nor unbiased. (Are you aware of one that is?) It does not offer an unprejudiced view, in which *all* the facts are presented and *all* values are given the same weight. Think again about what we suggested was the basic feature 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, and typically the unintended product, of people's choices.

Only individuals choose.

Closely related to this focus on choice, economics emphasizes *individuals* as the fundamental units of analysis. Our everyday language sometimes muddies this up. Because only individuals actually choose, economists try to dissect the decisions of

such collectives as businesses, governments, or nations until they locate the choices of individual persons within them. For example, you chose to attend your present college, but surely the college itself didn't "choose" to admit you as a student. The college itself is composed of a number of individuals with diverse roles and responsibilities. Some individuals within the college, acting in the name of the college, made that choice. The groundskeepers, the secretaries, and most if not all of the faculty, and other students probably played no part at all in the choice of admitting you as a new student. Similarly, neither Facebook, the Red Cross, Japan, nor the al Qaeda terrorist organization makes choices. Individuals within those collectives make choices. (Could you imagine any of those organizations making decisions if they weren't composed of individual people? And even if you could, do you think that would lead to an insightful way of explaining how they operate?) Just as any good physics student learns to see through our everyday language about the sun "rising" and "setting" (she instead knows that the earth itself rotates and that makes it appear that the sun goes up and down), so, too, a good economics student ought to quickly learn that individuals make choices and decisions, rather than organizations themselves.

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 act with a purpose in mind, 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, a pursuit of some clearly given goal? 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 benefits and costs. 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 other end.

Another charge often leveled against the economic way of thinking is that it contains a pro-market 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 began 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 pro-market bias is probably better seen as a preference for those social institutions and rules of the game that make exchange mutually beneficial and production more efficient—a process from which all participants tend to benefit.

Biases or Conclusions?

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 observing scarcity, choice, trade-offs, and consequences, because this enables us to understand those phenomena? Do we say that physicists are biased when they argue that energy cannot be created nor destroyed, 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. But we cannot follow them further without making this introductory chapter too long. It has seemed obvious to the authors 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 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. Even the most detailed road map is a necessary and useful simplification of reality.

Even economists face scarcity!

We cannot avoid this risk, as some people suppose, by steering clear of theory. *Economics is a theory of choice and its unintended consequences*. People who sneer at "fancy theories" and prefer to rely only on common sense and everyday experience are often in fact the victims of extremely vague and sweeping hypotheses. Common sense might lead someone to believe that pot smoking leads to more powerful drugs, because most hard drug users started on pot. Yet, most pot users had previously been milk drinkers—does milk drinking therefore lead to pot smoking? Even though milk has heavy amounts of l-tryptophan—the same amino acid in turkey that leads to drowsiness—surely these "facts," by themselves, cannot prove that one fact caused the other. Or, consider the so-called "Superbowl Effect." Financial journalists often report, during Superbowl week, an interesting set of facts. When an NFC team wins the Superbowl, the Dow Jones Industrial Average does well over the course of the year; when an AFC team wins, the Dow does poorly that year. This held about 100 percent of the time until the Green Bay Packers (an NFC team) messed it up in 1998. Today, it is said to hold about 80 percent of the time. *Hold what?* The *fact* that the Dow had often done well after an NFC victory and poorly after an NFC loss provides little insight about financial markets and the Dow.

Economics defined

It doesn't necessarily follow that the Superbowl outcome causes (or "leads to") the value of Dow stocks to rise or fall. To conclude otherwise is to fall victim to the all-too-common but profoundly mistaken reasoning that the association or statistical correlation among groups of facts establishes some kind of causation among those facts. It may, in fact, be a mere coincidence.

The Skills of the Economist

Cause and effect

The point is a simple but important one. We can observe facts, but it takes a theory to explain the causes. It takes a theory about cause and effect to weed out the irrelevant facts from the relevant ones (and so, although the facts clearly show that most pot smokers were former milk drinkers, milk drinking is probably not a relevant fact in explaining pot smoking; similarly, the Superbowl is irrelevant when explaining Wall Street interactions). Our observations of the world are 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 and broad, vague and precise, well tested and poorly tested, widely held and sometimes peculiar, carefully reasoned and dimly recognized.

This textbook developed out of a growing suspicion that when students found economic theory abstract and dull, it was largely because we economists were trying to teach them too much. This book tries, 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—actually, the skills—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. The best economists and students of economics aren't mere technicians. They are skilled users of the economic way of thinking.

But this is not the time to worry about all that. 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 begin to think "outside the box," which tends to be a scarce, powerful, and rewarding intellectual skill.

Can you connect all points together with straight lines without retracing or taking your pen off the paper? (Hint: Think outside the box.)

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. Economics is a theory of choice and its unintended consequences.

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. Only individuals make choices. They may make those choices on their own or by collaborating in groups (households, business firms, government bureaus, and so on). But that should not lead us to lose sight of the fact that the choices in the name of a group were really made by individuals who evaluate trade-offs and economize when they pursue their plans and projects.

The perspective of economic theory on human actions and interactions places a strong emphasis on choices by individuals who continually compare expected additional benefits and costs. We often call this economizing behavior. 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 of the rules of the game, and the way those rules tend to influence our choices. By legally assigning ownership of scarce goods, property rights are a key element of the rules of the game. Social property rights assign ownership to society in general, and therefore nobody in particular. But the problem is society by itself never makes choices and decisions. Only individuals can do that. A system of private property rights assigns rights to specific

individuals, rights that can be voluntary traded. Being freely exchangeable, private property rights help clarify our options and opportunities and form the foundation of the market-exchange economy.

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 planners in Dallas 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. A model of saintlihood and altruism, when Mother Teresa accepted the Nobel Prize for Peace in October 1979 and decided to use the $190,000 award to build a hospital for the treatment of people with leprosy, was she acting in her own interest? Was she behaving selfishly? Was she economizing? What about former Vice President Al Gore's promise to donate his portion of the $1.5 million 2007 Nobel award to the Alliance for Climate Protection?
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. 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?
6. 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?
7. What happens when the rules of the game (written or unwritten) decree that important student government 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?
8. 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?
9. Have you ever noticed that the grounds of city-owned parks are often more polluted than those of country clubs?
   (a) Is it simply because people who use parks are less concerned with pollution compared with those who golf? Is that even true?
   (b) Might the property-rights assignments have something to do with it? Who owns the city park? Who owns the country club?
   (c) Though their grounds are often impeccably clean, country clubs tend to use powerful fertilizers that eventually seep into and pollute the water table below, causing problems for others in the surrounding community. Who owns the water table?
10. 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?
11. 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 it? 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?
12. 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?