

PAUL HEYNE | PETER BOETTKE | DAVID PRYCHITKO

# The Economic Way of Thinking

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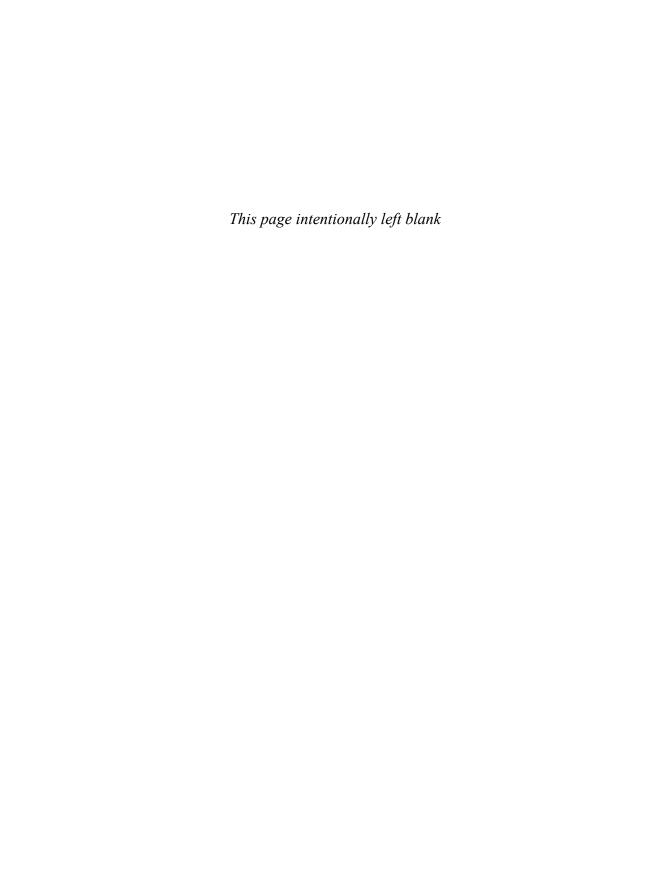
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# The Economic Way of Thinking

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**Thirteenth Edition** 



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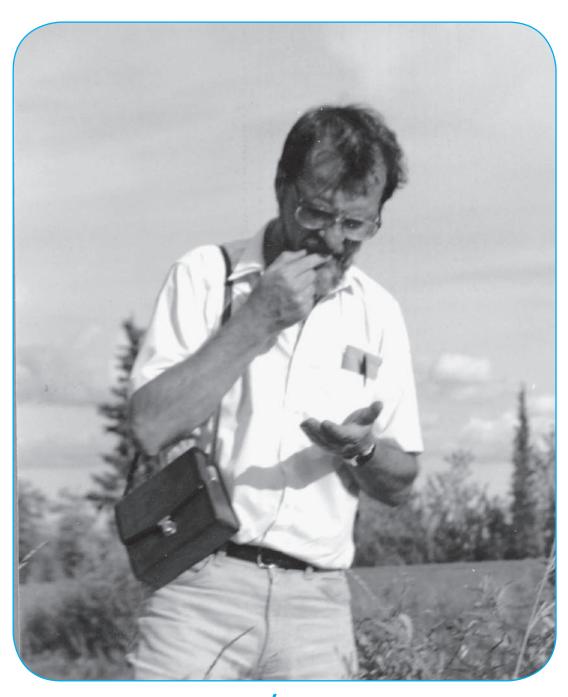
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ISBN 10: 0-13-299129-2 ISBN 13: 978-0-13-299129-2 In memory of Paul Heyne, and our professors Hans Sennholz, Howard Swaine, Don Lavoie, Kenneth Boulding, and James Buchanan



Paul Heyne 1931–2000

### A Tribute

On a rare occasion, if you are fortunate, you will run across an individual who lives and acts upon the ideals that we profess. I was fortunate. Paul Heyne came into my life in 1975. Out of the blue, he sent me a letter that began as follows:

I'm going to be moving to Seattle at the end of the current academic year, and I'd like to find a college or university in the city at which I could be an economics teacher. Those are two separate decisions. I'll be moving to Seattle whether or not I find a position in an economics department there. But teaching and especially the teaching of introductory economics is one of the things I think I do well and something I would continue doing.

I had assumed the chairmanship of the department of economics at the University of Washington in 1967 and set out to make it one of the best in the country. My definition of best included not only scholarly eminence, which we were in the process of achieving, but the effective, caring teaching of the multitude of undergraduates that populated a large state university. The University played lip service to good teaching but the reward system was geared to publication and most, but not all, of my colleagues acted accordingly. Shortly after assuming the chairmanship, I decided I should go back to teaching the introductory course to see just what we did. I was dismayed to find that it had not changed an iota from my undergraduate days. The textbooks were full of the formal jargon of economic theory elucidating the perfectly competitive model, imperfect competition a la Chamberlin and Joan Robinson, and monopoly replete with all the marginal analysis and appropriate graphs. Following the tradition, I was in the midst of my fourth lecture on perfect competition, illustrating it with the case of American agriculture, when a student in the back of the auditorium noisily took exception to what I was saying. I thought I would teach him a lesson and invited him to address the class, explaining himself. He did, describing effectively the myriad of price supports, milk marketing acts, sugar production subsidies, etc. that pervaded agriculture and made it far from the competitive model. I slunk back to my office and began a search for a more effective teaching program. I was some years into an attempt when Paul's letter arrived. I wrote back asking what he would like to do as a teacher. His reply, in part:

I would like to teach at a college whose faculty was enthusiastically committed to providing a liberal education for undergraduates. I would like to be a member of a faculty that was continuously asking about the nature and significance of liberal education and looking critically at its own efforts to provide one. The members of such a faculty would use their own disciplines as bases for venturing

into other disciplines and not as castles within which to enjoy untroubled lives. In the college of my fantasies, there would be some core requirements for all to satisfy; not so much because anyone can specify particular knowledge that a liberally educated person must have as because a liberal arts college requires some common core if it wants to be a lively intellectual community, Mastery of the core would be expected first of all of faculty members. (I've often thought how much more profitable faculty curriculum discussions would be if every faculty member knew that he would be taking all courses imposed on undergraduates and that his colleagues would be evaluating any course he himself wanted to offer in the common core.)

Paul left a tenured professorship at Southern Methodist University to come to Washington as a non-tenured lecturer and he retained that untenured rank until he died in March 2000. I am not sure we lived up to Paul's fantasies of the ideal faculty; I know we didn't but he did change the way economics was taught at the University; revamping the undergraduate program, over-hauling the introductory course, and meeting regularly with the graduate teaching assistants to improve the quality of their teaching. But much more than that, Paul was a continuing inspiration for those of us who took seriously a quality liberal education for undergraduates.

The Economic Way of Thinking embodies Paul's approach to economics and to a liberal education. It was a radical change from the textbooks of the time. Its focus on the problems of a society and the way in which economic reasoning could shed light on those problems made economics interesting to the students. More than that, the book recognized that the strength of economics was precisely described in the title of the book—as a way of thinking. Comprehending that way of thinking was, and continues to be, the revolutionary contribution of economics to the social sciences and to a better understanding of the world around us.

I open the seminar for freshmen that I teach every fall with a lecture on Paul, the human being—his Seminary education, ordination, the way he got drawn into economics, and the way he combined a rigorous economics (and make no mistake about it, Paul's economics is rigorous) with a broad and active concern for community and social welfare. He believed in individual freedom and the demands that that freedom imposed on responsible human beings. And he and his wife, Julie, lived their lives accordingly.

Douglass C. North

Washington University, St. Louis

Nobel Prize in Economic Sciences 1993

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# Preface

The Economic Way of Thinking continues to enjoy a dedicated and growing following and has been recently translated into Chinese, Japanese, Russian, and Hungarian. Even in English, this book looks different, feels different, and reads different compared with the mainstream fare.

Indeed, this book is different.

This text introduces students to the skills of the economist. It teaches students through example and application. It even teaches by showing students how *not* to think, by exposing them to the errors implicit in much popular reasoning about economic events. The text is designed primarily for a one-semester survey course in general economics. It has also been successfully used in M.B.A. economics courses and in Master's courses in economic education. Some have used it as a micro principles text. *The Economic Way of Thinking* develops the basic principles of micro- and macroeconomic analysis and rigorously employs them as *tools* rather than ends unto themselves.

Authors of other introductory texts, understandably eager to display the formal beauty of economic analysis, unwittingly tend to overload students with abstract technical details. Yes, economists build models (and we also use metaphors and rhetoric). But the typical college freshman probably won't share our excitement over the models. Most sit through our courses merely hoping to get a prerequisite out of the way. We economists ought to show them why they're in the seats and we're at the podium. Let's show them why others who have designed the curriculum believe economics is an important area of study. In the end, economics is *not* about production functions, perfectly competitive equilibrium, price takers, or Phillips curves. Instead, economics explores the logic of both the economizing process and the exchange process—it's about plan coordination among buyers and sellers in the world outside the lecture hall. Students using this book will not have to wait for that message at the end of the semester. They'll get it at the very beginning too.

Paul never shied away from making his strategy explicit. In previous editions he insisted, "We must show them from the first day how the principles of economics make sense out of buzzing confusion; how they clarify, systematize, and correct the daily assertions of newspapers, political figures, ax grinders, and coffee shop pontificators." For more than thirty years, *The Economic Way of Thinking* has taught students how to see through the nonsense and begin to understand the complex world around them. The 13th edition continues that tradition.

Preface

# Accomplishing More with Less

This text accomplishes more—more thinking, more application, more insight—with less emphasis on formal modeling. But don't get us wrong. This is not an easy and watered-down exploration of economics. The 13th edition offers a solid discussion and development of economic principles, and a wealth of probing, illuminating applications to the everyday world around us. Even professional economists have informed the co-authors that they have learned more about economics by reading this book. And that's after they've acquired their Ph.D.s.

This book is designed to develop our students' skills in *thinking* like an economist. If they become hooked, they will have ample opportunity to hone their modeling skills as they advance to other economics course offerings. May we hope that the students continue their pursuit of this wonderful discipline—or at least retain its basic lessons.

# Changes to the Thirteenth Edition

The Economic Way of Thinking is Paul Heyne's baby, his pedagogical legacy. It is richly steeped in the property-rights and coordinationist tradition of Alchian & Allen's *University Economics*, which is long out of print. Our text also has an Austrian-School flair, emphasizing the dynamic, entrepreneurial nature of the market process, themes developed by Ludwig von Mises, F.A. Hayek, Israel Kirzner, and Murray Rothbard. These and other insights—such as the Public Choice approach of our former professors James Buchanan and Gordon Tullock—have merged into what some are beginning to call Virginia Political Economy.

This edition has several new features:

- We discuss time preference and the role of interest rates in coordinating economic activity in Chapter 5.
- We have reintroduced an entire chapter on income distribution (Chapter 12).
- We have added a discussion of discouraged workers in Chapter 13.
- Our discussion of monetary equilibrium has been merged into Chapter 14 on money.
- We discuss the Austrian theory of the unsustainable boom in Chapter 15, connect that to the interest rate presentation in Chapter 5, and apply it to the Great Recession of our recent past. (One reviewer remarked that we didn't have enough of a presentation of the Austrian theory of the business cycle in previous editions. He asked us to just spell it out and be done with it. We have accomplished just that in Chapter 15.)
- We've updated the data and have added learning objectives at the beginning of each chapter.

# Acknowledgments

We shall always be indebted to the late Paul Heyne. We are thankful that new generations of students continue to have the opportunity to learn from Paul's text.

So many people have helped shape and improve this text over the past three decades. In appreciation, we wish to continue to acknowledge those who have reviewed or offered helpful unsolicited comments on earlier editions, as Paul Heyne did without fail. They are:

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John B. Egger	Mark McNeil		
Theo Eicher	Tom Means		
Mary Eysenbach	Howard Miller	M.Y. (Zak) Zaki	
Matthew Facas	Glenn Moots		

In a market economy, mismanaged property rights tend to move into more productive hands, so your authors have quite the incentive to minimize errors and add value to the project. Information, nevertheless, remains a scarce good, so we welcome your comments, criticisms, and suggestions. Always feel free to email Boettke (pboettke@gmu.edu) or Prychitko (dprychit@nmu.edu) for comments on this new edition and its supplements.

Reviewers solicited for the 13th edition provided clear and detailed comments, and challenged us to reconsider examples,

Preface

Preface

sections, and even whole chapters from the previous edition. We greatly appreciate their comments, and they deserve a special word of thanks:

Gloria Komer, Stark State University
John Marcis, Coastal Carolina University
John McArthur, Wofford College
Lawrence Overlan, Wentworth Institute
Michael Carter, Jacksonville State University
Ning Wang, Arizona State University
Paul Cwik, Mount Olive College

You might have noticed that several of our reviewers have been involved with this textbook for quite some time. In our blind review, we have carefully considered all the comments and, when reviewer suggestions offered two (or three) alternative forks in the road, we chose the one we thought would be most interesting and productive. That means we faced opportunity costs and probably won't satisfy all of our reviewers all of the time, but we've tried to do our best.

We don't want to forget GMU grads Scott Beaulier, Chris Coyne, Isaac Dilanni, Jeremy Horpedahl, Peter Leeson, Nick Schandler, Solomon Stein, and John Robert Subrick who had, at one time or another, a hand in tracking down and updating data since we came on board with the 10th edition. Peter Lipsey, Boettke's personal assistant, did a fine job running in this direction, helping us update the data, proof the copyedits, and meet our deadlines. Emily Prychitko kindly assisted with the copyedits as well.

Turning to the editorial and production staff, we thank Noel Seibert, Acquisitions Editor at Pearson, for continuing to appreciate this text's uniqueness and for encouraging us to further adapt the new edition to our economic challenging times. We thank Carolyn Terbush, Senior Editorial Project Manager, and Emily Brodeur, Editorial Assistant, for their patience and keeping us on task. Last but not least, Alison Eusden, Associate Production Project Manager at Pearson, and Arun Pragash Albert at S4Carlisle, made sure that our copyediting and proofreading efforts were productive and timely.

We are grateful to the good people at the Atlas Foundation, Earhart Foundation, J. M. Kaplan Fund, and the Mercatus Center for providing us quite generous financial support for our research and teaching activities over the years, activities that continue to support this new edition as well.

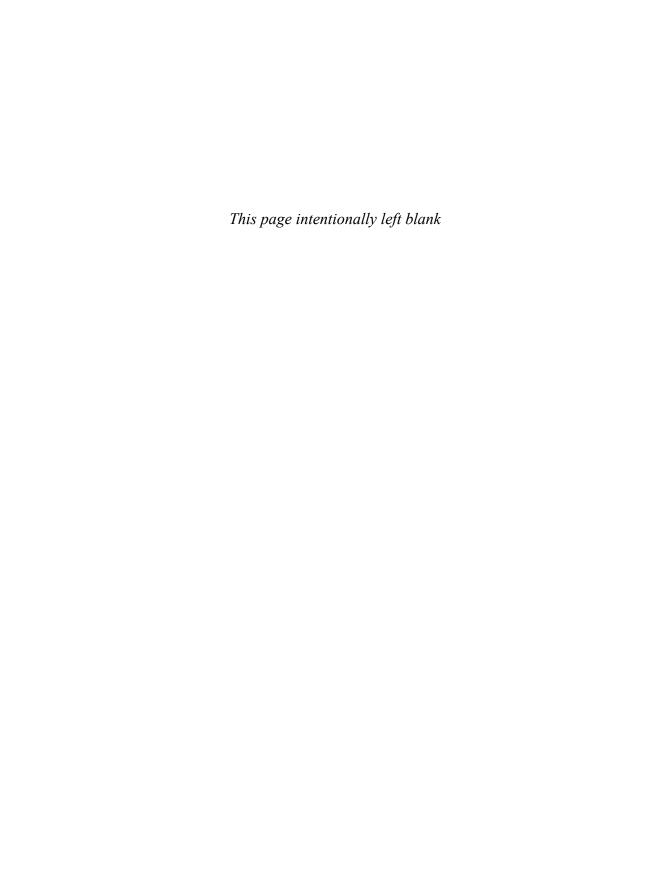
And our most important acknowledgment of all: This project would simply not be possible if it weren't for the unending love, support, and understanding from our wives Rosemary Boettke and Julie Prychitko and our families. Indeed, none of what we do would have meaning without them.

# About the Authors

**Peter Boettke** is the BB&T Professor for the Study of Capitalism at the Mercatus Center and a University Professor of Economics and Philosophy at George Mason University. Professor Boettke is the author of several books on the history, collapse, and transition from socialism in the former Soviet Union, as well as books and articles on the history of economic thought and methodology.

**David L. Prychitko** was a Junior Fellow at Cornell University and Fulbright Researcher in the former Yugoslavia. Also an author of several books and articles on Marxism, comparative systems, and economic methodology, Professor Prychitko currently teaches at Northern Michigan University, his alma mater in the beautiful Upper Peninsula of Michigan.

Close friends (who still occasionally disagree on details), Boettke and Prychitko have published many joint works since graduating from George Mason University in the late 1980s. They have been teaching economics for a combined total of more than fifty years.



# The Economic Way of Thinking

#### 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.

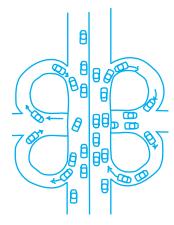
Chapter One

## 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.

The economic way of thinking

Chapter One

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!

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

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Economizing actions

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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 byproduct 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

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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.

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Similar to lines at checkout counters

"Higher gas prices expected to reduce Labor Day travel"

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.

# 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.

# Rules of the Game

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.

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, marketcoordinated 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

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All interactions presuppose some "rules of the game."