The following are the web notes for the sixth edition of *Law and Economics* by Robert D. Cooter and Thomas S. Ulen. Our intent in these notes is to extend the material in the text by describing some additional issues, articles, cases, and books. Because the fields of law, economics, and law and economics are not standing still—because, that is, scholars are adding interesting new material all the time, we may supplement, alter, and add to these notes from time to time.

Each note begins with a copy of the material from the text about the content of the web note and the page on which that web note can be found. We will from time to time insert new material, update some of the entries, and add some additional material. You should be able to download pdf versions of each chapter’s web notes and of the entire set of web notes for all 13 chapters.

We have found that the very best students and their instructors from all over the world pay close attention to these web notes. They often have good ideas about how to add to the entries already here and suggestions about articles, cases, books, and topics that would be instructive to add. We would be grateful for any comments or suggestions about any of the notes.

**Chapter 2**

*Web Note 2.1 (p. 41)*

Another kind of problem that markets have is coordinating people, especially when they act collectively. See our website for a discussion of coordination and collective action applied to legal issues.

Coordination among people with different preferences is sometimes a problem. Game theory has highlighted this problem in several games—the Battle of the Sexes and the Hawk-Dove games. They illustrate slightly different issues, so let’s take them up separately.

Suppose that two people—call them A and B—love each other very much but have different tastes. If put to a choice between going to a baseball game or to an art show, A would very much prefer the baseball game, while B would very much prefer the art show. However, they both would rather be with each other than be apart. We might summarize their payoffs from the various combinations available to them using the following payoff matrix: (We gave a brief introduction to game theory on pp. 38 – 42 of the text.)

<table>
<thead>
<tr>
<th></th>
<th>Baseball</th>
<th>Art Show</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BaseBall</td>
<td>5, 3</td>
<td>1, 2</td>
</tr>
<tr>
<td>ArtShow</td>
<td>1, 2</td>
<td>3, 5</td>
</tr>
</tbody>
</table>

The payoffs are for \((A, B)\).
There is no unique Nash equilibrium for this game. Both the upper left and lower right cells of the payoff matrix—the combinations (Baseball, Baseball) and (Art Show, Art Show)—dominate the others and are equilibria (in the sense that if the players are in that cell, there’s no incentive for them to leave). But there’s no obvious way to choose between the two possible equilibria. Some method of coordination is necessary, and the literature has suggested two in particular. One is for each of the players to recognize that if they are the first to choose (“Look, I’ve got tickets to the ball game!”), that might force the hand of the other player. Another is for this to be part of a repeated game in which the players take turns shifting from one equilibrium to the other (“Last weekend we went to the art show. Why don’t we go to the ball game this weekend?”)

Another game in which coordination is necessary is the Hawk-Dove game. Suppose that two people, C and D, are engaged in an interaction in which they can play an aggressive strategy, called “Hawk,” or a passive strategy, called “Dove.” (As an example, one can imagine arriving at a four-way stop roughly at the same time as another car approaching at right angles. We might define the Hawk strategy as “being the first to proceed into the intersection” and the Dove strategy as “letting the other person go first.”) The payoffs to the players might be described in the following payoff matrix:

<table>
<thead>
<tr>
<th></th>
<th>Hawk</th>
<th>Dove</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawk</td>
<td>-5, -5</td>
<td>2, 1</td>
</tr>
<tr>
<td>Dove</td>
<td>1, 2</td>
<td>-1, -15</td>
</tr>
</tbody>
</table>

The payoffs are for \((A, B)\).

For this game there are, as before, two Nash equilibria—the upper right-hand cell and the lower left-hand cell—(Hawk, Dove) and (Dove, Hawk). Both of the other cells represent destructive outcomes, although the (Dove, Dove) outcome might well be interpreted as not causing the parties to incur any net costs.

The point here is simply to draw attention to the fact that there are situations in which the parties must coordinate their behavior and that a failure to do so may impose some substantial costs. You might ask yourself this, “How can the parties involved in a Hawk-Dove game coordinate their behavior so as not to end up at one of the destructive outcomes?” And relatedly, “Are there any legal or institutional correctives that society can impose so as to minimize the possibility of destructive outcomes in a Hawk-Dove game?” Might you argue, for example, that clear social norms or laws punishing those who behave in a hawk-like fashion deter destructive outcomes?

For an extremely instructive discussion of coordination games, see the treatment of “Path-Dependent Coordination in ‘Continental Divide’ Games,” in Chapter 1 of Colin F. Camerer, *Behavioral Game Theory: Experiments in Strategic Interaction* (2003). (A pdf version of that chapter is available at http://pup.princeton.edu/chapters/i7517.html.) There is a longer section of the book devoted entirely to coordination games. We very strongly recommend the entire book.

For more, fascinating reading on coordination games, see James Surowiecki, *The Wisdom of Crowds* (2004), to which we referred in the introduction to this chapter’s Web Notes. Surowiecki gives a wonderful summary of Thomas Schelling’s famous experiments of the 1950s and 1960s
on coordination and “focal points,” and this wonderful example of a coordination problem from the work of Brian Arthur and others.¹

El Farol is a wonderful restaurant and bar in Santa Fe, New Mexico. (See www.elfarolsf.com.) Arthur hypothesized that if the bar was no more than 60 percent filled, then going to El Farol was fun but that if it was more than 60 percent filled, it was too noisy and crowded to be fun. (This reminds us of Yogi Berra’s famous criticism of a restaurant-bar: “It’s so crowded no one goes there anymore.”) How can potential patrons of El Farol coordinate their bar-going decisions so that the bar is fun? Is coordination impossible, so that there are random fluctuations around the bar’s being 60 percent filled? Or is coordination somehow possible so that the bar settles into a less-than-60 percent filled equilibrium? If so, what decision rules do individuals use to achieve that equilibrium?

You can Google this problem and find Arthur’s and others’ attempts to answer this problem.

Another problem that may be fairly common but that we did not identify as one of the principal causes of market failure is the issue problem of “collective action.” Public goods are an example of a collective action problem: everyone would like to have the good provided, but there does not seem to be any means by which that collective desire can be realized through purely private action. The Prisoner’s Dilemma that we examined in the text is another example. The general failing of collective action problems is that everyone concerned would be better off if they could agree to adopt one particular course of action. However, it proves difficult or impossible for them to agree (convincingly) to adopt that course of action.

There have been some fascinating experiments conducted on to see the extent to which collective action problems truly exist in real interactions. (Some of these games are review in Camerer’s Behavioral Game Theory in § 2.7 on “Trust Games” 83 – 101.) Here is a description of a very simple game—called the “group exchange”—that gets at the existence of trust and collective action. (This description comes from Russell B. Korobkin & Thomas S. Ulen, Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics, 88 Cal. L. Rev. 1051 (2000), available at www.ssrn.com.)

A group of people are brought together, and each is given the same amount of money. (See John O. Ledyard, “Public Goods A Survey of Experimental Results” in The Handbook of Experimental Economics 111 (Kagel & Roth eds., 1995).) They are told that they can invest some, none, or all of that money in something called a “group exchange.” Their decisions about investment will be kept secret from the other members of the group. The members of the group exchange are also told that the person operating the game will multiply the total amount invested by an integer that is greater than one but less than the total number of people in the group exchange and will then divide that product equally among all the members of the group. To be concrete, suppose that there are 8 people in the group and that each of them is given $20 to invest. If none of them invests any money, then there is nothing to multiply and, therefore, nothing to divide among the members of the group. But suppose that 2 of the players invest nothing but that the other 6 each invests $10. The total amount invested is $120. Suppose that the ex-

¹ Just in case you do not know Schelling’s experiments, here is a rough summary of the most famous. He asked a group of Yale law students to answer the following question, “You are supposed to meet an old friend in New York City on Monday, July 3, but neither of you know where or when. Where should you go and at what time?” The vast majority of the students answered, “The information booth at Grand Central Station”—that being a landmark in the heart of New York City that everyone in the 1950s and 1960s would have thought of. Almost everyone answered the time question, “At noon.” Schelling characterized these answers (and other answers to similar coordination games) “focal points.” In honor of him, they are sometimes now called “Schelling points.”
perim
ent operator uses the multiple 6 and, therefore, has a total sum of $720 to be divided among
the 8 members of the group exchange. Each of them receives $90. This is not a bad return for
those who invested $10, but it’s a spectacular return for those who invested nothing. Each of the
2 who invested nothing has $110 (their original $20 plus the $90 that everyone in the group re-
ceived from the experiment operator). Each of the 6 who invested $10 has $100 ($10 from their
original $20 and $90 from the experiment operator). Because the total amount available to those
who invested nothing is so great, rational choice theory (hereafter, RCT) might predict that no
one would invest in the group exchange—even though they would all be better off if everyone
did.

When investigators conducted experiments with these rules, they found that although not
everyone contributed to the group exchange, most did. The average participant contributed be-
tween 40 and 60 percent of the investable funds in the group exchange. Investigators have varied
certain aspects of the game to see how those changes might affect participants’ willingness to
invest and have found that, for instance, increasing the returns increases willing to invest, as does
allowing the participants to communicate prior to investment, but that increasing the number of
members of the group has ambiguous effects. Interestingly, even economics students, who ought
to be able to reason from RCT that the best thing to do is to invest nothing, contributed some-
ting to the group exchange, although their average contribution was less (20 percent) than that
of non-economics students.

Whatever the nuances of the various games, it is striking that there is much more contribution
to the games than RCT would predict. One possible implication may be that collective action
problems may not be as troublesome as one might predict.

The classic book on collective action is the late Mancur Olson, *The Logic of Collective Ac-
choice literature as it applies to legal issues, see Daniel A. Farber & Philip Frickey, *Law and

*Web Note 2.2 (p. 42)*

One of the most important issues in welfare economics has been the derivation of a social
welfare function, which aggregates individual preferences into social preferences. The
Arrow Impossibility Theorem, one of the most significant intellectual achievements of
modern economics, argues that a social welfare function with minimally desirable proper-
ties cannot be constructed. We describe the theorem in more detail at our website.

The Arrow Impossibility Theorem addresses the issue of how society aggregates individual
preferences about social matters (*e.g.*, about the distribution of income and wealth) into societal
preferences. Suppose that these aggregations are made by majority voting. We could imagine
that elections are devices for converting individual preferences into societal preference order-
ings: candidates announce their social welfare functions and the associated distribution on the
utility-possibility frontier that they intend to pursue and voters then choose among the candi-
dates, with that policy, social welfare function, or candidate winning that commands the highest
number of votes.

Make the following five assumptions about this means of aggregating individual preferences
into social preferences:

1. There is no dictatorship—that is, no one person’s preferences determine the group
Each individual has ordered all the alternatives according to her preferences and votes for that policy, social welfare function, or candidate that ranks highest in her preference ordering.

If every individual unanimously agrees on an alternative, then that alternative is indicated as the society’s preference.

Each individual’s choices are complete, transitive, and reflexive.

The preferences between any two candidates or policies depend on how people rank those two alternatives, not on how they rank other alternatives. (This is known as the axiom of the independence of irrelevant alternatives.)

For the purpose of illustrating the Theorem, let us assume that there are only three individuals in society and three policies, candidates, or social welfare functions. Suppose that the individuals’ preferences among the three policies—call them $x$, $y$, and $z$—are as follows (with $P$ indicating the relationship “is preferred to”):

| Individual 1 | $x \, P \, y$ | $y \, P \, z$ | $x \, P \, z$ |
| Individual 2 | $y \, P \, x$ | $y \, P \, z$ | $z \, P \, x$ |
| Individual 3 | $y \, P \, x$ | $z \, P \, y$ | $z \, P \, x$ |

Each individual has complete, transitive, and reflexive preferences over the relevant social choices. For instance, for Individual 2, $y$ is preferred to $z$, and $z$ is preferred to $x$, and so by transitivity $y$ should be preferred to $x$, and it is.

What happens if we try to aggregate these individual preferences into a societal preference ordering by means of majority voting? Suppose that we begin with a choice between $x$ and $y$, with the winner advancing to a run-off against policy $z$. Thus, letting $S$ stand for the relationship “is socially preferred to,” we may write that $y \, S \, x$ because both Individuals 2 and 3 prefer $y$ to $x$, while only Individual 1 prefers $x$ to $y$. What now happens in the run-off election between $y$ and $z$? Individual 1 votes for $y$; Individual 2 votes for $y$; and Individual 3 votes for $z$. Thus, $y$ wins so that $y \, S \, z$, and $y$ is the socially-preferred policy.

Just for the sake of completeness, what would have happened if we had begun with the pairing $x$ and $z$? In that case, Individual 1 would have voted for $x$, but the other two individuals would have voted for $z$, making $z$ the winner. Thus, $z \, S \, x$. If we then advanced the winning policy, $z$, to a run-off against policy $y$, we already know that $y$ would have won.

This means that $y$ is the socially-preferred alternative, regardless of the order in which the alternatives are considered. Matters seem to be in good order. Majority voting has converted completed, transitive, and reflexive individual preferences into complete and transitive social preferences. (Can you show that the social preferences are, in fact, transitive?)

But Professor Kenneth J. Arrow, a Nobel laureate in economics, demonstrated in *Social Choice and Individual Values* (1952) that this result did not always hold. That is, he showed that complete, transitive, and reflexive individual preferences can not necessarily be converted into complete, transitive, and reflexive social preferences by means of majority voting that obeys the five assumptions on the previous page. To see why, suppose that individual preferences over the three policy of candidate alternatives were as follows:
At first glance there appears to be very little to distinguish this set of individual preferences from the first set. (The only difference has to do with how Individual 3 feels about $x$ and $y$.) In both instances each individual has complete, transitive, and reflexive preferences. Let us conduct an election among these policies or candidates to get the social preferences. If we begin with an election between policies $x$ and $y$, $x$ wins 2-1, so that $x \succ y$. Now pit $x$ against the remaining policy $z$; $z$ wins, 2-1, so that $z \succ x$. It appears to be the case that $z$ is the socially-preferred policy.

But suppose that the first pairing is not $x$ and $y$, but $z$ and $y$. If we held an election between alternatives $z$ and $y$, $y$ wins, 2-1. And we know that if we were then to hold an election between $y$ and $x$, $x$ would be determined to be the socially-preferred winner. Finally, if we were to start our election by pitting $x$ against $z$, $z$ would win. If we were then to pit $z$ against $y$, $y$ would be determined to be the socially-preferred policy.

There’s clearly a problem here. We get three different socially-preferred policies depending on the order in which we pair them initially. (This possibility of circular group preferences in majority voting was first noted by Condorcet (1743-1794) and is sometimes called the “Condorcet paradox.”)

The problem is that majority voting may not give rise to transitive social preferences. We know that if the group preferences were transitive, then, because $z \succ x$ and $x \succ y$, it should be the case that $z \succ y$. But notice that $y \succ z$ because two people prefer $y$ to $z$.

The gist of the Arrow Impossibility Theorem is that even though individual preferences are complete, transitive, and reflexive, group preferences determined through majority voting may not be. There is apparently no way to distinguish between those sets of complete, transitive, and reflexive individual preferences that will give rise to transitive social preferences and those that will not. The only method of guaranteeing transitive social preferences through majority voting is to relax one of the five assumptions made at the beginning. But it is difficult to see which of those five ought to be relaxed.

*Web Note 2.3* (p. 43)

See our website for much more on cost-benefit analysis as a guide to public policy, including legal change.

Cost-benefit analysis (CBA) is a technique for implementing Pareto or Kaldor-Hicks efficiency, which uses the actual preferences of people to evaluate the costs and the benefits of a certain change in the social status quo. It has been implemented by many governmental agencies to evaluate the social value of competing projects and to determine whether a project needs to be financed at all or not. Despite its regular use, however, the CBA has not been applied uniformly. In addition, there has been some serious academic dispute lately with respect to the normative value of the CBA. The opponents of the CBA argued that (1) actual preferences are not a good basis for governmental policy, because they can be distorted, and (2) the CBA is not tailored to
achieve a Pareto efficiency, but a Kaldor-Hicks efficiency, and the achievement of a Kaldor-Hicks efficiency has no normative input for social welfare, because it disregards the wealth distribution differences, i.e. disregards the effects of the decreasing marginal utility of money.

In their article Implementing Cost-Benefit Analysis When Preferences Are Distorted, Mathew D. Adler and Eric A. Posner address both criticisms of the opponents of the CBA and assert that even though the CBA truly lacks normative significance (i.e. no claim of moral superiority to the status quo can be made), it is nevertheless the best decision-making technique, aimed at achieving a maximum overall well-being.

I. Distorted actual preferences

Adler and Posner examine five different types of distortions of the actual preferences of people and prescribe a way of “restricting” those actual preferences in such circumstances.

1. Disinterested preferences

Sometimes people’s actual preferences are a result partly or fully of disinterested moral views. By definition, a moral view is disinterested, if it relates to an issue that has no implication on that person’s life, but for moral or other reasons that person still has a preference with respect to that issue. An example would be a preference by a person living in North America for the protection of extinguishing species in the jungles of South America, or a preference of a person with respect to whether fetal tissues should be used for scientific research or not.

The problem with the incorporation of the disinterested preferences in the actual preferences of an individual, according to Adler and Posner, is that the disinterested preferences do not carry an independent social value – the objective effect of the new project on the overall well-being does not depend on the disinterested preferences of all individuals who are not affected by the new project. Therefore Adler and Posner suggest that the governmental agencies, when evaluating a project, should not take into account the disinterested preferences of unaffected people, even if they are vigorous. The authors suggest that if such moral preferences need to be accounted for, the legislation and the courts are better equipped to do so than the agencies.

Are disinterested preferences really all that irrelevant? Do they not constitute a legitimate part of the social costs and benefits of a project? Does it matter whether a person feels strongly in favor or against a project because of his interest in that project or because of more general moral considerations?

2. Uninformed preferences

All actual preferences are dependent on the amount of information available to the people at the time they are forming their preferences. Often times the available information is insufficient, and were the people presented with sufficient information, they would have had a different actual preference. Thus, a possible distinction between preferences based on full information and preferences based on no or partial information may be apposite, and a problem may arise as to which of those preferences to be preferred in cases when they differ. For example, an individual A may not know that walking every day is good for his/her health and may therefore be indifferent or against the project of building a new park close by his/her house. However, the same individual A may be strongly in favor of the building of the park, if he/she was adequately informed of the impact of this park on his/her life.

In addressing this problem, Adler and Posner differentiate their prescribed solution for the limited information distortions of the people’s actual preferences, depending on whether the
people are likely to obtain the necessary information at all or not. In short, where even after the implementation of the project the relevant information will not be costlessly and rapidly acquired by the people whose preferences we are taking into account, the limited information preferences are the ones that the agencies should take into account when implementing the CBA. If, however, after the implementation of the project the relevant information will be rapidly and costlessly acquired by the people, the agencies will be justified in relying on the informed preferences of those same people.

Who defines what information is relevant and what not, or whose information is superior? Aren’t all decisions taken in conditions of limited information? Would this conclusion not give the agencies the right to impose their own version of “relevant” information and to justify whatever result they see appropriate?

3. Objectively bad preference

Sometimes people’s actual preferences are a result of objectively bad likings (such as a sadistic satisfaction of seeing other people suffer, a pleasure of incurring harm on other people, etc.). Shall we disregard those preferences, having in mind that they are actual, and may very well be also fully informed?

Adler and Posner respond somewhat positively to that question. According to them, in theory the agencies should assign to such preferences a value somewhere in between their actual preference and their preference the way it would have been if the person had perfectly tracked the objective values. However, since the above rule is not very practicable, the authors suggest a simpler and more practicable approach: if the person is so perverse as to prefer a project that is clearly objectively bad, or to disprefer a project that is clearly objectively good, then the person’s preference should be taken by the agency to be 0. Otherwise objective values should be ignored.

Who decides what preferences are objectively bad though? Is there anything objective in the world? Is anyone’s morality or ideas “objectively” better than someone else’s?

4. Adaptive preferences

In some cases, because of the process of adaptation to the status quo, people’s actual preferences are distorted in favor of the status quo and do not reflect the proposed project’s objective impact on the well-being of that person. For example, if one has always used a car to go anywhere in a city, one may never be able to fully appreciate the advantages of having public transportation. Or if one is poor, one may have well persuaded himself/herself that only rich people need parks, and that for him having a park is not any good.

Adler and Posner again suggest the distinction between two types of adaptive preferences: the ones that will never be changed (even if the project is implemented), and the ones that will change once the status quo changes. Consistently with their previous solution, if the adaptive preferences are unchangeable, they should be left as they are, and if the adaptive preferences are changeable, the agencies should have the freedom to impute the real, “non-adapted,” preference as the person’s actual preferences. The authors, however, find this impracticable, and conclude that “adaptiveness per se should not be a component of agency decisionmaking.”

Aren’t all preferences adaptive? Don’t we always judge things based on our prior experience and the adaptations that we went through thus far in our lives?

5. Wealth distortions
The actual preferences, as measured by CBA, measure the welfare impacts on project winners and project losers in dollars (since the use of utils will make CBA an impracticable tool). Because of the decreasing marginal utility of money, however, for different people the dollar gains or losses correspond to a different welfare gain/loss, depending on their personal wealth (see the classical utilitarian theories for more information on utils v. money). Thus, a dollar gain/loss for a poorer person would correspond to a much greater welfare gain/loss, than a dollar gain/loss for a rich person and therefore the actual result of a project, calculated in dollars may differ from the actual result of the project, calculated in welfare units (utils).

How do we reconcile this tension? The most obvious solution would be to start measuring the actual preferences in utils, rather than in dollars, but unfortunately so far there is no established way of measuring utils, and therefore a recalculation of the actual preferences will be impracticable. Does this mean that we should disregard the distortion? Not necessarily. The authors believe, for example, that in the cases where the agencies have some way of controlling for the wealth distortions, they should do so, taking into account the possible “perverse incentives” and “market adjustment costs” that are inevitably associated with a different treatment of individual’s dollar preferences depending on their personal wealth.

II. Pareto and Kaldor-Hicks efficiency

Posner and Adler accept the criticism that the traditional CBA will rarely produce a Pareto optimal solution, as well as that the Kaldor-Hicks solution does not necessarily have normative input (i.e. does not necessarily present with a superior to the status quo solution). They assert, however, that despite the failure of the Pareto efficiency and the Kaldor-Hicks efficiency to serve as a normative basis for the implementation of the CBA technique, there is still a normative criterion that does plausibly justify the use of CBA, and that is the criterion of overall well-being. Unlike the classical utilitarians though, Adler and Posner perceive the overall well-being as one of the several normative criteria bearing upon the governmental choice, not as the sole criterion. Thus room is left for deontological or egalitarian considerations to take precedence to overall well-being considerations in cases where this is justified (no guidance is given as to what such cases may be). The authors believe, nonetheless, that it is the agencies’ job to pursue the maximization of the overall well-being only, and it is Congress’ and the courts’ job to apply deontological and egalitarian considerations whenever they are justified.


Web Note 2.4 (p. 46)

One of the winners of the Nobel Prize in Economics in 2002 was Daniel Kahneman, Professor Emeritus of Psychology at Princeton University. Kahneman and his coauthor, the late Amos Tversky, did experiments to see the extent to which people’s attitudes toward risk fit those we have just studied. The experiments suggested that most people have complex feelings about losses and gains that Kahneman and Tversky characterized as “loss aversion.” See section XII below and our website for more on the experiments and their implications.
This edition of *Law and Economics* now has a very brief introduction later in Chapter 2. And we have included some new examples of behavioral law and economics in almost every “topics” chapter in the book. For instance, in Chapter 7 we include some material suggesting that the well-documented difficulty that people have with probabilistic calculations might cause us to reassess the economic model of tort liability that we developed in Chapter 6. And in Chapter 9 we give an example of experimental results that suggest that including a liquidated-damages clause in a contract might induce people to breach the contract when it is more efficient to breach than to perform. And, finally, in Chapter 13, we include a section on behavioral critiques of the deterrent effect of criminal law.

Here we expand very briefly on the material contained in Section XII of Chapter 2.

Rational choice theory has been an extraordinarily fruitful hypothesis in economics and the social sciences generally. There is no clear definition of rational choice, but some of the elements of the theory are the assumption that all decisionmakers can identify the alternatives open to them and can consistently rank them in order of preference. That sounds undemanding, but it turns out that they assumption may—in some circumstances and for some people—make tremendous demands on their cognitive abilities.

In the last 25 years or some (and increasingly of late) a literature that is critical of rational choice theory has appeared that calls into question some of the predictions of rational choice theory. We will have occasion to refer to this literature repeatedly throughout these notes; so, here all we seek to do is to draw out some general characteristics of this literature (called “behavioral economics”) and to give some examples.

One of the most important aspects of the literature that is critical of rational choice theory is that it does not find that people, as decisionmakers, are irrational. Rather, the literature finds that people have systematic and persistent biases in their perceptions and judgments. It is important to recognize that these are systematic biases—that is, that they run in the same way. They are not, for instance, symmetrically distributed around an average or most common response. To take a concrete example, people tend to be overly optimistic about future events having to do with themselves. They believe that they are going to happier, wealthier, or more successful than will actually be the case. Students believe that they are going to get higher grades than they will. (Almost all the students in a given class believe that, like the children in Lake Wobegon, they are all above average.) This would not be an optimism bias if attitudes about future states were randomly and symmetrically distributed around a most common response, with about half of the people thinking they are going to do poorly and half thinking that they are going to do well.

Also, these biases are persistent; they occur again and again in people of all ages and socioeconomic circumstances.

These findings regarding cognitive biases typically arise from laboratory experiments. Psychologists, economists, lawyers, and others want to see if a particular prediction of rational choice theory (hereafter, RCT) is borne out in actual decisions. So, they set up an experiment designed to test the RCT prediction, conduct the experiment, and compare the results with the prediction.

An example has to do with the famous economic dictum that “bygones are bygones” or that “fixed (or sunk) costs should not matter.” Consider this example. You have purchased a season ticket to a series of concerts to be held at the local auditorium throughout the next year. The ticket cost $450 and entitles you to the same seat at each of the concerts. Now suppose that you
have attended and enjoyed several of the concerts. There is a concert tonight, but you have had a long day already; you’re tired and hungry; and you would rather not forgo dinner and go to the concert, at which you may well fall asleep. These are all sensible reasons for not going to the concert. But a very common one that is not sensible is this: “I’ve paid for the season ticket. If I don’t go, that expenditure is a waste.” The season ticket expenditure has already been made and will stay the same whether you go to the concert or not. Economics teaches that the only expenses that you should consider are those that actually vary with your choice.

And yet there are lots of examples of decisions in which fixed costs influence people’s decisions. For instance, politicians and others frequently argue in favor of continuing a ruinously expensive public works project on the ground that if we don’t continue, all the expenditures made to this point will have been wasted.

Here’s a wonderful example. Professor Richard Thaler, now at the Graduate School of Business at Chicago but at the time of this experiment at Cornell University, decided to test the impact of fixed costs on current decisions. He rented a local pizza parlor and advertised a fixed low price “all you can eat” night in the local newspaper. The students and townspeople turned out in huge numbers. When the customers had paid their, say, $5, and taken all the seats in the restaurant, Professor Thaler came out and, pretending to be the restaurant owner, announced that he was so pleased with the response to his “all you can eat” offer that he would refund the $5 fixed price to half of the people in the restaurant. His assistants went through the restaurant randomly returning $5 to half the customers and carefully noting who had received their $5 back and who had not. Then the waiters brought out the pizzas and served the customers.

Here’s the question—should there be a difference between the amount of pizza eaten by those customers who did and those who did not receive their $5 back? RCT would predict that there ought not to be a difference. The fact that some of the customers received $5 back should no more influence the amount of pizza eaten than would those customers’ unexpectedly finding a $5 bill in their wallet before the pizza was served.

And yet there was a significant difference. Those who did not receive their $5 back ate significantly more than those who did.

That is merely one example of many examples that we might give of cognitive biases that induce people to behave in ways contrary to ways predicted by RCT. We do not, however, want you to think that this very brief foray into behavioral economics means that the RCT-based analysis that we shall develop in the next 11 chapters is not useful. It most certainly is.

We shall pause from time to time to introduce some cognitive biases to you and to show how they might alter the analysis that we shall develop.