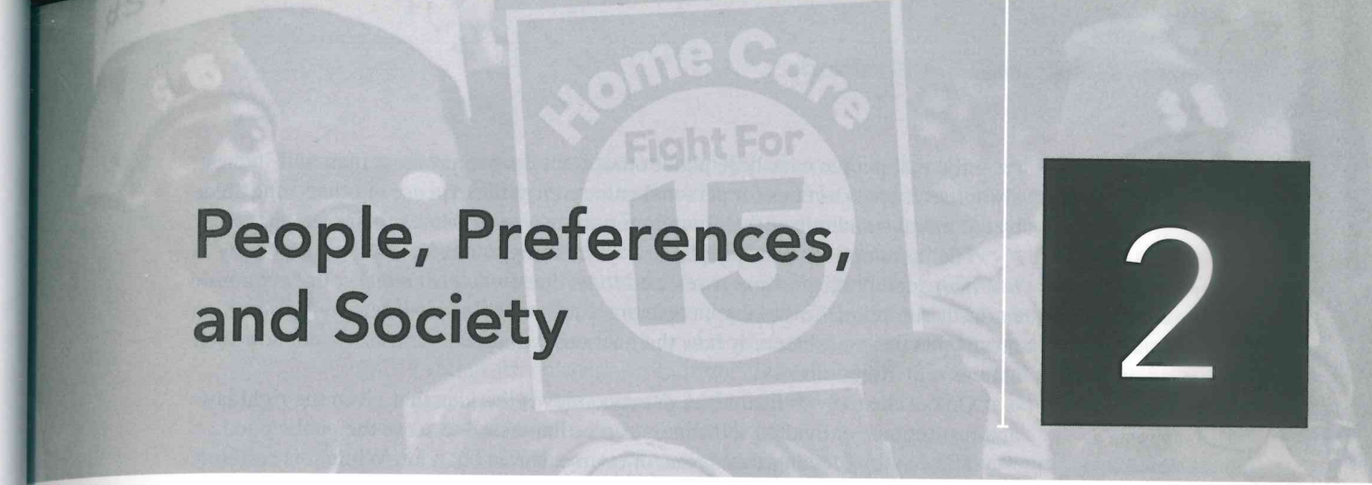
Robert Reich, *Saving Capitalism: For the Many, Not the Few* (New York: Alfred A. Knopf, 2015).

George Soros, *The Crisis of Global Capitalism: Open Society Endangered* (New York: PublicAffairs, 1998), especially Chapter 6, "The Global Capitalist System," 101–34.

Eric Wolf, *Europe and the People Without History* (Berkeley: University of California Press, 1982).



People, Preferences, and Society

2

Parents everywhere are sometimes late in picking up their children at day care centers, thereby inconveniencing the staff. An experiment, carried out in Haifa, Israel, was designed to find a solution to the problem of tardy parents. At six randomly chosen centers a fine was imposed for lateness, and a few other centers were selected to serve as a "control group" (nothing was changed at these centers). Staff at the centers with the newly instituted fines expected that punctuality would improve. Contrary to these expectations, however, there was an *increase* in tardiness when the fines were imposed: the number of parents picking up their kids late more than doubled. Even more striking was the fact that when the fines were revoked, the parents' higher rate of tardiness persisted. Meanwhile, the amount of parental lateness at the centers in the control group did not change.

The economists who designed the Haifa experiment were quite surprised by the results. Most economists assume that people seek monetary gain and try to avoid losses. From this perspective, the day care centers' fines should have given the parents an incentive to be more punctual. But the plan backfired. After analyzing the results, the designers of the experiment concluded that the imposition of the fines must have unintentionally suggested to the parents a new way of thinking about their behavior. Whereas before the experiment lateness had been seen as a violation of a *moral obligation* (to pick up the kids on time), after the imposition of the fines being late could be viewed as a *choice* between picking up the kids on time and paying a price (the fine) for being late. And under the new system many parents were apparently willing to pay the price. The designers of the experiment titled their report "A Fine Is a Price." Their main finding was that imposing the fines had signaled to the parents that they were now in a market-like relationship to the day care staff—one in which they could *buy* lateness. Once the fines had been introduced, revoking them could not restore the initial situation; it just lowered the "price of lateness" to zero.[1]

Why were the economists who designed the day care experiment surprised by its results? It was because they took it for granted, as have most economists until very

[1]Uri Gneezy and Aldo Rustichini, "A Fine Is a Price," *Journal of Legal Studies* 29, no. 1 (2000): 1–17.

recently, that people care little about others, act only to promote their self-interest, always seek opportunities for personal gain, even at the expense of others, and abide by the moral standards of their community only when it serves their own purposes.

Economic man (*Homo economicus*) refers to the assumption that human beings are calculating, amoral, and self-interested.

The assumption that people are calculating, amoral, and governed by a self-interested predisposition is referred to as the *Homo economicus,* or "**economic man**," assumption. To say that people are governed by a **self-interested** disposition means that they consider only how their actions will affect themselves, not how their actions will affect others.

One of the truly radical ideas in economics is the idea that given the right laws and institutions, individual selfishness can be harnessed to serve the public good.

Self-interest refers to a disposition to consider only how one's actions will affect oneself, not how they may affect others.

The economic man assumption, of course, leaves out a lot. While it is certainly true that selfish behavior is common, so are acts of compassion, selflessness, and altruism. People show concern for their friends' well-being, volunteer for military duty, care for their infants or aged parents, risk their lives for strangers, and forgo opportunities to steal even when no one is looking. When such acts are motivated by a concern for others—or for what happens to others—they are not self-interested acts. We might better call them *other-regarding* because they are motivated by a regard for others. (Self-interested behaviors are, of course, *self-regarding.*)

The key to whether an act is self-interested is its motivation. The deciding factor is whether the act is motivated by a concern for others, not whether it produces happiness in the actor. For example, many generous people take pleasure in helping others in need. But this pleasure does not make them selfish people: since they act from unselfish motives they are *not* self-interested. Not all other-regarding acts are as admirable as helping others and obeying moral codes, however. Hurting another person out of spite, jealousy, or intolerance of his or her religion or race is also other-regarding. Such an act is intended (based on a motive) to make something bad happen to someone else, just as generous actions seek good outcomes for others.

Also left out of the economic man assumption is the fact that people change. *Homo economicus* is believed to be a "natural" phenomenon, and, accordingly, the type of (self-interested) behavior associated with it is assumed to have been prevalent in every kind of society, unchanging across the entire span of human history, and sure to be characteristic of any future economic system. The great eighteenth-century philosopher-economists Adam Smith and David Hume thought that the key to a well-ruled society was not to deny self-interest (which they thought to be impossible) but to find a way to harness selfish motives to serve socially valued objectives:

> *It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest.*
>
> —Adam Smith, *The Wealth of Nations* (1776), book I, chapter II

> *Political writers have established it as a maxim, that in contriving any system of government . . . every man ought to be supposed to be a knave and to have no other end, in all his actions, than his private interest. By this interest we must govern him, and, by means of it, make him, notwithstanding his insatiable avarice and ambition, cooperate to public good.*
>
> —David Hume, *Essays: Moral, Political and Literary* (1742)

It is well known, however, that people frequently change as a result of experiences they have in the economy. For example, a long but unsuccessful job search

can turn a confident and happy person into a depressed and violent threat to his or her family or community. Even a whole group's culture can change when its way of making a living is altered. For example, when the sons and daughters of farmers become office or factory workers, it is quite likely that they will develop new patterns of behavior, discover new wants, and be guided by different values.

In this chapter we consider various ways in which economists attempt to explain individual behavior. A common starting point is that people make choices and do things for reasons—even if not always for good reasons, and even if their reasoning does not always correctly anticipate the outcomes of their actions. Thus, behavior is seen as intentional, or goal-seeking.

The main idea of this chapter is that *while the intentional view of behavior is essential to understand why people do what they do, economic man is a fictional character. Real humans are* diverse (*some selfish, others generous*) *and* versatile (*sometimes bold, other times cautious*), *and their values, tastes, habits, and beliefs are very much the product of their upbringing, work experience, and national, ethnic, and cultural backgrounds.* This main idea is expressed in five key points.

1. Explaining behavior requires taking into consideration an individual's *constraints* (limits on his or her actions), *preferences* (evaluations of outcomes), and *beliefs* (understandings of how particular actions may bring about specific outcomes).
2. Laboratory experiments as well as ordinary observations of daily life show that selfishness is but one of our motives. We are also generous, even toward those we do not know, and we are willing to reward those who treat us well and to punish those who treat us or others badly, even if such actions are costly to us in terms of lost income or missed opportunities for personal gain.
3. People are similar in many respects the world over, reflecting our common genetic inheritance, and these commonalities are sometimes termed *human nature.* But in other respects our behaviors differ greatly, reflecting differences in the things we have learned from others in our society; such differences are termed *cultural differences.*
4. Families, schools, neighborhoods, religious institutions, and workplaces all play a part in the processes by which we come to have our particular values, desires, and beliefs.
5. All animals *compete* with other members of their species, but humans are unique in the extent to which we can also *cooperate* with those to whom we are not related. We have become the "cooperative species" because throughout history cooperative people prospered, and their cooperative behaviors were copied by others, in part because groups that succeeded in cooperating survived and grew, eclipsing groups that did not.

Aggregate or **population-level outcomes** refer to the economic totals, averages, and relationships that are generally studied by economists.

Economics is about *totals* (the output of an economy or the number of unemployed people, for instance) and *averages* (per capita income, for example). It is also about *relationships*—the power of employers over workers, the price of bread relative to the typical wage, the distribution of income between rich and poor, and so on. These totals, averages, and relationships are sometimes called **aggregate** or **population-level outcomes**.

Economics is not about what particular individuals do, but economists need to know how individuals behave in order to explain totals, averages, and relationships. In most cases it is difficult to understand aggregate, or population-level, outcomes without understanding why people do what they do. Hence, individual behavior comes in as part of an explanation of the larger picture.

Constraints, Preferences, and Beliefs

To explain why people do what they do, economists make use of three terms: *constraints*, *preferences*, and *beliefs*. An example will elucidate the meaning of each of these terms. Imagine that you are planning to drive across the country and are going to purchase a used car for the trip. You will need to pick out the car, decide how long you want to spend on the road, and select the kind of accommodations you will stay in while traveling.

Constraints are the limits on the actions that an individual or a society can take.

Preferences are the relative values one places on the various outcomes that one's actions might bring about.

Beliefs are one's understandings of the actions necessary to bring about particular outcomes.

Constraints put limits on the various actions available for you to take. Such constraints might include physical limitations (one cannot travel in a car from Massachusetts to California in less than two days); your own capacities (you cannot drive for more than twelve hours at a stretch without going to sleep); your social relationships to others (the availability of friends you might ask to go with you); facts about institutions or your own ethical rules (you may not want to buy your car from a dealer you know is corrupt); and your wealth and capacity to borrow (you have a limited bank account and possess little that might serve as collateral in return for a loan). Constraints will limit your actions in such a way that you will face what is called a *trade-off*: achieving more of one thing means getting less of something else. Given your budget—limited by your wealth plus what you can borrow—you can buy a better car if you are willing, say, to give up staying at upscale motels.

Preferences are the relative values you place on various outcomes that your actions might bring about. For instance, as you plan your car trip to California you might assign different degrees of importance to comfortable nights in upscale accommodations, fatigue from all-nighters on the road, ownership of a decent car at the end of the trip, and arrival in California by a certain date.

Your **beliefs** are your understandings of the actions necessary to bring about a particular outcome. (Note that this is a particular usage of the term *belief*, the broader definition of which refers to a conviction regarding the truth of something.) For example, you may believe that getting to California without a breakdown requires buying a better car.

Information about constraints, preferences, and beliefs is generally sufficient to explain why a particular set of actions was taken. Continuing the road trip example: You bought a seven-year-old Honda Civic because you could not afford an Accord and you believed that the Civic would probably get you there. Also, you asked a friend to join you so that you could drive straight through, enjoy his company, and surprise your parents by getting home early.

In sum, individuals make choices to take various actions (within their constraints); they seek to bring about the outcomes they desire (according to their preferences); and they base their choices on their understandings (beliefs) about how certain actions may bring about the desired outcomes. The important thing to note here is that behavior involves choosing. The choices that the driver in the above example made may have been quite limited due to constraints such as a lack of wealth, but that does not mean that the actions taken were not choices. It may also be that

the choices made were bad choices (the seven-year-old Civic might not have been adequate to get her all the way to California), but, in any case, choices were made.

We stress the element of choice because some views of behavior see choice as unimportant or even nonexistent. Such views are based either on the argument that individuals are not free (their constraints dictate a particular action) or that they are creatures of habit or conformity. There certainly are situations in which we are not free: the choice between "your money or your life!" is not much of a choice. It may also be the case that we sometimes repeat our past actions (out of habit) or copy (conform to) the actions of others without considering alternative possibilities. Habit and conformity certainly play a part in our behavior: just think of what you ate for breakfast this morning or what you wore to the last social event you attended. But views of behavior as coerced, habitual, or conformist fail to recognize the important elements of choice in most of what we do.

The constraints, preferences, and beliefs approach to understanding human behavior has therefore been widely accepted, not only in economics but in other social sciences as well. However, no theory can explain anything by itself. To explain behavior we need to know facts about the particular constraints, preferences, and beliefs pertaining to a given situation, and such facts will differ from person to person and among groups. Men and women face different constraints, for example, as do members of different classes, races, ethnic groups, and nationalities.

Moreover, two important aspects of the constraints, preferences, and beliefs approach have not yet been mentioned. The first is that preferences are not necessarily selfish: there is no reason to say that people must always be self-interested. The person driving across the country in our earlier example may have wanted to arrive early not for selfish reasons but to please her parents. Second, we have not said anything about where preferences come from. Was her concern for her parents' happiness an expression of "human nature"—an expression of a genetically transmitted trait? Or was it the result of her happy childhood? Was her lack of status consciousness (indicated by her purchase of the seven-year-old Civic) derived from a considered decision not to throw money away, or was it the result of a vague awareness that her cash-strapped friends would have frowned on the purchase of as nice a car as an Accord?

The view of preferences adopted in this book is fundamentally different from the one that prevails in the neoclassical school of economics, an approach to understanding the economy that appears in many textbooks and is discussed in detail in the next chapter. Neoclassical economists build their theories on the *Homo economicus* assumption that people have entirely self-interested preferences. They assume that people care about outcomes that involve themselves but not those that affect others. They also assume that everyone is an economic man and everyone knows that everyone is an economic man.

In addition, neoclassical economists generally do not ask where preferences come from. Rather, they take preferences as "given," meaning that the preferences that guide economic decision making are thought to be simply there, possibly as an expression of human nature, or possibly due to advertising, socialization, or other factors that are of no concern to economists. Moreover, neoclassical economists usually view preferences as being *exogenously* determined, formed by forces *outside* the economy.

Because the neoclassical approach is out of line with many scientifically determined and widely known facts regarding human behavior, we take a different view. As we have said, in our understanding of the economy preferences are not necessarily selfish. More important, we do not assume that preferences are exogenously determined. Rather, we view them as *endogenously* determined, that is, determined

mostly by processes *internal* to the economy. In the next section we set forth our reasons for doubting the assumption that preferences are entirely selfish. Later in the chapter we explore the question of where preferences come from.

"Economic Man" Reconsidered

Nobody would pick *Homo economicus* for a housemate, a spouse, a friend, or (if we could choose them) a parent or a child. The economics Nobel Laureate Amartya Sen has called economic man a "rational fool." But the implications of the concept are actually worse than Sen suggests: mental health professionals use the term *sociopath* to refer to a person whose behavior is governed entirely by calculation of self-interest. Sociopaths have no sense of right and wrong, and they lack any concern for the well-being or pain of others.

It is not surprising, then, that since the inception of neoclassical economics in the late nineteenth century, even its adherents have sometimes had difficulty with the assumption that human beings are motivated solely by self-interest. A founder of the neoclassical approach, F. Y. Edgeworth, wrote: "The first principle of economics is that every agent is actuated only by self-interest." In his next sentence, however, he cautioned that this "first principle" is strictly applicable only in situations of "contract and war."[2] With regard to war, Edgeworth was not entirely right: bravery under fire often is not based exclusively on self-interest. And with regard to contracts, sometimes a handshake is a handshake, even if one party could benefit by violating the unwritten contract.

Just how mistaken the assumption of universal selfishness is has been revealed in a series of behavioral experiments in recent decades. Subjects, usually students, often economics or business majors, volunteer to play a game in which they can win real money. Each is paired with a person, for example someone in another room, whom they do not meet and do not know, for a single interaction. One (usually chosen randomly) is termed the "proposer," the other, the "responder." The proposer is provisionally given, for example, $10, an amount of money referred to as the "pie." Both participants know the size of the pie. It is explained to both of them in advance that the proposer will decide how much of the pie to offer to the responder; after the proposer makes the offer, the responder decides whether to accept or reject it. If the responder accepts, the responder gets the offered portion, and the proposer keeps the rest. If the responder rejects the offer, both get nothing. The pie is often a small sum, such as the $10 described above, but the game has been played in the United States for $100 and in Indonesia with a pie equal to three months' salary. This experiment is called the "ultimatum game," where the "ultimatum" refers to the proposer's offer, which the responder can either accept or reject.

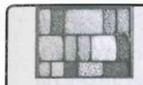
How would "economic man" play this game? As the proposer, he would reason that the responder (assumed also to be an economic man) would accept *any* offer greater than zero, for rejecting an offer of even one penny would deprive the responder of a penny. For an economic man a penny is better than nothing, no matter how it is acquired. This being the case, the proposer would offer a penny (or the smallest amount possible), anticipating that it would be accepted.

[2]F. Y. Edgeworth, *Mathematical Psychics: An Essay on the Application of Mathematics to the Moral Sciences* (London: C. Kegan Paul, 1881), 104.

But this is not what usually happens when the ultimatum game is played with real people for real money. Before we tell you what *does* happen, however, think about what you would offer if you were a proposer with $100 to share, in some proportion, with a responder. Also try to imagine the lowest offer you would accept if you were the responder.

The ultimatum game has been played in hundreds of experiments with university students as subjects in the United States, Japan, Israel, Germany, Russia, Slovakia, Slovenia, Indonesia, and many other countries. Few play the game as economic man would. The vast majority of proposers offer between 40 and 50 percent of the pie, and the most common offers are typically 50 percent. Equally striking is the fact that offers of 25 percent or less are frequently rejected.

These experiments show that neither the proposers nor the responders behave like economic man. A responder is often willing to reject a low offer and end up with nothing, just to punish a proposer who makes an unacceptably low offer. Many have interpreted this behavior as evidence of a *preference for reciprocity*—a tendency to be generous toward another person as long as you are treated well by the other person but a willingness to pay good money to punish someone who has crossed or insulted you, even if you will never see that person again.



Coke Versus The "Just Price"

The Coca-Cola Company has tested a vending machine that automatically raises the price of a soda on hot days. Doing this does not require rocket science, just a thermostat and a computer chip. The company's chairman and chief executive at the time, M. Douglas Ivester, noting that the desire for a cold drink goes up with the temperature, concluded: "So it's fair that it should be more expensive." Airlines charge more when the demand is high, so why should Coke not do the same? "The machine will simply make this process automatic," Ivester explained.

Not everyone agrees. A Pepsi spokesman, no doubt seeking a competitive edge, took the high road: "We believe that machines that raise prices in hot weather exploit consumers who live in warm climates." Another beverage executive wondered: "What's next? A machine that X-rays people's pockets to find out how much change they have and raises the price accordingly? . . . It's another reason to move to Sweden!"

Apparently the price of a Coke—or that of any other commodity—is not, for some people at least, only something to be left to the market (or to the influence of large corporations). Economics Nobel Prize winner Daniel Kahneman (a psychologist by training) and his collaborators asked consumers if they thought it was fair for stores to raise the price of snow shovels during winter storms. The answer: they did not.

The Coca-Cola Company's new machine strikes at least some people as unfair because they think that when two parties engage in a mutually beneficial exchange—one, say, that increases a company's profits while quenching a consumer's thirst—the distribution of the benefits and burdens should not violate ethical norms. This idea can be traced to Thomas Aquinas, the medieval Catholic philosopher, and his concept of a "just price." Most economists think the idea of a just price is a nonsensical expression—like a "yellow logarithm." They would side with Coke. But judging from the reception that Coke received, they have not persuaded everyone yet.

Source: Constance Hayes, "Coke Tests Vending Unit That Can Hike Prices in Hot Weather," *New York Times*, October 28, 1999.

One interpretation is that a proposer could have well-informed beliefs and be motivated by selfish preferences. Suppose the proposer believes that the responder will not play the game like an economic man, one willing to accept a penny. If the proposer believes that the responder will reject low offers, then making a 50–50 offer could be nothing more than self-interest guided by prudence.

While the responders' behavior is understood as reciprocity, the behavior of proposers seems to be more complex than a simple preference for reciprocity would suggest. It is possible that high offers could reflect unconditional generosity toward the responders or a concern for their well-being irrespective of any behavior on the responders' part. If this is the correct interpretation, the proposers can be said to have *altruistic* preferences—preferences that lead them to act to benefit others at some cost to themselves (even with no expectation that reciprocal benefits will be received later).

All we can say for sure in interpreting the most frequent outcomes of the ultimatum game is that neither the proposers nor the responders behave like economic man. Even the self-interested but prudent proposer just described does not believe that the responder is an economic man. And in virtually all cases the proposers assume that the responders will depart from the assumption of perfect selfishness.

Violations of the selfishness assumption are not confined to these experiments, and neither are they limited to such dramatic but exceptional examples as heroism in warfare. Most people do not steal or cheat on their taxes even when they are sure they can get away with it. And in all of the richest nations in the world (Canada, the United States, and the European countries, for example), large majorities vote for income transfers to the poor, knowing that these programs require higher taxes on most income-earners. Even in the United States, where such programs are relatively unpopular, there is substantial support for income transfers to the poor, even among rich and upwardly mobile people who will probably never be able (or have the need) to benefit directly from such transfers.

However, we cannot conclude from our recitation of the above facts that people are not selfish. What is probably true is something like Abraham Lincoln's assertion about people being fooled: being selfish is what some of the people are all of the time and what all of the people are some of the time. But the rest of the people, the rest of the time, are sometimes altruistic, sometimes reciprocal, sometimes spiteful, occasionally vengeful, and so on.

Human Nature and Cultural Differences

These experiments show that people differ within societies. This lesson is important because it reinforces what we know from our own observations, namely, that assuming everyone is selfish (or generous, or spiteful, for that matter) ignores the facts. But people's behavior also differs—sometimes strikingly—from one society to another. To some extent this is due to the particular requirements of making a living in each society—people in Kansas farm, people in Iceland fish. But does the extent to which people resemble economic man vary from one society to another?

One of us (Bowles) and a team of anthropologists and economists designed a set of experiments to explore the connections (if any) between how people make their living and their preferences. We conducted our experiments in fifteen societies in Africa, Asia, and Latin America where people live in sharply contrasting ways. In some, hunters and gatherers live in ways not very different from the ways in which our early human ancestors lived before the domestication of animals and plants. In others, herders and farmers use technologies that have been in use thousands of years to make a living from their animals and plants. Most of the groups we studied live in inaccessible places such as the New Guinea highlands and the Peruvian part of the Amazon, and they have very limited connections with modern governments or the world of markets. None of the groups we studied was large; most were settlements of less than one hundred people and had had little contact with the outside world. For this reason, and because they have so little else in common, we call them "small-scale societies."[3]

The results of the experiments surprised us. When the ultimatum game was played among the Au and Gnau peoples in Papua, New Guinea, for example, offers of more than half of the pie were common. (Such offers were almost never encountered in experiments conducted with American students.) Even more interesting was the observation that in these societies high and low offers were rejected with equal frequency. (Most fifty-fifty offers were accepted.) This unusual result probably occurred because competitive gift-giving is a means of establishing status in these and many other New Guinea societies. We reasoned that proposers making high offers (offering more than half) may have been seeking to enhance their status, while those rejecting these offers were simply refusing (albeit at a high price) to accept a lower status. The frequent rejection of low offers was probably due to a sense that accepting them would mark the responders as already being of a low status.

In contrast, when the game was played among the Machiguenga forest agriculturalists in Amazonian Peru, the average offer was 27 percent of the pie. Nearly three-fourths of all the Machiguenga offers were less than 25 percent, and only one offer was rejected! This was a pattern strikingly different from the results of the other experiments we conducted. We were left wondering: if the Machiguenga were really so stingy (as suggested by the frequency of low offers and the infrequent rejection of them), why did they offer more than a penny?

Analysis of our experiments in the fifteen small-scale societies led us to the following conclusions. First, and most important, is that typical behaviors vary significantly from group to group. The subjects in some groups were much more generous (and willing to punish stinginess) than were American, European, and other students, and some were much less so. Second, in no group did we find "economic man" behavior to be typical. Third, variations in behavior from one group to another seemed to reflect differences in how people in each group make their living. For example, the Aché people in Paraguay acquire some kinds of food (meat and honey) by hunting and gathering, and these foods are shared equally among all group members. When playing the ultimatum game, almost all Aché proposers offered about half of the pie, and *none* of their offers was rejected. (This behavior differs, of course, from that of the Machiguenga and other groups such as American students.)

Another example of how a particular group's economic circumstances affect its typical behavior comes from Indonesia. There the Lamalera whale hunters need to hunt in large crews, and they divide their catch according to strict sharing rules, with each part customarily going to a particular individual or group—crew, sailmaker, blacksmith and boat builder, for example. When they played the ultimatum game, the average offer was 58 percent of the pie.

---

[3]Joe Henrich, Robert Boyd, Samuel Bowles, Ernst Fehr, and Herbert Gintis, *Foundations of Human Reciprocity: Economic Experiments and Ethnographic Evidence in 15 Small-Scale Societies* (Oxford: Oxford University Press, 2004).

Why do people play the ultimatum game so differently from one society to another? We know that the players in each society, from Orma herders in Kenya to Aché hunters in Paraguay, face the same constraints in the experiments. Therefore, the answer must be either that the players' beliefs vary or that their preferences differ. If it is their preferences, where do the differences come from?

Some of our preferences are influenced by our genes and are hence thought of as reflecting our "nature." Thus, we sometimes say that a certain person is generous or stingy (or something else) "by nature." To take another example, the taste for sweet or fatty foods seems universal and is probably genetically transmitted. But most food tastes vary greatly among countries, and genetic differences between human populations are not great enough to account for such variations. Spain, Italy, and France are famous for their distinctive national cuisines, but the crops grown in each of these countries can be grown in others, and there are no relevant genetic differences between their populations. Why do the Italians eat pasta while the French prefer bread or potatoes? These tastes are not inherited genetically. Rather, they are *learned* from parents, neighbors, and others.

Preferences that are learned from others—passed on from parents, elders, teachers, heroes, competitors, neighbors, or friends rather than being genetically transmitted just from parents—are part of what is called *culture*. We define culture as aspects of behavior that we learn from others.

As noted earlier, beliefs influence our behavior because our choices about what actions to take are based in part on our understandings (beliefs) regarding cause-and-effect relationships. Since our beliefs are either learned from others or gathered from our own experiences, they too (like preferences) are part of our culture. Similarly, learned skills, transmitted to us by parents, schools, friends, neighbors, and others, are part of the culture in which we are situated.

Culture and *human nature* have long been controversial terms: is it "nature" or "nurture" that explains why some people lead and others follow? Is it "genes" or "environment" that make some rich and others poor?

What is not controversial is that people do not differ much genetically from group to group. *Within* any group, of course—whether it is citizens of the United States, the Aché people of Paraguay, or Italians—the genetic differences are very large. Researchers have found, however, that such within-group differences are much greater than the differences between a typical person in a certain group and one in some other group. For example, if you were to pick two Americans at random, even ones who share the same skin color or height, the genetic differences between them would most likely be huge in comparison to the differences, say, between the average American and the average Aché.

Behaviors, however, are another matter. People behave very differently in different societies. (Recall the varying results of the ultimatum game played in different societies.) Behaviors differ mainly because cultures are very different from one country or group to another: what we learn from others as we grow up and even when we are adults varies greatly from place to place. That is why the preferences and beliefs of the peoples studied by the authors differ so much. The culture of Lamalera whale hunters (who on average offered more than half of the pie) is different from that of the Machiguenga forest agriculturalists (who offered barely more than a quarter), which in turn is different from that of the Tanzanian Hadza hunter-gatherers (who rejected almost half of low offers)—and all of these cultures are different from that of the Ecuadorian forest people, the Tsimane (who rejected none). Why do people learn such different things from one culture to another?

The Economy Produces People

As we will discuss more in Chapter 4, the economy produces more than just goods and services; it also produces people. We call the creation of goods and services "production" and the production of people "reproduction" (see Figure 4.1). The term *reproduction* comprises not only biological procreation but also all the processes entailed in the formation of an individual, including what happens in families, schools, and all the other institutions in which parents, teachers, caregivers, spouses, and others combine their labor with other inputs to raise and support each new generation. Societies accomplish the tasks of reproduction in various ways, and some of the differences in methods of reproduction result from differences in the way people make their livings (production). This is what we mean when we say that the economy produces people.

We've seen that ultimatum game experiments can provide information about the relationship between an economy and a culture. In our small-scale society experiments individual choices appeared to reflect everyday life, especially the way people made their living. For example, we saw that the Aché, who acquire much of their food by hunting and gathering and then share it, tended to divide the pie equally, sometimes offering more than half of it to the responders in our experiments.

Similar information can be gathered using other types of experiments. Among the Orma herders and throughout Kenya there is an important cultural institution they call the *harambee system*. With this system it is customary to collect money to build a school or repair a road by assessing each herder a certain amount, expecting him to make a contribution that varies with the size of his herd. We asked the Orma to play a different game called the "public goods game."

A public goods game is also explained to each player beforehand, and, like the ultimatum game, it is played anonymously and for real money. But in this game individuals play in groups rather than with a single partner, and they are asked to contribute to a common pot for the benefit of all. Once all the contributions are made, the amount in the pot is doubled and the total is then distributed in equal amounts to all the players. In this game, each player benefits from *the others* contributing, but each would personally gain the most by contributing nothing.

In the public goods game an Orma herder with a large herd who contributed one Kenyan shilling—quite a lot of money among his people—would see his contribution to the common pot doubled and then divided and distributed equally among the players in the game. Suppose there are five players. Then, the share distributed to the herder as a result of his contribution would be, say, two-fifths of a shilling, less than his original one shilling, so he would have been better off remaining on the sidelines and just holding on to his shilling. Despite the fact that self-interest would prescribe contributing nothing, however, the herders in fact contributed generously—and those with large herds contributed more than those with smaller ones.

We wondered if the similarity between the local customs and the experimental play of groups such as the Aché hunters in Paraguay and the Orma herders in Kenya comes about because preferences are affected by a particular group's social institutions and norms of fairness. The large differences in institutions and norms in our sample allowed us to address this question. Accordingly, we ranked each society with reference to two aspects of its economic institutions and then sought to use the rankings to predict the results we achieved in the ultimatum games.

Fifty-Fifty: The Importance of Norms

On January 11, 1886, Fenner Powell, a former slave in Wade County, North Carolina, placed his X next to the signature of his landlord, W. S. Mial. Powell thereby agreed to "do all manner of work . . . as directed, and to be respectful in manners and comportment to said Mial . . . and to give to said Mial one half of all crops raised." Remarkably, this was exactly the same crop share that free-born white farmers in Wade County and throughout the South agreed to pay their landlords. Why would a former slave—illiterate, excluded from voting, and subject to denigration and lynching—be allowed to keep the same share as free-born farmers with greater social status and bargaining power? The answer lies far from the post–Civil War U.S. South.

In Illinois today, growing corn is big business. Using capital-intensive technologies and computer-generated business plans, some farmers cultivate over 1,000 acres, much of it on plots rented from multiple owners. In the mid-1990s over half the contracts between farmers and owners were sharecropping agreements, and of these, over four-fifths divided the crop fifty-fifty. In southern Illinois, where the soil is less fertile, in some counties most contracts give the tenant two-thirds of the crop and the owner one-third, although land quality varies widely.

Rice cultivation in West Bengal in the mid-1970s seems light years away from Illinois. In West Bengal, poor illiterate farmers eked out a bare living on plots averaging just two acres; their villages lacked modern communication, and were isolated by impassable roads much of the year. Yet, as in Illinois, crops were divided fifty-fifty between sharecroppers and owners in more than two-thirds of the contracts. Ibn Battuta, the famous Arab geographer who visited Bengal, India, in 1347, had recorded exactly the same division of the crop six centuries earlier. (Of course, if each landlord had twenty sharecroppers, fifty-fifty crop sharing would not give owners and farmers equal incomes: each landlord's income would be twenty times that of the typical farmer.)

John Stuart Mill, the nineteenth-century English philosopher and economist, noted both the widespread pattern of equal sharing of crops and local conformity to other proportions where fifty-fifty was not the rule. Mill's explanation: "The custom of the country is the universal rule." But why did the Bengalis and the Americans come up with the same proportion? And, more puzzling: why do owners offer a 1:1 or a 2:1 split, when they could make huge profits if they only offered lower shares on more fertile land? And when the shares do change, as in West Bengal in the 1980s and 1990s, why do they all change at once?

Fifty-fifty crop shares are social *norms*—widespread practices that are followed because violating them would bring criticism, retaliation, or ostracism. Norms play a key role in all economies, limiting the extent to which people can simply pursue their self-interest. Often norms become values in their own right, adhered to not to avoid sanction but because people would not feel right doing otherwise.

Sources: Samuel Bowles, *Microeconomics: Behavior, Institutions, and Evolution* (Princeton: Princeton University Press, 2004), Ch. 3; Roger L. Ransom and Richard Sutch, *One Kind of Freedom: The Economic Consequences of Emancipation* (Cambridge: Cambridge University Press, 1977); Peyton Young and Mary Burke, "Competition and Custom in Economic Contracts: A Case Study of Illinois Agriculture," *American Economic Review* 91, no. 3 (2001): 559–73; Pranab Bardhan, *Land, Labor and Rural Poverty: Essays in Development Economics* (New York: Columbia University Press, 1984); John Stuart Mill, *Principles of Political Economy with Some of Their Applications* (London: Longmass, Green, Reader, and Diver, 1867 [1848]).

The first basis for ranking, *cooperation*, is a measure of the extent to which the local ecology allows for a more productive use of labor when many work together. The Lamalera whale hunters were ranked first because successful whaling requires large numbers of hunters to work together, and the dispersed Machiguenga forest agriculturalists were ranked last because their production is more individualized and they gain little by collective production activities. We speculated that in groups

that cannot benefit much from cooperative production there would be few norms of sharing. We also guessed that in groups such as the Lamalera, whose livelihood depends on large-scale cooperation, ways of sharing would be well developed, and these would affect how the Lamalera played our games.

The second basis for ranking, *market integration*, is a measure of the fraction of a people's livelihood that is acquired through market exchange. The rationale for this measure is as follows: the more frequently people experience market transactions, the more they will also experience beneficial sharing of the gains made possible by trading with strangers. Historically, it is a fact that before markets became widespread, most interactions with strangers were potentially dangerous, often providing occasions for violent confrontation, theft, or worse. As markets developed they habituated us to the benefits of regular interactions with strangers in which both parties can benefit as long as they follow certain rules (you pay at the checkout, you do not take the groceries and run). Our speculation was that such experiences would give rise to societal sharing norms and that these would be reflected in the results of the experimental games.

Using the measures of cooperation and market integration we sought to explain both a group's average ultimatum game offer and its frequency of low offer rejection. We found that the two measures—cooperation and market integration—enabled us to predict the results of ultimatum game play in most of our societies. In societies with more cooperation or greater market integration, proposers made higher offers (on average), and low offers were more likely to be rejected. The great eighteenth- and nineteenth-century thinkers Karl Marx, Edmund Burke, and Alexis de Tocqueville might be surprised to find that exposure to markets leads to higher offers

Does a Constitution for Knaves Make Knaves of Us?

Unlike Adam Smith and David Hume, the English conservative Edmund Burke, the German revolutionary Karl Marx, and the French liberal Alexis de Tocqueville feared that harnessing self-interest, or (to use Hume's phrase) living under a constitution designed for knaves, would turn us into knaves.

[T]he age of chivalry is gone. That of sophisters, economists, and calculators has succeeded . . . Nothing is left which engages the affections . . . so as to create in us love, veneration, admiration or attachment.

—Edmund Burke, *Reflections on the Revolution in France* (1790)

Finally, there came a time when everything that men had considered as inalienable became an object of exchange, of traffic, and could be alienated. This is the time when the very things which till then had been communicated, but never exchanged; given, but never sold; acquired, but never bought—virtue, love, conviction, knowledge, conscience, etc.—when everything, in short, passed into commerce. It is the time of general corruption, of universal venality.

—Karl Marx, *The Poverty of Philosophy* (1847)

Each [person] *. . . is a stranger to the fate of all the rest . . . his children and his private friends constitute to him the whole of mankind; as for the rest of his fellow citizens, he is close to them but he sees them not . . . he touches them but he feels them not; he exists but in himself and for himself alone.*

—Alexis de Tocqueville, *Democracy in America* (1830)

(greater sharing with others) and a greater tendency to reject unfair offers. (See the box, "Does a Constitution for Knaves Make Knaves of Us?")

Our ability to predict behavior in experiments that were entirely novel situations for our subjects on the basis of our two measures of economic structure suggests that economic institutions influence preferences. Our values, likes, dislikes, and morals seem to be affected by living within a particular set of institutions—sharing food like the Aché, cooperating in acquiring food like the Lamalera, pitching in voluntarily to build a school like the Orma, or, for that matter, competing for a job following graduation. How does this come about?

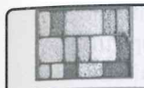
A plausible answer is that people acquire their preferences in part through the way they are brought up, and child-rearing practices stress values and skills that are important in a society's way of life. To test this idea, three anthropologists categorized seventy-nine mostly nonliterate societies (similar to our fifteen "small-scale" societies) according to their prevalent form of livelihood (animal husbandry, agriculture, hunting, and fishing) and their related capacity for food storage or other wealth accumulation. Food storage is common in agricultural societies but not among hunters and gatherers. These researchers also collected evidence on forms of child-rearing, including obedience training ("compliance") and the degree to which self-reliance, independence, and taking responsibility ("assertion") were encouraged. They found significant variations of child-rearing practices, and they also found that these variations were correlated with differences in economic structure. They concluded, "Knowledge of the economy alone would enable one to predict with considerable accuracy whether a society's socialization pressures were primarily toward compliance or assertion."[4]

The box "Property Rights among the Arapesh of New Guinea" offers a fine example of how cooperation is embedded in the norms of a culture and particularly the idea of how property rights should be assigned—that is, who "owns" what. A child growing up in such a society learns that producing something does not necessarily imply owning it. It is hard to imagine a society more different from the one we live in.

We do not need to confine our attention to anthropological studies of exotic societies to find evidence that economic institutions influence preferences. Over a period of three decades, a social psychologist, Melvin Kohn, and his collaborators have studied a number of individuals, focusing on the relationship between these individuals' positions in the authority structure of their workplaces and the extent to which they value obedience and discipline or self-direction and independence both in themselves and in their children. The hypothesis was that people who routinely take orders on the job value obedience and discipline, while those who give orders value autonomy. Kohn's collaborative study of Japan, the United States, and Poland (when it was still ruled by a Communist government) found that in all three countries people who exercised self-direction on the job also valued self-direction in other realms of their life (including child-rearing and leisure activities) and were less likely to exhibit fatalism, distrust, and self-deprecation. Kohn and his coauthors argued that "social structure affects individual psychological functioning mainly by affecting the conditions of people's own lives,"[5] and they concluded that "the experience of occupational self-direction has a profound effect on people's values, orientation, and cognitive functioning."[6]

The facts presented above suggest that the way goods are produced and distributed in any society conditions what one must be or do to make a living. Hunters must be independent-minded and physically fit, industrial workers and clerical staff must be willing to take orders, and entrepreneurs must be self-motivated. Economic institutions thus impose characteristic patterns of interaction on the people who make up a society, affecting who meets whom, on what terms, to perform which tasks, and with what expectations of rewards. These patterns, in turn, influence the process by which people mature and change over their lifetimes, forming their personalities, habits, tastes, identities, and values—in short, their preferences.

[4] Herbert Barry III, Irvin L. Child, and Margaret K. Bacon, "Relation of Child Training to Subsistence Economy," *American Anthropologist* 61 (1959): 51–63.
[5] Melvin L. Kohn, *Class and Conformity: A Study in Values* (Homewood, IL: Dorsey Press, 1969), 189.
[6] Melvin L. Kohn and Kazimierz M. Slomcy´nski, *Social Structure and Self-direction: A Comparative Analysis of the United States and Poland* (Cambridge, MA: B. Blackwell, 1990), 967.



Property Rights Among the Arapesh of New Guinea

A typical Arapesh man [lives] *for at least part of the time . . . on land which does not belong to him. Around the house door are pigs which his wife is feeding but which belong either to one of her relatives or to one of his. Beside the house are coconut and betel palms which belong to still other people and the fruit of which he will never touch without the permission of the owner. . . . He hunts on bush land belonging to a brother-in-law or a cousin at least part of* [his] *hunting time, and the rest of the time he is joined by others on his bush, if he has some. He works his sago in others' sago clumps as well as in his own.*

Of the personal property in his house, that which is of any permanent value, like large pots, well carved plates, [and] *good spears, has already been assigned to his sons, even though they are only toddling children. His own pig or pigs are far away in other hamlets; his palm trees are scattered three miles in one direction, two in another; his sago palms are still further scattered; and his garden patches lie here and there, mostly on the lands of others.*

If there is meat on his smoking rack over the fire, it is either meat which was killed by another—a brother, a brother-in-law, a sister's son, etc.—and has been given to him, in which case he and his family may eat it; or it is meat which he himself killed and which he is smoking to give away to someone else, for to eat one's own kill, even though it be only a small bird, is a crime to which only the morally—which usually means in Arapesh mentally—deficient would stoop.

If the house in which he is living is nominally his, it will have been constructed in part at least from the posts and planks of other people's houses, which have been dismantled or temporarily deserted, and from which he has borrowed timber. He will not cut his rafters to fit his house, if they are too long, because they may be needed later for someone else's house which is of a different shape or size.

This then is the picture of a man's ordinary economic affiliations, crosscutting every defined line of geography and blood kinship, [and these affiliations are] based on personal ties between individuals which serve to tangle the members of each group into many other groups and to blur every possible distinction between groups.

Source: Margaret Mead, *Cooperation and Competition Among Primitive Peoples* (Boston: Beacon Press, 1961), 31–32. Reprinted with permission from the Institute for Intercultural Studies, Inc., New York, NY.

Economic institutions shape people's preferences in part because institutions determine what kinds of individuals will be successful, and people try to copy the successful, either in their own likes, dislikes, and values or in raising their children. But in most societies the job of socializing young people is not left entirely to parents. Schools, religious institutions, and other organizations play a major part in bringing up the next generation.

If you look at the curriculum of a school, you might get the impression that its only objective is to teach skills such as reading, writing, math, and the ability to use a computer. But a closer look at what goes on in the classroom and how rewards are distributed among students shows that schools do something else, too: they teach children how to behave. The fact is that getting a good grade requires more than knowledge of the subject, and there is a study that proves this. It shows that to get good grades one also has to develop certain personality traits. (Many students already know this.) More surprising, however, is the study's additional finding that the personality traits rewarded with high grades in the classroom are the same as those rewarded with favorable rankings by supervisors in the workplace.

Here is the study. One of us (Edwards) used a peer-rated set of personality measures to predict supervisors' ratings of workers in both private and public employment. Peer-rated personality measures are based on how individuals are seen by people similar to, or in the same situation as, themselves. Such measures are expressed in words such as *tactful*, *creative*, and *punctual*. One of Edwards's collaborators, Peter B. Meyer, used the same peer-rated personality variables to predict differences in high school students' grade point averages from what would be predicted on the basis of their SAT and IQ scores.

Edwards found that certain peer-defined personality traits—perseverance, dependability, consistency, punctuality, tactfulness, and being able to "identify with work" and "empathize with others"—were highly correlated with positive supervisors' ratings, whereas to be judged by one's peers as being creative or independent meant receiving poor ratings from supervisors.[7] Meyer found virtually identical results for the high school students in his grading study: the correlations between their grade point averages and twelve personality traits are nearly the same as the correlations observed in Edwards's study of employees.[8] Thus, both teachers and employers reward the same personality traits. The conclusion: schools teach more than skills, and they also cultivate (or at least they reward) the kinds of personality traits that employers prefer.

All human societies have developed elaborate ways of teaching the preferences and beliefs required for normal functioning as an adult. In many hunter-gatherer societies children accompanied their parents as they stalked game and searched for fruits and nuts, learning the skills necessary to live by these means. Before the emergence of capitalism, most production took place within families—in small workshops, on farms, and the like—and a person could learn most of what was necessary to function in the economy from parents and relatives. Also, the skills required did not change much from generation to generation.

Capitalism changed all this. It created huge workplaces in which thousands of strangers come into contact with one another, and rapid technological change may

[7] Richard C. Edwards, "Personal Traits and 'Success' in Schooling and Work," *Educational and Psychological Measurement* (Spring 1977) and "Individual Traits and Organizational Incentives: What Makes a 'Good' Worker?" *Journal of Human Resources* (Winter 1976).
[8] Samuel Bowles, Herbert Gintis, and Peter Meyer, "The Long Shadow of Work: Education, the Family, and the Reproduction of the Social Division of Labor," *The Insurgent Sociologist* (Summer 1975).

now render the skills of one's parents obsolete even before retirement becomes an option for them. As capitalism has become the preeminent economic system, schools have come to play an essential role in the socialization process. Moreover, the personality traits that schools foster—dependability, consistency, punctuality—now make it possible for large numbers of strangers to work together even if the bonds of kinship, loyalty, and affection are absent.

The Cooperative Species

Humans are unique among animals in that large numbers of unrelated people cooperate to produce the goods and services we require. We also cooperate in pursuing other projects such as raising the next generation and engaging in warfare.

All animals compete: for food, for survival, for reproductive success. Some animals exchange goods and services. For example, fish called "cleaner fish" remove parasites from the skin and mouths of larger fish, providing health services in return for a good meal. The Greek scholar Herodotus described a similar exchange more than two and a half millennia ago:

> Because [the crocodile] spends its life in water, its mouth is filled with leeches. With the exception of the sandpiper, all other birds and animals run away from it. The sandpiper, however, is on good terms with it because it [the sandpiper] is of use to the crocodile. When the crocodile climbs out of the water and onto land, it yawns widely . . . and then the sandpiper slips into its mouth and swallows the leeches. This does the crocodile good and gives it pleasure, so it does not harm the sandpiper.[9]

Some animals even respect property rights. Spiders do not intrude onto the webs occupied by other spiders (unless the intruder is much bigger). A male Hamadryas baboon does not attempt to steal food that is in the possession of another one.

But in no other species but *Homo sapiens* do thousands of unrelated individuals work together to accomplish a common project, whether it be building cars, providing medical insurance for citizens, or making war. (Ants, bees, and some other so-called eusocial insects cooperate on a grand scale, but it is all in the family: the members of a hive or nest, even if they number in the thousands, are mostly relatives.) How do we do it?

In part, these feats of cooperation are accomplished because, distinct from other animals, we are able to devise laws and organizations that go beyond the family, such as governments and firms. These often provide the incentives and constraints that induce people to work together effectively, even if they are entirely self-interested.

Self-interested behavior is not characteristic of successful organizations, however. The soldier who goes to war may do it for the money or because he was drafted and had no choice. But as any officer knows, such motives do not inspire people to become good soldiers.

All forms of human cooperation, including those capable of winning in warfare, are best understood by considering motives other than self-interest. These include

[9] Herodotus, *The Histories* (New York: Oxford University Press, 1998), 122.

envy or spite toward others as well as concern for others and the aspiration to see certain principles upheld. The success of humans as cooperators is much less puzzling once one realizes that economic man is just one kind of human, and not a very common one at that. Far more common are people who, at least some of the time, are reciprocators or altruists and, for better or worse, care about others. Humans are cooperative on a scale unmatched by any other animal because we have preferences that lead us to act in cooperative ways.

Conclusion

Our last question: how did we get this way? Part of the answer concerns human nature. We have the intellectual capacity to devise general ethical rules to live by, and we also have the linguistic capacity to communicate these rules among ourselves, to report violations of the rules, and to coordinate the punishment of those who break them. In addition, we are acutely sensitive to praise and blame, experiencing such *moral emotions* as shame, which serve as powerful incentives to avoid wrongdoing. It is worth noting that Adam Smith titled his first book *The Theory of Moral Sentiments* and devoted it to the analysis of exactly this aspect of human life. The moral emotions as well as the intellectual and linguistic capacity to devise and enforce social norms are part of human nature. They are not part of cat nature, or spider nature, or baboon nature.

The content of ethical rules—just what it is that they bid us to do and not do—is also, to some extent, a matter of human nature. Incest evokes disgust and shame among most humans, irrespective of the culture they grow up in, as do a number of unhealthy practices such as living with personal uncleanliness or ingesting unhealthy substances. But most of the content of our ethical norms is learned: it comes from culture, not nature.

People in most societies actively teach the value of curbing our selfish desires and behaving in altruistic or reciprocal ways under appropriate circumstances. For most people (but not, of course, for sociopaths), acting in accordance with such teachings becomes an objective that is embedded in our preferences, becoming thus more than just an external constraint. That is why most of us, most of the time, do not steal even when we could get away with it.

But what about those who, like *Homo economicus*, are clever enough and immoral enough to steal when they *can* get away with it? Why do they not succeed in taking advantage of and eventually outcompeting their more ethical neighbors for the goods necessary for survival? If this happened, would not the ethical ones have to respond by becoming like the immoral ones? We hear of cases of unethical behavior being rewarded and going unpunished all the time.

The answer is that a group made up of economic man types would not function successfully as a unit. Who would come to the defense of the group in an attack by an external enemy or help out during a drought or other ecological crisis? Not economic man. In his second great book, *The Descent of Man* (the first was his better-known *The Origin of Species*), Charles Darwin, the founder of the modern theory of biological evolution, came to the following conclusion:

> When two tribes of primeval man, living in the same country, came into competition, if . . . one tribe included a great number of courageous, sympathetic and faithful members, who were always ready to warn each other of danger [and] to aid and defend each other, this tribe would succeed better and conquer the other. . . . Selfish and contentious people will not cohere, and without coherence nothing can be effected.[10]

The point of Darwin's statement is clear: in competitions among groups, those whose members have learned how to cooperate—that is, *not to compete* with one another—often win. Think of team sports. Darwin spoke of tribes as groups that would benefit from having a preponderance of cooperative members. The same reasoning applies to firms, neighborhoods, ethnic groups, and nations.

Thus, it is not that our good cultures beat out our bad nature. Rather, our cultures and our nature work together to make *Homo sapiens* the uniquely cooperative species that we are. The fact that we are cooperative means that nice guys do not always finish last. The reasoning that explains why nice guys do not always finish last also makes clear that neoclassical economists sometimes overrate the value of competition as a source of progress. Cooperation is also necessary.

Suggested Readings

Samuel Bowles and Herbert Gintis, *A Cooperative Species: Human Reciprocity and Its Evolution* (Princeton, NJ: Princeton University Press, Reprint edition, paperback, 2013); http://www.jstor.org/stable/j.ctt7s72v.

Samuel Bowles, *Microeconomics: Behavior, Institutions, and Evolution* (Princeton: Princeton University Press, 2004).

Samuel Bowles and Herbert Gintis, *Schooling in Capitalist America: Educational Reform and the Contradictions of Economic Life* (New York: Basic Books, 1976).

Ananish Chaudhuri, *Experiments in Economics: Playing Fair with Money* (New York: Routledge, 2009).

Robert H. Frank, *Passions within Reason: The Strategic Role of the Emotions* (New York: Norton, 1988).

Bruno S. Frey, *Not Just for the Money: An Economic Theory of Personal Motivation* (Cheltenham, UK: Edward Elgar Publishing, 1997).

Herbert Gintis, Samuel Bowles, Robert Boyd, and Ernst Fehr, eds., *Moral Sentiments and Material Interests: The Foundations of Cooperation in Economic Life* (Cambridge, MA: Massachusetts Institute of Technology Press, 2004).

Uri Gneezy and Aldo Rustichini, "A Fine Is a Price," *Journal of Legal Studies* 29, no. 1 (2000) 1–17.

Joseph Henrich, Robert Boyd, Samuel Bowles, Ernst Fehr, and Herbert Gintis, *Foundations of Human Sociality: Economic Experiments and Ethnographic Evidence from Fifteen Small-Scale Societies* (Oxford: Oxford University Press, 2004).

[10] Charles Darwin, *The Descent of Man* (Amherst, NY: Prometheus Books, 1997 [1871]), Ch. 5, "On the Development of the Intellectual and Moral Faculties During Primeval and Civilized Times."