per year—which sounds like a lot of money, unless you care to measure it against something seemingly less important than democratic elections.

It is the same amount, for instance, that Americans spend every year on chewing gum.

This isn't a book about the cost of chewing gum versus campaign spending per se, or about disingenuous real-estate agents, or the impact of legalized abortion on crime. It will certainly address these scenarios and dozens more, from the art of parenting to the mechanics of cheating, from the inner workings of the Ku Klux Klan to racial discrimination on The Weakest Link. What this book is about is stripping a layer or two from the surface of modern life and seeing what is happening underneath. We will ask a lot of questions, some frivolous and some about life-and-death issues. The answers may often seem odd but, after the fact, also rather obvious. We will seek out these answers in the data—whether those data come in the form of schoolchildren's test scores or New York City's crime statistics or a crack dealer's financial records. (Often we will take advantage of patterns in the data that were incidentally left behind, like an airplane's sharp contrail in a high sky.) It is well and good to opine or theorize about a subject, as humankind is wont to do, but when moral posturing is replaced by an honest assessment of the data, the result is often a new, surprising insight.

Morality, it could be argued, represents the way that people would like the world to work—whereas economics represents how it actually does work. Economics is above all a science of measurement. It comprises an extraordinarily powerful and flexible set of tools that can reliably assess a thicket of information to determine the effect of any one factor, or even the whole effect. That's what "the economy" is, after all: a thicket of information about jobs and real estate and banking and investment. But the tools of economics can be just as easily applied to subjects that are more—well, more interesting.

This book, then, has been written from a very specific worldview, based on a few fundamental ideas:

Incentives are the cornerstone of modern life. And understanding them—or, often, ferreting them out—is the key to solving just about any riddle, from violent crime to sports cheating to online dating.

The conventional wisdom is often wrong. Crime didn't keep soaring in the 1990s, money alone doesn't win elections, and—surprise—drinking eight glasses of water a day has never actually been shown to do a thing for your health. Conventional wisdom is often shoddily formed and devilishly difficult to see through, but it can be done.

Dramatic effects often have distant, even subtle, causes. The answer to a given riddle is not always right in front of you. Norma McCorvey had a far greater impact on crime than did the combined forces of gun control, a strong economy, and innovative police strategies. So did, as we shall see, a man named Oscar Danilo Blandon, aka the Johnny Appleseed of Crack.

“Experts”—from criminologists to real-estate agents—use their informational advantage to serve their own agenda. However, they can be beat at their own game. And in the face of the Internet, their informational advantage is shrinking every day—as evidenced by, among other things, the falling price of coffins and life-insurance premiums.

Knowing what to measure and how to measure it makes a complicated world much less so. If you learn how to look at data in the right way, you can explain riddles that otherwise might have seemed impossible. Because there is nothing like the sheer power of numbers to scrub away layers of confusion and contradiction.

So the aim of this book is to explore the hidden side of…everything. This may occasionally be a frustrating exercise. It may sometimes feel as if we are peering at the world through a straw or even staring into a funhouse mirror; but the idea is to look at many different scenarios and examine them in a way they have rarely been examined. In some regards, this is a strange concept for a book. Most books put forth a single theme, crisply expressed in a sentence or two, and then tell the entire story of that theme: the history of salt; the fragility of democracy; the use and misuse of punctuation. This book boasts no such unifying theme. We did consider, for about six minutes, writing a book that would revolve around a single theme—the theory and practice of applied microeconomics, anyone?—but opted instead for a sort of treasure-hunt approach. Yes, this approach employs the best analytical tools that economics can offer, but it also allows us to follow whatever freakish curiosities may occur to us. Thus our invented field of study: Freakonomics. The sort of stories told in this book are not often covered in Econ. 101, but that may change. Since the science of economics is primarily a set of tools, as opposed to a subject matter, then no subject, however offbeat, need be beyond its reach.

It is worth remembering that Adam Smith, the founder of classical economics, was first and foremost a philosopher. He strove to be a moralist and, in doing so, became an economist. When he published The Theory of Moral Sentiments in 1759, modern capitalism was just getting under way. Smith was entranced by the sweeping changes wrought by this new force, but it wasn’t only the numbers that interested him. It was the human effect, the fact that economic forces were vastly changing the way a person thought and behaved in a given situation. What might lead one person to cheat or steal while another didn’t? How would one person’s seemingly innocuous choice, good or bad, affect a great number of people down the line? In Smith’s era, cause and effect had begun to wildly accelerate; incentives were magnified tenfold. The gravity and shock of these changes were as overwhelming to the citizens of his time as the gravity and shock of modern life seem to us today.

Smith’s true subject was the friction between individual desire and societal norms. The economic historian Robert Heilbroner, writing in The Worldly Philosophers, wondered how Smith was able to separate the doings of man, a creature of self-interest, from the greater moral plane in which man operated. "Smith held that the answer lay in our ability to put ourselves in the position of a third person, an impartial observer," Heilbroner wrote, "and in this way to form a notion of the objective…merits of a case."

Consider yourself, then, in the company of a third person—or, if you will, a pair of third people—eager to explore the objective merits of interesting cases. These explorations generally begin with the asking of a simple unasked question. Such as: what do schoolteachers and sumo wrestlers have in common?

"I'd like to put together a set of tools that let us catch terrorists," Levitt said. "I don't necessarily know yet how I'd go about it. But given the right data, I have little doubt that I could figure out the answer."

It might seem absurd for an economist to dream of catching terrorists. Just as it must have seemed absurd if you were a Chicago schoolteacher, called into an office and told that, ahem, the algorithms designed by that skinny man with thick glasses had determined that you are a cheater. And that you are being fired. Steven Levitt may not fully believe in himself, but he does believe in this: teachers and criminals and real-estate agents may lie, and politicians, and even CIA analysts. But numbers don't.

—THE N EW Y ORK T IMES M AGAZINE, AUGUST 3, 2003

1 What Do Schoolteachers and Sumo Wrestlers Have in Common?

Imagine for a moment that you are the manager of a day-care center. You have a clearly stated policy that children are supposed to be picked up by 4 p.m. But very often parents are late. The result: at day's end, you have some anxious children and at least one teacher who must wait around for the parents to arrive. What to do?

A pair of economists who heard of this dilemma—it turned out to be a rather common one—offered a solution: fine the tardy parents. Why, after all, should the day-care center take care of these kids for free?

The economists decided to test their solution by conducting a study of ten day-care centers in Haifa, Israel. The study lasted twenty weeks, but the fine was not introduced immediately. For the first four weeks, the economists simply kept track of the number of parents who came late; there were, on average, eight late pickups per week per day-care center. In the fifth week, the fine was enacted. It was announced that any parent arriving more than ten minutes late would pay $3 per child for each incident. The fee would be added to the parents' monthly bill, which was roughly $380.

After the fine was enacted, the number of late pickups promptly went…up. Before long there were twenty late pickups per week, more than double the original average. The incentive had plainly backfired.

Economics is, at root, the study of incentives: how people get what they want, or need, especially when other people want or need the same thing. Economists love incentives. They love to dream them up and enact them, study them and tinker with them. The typical economist believes the world has not yet invented a problem that he cannot fix if given a free hand to design the proper incentive scheme. His solution may not always be pretty—it may involve coercion or exorbitant penalties or the violation of civil liberties—but the original problem, rest assured, will be fixed. An incentive is a bullet, a lever, a key: an often tiny object with astonishing power to change a situation.

We all learn to respond to incentives, negative and positive, from the outset of life. If you toddle over to the hot stove and touch it, you burn a finger. But if you bring home straight A's from school, you get a new bike. If you are spotted picking your nose in class, you get ridiculed. But if you make the basketball team, you move up the social ladder. If you break curfew, you get grounded. But if you ace your SATs, you get to go to a good college. If you flunk out of law school, you have to go to work at your father's insurance company. But if you perform so well that a rival company comes calling, you become a vice president and no longer have to work for your father. If you become so excited about your new vice president job that you drive home at eighty mph, you get pulled over by the police and fined $100. But if you hit your sales projections and collect a year-end bonus, you not only aren't worried about the $100 ticket but can also afford to buy that Viking range you've always wanted—and on which your toddler can now burn her own finger.

An incentive is simply a means of urging people to do more of a good thing and less of a bad thing. But most incentives don't come about organically. Someone—an economist or a politician or a parent—has to invent them. Your three-year-old eats all her vegetables for a week? She wins a trip to the toy store. A big steelmaker belches too much smoke into the air? The company is fined for each cubic foot of pollutants over the legal limit. Too many Americans aren't paying their share of income tax? It was the economist Milton Friedman who helped come up with a solution to this one: automatic tax withholding from employees' paychecks.

There are three basic flavors of incentive: economic, social, and moral. Very often a single incentive scheme will include all three varieties. Think about the anti-smoking campaign of recent years. The addition of a $3-per-pack "sin tax" is a strong economic incentive against buying cigarettes. The banning of cigarettes in restaurants and bars is a powerful social incentive. And when the U.S. government asserts that terrorists raise money by selling black-market cigarettes, that acts as a rather jarring moral incentive.

Some of the most compelling incentives yet invented have been put in place to deter crime. Considering this fact, it might be worthwhile to take a familiar question—why is there so much crime in modern society?—and stand it on its head: why isn't there a lot more crime?

After all, every one of us regularly passes up opportunities to maim, steal, and defraud. The chance of going to jail—thereby losing your job, your house, and your freedom, all of which are essentially economic penalties—is certainly a strong incentive. But when it comes to crime, people also respond to moral incentives (they don't want to do something they consider wrong) and social incentives (they don't want to be seen by others as doing something wrong). For certain types of misbehavior, social incentives are terribly powerful. In an echo of Hester Prynne's scarlet letter, many American cities now fight prostitution with a "shaming" offensive, posting pictures of convicted johns (and prostitutes) on websites or on local-access television. Which is a more horrifying deterrent: a $500 fine for soliciting a prostitute or the thought of your friends and family ogling you on www.HookersAndJohns.com.

So through a complicated, haphazard, and constantly readjusted web of economic, social, and moral incentives, modern society does its best to militate against crime. Some people would argue that we don't do a very good job. But taking the long view, that is clearly not true. Consider the historical trend in homicide (not including wars), which is both the most reliably measured crime and the best barometer of a society's overall crime rate. These statistics, compiled by the criminologist Manuel Eisner, track the historical homicide levels in five European regions.

HOMICIDES

(per 100,000 People)

	ENGLAND	NETHERLANDS AND BELGIUM	SCANDINAVIA	GERMANY AND SWITZERLAND	ITALY
13th and 14th c.	23.0	47.0	n.a.	37.0	56.0
15th c.	n.a.	45.0	46.0	16.0	73.0
16th c.	7.0	25.0	21.0	11.0	47.0
17th c.	5.0	7.5	18.0	7.0	32.0
18th c.	1.5	5.5	1.9	7.5	10.5
19th c.	1.7	1.6	1.1	2.8	12.6
1900–1949	0.8	1.5	0.7	1.7	3.2

1950–1994	0.9	0.9	0.9	1.0	1.5

The steep decline of these numbers over the centuries suggests that, for one of the gravest human concerns—getting murdered—the incentives that we collectively cook up are working better and better.

So what was wrong with the incentive at the Israeli day-care centers?

You have probably already guessed that the $3 fine was simply too small. For that price, a parent with one child could afford to be late every day and only pay an extra $60 each month—just one-sixth of the base fee. As babysitting goes, that's pretty cheap. What if the fine had been set at $100 instead of $3? That would have likely put an end to the late pickups, though it would have also engendered plenty of ill will. (Any incentive is inherently a trade-off; the trick is to balance the extremes.)

But there was another problem with the day-care center fine. It substituted an economic incentive (the $3 penalty) for a moral incentive (the guilt that parents were supposed to feel when they came late). For just a few dollars each day, parents could buy off their guilt. Furthermore, the small size of the fine sent a signal to the parents that late pickups weren't such a big problem. If the day-care center suffers only $3 worth of pain for each late pickup, why bother to cut short the tennis game? Indeed, when the economists eliminated the $3 fine in the seventeenth week of their study, the number of late-arriving parents didn't change. Now they could arrive late, pay no fine, and feel no guilt.

Such is the strange and powerful nature of incentives. A slight tweak can produce drastic and often unforeseen results. Thomas Jefferson noted this while reflecting on the tiny incentive that led to the Boston Tea Party and, in turn, the American Revolution: "So inscrutable is the arrangement of causes and consequences in this world that a two-penny duty on tea, unjustly imposed in a sequestered part of it, changes the condition of all its inhabitants."

In the 1970s, researchers conducted a study that, like the Israeli day-care study, pitted a moral incentive against an economic incentive. In this case, they wanted to learn about the motivation behind blood donations. Their discovery: when people are given a small stipend for donating blood rather than simply being praised for their altruism, they tend to donate less blood. The stipend turned a noble act of charity into a painful way to make a few dollars, and it wasn't worth it.

What if the blood donors had been offered an incentive of $50, or $500, or $5,000? Surely the number of donors would have changed dramatically.

But something else would have changed dramatically as well, for every incentive has its dark side. If a pint of blood were suddenly worth $5,000, you can be sure that plenty of people would take note. They might literally steal blood at knifepoint. They might pass off pig blood as their own. They might circumvent donation limits by using fake IDs. Whatever the incentive, whatever the situation, dishonest people will try to gain an advantage by whatever means necessary.

Or, as W. C. Fields once said: a thing worth having is a thing worth cheating for.

Who cheats?

Well, just about anyone, if the stakes are right. You might say to yourself, I don't cheat, regardless of the stakes. And then you might remember the time you cheated on, say, a board game. Last week. Or the golf ball you nudged out of its bad lie. Or the time you really wanted a bagel in the office break room but couldn't come up with the dollar you were supposed to drop in the coffee can. And then took the bagel anyway. And told yourself you'd pay double the next time. And didn't.

For every clever person who goes to the trouble of creating an incentive scheme, there is an army of people, clever and otherwise, who will inevitably spend even more time trying to beat it. Cheating may or may not be human nature, but it is certainly a prominent feature in just about every human endeavor. Cheating is a primordial economic act: getting more for less. So it isn't just the boldface names—inside-trading CEOs and pill-popping ballplayers and perk-abusing politicians—who cheat. It is the waitress who pockets her tips instead of pooling them. It is the Wal-Mart payroll manager who goes into the computer and shaves his employees' hours to make his own performance look better. It is the third grader who, worried about not making it to the fourth grade, copies test answers from the kid sitting next to him.

Some cheating leaves barely a shadow of evidence. In other cases, the evidence is massive. Consider what happened one spring evening at midnight in 1987: seven million American children suddenly disappeared. The worst kidnapping wave in history? Hardly. It was the night of April 15, and the Internal Revenue Service had just changed a rule. Instead of merely listing each dependent child, tax filers were now required to provide a Social Security number for each child. Suddenly, seven million children—children who had existed only as phantom exemptions on the previous year's 1040 forms—vanished, representing about one in ten of all dependent children in the United States.

The incentive for those cheating taxpayers was quite clear. The same for the waitress, the payroll manager, and the third grader. But what about that third grader's teacher? Might she have an incentive to cheat? And if so, how would she do it?

Imagine now that instead of running a day-care center in Haifa, you are running the Chicago Public Schools, a system that educates 400,000 students each year.