

# FRENOMONICS

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A Rogue Economist  
Explores the Hidden  
Side of Everything

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**Steven D. Levitt**  
and **Stephen J. Dubner**



PENGUIN BOOKS

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Published by the Penguin Group

Penguin Books Ltd, 80 Strand, London WC2R 0RL, England

Penguin Group (USA) Inc., 375 Hudson Street, New York, New York 10014, USA

Penguin Group (Canada), 90 Eglinton Avenue East, Suite 700, Toronto, Ontario,

Canada M4P 2Y3 (a division of Pearson Penguin Canada Inc.)

Penguin Ireland, 25 St. Stephen's Green, Dublin 2, Ireland

(a division of Penguin Books Ltd)

Penguin Group (Australia), 250 Camberwell Road,

Camberwell, Victoria 3124, Australia (a division of Pearson Australia Group Pty Ltd)

Penguin Books India Pvt Ltd, 11 Community Centre,

Panchsheel Park, New Delhi - 110 017, India

Penguin Group (NZ), 67 Apollo Drive, Mairangi Bay, Auckland 1310, New Zealand

(a division of Pearson New Zealand Ltd)

Penguin Books (South Africa) (Pty) Ltd, 24 Sturdee Avenue,

Rosebank, Johannesburg 2196, South Africa

Penguin Books Ltd, Registered Offices: 80 Strand, London WC2R 0RL, England

www.penguin.com

First published in the United States of America by William Morrow Ltd 2003

First published in Great Britain by Allen Lane 2003

Published in Penguin Books 2006

Reissued with new material 2006

7

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Printed in England by Clays Ltd, St Ives plc

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ISBN-13: 978-0-141-03008-1

CONTENTS

AN EXPLANATORY NOTE

ix

In which the origins of this book are clarified.

PREFACE TO THE REVISED AND EXPANDED EDITION

xiii

INTRODUCTION: The Hidden Side of Everything

1

In which the book's central idea is set forth: namely, if morality represents how people would like the world to work, then economics shows how it actually does work.

*Why the conventional wisdom is so often wrong... How "experts"—from criminologists to real-estate agents to political scientists—bend the facts... Why knowing what to measure, and how to measure it, is the key to understanding modern life... What is "gigonomics," anyway?*

1. What Do Schoolteachers and Sumo Wrestlers Have in Common?

15

In which we explore the beauty of incentives, as well as their dark side—cheating.

*Who cheats? Just about everyone . . . How cheaters cheat, and how to catch them . . . Stories from an Israeli day-care center . . . The sudden disappearance of seven million American children . . . Cheating schoolteachers in Chicago . . . Why cheating to lose is worse than cheating to win . . . Could sumo wrestling, the national sport of Japan, be corrupt? . . . What the Bagel Man saw: mankind may be more honest than we think.*

2. How Is the Ku Klux Klan Like a Group of Real-Estate Agents? 49

In which it is argued that nothing is more powerful than information, especially when its power is abused.  
*Spilling the Ku Klux Klan's secrets . . . Why experts of every kind are in the perfect position to exploit you . . . The antidote to information abuse: the Internet . . . Why a new car is suddenly worth so much less the moment it leaves the lot . . . Breaking the real-estate agent code: what "well-maintained" really means . . . Is Trent Lott more racist than the average "Weakest Link contestant"? . . . What do online daters lie about?*

3. Why Do Drug Dealers Still Live with Their Moms? 79

In which the conventional wisdom is often found to be a web of fabrication, self-interest, and convenience.  
*Why experts routinely make up statistics: the invention of chronic halitosis . . . How to ask a good question . . . Sudhir Venkatesh's long, strange trip into the crack den . . . Life is a tournament . . . Why prostitutes earn more than architects . . . What a drug dealer, a high-school quarterback, and an editorial assistant have in common . . . How the invention of crack cocaine mirrored the invention of nylon stockings . . . Was crack the worst thing to hit black Americans since Jim Crow?*

4. Where Have All the Criminals Gone? 105

In which the facts of crime are sorted out from the fictions.  
*What Nicolas Cageyescu learned—the hard way—about abortion . . .*

*Why the 1960s was a great time to be a criminal . . . Think the roaring 1990s economy put a crimp on crime? Think again . . . Why capital punishment doesn't deter criminals . . . Do police actually lower crime rates? . . . Prisons, prisons everywhere . . . Seeing through the New York City police "miracle" . . . What is a gun, really? . . . Why early crack dealers were like Microsoft millionaires and later crack dealers were like Pets.com . . . The superpredator versus the senior citizen . . . Jane Roe, crime stopper: how the legalization of abortion changed everything.*

5. What Makes a Perfect Parent? 133

In which we ask, from a variety of angles, a pressing question: do parents really mater?  
*The conversion of parenting from an art to a science . . . Why parenting experts like to scare parents to death . . . Which is more dangerous: a gun or a swimming pool? . . . The economics of fear . . . Obsessive parents and the nature-nurture quagmire . . . Why a good school list as good as you might think . . . The black-white test gap and "acting white" . . . Eight things that make a child do better in school and eight that don't.*

6. Perfect Parenting, Part II: or: Would a Roshanda by Any Other Name Smell as Sweet? 163

In which we weigh the importance of a parent's first official act—naming the baby.  
*A boy named Winner and his brother, Loser . . . The blackest names and the whitest names . . . The segregation of culture: why Seinfeld never made the top fifty among black viewers . . . If you have a really bad name, should you just change it? . . . High-end names and low-end names (and how one becomes the other) . . . Britney Spears: a symptom, not a cause . . . Is Aviva the next Madison? . . . What your parents were telling the world when they gave you your name.*

## INTRODUCTION: The Hidden Side of Everything

Anyone living in the United States in the early 1990s and paying even a whisper of attention to the nightly news or a daily paper could be forgiven for having been scared out of his skin.

The culprit was crime. It had been rising relentlessly—a graph plotting the crime rate in any American city over recent decades looked like a ski slope in profile—and it seemed now to herald the end of the world as we knew it. Death by gunfire, intentional and otherwise, had become commonplace. So too had carjacking and crack dealing, robbery and rape. Violent crime was a gruesome, constant companion. And things were about to get even worse. Much worse. All the experts were saying so.

The cause was the so-called superpredator. For a time, he was everywhere. Glowering from the cover of newswEEKlies. Swaggering his way through foot-thick government reports. He was a scrawny, big-city teenager with a cheap gun in his hand and nothing in his heart but ruthlessness. There were thousands out there just like him,

we were told, a generation of killers about to hurl the country into deepest chaos.

In 1995 the criminologist James Alan Fox wrote a report for the U.S. attorney general that grimly detailed the coming spike in murders by teenagers. Fox proposed optimistic and pessimistic scenarios. In the optimistic scenario, he believed, the rate of teen homicides would rise another 15 percent over the next decade; in the pessimistic scenario, it would more than double. "The next crime wave will get so bad," he said, "that it will make 1995 look like the good old days."

Other criminologists, political scientists, and similarly learned forecasters laid out the same horrible future, as did President Clinton. "We know we've got about six years to turn this juvenile crime thing around," Clinton said, "or our country is going to be living with chaos. And my successors will not be giving speeches about the wonderful opportunities of the global economy; they'll be trying to keep body and soul together for people on the streets of these cities." The smart money was plainly on the criminals.

And then, instead of going up and up and up, crime began to fall. And fall and fall and fall some more. The crime drop was starting in several respects. It was ubiquitous, with every category of crime falling in every part of the country. It was persistent, with incremental decreases year after year. And it was entirely unanticipated—especially by the very experts who had been predicting the opposite.

The magnitude of the reversal was astounding. The teenage murder rate, instead of rising 100 percent or even 15 percent as James Alan Fox had warned, fell more than 50 percent within five years. By 2000 the overall murder rate in the United States had dropped to its lowest level in thirty-five years. So had the rate of just about every other sort of crime, from assault to car theft.

Even though the experts had failed to anticipate the crime drop—which was in fact well under way even as they made their horrifying

predictions—they now hurried to explain it. Most of their theories sounded perfectly logical. It was the roaring 1990s economy, they said, that helped turn back crime. It was the proliferation of gun control laws, they said. It was the sort of innovative policing strategies put into place in New York City, where murders would fall from 2,262 in 1990 to 540 in 2005.

These theories were not only logical; they were also *encouraging*, for they attributed the crime drop to specific and recent human initiatives. If it was gun control and clever police strategies and better-paying jobs that quelled crime—well then, the power to stop criminals had been within our reach all along. As it would be the next time, God forbid, that crime got so bad.

These theories made their way, seemingly without friction, from the experts' mouths to journalists' ears to the public's mind. In short course, they became conventional wisdom.

There was only one problem: they weren't true.

There was another factor, meanwhile, that *had* greatly contributed to the massive crime drop of the 1990s. It had taken shape more than twenty years earlier and concerned a young woman in Dallas named Norma McCorvey.

Like the proverbial butterfly that flaps its wings on one continent and eventually causes a hurricane on another, Norma McCorvey dramatically altered the course of events without intending to. All she had wanted was an abortion. She was a poor, uneducated, unskilled, alcoholic, drug-using twenty-one-year-old woman who had already given up two children for adoption and now, in 1970, found herself pregnant again. But in Texas, as in all but a few states at that time, abortion was illegal. McCorvey's cause came to be adopted by people far more powerful than she. They made her the lead plaintiff in a class-action lawsuit seeking to legalize abortion. The defendant was Henry Wade, the Dallas County district attorney. The case ultimately

made it to the U.S. Supreme Court, by which time McCorvey's name had been disguised as Jane Roe. On January 22, 1973, the court ruled in favor of Ms. Roe, allowing legalized abortion throughout the United States. By this time, of course, it was far too late for Ms. McCorvey/Roe to have her abortion. She had given birth and put the child up for adoption. (Years later she would renounce her allegiance to legalized abortion and become a pro-life activist.)

So how did *Roe v. Wade* help trigger, a generation later, the greatest crime drop in recorded history?

As far as crime is concerned, it turns out that not all children are born equal. Not even close. Decades of studies have shown that a child born into an adverse family environment is far more likely than other children to become a criminal. And the millions of women most likely to have an abortion in the wake of *Roe v. Wade*—poor, unmarried, and teenage mothers for whom illegal abortions had been too expensive or too hard to get—were often models of adversity. They were the very women whose children, if born, would have been much more likely than average to become criminals. But because of *Roe v. Wade*, these children *weren't* being born. This powerful cause would have a drastic, distant effect: years later, just as these unborn children would have entered their criminal primes, the rate of crime began to plummet.

It wasn't gun control or a strong economy or new police strategies that finally blunted the American crime wave. It was, among other factors, the reality that the pool of potential criminals had dramatically shrunk.

Now, as the crime-drop experts (the former crime doomsayers) spun their theories to the media, how many times did they cite legalized abortion as a cause?

Zero.

It is the quintessential blend of commerce and camaraderie: you hire a real-estate agent to sell your home.

She sizes up its charms, snaps some pictures, sets the price, writes a seductive ad, shows the house aggressively, negotiates the offers, and sees the deal through to its end. Sure, it's a lot of work, but she's getting a nice cut. On the sale of a \$300,000 house, a typical 6 percent agent fee yields \$18,000. Eighteen thousand dollars, you say to yourself: that's a lot of money. But you also tell yourself that you never could have sold the house for \$300,000 on your own. The agent knew how to—what's that phrase she used?—"maximize the house's value."

She got you top dollar, right?

Right?

A real-estate agent is a different breed of expert than a criminologist, but she is every bit the expert. That is, she knows her field far better than the layman on whose behalf she is acting. She is better informed about the house's value, the state of the housing market, even the buyer's frame of mind. You depend on her for this information. That, in fact, is why you hired an expert.

As the world has grown more specialized, countless such experts have made themselves similarly indispensable. Doctors, lawyers, contractors, stockbrokers, auto mechanics, mortgage brokers, financial planners: they all enjoy a gigantic informational advantage. And they use that advantage to help you, the person who hired them, get exactly what you want for the best price.

Right?

It would be lovely to think so. But experts are human, and humans respond to incentives. How any given expert treats you, therefore, will depend on how that expert's incentives are set up. Sometimes his incentives may work in your favor. For instance: a study of California auto mechanics found they often passed up a small repair bill by letting failing cars pass emissions inspections—the reason being that

lenient mechanics are rewarded with repeat business. But in a different case, an expert's incentives may work against you. In a medical study, it turned out that obstetricians in areas with declining birth rates are much more likely to perform cesarean-section deliveries than obstetricians in growing areas—suggesting that, when business is tough, doctors try to ring up more expensive procedures.

It is one thing to muse about experts' abusing their position and another to prove it. The best way to do so would be to measure how an expert treats you versus how he performs the same service for himself. Unfortunately a surgeon doesn't operate on himself. Nor is his medical file a matter of public record; neither is an auto mechanic's repair log for his own car.

Real-estate sales, however, *are* a matter of public record. And real-estate agents often do sell their own homes. A recent set of data covering the sale of nearly 100,000 houses in suburban Chicago shows that more than 3,000 of those houses were owned by the agents themselves.

Before plunging into the data, it helps to ask a question: what is the real-estate agent's incentive when she is selling her own home? Simple: to make the best deal possible. Presumably this is also your incentive when you are selling your home. And so your incentive and the real-estate agent's incentive would seem to be nicely aligned. Her commission, after all, is based on the sale price.

But as incentives go, commissions are tricky. First of all, a 6 percent real-estate commission is typically split between the seller's agent and the buyer's. Each agent then kicks back roughly half of her take to the agency. Which means that only 1.5 percent of the purchase price goes directly into your agent's pocket.

So on the sale of your \$300,000 house, her personal take of the \$18,000 commission is \$4,500. Still not bad, you say. But what if the house was actually worth more than \$300,000? What if, with a little

more effort and patience and a few more newspaper ads, she could have sold it for \$310,000? After the commission, that puts an additional \$9,400 in your pocket. But the agent's additional share—her personal 1.5 percent of the extra \$10,000—is a mere \$150. If you earn \$9,400 while she earns only \$150, maybe your incentives aren't aligned after all. (Especially when she's the one paying for the ads and doing all the work.) Is the agent willing to put out all that extra time, money, and energy for just \$150?

There's one way to find out: measure the difference between the sales data for houses that belong to real-estate agents themselves and the houses they sold on behalf of clients. Using the data from the sales of those 100,000 Chicago homes, and controlling for any number of variables—location, age and quality of the house, aesthetics, whether or not the property was an investment, and so on—it turns out that a real-estate agent keeps her own home on the market an average of ten days longer and sells it for an extra 3-plus percent, or \$10,000 on a \$300,000 house. When she sells her own house, an agent holds out for the best offer; when she sells yours, she encourages you to take the first decent offer that comes along. Like a stockbroker churning commissions, she wants to make deals and make them fast. Why not? Her share of a better offer—\$150—is too puny an incentive to encourage her to do otherwise.

Of all the truisms about politics, one is held to be truer than the rest: money buys elections. Arnold Schwarzenegger, Michael Bloomberg, Jon Corzine—these are but a few recent, dramatic examples of the truism at work. (Disregard for a moment the contrary examples of Steve Forbes, Michael Huffington, and especially Thomas Golisano, who over the course of three gubernatorial elections in New York spent \$93 million of his own money and won 4 percent, 8 percent,

and 14 percent, respectively, of the vote.) Most people would agree that money has an undue influence on elections and that far too much money is spent on political campaigns.

Indeed, election data show it is true that the candidate who spends more money in a campaign usually wins. But is money the *cause* of the victory?

It might seem logical to think so, much as it might have seemed logical that a booming 1990s economy helped reduce crime. But just because two things are correlated does not mean that one causes the other. A correlation simply means that a relationship exists between two factors—let's call them *X* and *Y*—but it tells you nothing about the direction of that relationship. It's possible that *X* causes *Y*; it's also possible that *Y* causes *X*; and it may be that *X* and *Y* are both being caused by some other factor, *Z*.

Think about this correlation: cities with a lot of murders also tend to have a lot of police officers. Consider now the police/murder correlation in a pair of real cities. Denver and Washington, D.C., have about the same population—but Washington has nearly three times as many police as Denver, and it also has eight times the number of murders. Unless you have more information, however, it's hard to say what's causing what. Someone who didn't know better might contemplate these figures and conclude that it is all those extra police in Washington who are causing the extra murders. Such a wayward thinking, which has a long history, generally provokes a wayward response. Consider the folklore of the czar who learned that the most disease-ridden province in his empire was also the province with the most doctors. His solution? He promptly ordered all the doctors shot dead. Now, returning to the issue of campaign spending: in order to figure out the relationship between money and elections, it helps to consider the incentives at play in campaign finance. Let's say you are the kind of person who might contribute \$1,000 to a candidate. Chances

are you'll give the money in one of two situations: a close race, in which you think the money will influence the outcome; or a campaign in which one candidate is a sure winner and you would like to bask in reflected glory or receive some future in-kind consideration. The one candidate you *won't* contribute to is a sure loser. (Just ask any presidential hopeful who bombs in Iowa and New Hampshire.) So front-runners and incumbents raise a lot more money than long shots. And what about spending that money? Incumbents and front-runners obviously have more cash, but they only spend a lot of it when they stand a legitimate chance of losing; otherwise, why dip into a war chest that might be more useful later on, when a more formidable opponent appears?

Now picture two candidates, one intrinsically appealing and the other not so. The appealing candidate raises much more money and wins easily. But was it the money that won him the votes, or was it his appeal that won the votes *and* the money?

That's a crucial question but a very hard one to answer. Voter appeal, after all, isn't easy to quantify. How can it be measured?

It can't, really—except in one special case. The key is to measure a candidate against . . . himself. That is, Candidate A today is likely to be similar to Candidate A two or four years hence. The same could be said for Candidate B. If only Candidate A ran against Candidate B in two consecutive elections but in each case spent different amounts of money. Then, with the candidates' appeal more or less constant, we could measure the money's impact.

As it turns out, the same two candidates run against each other in consecutive elections all the time—indeed, in nearly a thousand U.S. congressional races since 1972. What do the numbers have to say about such cases?

Here's the surprise: the amount of money spent by the candidates *hardly matters at all*. A winning candidate can cur his spending in half



and lose only 1 percent of the vote. Meanwhile, a losing candidate who doubles his spending can expect to shift the vote in his favor by only that same 1 percent. What really matters for a political candidate is *not* how much you spend; what matters is who you are. (The same could be said—and will be said, in chapter 5—about parents.) Some politicians are inherently attractive to voters and others simply aren't, and no amount of money can do much about it. (Messrs. Forbes, Huffington, and Gollisano already know this, of course.)

And what about the other half of the election truism—that the amount of money spent on campaign finance is obscenely huge? In a typical election period that includes campaigns for the presidency, the Senate, and the House of Representatives, about \$1 billion is spent 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 a crack-selling gang 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 finan-

cial 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 thicker of information to determine the effect of any one factor, or even the whole effect. That's what “the economy” is, after all: a thicker 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 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 has 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 just 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 may 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?