

Where Have All the Criminals Gone?

In 1966, one year after Nicolae Ceauşescu became the Communist dictator of Romania, he made abortion illegal. "The fetus is the property of the entire society," he proclaimed. "Anyone who avoids having children is a deserter who abandons the laws of national continuity."

Such grandiose declarations were commonplace during Ceauşescu's reign, for his master plan—to create a nation worthy of the New Socialist Man—was an exercise in grandiosity. He built palaces for himself while alternately brutalizing and neglecting his citizens. Abandoning agriculture in favor of manufacturing, he forced many of the nation's rural dwellers into unheated apartment buildings. He gave government positions to forty family members including his wife, Elena, who required forty homes and a commensurate supply of fur and jewels. Madame Ceauşescu, known officially as the Best Mother Romania Could Have, was not particularly maternal. "The worms never get satisfied, regardless of how much food you give them," she said when Romanians complained about the food short-

FREAKONOMICS

ages brought on by her husband's mismanagement. She had her own children bugged to ensure their loyalty.

Ceauşescu's ban on abortion was designed to achieve one of his major aims: to rapidly strengthen Romania by boosting its population. Until 1966, Romania had had one of the most liberal abortion policies in the world. Abortion was in fact the main form of birth control, with four abortions for every live birth. Now, virtually overnight, abortion was forbidden. The only exemptions were mothers who already had four children or women with significant standing in the Communist Party. At the same time, all contraception and sex education were banned. Government agents sardonically known as the Menstrual Police regularly rounded up women in their workplaces to administer pregnancy tests. If a woman repeatedly failed to conceive, she was forced to pay a steep "celibacy tax."

Ceauşescu's incentives produced the desired effect. Within one year of the abortion ban, the Romanian birth rate had doubled. These babies were born into a country where, unless you belonged to the Ceauşescu clan or the Communist elite, life was miserable. But these children would turn out to have particularly miserable lives. Compared to Romanian children born just a year earlier, the cohort of children born after the abortion ban would do worse in every measurable way: they would test lower in school, they would have less success in the labor market, and they would also prove much more likely to become criminals.

The abortion ban stayed in effect until Ceauşescu finally lost his grip on Romania. On December 16, 1989, thousands of people took to the streets of Timisoara to protest his corrosive regime. Many of the protestors were teenagers and college students. The police killed dozens of them. One of the opposition leaders, a forty-one-year-old professor, later said it was his thirteen-year-old daughter who insisted he attend the protest, despite his fear. "What is most interesting is that

we learned not to be afraid from our children," he said. "Most were aged thirteen to twenty." A few days after the massacre in Timisoara, Ceausescu gave a speech in Bucharest before one hundred thousand people. Again the young people were out in force. They shouted down Ceauşescu with cries of "Timisoara!" and "Down with the murderers!" His time had come. He and Elena tried to escape the country with \$1 billion, but they were captured, given a crude trial, and, on Christmas Day, executed by firing squad.

Of all the Communist leaders deposed in the years bracketing the collapse of the Soviet Union, only Nicolae Ceauşescu met a violent death. It should not be overlooked that his demise was precipitated in large measure by the youth of Romania—a great number of whom, were it not for his abortion ban, would never have been born at all.

The story of abortion in Romania might seem an odd way to begin telling the story of American crime in the 1990s. But it's not. In one important way, the Romanian abortion story is a reverse image of the American crime story. The point of overlap was on that Christmas Day of 1989, when Nicolae Ceauşescu learned the hard way—with a bullet to the head—that his abortion ban had much deeper implications than he knew.

On that day, crime was just about at its peak in the United States. In the previous fifteen years, violent crime had risen 80 percent. It was crime that led the nightly news and the national conversation.

When the crime rate began falling in the early 1990s, it did so with such speed and suddenness that it surprised everyone. It took some experts many years to even recognize that crime was falling, so confident had they been of its continuing rise. Long after crime had peaked, in fact, some of them continued to predict ever darker scenarios. But the evidence was irrefutable: the long and brutal spike in FREAKONOMICS

crime was moving in the opposite direction, and it wouldn't stop until the crime rate had fallen back to the levels of forty years earlier.

Now the experts hustled to explain their faulty forecasting. The criminologist James Alan Fox explained that his warning of a "bloodbath" was in fact an intentional overstatement. "I never said there would be blood flowing in the streets," he said, "but I used strong terms like 'bloodbath' to get people's attention. And it did. I don't apologize for using alarmist terms." (If Fox seems to be offering a distinction without a difference—"bloodbath" versus "blood flowing in the streets"—we should remember that even in retreat mode, experts can be self-serving.)

After the relief had settled in, after people remembered how to go about their lives without the pressing fear of crime, there arose a natural question: just where did all those criminals go?

At one level, the answer seemed puzzling. After all, if none of the criminologists, police officials, economists, politicians, or others who traffic in such matters had foreseen the crime decline, how could they suddenly identify its causes?

But this diverse army of experts now marched out a phalanx of hypotheses to explain the drop in crime. A great many newspaper articles would be written on the subject. Their conclusions often hinged on which expert had most recently spoken to which reporter. Here, ranked by frequency of mention, are the crime-drop explanations cited in articles published from 1991 to 2001 in the ten largestcirculation papers in the LexisNexis database:

CRIME-DROP EXPLANATION	Number of Citations
1. Innovative policing strategies	52
2. Increased reliance on prisons	47
3. Changes in crack and other drug markets	33
4. Aging of the population	32

CRIME-DROP EXPLANATION	Number of Citations
5. Tougher gun control laws	32
6. Strong economy	28
7. Increased number of police	26
8. All other explanations (increased use of	34
capital punishment, concealed-weapons	
laws, gun buybacks, and others)	

If you are the sort of person who likes guessing games, you may wish to spend the next few moments pondering which of the preceding explanations seem to have merit and which don't. Hint: of the seven major explanations on the list, only three can be shown to have contributed to the drop in crime. The others are, for the most part, figments of someone's imagination, self-interest, or wishful thinking. Further hint: one of the greatest measurable causes of the crime drop does not appear on the list at all, for it didn't receive a single newspaper mention.

Let's begin with a fairly uncontroversial one: the strong economy. The decline in crime that began in the early 1990s was accompanied by a blistering national economy and a significant drop in unemployment. It might seem to follow that the economy was a hammer that helped beat down crime. But a closer look at the data destroys this theory. It is true that a stronger job market may make certain crimes relatively less attractive. But that is only the case for crimes with a direct financial motivation—burglary, robbery, and auto theft—as opposed to violent crimes like homicide, assault, and rape. Moreover, studies have shown that an unemployment decline of 1 percentage point accounts for a 1 percent drop in nonviolent crime. During the 1990s, the unemployment rate fell by 2 percentage points; nonviolent crime,

FREAKONOMICS

meanwhile, fell by roughly 40 percent. But an even bigger flaw in the strong-economy theory concerns violent crime. Homicide fell at a greater rate during the 1990s than any other sort of crime, and a number of reliable studies have shown virtually no link between the economy and violent crime. This weak link is made even weaker by glancing back to a recent decade, the 1960s, when the economy went on a wild growth spurt—as did violent crime. So while a strong 1990s economy might have seemed, on the surface, a likely explanation for the drop in crime, it almost certainly didn't affect criminal behavior in any significant way.

Unless, that is, "the economy" is construed in a broader sense—as a means to build and maintain hundreds of prisons. Let's now consider another crime-drop explanation: *increased reliance on prisons*. It might help to start by flipping the crime question around. Instead of wondering what made crime fall, think about this: why had it risen so dramatically in the first place?

During the first half of the twentieth century, the incidence of violent crime in the United States was, for the most part, fairly steady. But in the early 1960s, it began to climb. In retrospect, it is clear that one of the major factors pushing this trend was a more lenient justice system. Conviction rates declined during the 1960s, and criminals who were convicted served shorter sentences. This trend was driven in part by an expansion in the rights of people accused of crimes—a long overdue expansion, some would argue. (Others would argue that the expansion went too far.) At the same time, politicians were growing increasingly softer on crime—"for fear of sounding racist," as the economist Gary Becker has written, "since African-Americans and Hispanics commit a disproportionate share of felonies." So if you were the kind of person who might want to commit a crime, the incentives were lining up in your favor: a slimmer likelihood of being convicted and, if convicted, a shorter prison term. Because criminals

respond to incentives as readily as anyone, the result was a surge in crime.

It took some time, and a great deal of political turmoil, but these incentives were eventually curtailed. Criminals who would have previously been set free—for drug-related offenses and parole revocation in particular—were instead locked up. Between 1980 and 2000, there was a fifteenfold increase in the number of people sent to prison on drug charges. Many other sentences, especially for violent crime, were lengthened. The total effect was dramatic. By 2000, more than two million people were in prison, roughly four times the number as of 1972. Fully half of that increase took place during the 1990s.

The evidence linking increased punishment with lower crime rates is very strong. Harsh prison terms have been shown to act as both deterrent (for the would-be criminal on the street) and prophylactic (for the would-be criminal who is already locked up). Logical as this may sound, some criminologists have fought the logic. A 1977 academic study called "On Behalf of a Moratorium on Prison Construction" noted that crime rates tend to be high when imprisonment rates are high, and concluded that crime would fall if imprisonment rates could only be lowered. (Fortunately, jailers did not suddenly turn loose their wards and sit back waiting for crime to fall. As the political scientist John J. DiIulio Jr. later commented, "Apparently, it takes a Ph.D. in criminology to doubt that keeping dangerous criminals incarcerated cuts crime.") The "Moratorium" argument rests on a fundamental confusion of correlation and causality. Consider a parallel argument. The mayor of a city sees that his citizens celebrate wildly when their team wins the World Series. He is intrigued by this correlation but, like the "Moratorium" author, fails to see the direction in which the correlation runs. So the following year, the mayor decrees that his citizens start celebrating the World Series before the first pitch is thrown—an act that, in his confused mind, will ensure a victory.

There are certainly plenty of reasons to dislike the huge surge in the prison population. Not everyone is pleased that such a significant fraction of Americans, especially black Americans, live behind bars. Nor does prison even begin to address the root causes of crime, which are diverse and complex. Lastly, prison is hardly a cheap solution: it costs about \$25,000 a year to keep someone incarcerated. But if the goal here is to explain the drop in crime in the 1990s, imprisonment is certainly one of the key answers. It accounts for roughly one-third of the drop in crime.

Another crime-drop explanation is often cited in tandem with imprisonment: the increased use of capital punishment. The number of executions in the United States quadrupled between the 1980s and the 1990s, leading many people to conclude—in the context of a debate that has been going on for decades—that capital punishment helped drive down crime. Lost in the debate, however, are two important facts.

First, given the rarity with which executions are carried out in this country and the long delays in doing so, no reasonable criminal should be deterred by the threat of execution. Even though capital punishment quadrupled within a decade, there were still only 478 executions in the entire United States during the 1990s. Any parent who has ever said to a recalcitrant child, "Okay, I'm going to count to ten and this time I'm *really* going to punish you," knows the difference between deterrent and empty threat. New York State, for instance, has not as of this writing executed a single criminal since reinstituting its death penalty in 1995. Even among prisoners on death row, the annual execution rate is only 2 percent—compared with the 7 percent annual chance of dying faced by a member of the Black Gangster Disciple Nation crack gang. If life on death row is safer than life on the streets, it's hard to believe that the fear of execution is a driving force in a criminal's calculus. Like the \$3 fine for late-

arriving parents at the Israeli day-care centers, the negative incentive of capital punishment simply isn't serious enough for a criminal to change his behavior.

The second flaw in the capital punishment argument is even more obvious. Assume for a moment that the death penalty is a deterrent. How much crime does it actually deter? The economist Isaac Ehrlich, in an oft-cited 1975 paper, put forth an estimate that is generally considered optimistic: executing 1 criminal translates into 7 fewer homicides that the criminal might have committed. Now do the math. In 1991, there were 14 executions in the United States; in 2001, there were 66. According to Ehrlich's calculation, those 52 additional executions would have accounted for 364 fewer homicides in 2001—not a small drop, to be sure, but less than 4 percent of the actual decrease in homicides that year. So even in a death penalty advocate's best-case scenario, capital punishment could explain only one twenty-fifth of the drop in homicides in the 1990s. And because the death penalty is rarely given for crimes other than homicide, its deterrent effect cannot account for a speck of decline in other violent crimes.

It is extremely unlikely, therefore, that the death penalty, as currently practiced in the United States, exerts any real influence on crime rates. Even many of its onetime supporters have come to this conclusion. "I feel morally and intellectually obligated simply to concede that the death penalty experiment has failed," said U.S. Supreme Court Justice Harry A. Blackmun in 1994, nearly twenty years after he had voted for its reinstatement. "I no longer shall tinker with the machinery of death."

So it wasn't capital punishment that drove crime down, nor was it the booming economy. But higher rates of imprisonment did have a lot to do with it. All those criminals didn't march into jail by themselves, of

125

FREAKONOMICS

course. Someone had to investigate the crime, catch the bad guy, and put together the case that would get him convicted. Which naturally leads to a related pair of crime-drop explanations:

> Innovative policing strategies Increased number of police

Let's address the second one first. The number of police officers per capita in the United States rose about 14 percent during the 1990s. Does merely increasing the number of police, however, reduce crime? The answer would seem obvious—yes—but proving that answer isn't so easy. That's because when crime is rising, people clamor for protection, and invariably more money is found for cops. So if you just look at raw correlations between police and crime, you will find that when there are more police, there tends to be more crime. That doesn't mean, of course, that the police are causing the crime, just as it doesn't mean, as some criminologists have argued, that crime will fall if criminals are released from prison.

To show causality, we need a scenario in which more police are hired for reasons completely unrelated to rising crime. If, for instance, police were randomly sprinkled in some cities and not in others, we could look to see whether crime declines in the cities where the police happen to land.

As it turns out, that exact scenario is often created by vote-hungry politicians. In the months leading up to Election Day, incumbent mayors routinely try to lock up the law-and-order vote by hiring more police—even when the crime rate is standing still. So by comparing the crime rate in one set of cities that have recently had an election (and which therefore hired extra police) with another set of cities that had no election (and therefore no extra police), it's possible to tease out the effect of the extra police on crime. The answer: yes indeed, additional police substantially lower the crime rate.

126

Again, it may help to look backward and see why crime had risen so much in the first place. From 1960 to 1985, the number of police officers *fell* more than 50 percent relative to the number of crimes. In some cases, hiring additional police was considered a violation of the era's liberal aesthetic; in others, it was simply considered too expensive. This 50 percent decline in police translated into a roughly equal decline in the probability that a given criminal would be caught. Coupled with the above-cited leniency in the other half of the criminal justice system, the courtrooms, this decrease in policing created a strong positive incentive for criminals.

By the 1990s, philosophies—and necessities—had changed. The policing trend was put in reverse, with wide-scale hiring in cities across the country. Not only did all those police act as a deterrent, but they also provided the manpower to imprison criminals who might have otherwise gone uncaught. The hiring of additional police accounted for roughly 10 percent of the 1990s crime drop.

But it wasn't only the number of police that changed in the 1990s; consider the most commonly cited crime-drop explanation of all: *innovative policing strategies*.

There was perhaps no more attractive theory than the belief that smart policing stops crime. It offered a set of bona fide heroes rather than simply a dearth of villains. This theory rapidly became an article of faith because it appealed to the factors that, according to John Kenneth Galbraith, most contribute to the formation of conventional wisdom: the ease with which an idea may be understood and the degree to which it affects our personal well-being.

The story played out most dramatically in New York City, where newly elected mayor Rudolph Giuliani and his handpicked police commissioner, William Bratton, vowed to fix the city's desperate crime situation. Bratton took a novel approach to policing. He ushered the NYPD into what one senior police official later called "our Athenian period," in which new ideas were given weight over calcified

practices. Instead of coddling his precinct commanders, Bratton demanded accountability. Instead of relying solely on old-fashioned cop know-how, he introduced technological solutions like CompStat, a computerized method of addressing crime hot spots.

The most compelling new idea that Bratton brought to life stemmed from the broken window theory, which was conceived by the criminologists James Q. Wilson and George Kelling. The broken window theory argues that minor nuisances, if left unchecked, turn into major nuisances: that is, if someone breaks a window and sees it isn't fixed immediately, he gets the signal that it's all right to break the rest of the windows and maybe set the building afire too.

So with murder raging all around, Bill Bratton's cops began to police the sort of deeds that used to go unpoliced: jumping a subway turnstile, panhandling too aggressively, urinating in the streets, swabbing a filthy squeegee across a car's windshield unless the driver made an appropriate "donation."

Most New Yorkers loved this crackdown on its own merit. But they particularly loved the idea, as stoutly preached by Bratton and Giuliani, that choking off these small crimes was like choking off the criminal element's oxygen supply. Today's turnstile jumper might easily be wanted for yesterday's murder. That junkie peeing in an alley might have been on his way to a robbery.

As violent crime began to fall dramatically, New Yorkers were more than happy to heap laurels on their operatic, Brooklyn-bred mayor and his hatchet-faced police chief with the big Boston accent. But the two strong-willed men weren't very good at sharing the glory. Soon after the city's crime turnaround landed Bratton—and not Giuliani—on the cover of *Time*, Bratton was pushed to resign. He had been police commissioner for just twenty-seven months.

New York City was a clear innovator in police strategies during the 1990s crime drop, and it also enjoyed the greatest decline in crime of

129

any large American city. Homicide rates fell from 30.7 per 100,000 people in 1990 to 8.4 per 100,000 people in 2000, a change of 73.6 percent. But a careful analysis of the facts shows that the innovative policing strategies probably had little effect on this huge decline.

First, the drop in crime in New York began in 1990. By the end of 1993, the rate of property crime and violent crime, including homicides, had already fallen nearly 20 percent. Rudolph Giuliani, however, did not become mayor—and install Bratton—until early 1994. Crime was well on its way down before either man arrived. And it would continue to fall long after Bratton was bumped from office.

Second, the new police strategies were accompanied by a much more significant change within the police force: a hiring binge. Between 1991 and 2001, the NYPD grew by 45 percent, more than three times the national average. As argued above, an increase in the number of police, regardless of new strategies, has been proven to reduce crime. By a conservative calculation, this huge expansion of New York's police force would be expected to reduce crime in New York by 18 percent relative to the national average. If you subtract that 18 percent from New York's homicide reduction, thereby discounting the effect of the police-hiring surge, New York no longer leads the nation with its 73.6 percent drop; it goes straight to the middle of the pack. Many of those new police were in fact hired by David Dinkins, the mayor whom Giuliani defeated. Dinkins had been desperate to secure the law-and-order vote, having known all along that his opponent would be Giuliani, a former federal prosecutor. (The two men had run against each other four years earlier as well.) So those who wish to credit Giuliani with the crime drop may still do so, for it was his own law-and-order reputation that made Dinkins hire all those police. In the end, of course, the police increase helped everyone—but it helped Giuliani a lot more than Dinkins.

Most damaging to the claim that New York's police innovations

FREAKONOMICS

radically lowered crime is one simple and often overlooked fact: crime went down *everywhere* during the 1990s, not only in New York. Few other cities tried the kind of strategies that New York did, and certainly none with the same zeal. But even in Los Angeles, a city notorious for bad policing, crime fell at about the same rate as it did in New York once the growth in New York's police force is accounted for.

It would be churlish to argue that smart policing isn't a good thing. Bill Bratton certainly deserves credit for invigorating New York's police force. But there is frighteningly little evidence that his strategy was the crime panacea that he and the media deemed it. The next step will be to continue measuring the impact of police innovations—in Los Angeles, for instance, where Bratton himself became police chief in late 2002. While he duly instituted some of the innovations that were his hallmark in New York, Bratton announced that his highest priority was a more basic one: finding the money to hire thousands of new police officers.

Now to explore another pair of common crime-drop explanations:

Tougher gun laws Changes in crack and other drug markets

First, the guns. Debates on this subject are rarely coolheaded. Gun advocates believe that gun laws are too strict; opponents believe exactly the opposite. How can intelligent people view the world so differently? Because a gun raises a complex set of issues that change according to one factor: whose hand happens to be holding the gun.

It might be worthwhile to take a step back and ask a rudimentary question: what is a gun? It's a tool that can be used to kill someone, of course, but more significantly, a gun is a great disrupter of the natural order.

130

A gun scrambles the outcome of any dispute. Let's say that a tough guy and a not-so-tough guy exchange words in a bar, which leads to a fight. It's pretty obvious to the not-so-tough guy that he'll be beaten, so why bother fighting? The pecking order remains intact. But if the not-so-tough guy happens to have a gun, he stands a good chance of winning. In this scenario, the introduction of a gun may well lead to more violence.

Now instead of the tough guy and the not-so-tough guy, picture a high-school girl out for a nighttime stroll when she is suddenly set upon by a mugger. What if only the mugger is armed? What if only the girl is armed? What if both are armed? A gun opponent might argue that the gun has to be kept out of the mugger's hands in the first place. A gun advocate might argue that the high-school girl needs to have a gun to disrupt what has become the natural order: it's the bad guys that have the guns. (If the girl scares off the mugger, then the introduction of a gun in this case may lead to less violence.) Any mugger with even a little initiative is bound to be armed, for in a country like the United States, with a thriving black market in guns, anyone can get hold of one.

There are enough guns in the United States that if you gave one to every adult, you would run out of adults before you ran out of guns. Nearly two-thirds of U.S. homicides involve a gun, a far greater fraction than in other industrialized countries. Our homicide rate is also much higher than in those countries. It would therefore seem likely that our homicide rate is so high in part because guns are so easily available. Research indeed shows this to be true.

But guns are not the whole story. In Switzerland, every adult male is issued an assault rifle for militia duty and is allowed to keep the gun at home. On a per capita basis, Switzerland has more firearms than just about any other country, and yet it is one of the safest places in the world. In other words, guns do not cause crime. That said, the established U.S. methods of keeping guns away from the people who *do*

cause crime are, at best, feeble. And since a gun—unlike a bag of cocaine or a car or a pair of pants—lasts pretty much forever, even turning off the spigot of new guns still leaves an ocean of available ones.

So bearing all this in mind, let's consider a variety of recent gun initiatives to see the impact they may have had on crime in the 1990s.

The most famous gun-control law is the Brady Act, passed in 1993, which requires a criminal check and a waiting period before a person can purchase a handgun. This solution may have seemed appealing to politicians, but to an economist it doesn't make much sense. Why? Because regulation of a legal market is bound to fail when a healthy black market exists for the same product. With guns so cheap and so easy to get, the standard criminal has no incentive to fill out a firearms application at his local gun shop and then wait a week. The Brady Act, accordingly, has proven to be practically impotent in lowering crime. (A study of imprisoned felons showed that even before the Brady Act, only about one-fifth of the criminals had bought their guns through a licensed dealer.) Various local guncontrol laws have also failed. Washington, D.C., and Chicago both instituted handgun bans well before crime began to fall across the country in the 1990s, and yet those two cities were laggards, not leaders, in the national reduction in crime. One deterrent that has proven moderately effective is a stiff increase in prison time for anyone caught in possession of an illegal gun. But there is plenty of room for improvement. Not that this is likely, but if the death penalty were assessed to anyone carrying an illegal gun, and if the penalty were actually enforced, gun crimes would surely plunge.

Another staple of 1990s crime fighting—and of the evening news—was the gun buyback. You remember the image: a menacing, glistening heap of firearms surrounded by the mayor, the police chief, the neighborhood activists. It made for a nice photo op, but that's about as meaningful as a gun buyback is. The guns that get turned in

are generally heirlooms or junk. The payoff to the gun seller—usually \$50 or \$100, but in one California buyback, three free hours of psychotherapy—isn't an adequate incentive for anyone who actually plans to use his gun. And the number of surrendered guns is no match for even the number of new guns simultaneously coming to market. Given the number of handguns in the United States and the number of homicides each year, the likelihood that a particular gun was used to kill someone that year is 1 in 10,000. The typical gun buyback program yields fewer than 1,000 guns—which translates into an expectation of less than one-tenth of one homicide per buyback. Not enough, that is, to make even a sliver of impact on the fall of crime.

Then there is an opposite argument—that we need *more* guns on the street, but in the hands of the right people (like the high-school girl above, instead of her mugger). The economist John R. Lott Jr. is the main champion of this idea. His calling card is the book More Guns, Less Crime, in which he argues that violent crime has decreased in areas where law-abiding citizens are allowed to carry concealed weapons. His theory might be surprising, but it is sensible. If a criminal thinks his potential victim may be armed, he may be deterred from committing the crime. Handgun opponents call Lott a pro-gun ideologue, and Lott let himself become a lightning rod for gun controversy. He exacerbated his trouble by creating a pseudonym, "Mary Rosh," to defend his theory in online debates. Rosh, identifying herself as a former student of Lott's, praised her teacher's intellect, his evenhandedness, his charisma. "I have to say that he was the best professor that I ever had," s/he wrote. "You wouldn't know that he was a 'right-wing' ideologue from the class. . . . There were a group of us students who would try to take any class that he taught. Lott finally had to tell us that it was best for us to try and take classes from other professors more to be exposed to other ways of teaching graduate material." Then there was the troubling allegation that Lott actually invented some of the survey data that support his more-guns/less-crime theory. Regardless of whether the data were faked, Lott's admittedly intriguing hypothesis doesn't seem to be true. When other scholars have tried to replicate his results, they found that right-to-carry laws simply don't bring down crime.

Consider the next crime-drop explanation: the bursting of the crack bubble. Crack cocaine was such a potent, addictive drug that a hugely profitable market had been created practically overnight. True, it was only the leaders of the crack gangs who were getting rich. But that only made the street-level dealers all the more desperate to advance. Many of them were willing to kill their rivals to do so, whether the rival belonged to the same gang or a different one. There were also gun battles over valuable drug-selling corners. The typical crack murder involved one crack dealer shooting another (or two of them, or three) and not, contrary to conventional wisdom, some bug-eyed crackhead shooting a shopkeeper over a few dollars. The result was a huge increase in violent crime. One study found that more than 25 percent of the homicides in New York City in 1988 were crack-related.

The violence associated with crack began to ebb in about 1991. This has led many people to think that crack itself went away. It didn't. Smoking crack remains much more popular today than most people realize. Nearly 5 percent of all arrests in the United States are still related to cocaine (as against 6 percent at crack's peak); nor have emergency room visits for crack users diminished all that much.

What *did* go away were the huge profits for selling crack. The price of cocaine had been falling for years, and it got only cheaper as crack grew more popular. Dealers began to underprice one another; profits vanished. The crack bubble burst as dramatically as the Nasdaq bubble would eventually burst. (Think of the first generation of crack

dealers as the Microsoft millionaires; think of the second generation as Pets.com.) As veteran crack dealers were killed or sent to prison, younger dealers decided that the smaller profits didn't justify the risk. The tournament had lost its allure. It was no longer worth killing someone to steal their crack turf, and certainly not worth being killed.

So the violence abated. From 1991 to 2001, the homicide rate among young black men—who were disproportionately represented among crack dealers—fell 48 percent, compared to 30 percent for older black men and older white men. (Another minor contributor to the falling homicide rate is the fact that some crack dealers took to shooting their enemies in the buttocks rather than murdering them; this method of violent insult was considered more degrading—and was obviously less severely punished—than murder.) All told, the crash of the crack market accounted for roughly 15 percent of the crime drop of the 1990s—a substantial factor, to be sure, though it should be noted that crack was responsible for far more than 15 percent of the crime *increase* of the 1980s. In other words, the net effect of crack is still being felt in the form of violent crime, to say nothing of the miseries the drug itself continues to cause.

The final pair of crime-drop explanations concern two demographic trends. The first one received many media citations: *aging of the population*.

Until crime fell so drastically, no one talked about this theory at all. In fact, the "bloodbath" school of criminology was touting exactly the opposite theory—that an increase in the teenage share of the population would produce a crop of superpredators who would lay the nation low. "Just beyond the horizon, there lurks a cloud that the winds will soon bring over us," James Q. Wilson wrote in 1995. "The population will start getting younger again. . . . Get ready."

But overall, the teenage share of the population wasn't getting much bigger. Criminologists like Wilson and James Alan Fox had badly misread the demographic data. The real population growth in the 1990s was in fact among the elderly. While this may have been scary news in terms of Medicare and Social Security, the average American had little to fear from the growing horde of oldsters. It shouldn't be surprising to learn that elderly people are not very criminally intent; the average sixty-five-year-old is about one-fiftieth as likely to be arrested as the average teenager. That is what makes this aging-of-the-population theory of crime reduction so appealingly tidy: since people mellow out as they get older, more older people must lead to less crime. But a thorough look at the data reveals that the graying of America did nothing to bring down crime in the 1990s. Demographic change is too slow and subtle a process—you don't graduate from teenage hoodlum to senior citizen in just a few years to even begin to explain the suddenness of the crime decline.

There was another demographic change, however, unforeseen and long-gestating, that did drastically reduce crime in the 1990s.

Think back for a moment to Romania in 1966. Suddenly and without warning, Nicolae Ceauşescu declared abortion illegal. The children born in the wake of the abortion ban were much more likely to become criminals than children born earlier. Why was that? Studies in other parts of Eastern Europe and in Scandinavia from the 1930s through the 1960s reveal a similar trend. In most of these cases, abortion was not forbidden outright, but a woman had to receive permission from a judge in order to obtain one. Researchers found that in the instances where the woman was denied an abortion, she often resented her baby and failed to provide it with a good home. Even when controlling for the income, age, education, and health of the mother, the researchers found that these children too were more likely to become criminals.

FREAKONOMICS

The United States, meanwhile, has had a different abortion history than Europe. In the early days of the nation, it was permissible to have an abortion prior to "quickening"—that is, when the first movements of the fetus could be felt, usually around the sixteenth to eighteenth week of pregnancy. In 1828, New York became the first state to restrict abortion; by 1900 it had been made illegal throughout the country. Abortion in the twentieth century was often dangerous and usually expensive. Fewer poor women, therefore, had abortions. They also had less access to birth control. What they did have, accordingly, was a lot more babies.

In the late 1960s, several states began to allow abortion under extreme circumstances: rape, incest, or danger to the mother. By 1970 five states had made abortion entirely legal and broadly available: New York, California, Washington, Alaska, and Hawaii. On January 22, 1973, legalized abortion was suddenly extended to the entire country with the U.S. Supreme Court's ruling in *Roe v. Wade*. The majority opinion, written by Justice Harry Blackmun, spoke specifically to the would-be mother's predicament:

The detriment that the State would impose upon the pregnant woman by denying this choice altogether is apparent.... Maternity, or additional offspring, may force upon the woman a distressful life and future. Psychological harm may be imminent. Mental and physical health may be taxed by child care. There is also the distress, for all concerned, associated with the unwanted child, and there is the problem of bringing a child into a family already unable, psychologically and otherwise, to care for it.

The Supreme Court gave voice to what the mothers in Romania and Scandinavia—and elsewhere—had long known: when a woman

does not want to have a child, she usually has good reason. She may be unmarried or in a bad marriage. She may consider herself too poor to raise a child. She may think her life is too unstable or unhappy, or she may think that her drinking or drug use will damage the baby's health. She may believe that she is too young or hasn't yet received enough education. She may want a child badly but in a few years, not now. For any of a hundred reasons, she may feel that she cannot provide a home environment that is conducive to raising a healthy and productive child.

In the first year after *Roe v. Wade*, some 750,000 women had abortions in the United States (representing one abortion for every 4 live births). By 1980 the number of abortions reached 1.6 million (one for every 2.25 live births), where it leveled off. In a country of 225 million people, 1.6 million abortions per year—one for every 140 Americans—may not have seemed so dramatic. In the first year after Nicolae Ceauşescu's death, when abortion was reinstated in Romania, there was one abortion for every *twenty-two* Romanians. But still: 1.6 million American women a year who got pregnant were suddenly not having those babies.

Before *Roe v. Wade*, it was predominantly the daughters of middleor upper-class families who could arrange and afford a safe illegal abortion. Now, instead of an illegal procedure that might cost \$500, any woman could easily obtain an abortion, often for less than \$100.

What sort of woman was most likely to take advantage of *Roe v. Wade*? Very often she was unmarried or in her teens or poor, and sometimes all three. What sort of future might her child have had? One study has shown that the typical child who went unborn in the earliest years of legalized abortion would have been 50 percent more likely than average to live in poverty; he would have also been 60 percent more likely to grow up with just one parent. These two factors—childhood poverty and a single-parent household—are among the strongest predictors that a child will have a criminal future. Growing

up in a single-parent home roughly doubles a child's propensity to commit crime. So does having a teenage mother. Another study has shown that low maternal education is the single most powerful factor leading to criminality.

In other words, the very factors that drove millions of American women to have an abortion also seemed to predict that their children, had they been born, would have led unhappy and possibly criminal lives.

To be sure, the legalization of abortion in the United States had myriad consequences. Infanticide fell dramatically. So did shotgun marriages, as well as the number of babies put up for adoption (which has led to the boom in the adoption of foreign babies). Conceptions rose by nearly 30 percent, but births actually *fell* by 6 percent, indicating that many women were using abortion as a method of birth control, a crude and drastic sort of insurance policy.

Perhaps the most dramatic effect of legalized abortion, however, and one that would take years to reveal itself, was its impact on crime. In the early 1990s, just as the first cohort of children born after *Roe v. Wade* was hitting its late teen years—the years during which young men enter their criminal prime—the rate of crime began to fall. What this cohort was missing, of course, were the children who stood the greatest chance of becoming criminals. And the crime rate continued to fall as an entire generation came of age minus the children whose mothers had not wanted to bring a child into the world. Legalized abortion led to less unwantedness; unwantedness leads to high crime; legalized abortion, therefore, led to less crime.

This theory is bound to provoke a variety of reactions, ranging from disbelief to revulsion, and a variety of objections, ranging from the quotidian to the moral. The likeliest first objection is the most straightforward one: is the theory true? Perhaps abortion and crime are merely correlated and not causal.

It may be more comforting to believe what the newspapers say,

that the drop in crime was due to brilliant policing and clever gun control and a surging economy. We have evolved with a tendency to link causality to things we can touch or feel, not to some distant or difficult phenomenon. We believe especially in near-term causes: a snake bites your friend, he screams with pain, and he dies. The snakebite, you conclude, must have killed him. Most of the time, such a reckoning is correct. But when it comes to cause and effect, there is often a trap in such open-and-shut thinking. We smirk now when we think of ancient cultures that embraced faulty causes—the warriors who believed, for instance, that it was their raping of a virgin that brought them victory on the battlefield. But we too embrace faulty causes, usually at the urging of an expert proclaiming a truth in which he has a vested interest.

How, then, can we tell if the abortion-crime link is a case of causality rather than simply correlation?

One way to test the effect of abortion on crime would be to measure crime data in the five states where abortion was made legal before the Supreme Court extended abortion rights to the rest of the country. In New York, California, Washington, Alaska, and Hawaii, a woman had been able to obtain a legal abortion for at least two years before *Roe v. Wade.* And indeed, those early-legalizing states saw crime begin to fall earlier than the other forty-five states and the District of Columbia. Between 1988 and 1994, violent crime in the early-legalizing states fell 13 percent compared to the other states; between 1994 and 1997, their murder rates fell 23 percent more than those of the other states.

But what if those early legalizers simply got lucky? What else might we look for in the data to establish an abortion-crime link?

One factor to look for would be a correlation between each state's abortion rate and its crime rate. Sure enough, the states with the highest abortion rates in the 1970s experienced the greatest crime drops in

139

There are even more correlations, positive and negative, that shore up the abortion-crime link. In states with high abortion rates, the entire decline in crime was among the post-Roe cohort as opposed to older criminals. Also, studies of Australia and Canada have since established a similar link between legalized abortion and crime. And the post-Roe cohort was not only missing thousands of young male criminals but also thousands of single, teenage mothers—for many of the aborted baby girls would have been the children most likely to replicate their own mothers' tendencies.

To discover that abortion was one of the greatest crime-lowering factors in American history is, needless to say, jarring. It feels less Darwinian than Swiftian; it calls to mind a long ago dart attributed to G. K. Chesterton: when there aren't enough hats to go around, the problem isn't solved by lopping off some heads. The crime drop was, in the language of economists, an "unintended benefit" of legalized abortion. But one need not oppose abortion on moral or religious grounds to feel shaken by the notion of a private sadness being converted into a public good.

FREAKONOMICS

Indeed, there are plenty of people who consider abortion itself to be a violent crime. One legal scholar called legalized abortion worse than either slavery (since it routinely involves death) or the Holocaust (since the number of post-Roe abortions in the United States, roughly thirty-seven million as of 2004, outnumber the six million Jews killed in Europe). Whether or not one feels so strongly about abortion, it remains a singularly charged issue. Anthony V. Bouza, a former top police official in both the Bronx and Minneapolis, discovered this when he ran for Minnesota governor in 1994. A few years earlier, Bouza had written a book in which he called abortion "arguably the only effective crime-prevention device adopted in this nation since the late 1960s." When Bouza's opinion was publicized just before the election, he fell sharply in the polls. And then he lost.

However a person feels about abortion, a question is likely to come to mind: what are we to make of the trade-off of more abortion for less crime? Is it even possible to put a number on such a complicated transaction?

As it happens, economists have a curious habit of affixing numbers to complicated transactions. Consider the effort to save the northern spotted owl from extinction. One economic study found that in order to protect roughly five thousand owls, the opportunity costs—that is, the income surrendered by the logging industry and others—would be \$46 billion, or just over \$9 million per owl. After the Exxon Valdez oil spill in 1989, another study estimated the amount that the typical American household would be willing to pay to avoid another such disaster: \$31. An economist can affix a value even to a particular body part. Consider the schedule that the state of Connecticut uses to compensate for work-related injuries.

LOST OR DAMAGED BODY PART	COMPENSATED WEEKS OF PAY
Finger (first)	36
Finger (second)	29

LOST OR DAMAGED BODY PART	COMPENSATED WEEKS OF PA
Finger (third)	21
Finger (fourth)	17
Thumb (master hand)	63
Thumb (other hand)	54
Hand (master)	168
Hand (other)	155
Arm (master)	208
Arm (other)	194
Toe (great)	28
Toe (any other)	9
Foot	125
Nose	35
Eye	157
Kidney	117
Liver	347
Pancreas	416
Heart	520
Mammary	35
Ovary	35
Testis	35
Penis	35–104
Vagina	35–104

Now, for the sake of argument, let's ask an outrageous question: what is the relative value between a fetus and a newborn? If faced with the Solomonic task of sacrificing the life of one newborn for an indeterminate number of fetuses, what number might you choose? This is nothing but a thought exercise—obviously there is no right answer—but it may help clarify the impact of abortion on crime.

For a person who is either resolutely pro-life or resolutely prochoice, this is a simple calculation. The first, believing that life begins at conception, would likely consider the value of a newborn versus the value of a fetus to be 1:1. The second person, believing that a woman's right to an abortion trumps any other factor, would likely argue that no number of fetuses can equal even one newborn.

But let's consider a third person. (If you identify strongly with either person number one or person number two, the following exercise might strike you as offensive, and you may want to skip this paragraph and the next.) This third person does not believe that a fetus is the 1:1 equivalent of a newborn, yet neither does he believe that a fetus has no relative value. Let's say that he is forced, for the sake of argument, to affix a relative value, and he decides that 1 newborn is worth 100 fetuses.

There are roughly 1.5 million abortions in the United States every year. For a person who believes that 1 newborn is worth 100 fetuses, those 1.5 million abortions would translate—dividing 1.5 million by 100—into the equivalent of a loss of 15,000 human lives. Fifteen thousand lives: that happens to be about the same number of people who die in homicides in the United States every year. And it is far more than the number of homicides eliminated each year due to legalized abortion. So even for someone who considers a fetus to be worth only one one-hundredth of a human being, the trade-off between higher abortion and lower crime is, by an economist's reckoning, terribly inefficient.

What the link between abortion and crime does say is this: when the government gives a woman the opportunity to make her own decision about abortion, she generally does a good job of figuring out if she is in a position to raise the baby well. If she decides she can't, she often chooses the abortion.

But once a woman decides she *will* have her baby, a pressing question arises: what are parents supposed to do once a child is born?

Levitt found that the support at the University of Chicago went beyond the scholarly. The year after he was hired, his wife gave birth to their first child, Andrew. One day, just after Andrew turned a year old, he came down with a slight fever. The doctor diagnosed an ear infection. When he started vomiting the next morning, his parents took him to the hospital. By the following day he was dead of pneumococcal meningitis.

Amidst the shock and grief, Levitt had an undergraduate class that needed teaching. It was Gary Becker—a Nobel laureate nearing his seventieth birthday—who sat in for him. Another colleague, D. Gale Johnson, sent a condolence card that so moved Levitt that he can still cite it from memory.

Levitt and Johnson, an agricultural economist in his eighties, began talking regularly. Levitt learned that Johnson's daughter was one of the first Americans to adopt a daughter from China. Soon the Levitts began proceedings to do the same, a girl they named Amanda. In addition to Amanda, they have since had a daughter, now three, and a son, nearly one year old. But Andrew's death has played on, in various ways. The Levitts have become close friends with the family of the little girl to whom they donated Andrew's liver. (They also donated

his heart, but that baby died.) And, not surprisingly for a scholar who pursues real-life subjects, the death also informed Levitt's work.

He and Jeannette had joined a support group for grieving parents. Levitt was struck by how many children had drowned in swimming pools. They were the kind of deaths that don't make the newspaper—unlike, for instance, a child who dies while playing with a gun.

Levitt got curious, and went looking for numbers that would tell the story. He wrote up the results as an OpEd for the Chicago Sun-Times. It featured the sort of plangent counterintuition for which he has become famous: "If you both own a gun and have a swimming pool in the backyard, the swimming pool is about 100 times more likely to kill a child than the gun is."

-THE NEW YORK TIMES MAGAZINE, AUGUST 3, 2003