

**Getting Deterrence Right: Applying Tipping Models and
Behavioral Economics to the Problems of Crime Control**

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My theme is crime control and how to do it better. I'm here because I'm excited: I think we're in the process of learning how to control crime much more effectively than we have been able to in the past.

It's well known that New York's subways and streets are much more civil and orderly now than they were five years ago and that serious crime there has fallen dramatically.

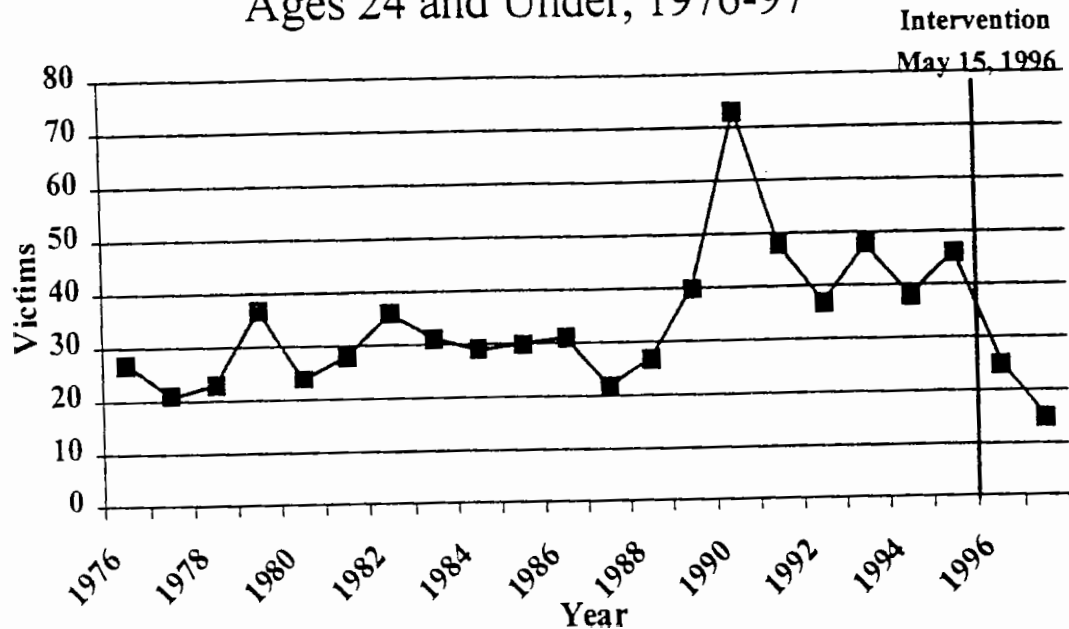
Those efforts were inspired by, and seem to bear out, the "broken windows theory" proposed by George Kelling and James Q. Wilson, that forms much of the conceptual basis for "community policing."

But how is it that reducing graffiti reduces mugging? I have a story to tell about that, and it's a story that justifies the choice made by Bill Bratton in New York to employ what might be called "focused" or "targeted" zero tolerance rather than the usual meaning of zero tolerance: a policy of making arrests for every observed violation of the law.

It's less well known that in Boston and Minneapolis, rates of youth homicide have fallen spectacularly as a result of a coordinated enforcement intervention targeted at gangs of violent juveniles - an intervention aimed, not at breaking them up, but at getting them to stop killing one another.

Boston Homicide Victims

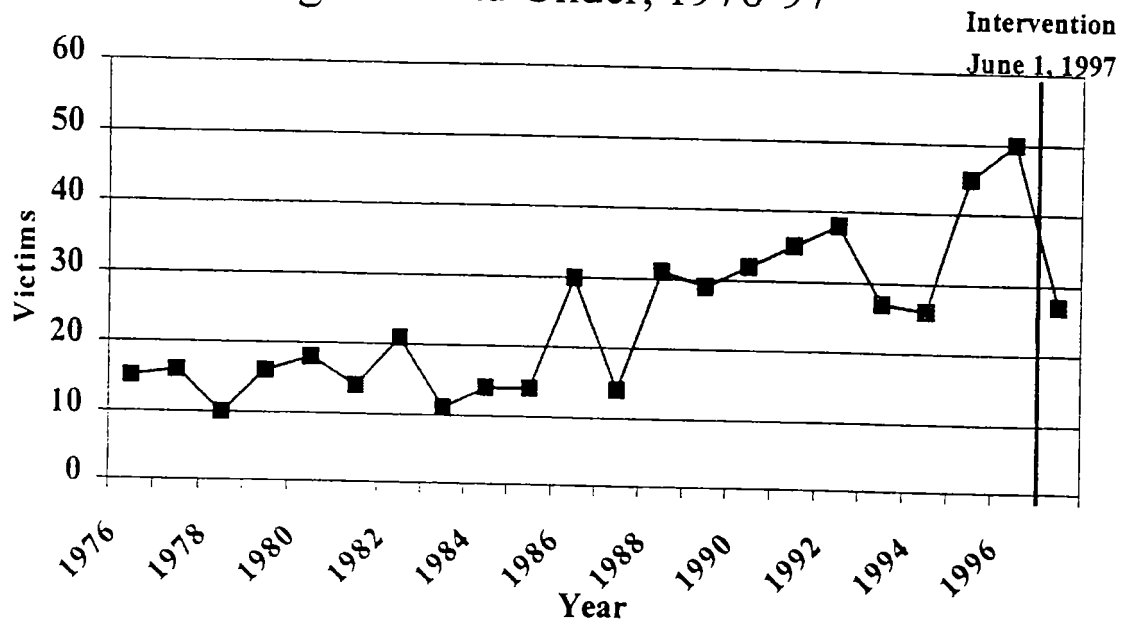
Ages 24 and Under, 1976-97



Note that the Boston pattern is consistent with falling homicide rates in the northeastern cities that got hit early by the crack epidemic, though the decline is still pretty dramatic. But Minneapolis is one of the cities in the Upper Midwest where crack arrived late and homicide rates have been soaring. There's no external reason why Minneapolis homicides should be way down.

Minneapolis Homicide Victims

Ages 24 and Under, 1976-97



How did these programs work? The details varied, but the concepts were identical (they were both invented by David Kennedy).

Let me tell the Boston story, which I know better:

1300 kids in 65 gangs.

Violence along stable intergang dispute lines.

Kids afraid that not being violent when provoked would make them seem weak.

Investigators knew which gangs were shooting, but couldn't prove anything.

Shooting increased gang prestige, and thus the prestige of the shooter.

Assembled police (gang, juvenile, drug) probation (adult and juvenile), prosecutors (state and federal) DEA, ATF, state police, truant officers.

Brought in kids in groups.

Message:

We know who you are.
We know what you're doing.
We can crack down on any group.
If we crack down on your group.
You can't live your (mostly illegal) life.

The rules: no deadly violence
Consequences of breaking the rules:
Concentrated attention until the whole group says "uncle."

When it becomes necessary, the task force delivered a crackdown, publicized it, and protected the target gang after they gave up their guns.

The task force then did a second old-style attack, using undercover drug buys, on the most violent group, got them all sent away for long sentences, and publicized that.
The results you see.

I'd like to explore the logic of the new crime control, and suggest how employing it more consistently could greatly abate what remains, in my view, a society-threatening social problem and the single greatest barrier to improving economic opportunity in urban neighborhoods of concentrated poverty.

Lots of things control crime – there's not much doubt that early childhood interventions, if we can learn to do them right, could have a big impact – but today I want to concentrate on the operations of what is loosely called the criminal justice system: police, courts, and corrections agencies.

The classical story talks about three crime-control effects of enforcement and punishment: incapacitation, deterrence, and rehabilitation.

Incapacitation is the easiest to understand: If we lock up people who commit more than their share of crimes, the population remaining free will include fewer high-rate offenders.

Since prison cells are expensive, incapacitation makes sense only if we can lock up people who, on average, commit lots of crimes.

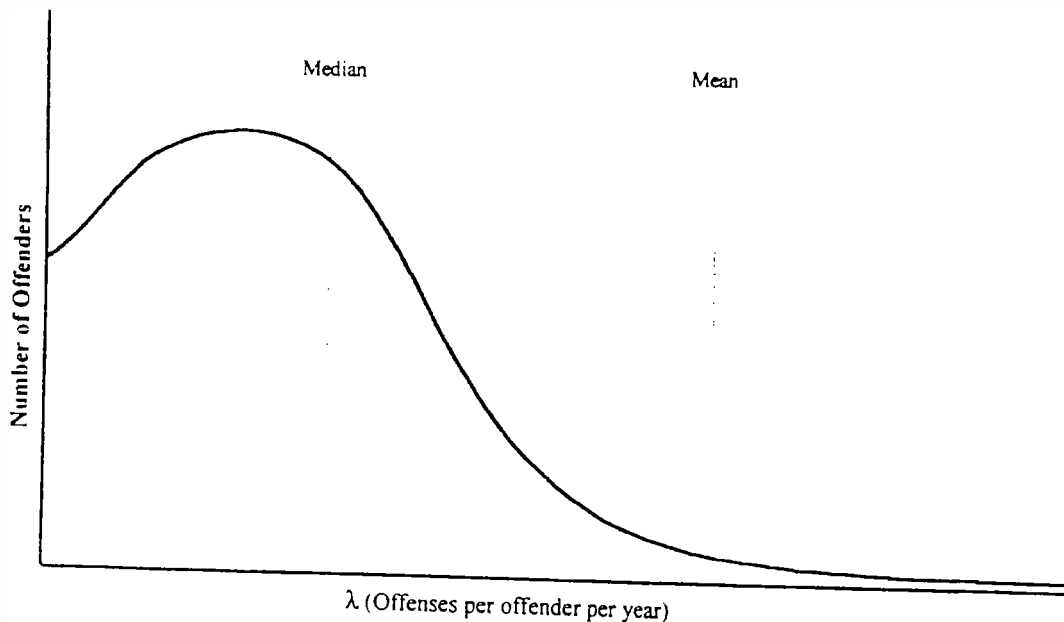
There's lots of evidence that we in fact do so - that the average offender in prison would be doing much more than \$25,000 per year worth of damage if he were running around free.

But that is true only because a relatively small number -- about 10% -- of those behind bars commit astounding numbers of offenses.

In the famous Rand Inmate Survey, the median prisoner had committed seventeen crimes in the year before incarceration, but the average offender had committed almost 200.

Offending is widespread, but persistent, serious offending is highly concentrated. Everything depends on the right-hand tail of the distribution.

The Distribution of Serious Offenses



This is consistent with a famous generalization called "Pareto's Law": 20% of any population accounts for 80% of any activity. Pareto's Law holds true about more things than you might expect.

This led Peter Greenwood of RAND, among others, to suggest that we should rethink sentencing policy to concentrate on high-rate offenders: a policy he called "selective incapacitation."

That turns out to be harder than it looks: an offender's criminal history (rap sheet) is a pretty poor indicator of his actual behavior, since most crimes never lead to an arrest.

Moreover, since criminals, like basketball players, tend to leave the game in their early thirties, basing sentences on the number of felony convictions – as in "three strikes" – tends to fill the prisons with people who would otherwise be retired muggers.

Incapacitation is a pretty mechanical process. Deterrence, by contrast, depends on changing the behavior of potential offenders by changing their perception of the likely consequences of offending.

The key to deterrent crime control lies in understanding the decision processes of (actual and potential) offenders. Since, serious, persistent offending is highly concentrated, it's the behavior of serious, persistent offenders – and of those who might become such offenders – that we most need to understand.

There are two extreme competitors here: models of purely rational choice – offenders comparing the benefits of offending to its costs – and models of utterly irrational social determination.

I want to offer a middle way: a model assuming that offenders seek their own well-being but pays attention to factors that might cause them to deviate from normative rationality as economists understand it.

If offenders tend to lapse from rationality in specific ways, and if we keep passing laws and making policies as if offenders were perfectly rational, we will wind up inflicting more punishment than we need to for less crime control benefit than we could have.

That's the "behavioral economics" of my title: I think that offenders are more likely than most people to be both reckless, in a way described by "prospect theory," and irrationally present-oriented.

The argument is simple: people who calculate rationally and who react strongly to small probabilities of horrible consequences sometime in the distant future don't become persistent offenders.

To control the behavior of such people, we need consistent and immediate sanctions, even if the sanctions themselves are relatively mild. What we have now is a system of severe sanctions, applied very sporadically and a long time after the offense.

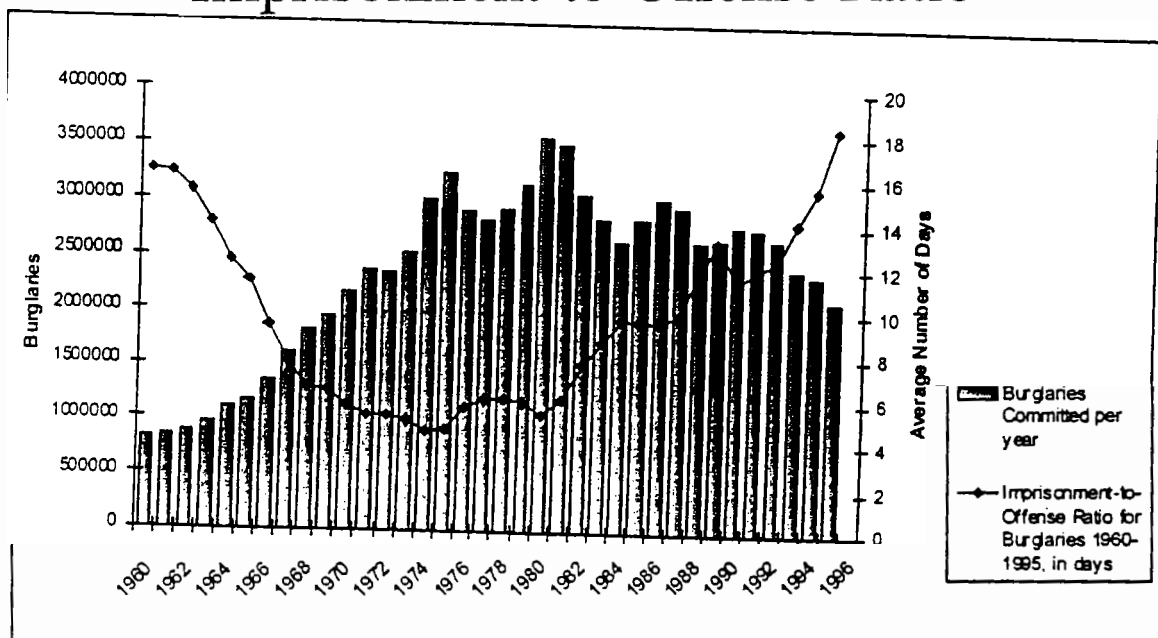
Now that isn't to say that deterrence always fails; in gross terms, it works pretty well. The simplest way to think about a deterrent threat when it's only occasionally carried out is in terms of what economists call "expected value."

An expected value is a probability-weighted average. [Remember the typical American family of the fifties with 2.7 kids? That's an expected value: all the kids divided by all the families was 2.7.]

If nine times out of ten a mugging results in no punishment, (because the mugger never gets caught) but the tenth time it results in five years in prison, then the expected-value punishment is five years times one chance in ten, or half a year.

By looking at the total number of crimes of a given type and the total number of people in prison for that crime, we can easily calculate the expected-value punishment.

Number of Burglaries vs. Imprisonment-to-Offense Ratio

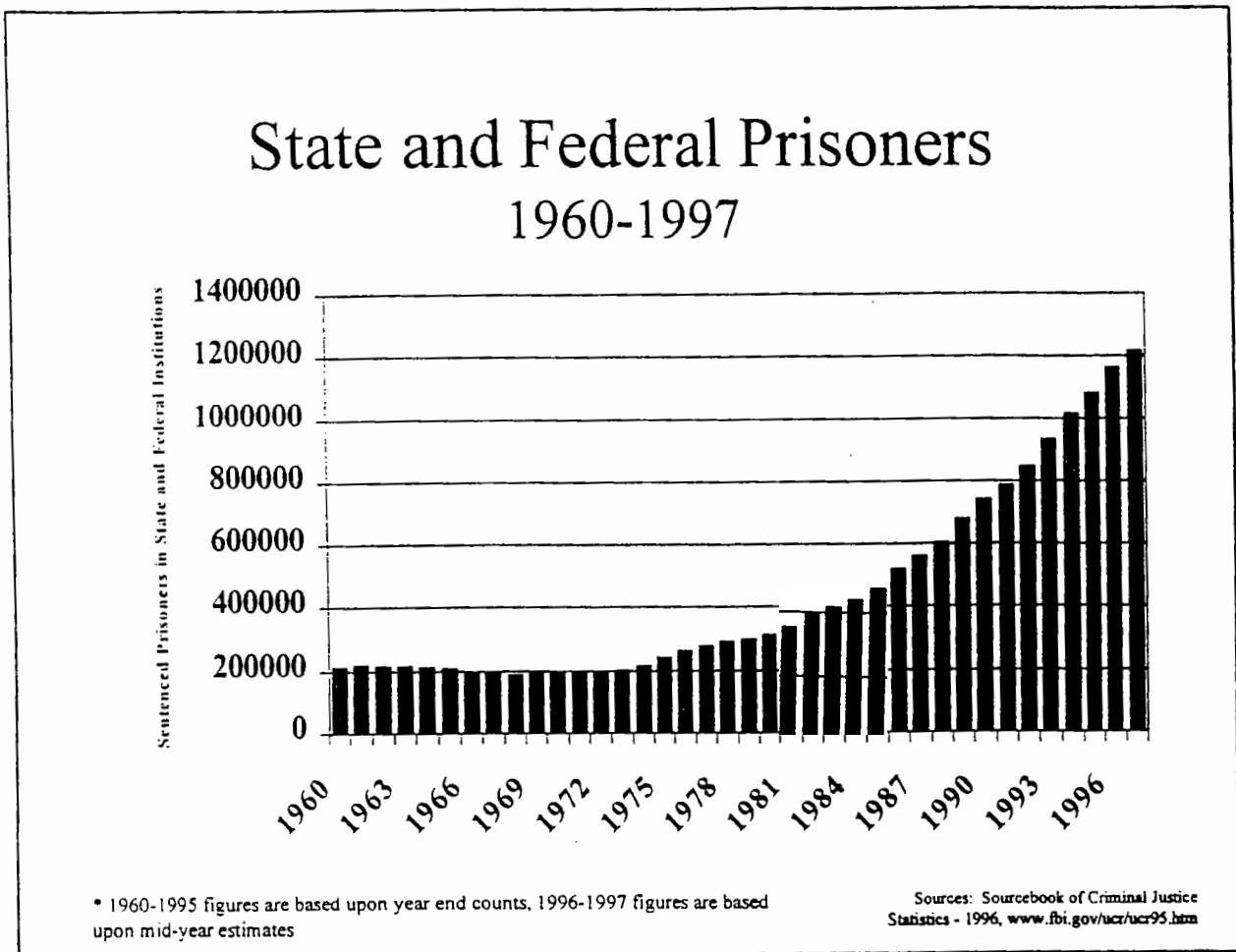


*1987-1989 Estimates are based upon 1983-1986 Percentage Distribution of Prison and Jail Inmates by Offense

1960-1975

Source: "Imprisonment-To-Offense Ratios", BOTEC Analysis Corporation; UCR Crime Reports 1960-1995, Correction Populations in the United States 1995, Sourcebook 1996 Table 1.43

Here's a graph for burglary over time: Note how the punishment rate fell sharply during the early 1960s due in part to the closing of big old prisons in many states, and how the rate of burglary started to climb explosively, which of course then pushed the punishment per crime down even further.



And also note how the explosion of prison-building in the mid-1970s was closely followed by a peak, and then a steady decline, in burglary. This isn't nearly enough to show cause and effect, but it's about what a simple deterrence model would predict.

On the other hand, the expected punishment-price of a burglary never went below about five days, and it is now nearly twenty days. That doesn't seem like much of a penalty for breaking into your home, but compared to the average "take" from a burglary, it's really quite a lot.

Given the low prices fences pay for stolen goods, a typical residential burglary nets the criminal perhaps two hundred dollars. Even at five days per burglary, that amounted to forty dollars per day served behind bars. At today's higher punishment-price, the effective take is nearer ten dollars per day served.

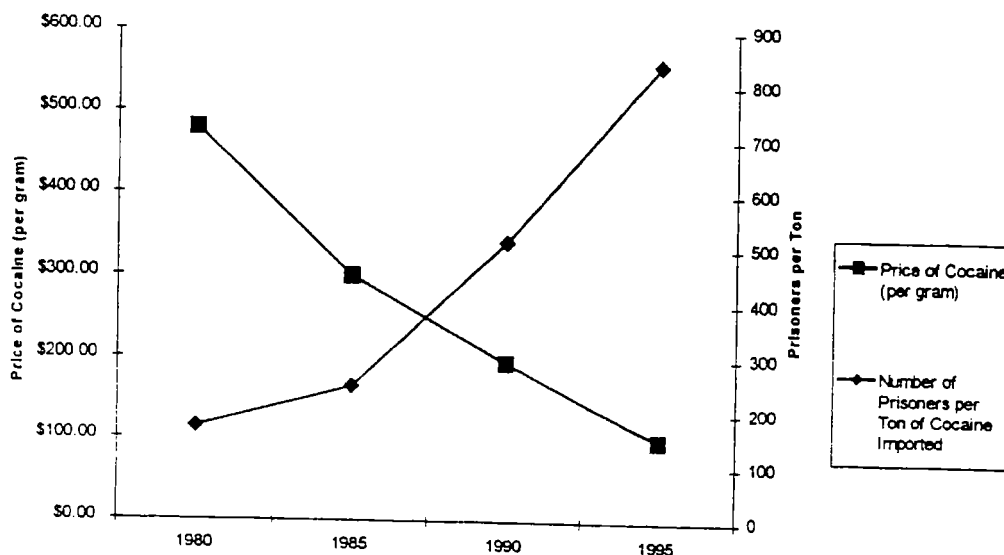
The deal for mugging is substantially worse.

That illustrates an important general principle of criminology: "The wages of sin are well below the legal minimum." Any purely rational-actor theory of crime would have a hard time explaining why people doing such unrewarding misdeeds. The illicit-drug markets, where the reward-to-punishment ratio tends to be more favorable, still don't behave as economic rational-actor theories would predict.

I have to plead guilty here: A dozen years ago, Peter Reuter and I came up with a model called "risks and prices" which asserted that drug prices ought to reflect punishment risks. Back then, the problem with the model was that the price of cocaine seemed unsustainably high compared to the punishment risk. (Unfortunately, my attempt to sell cocaine futures short failed for lack of a broker.)

Now, the puzzle is just the opposite:

Cocaine Prices & Punishment



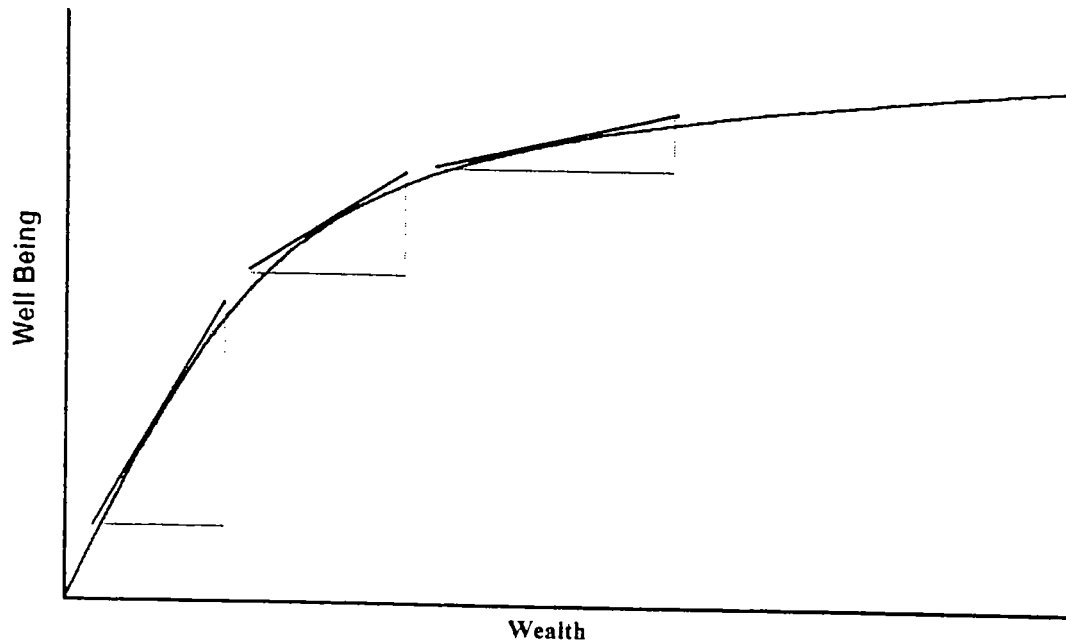
Even compared to the growth in cocaine shipments, the growth in cocaine punishment has been astounding. As a result, the punishment-price per ton of cocaine has soared. yet the prices, rather than rising, have continued to fall.

Something's wrong here.

Now of course no offender faces the expected value of punishment, any more than any family has 2.7 kids. So one problem may be that randomized threats don't work as well as reliable threats, even if the long-term average is the same.

But the standard theory of rational behavior predicts just the opposite. We expect rational people to be risk-averse; that's why they buy insurance policies.

Risk Aversion

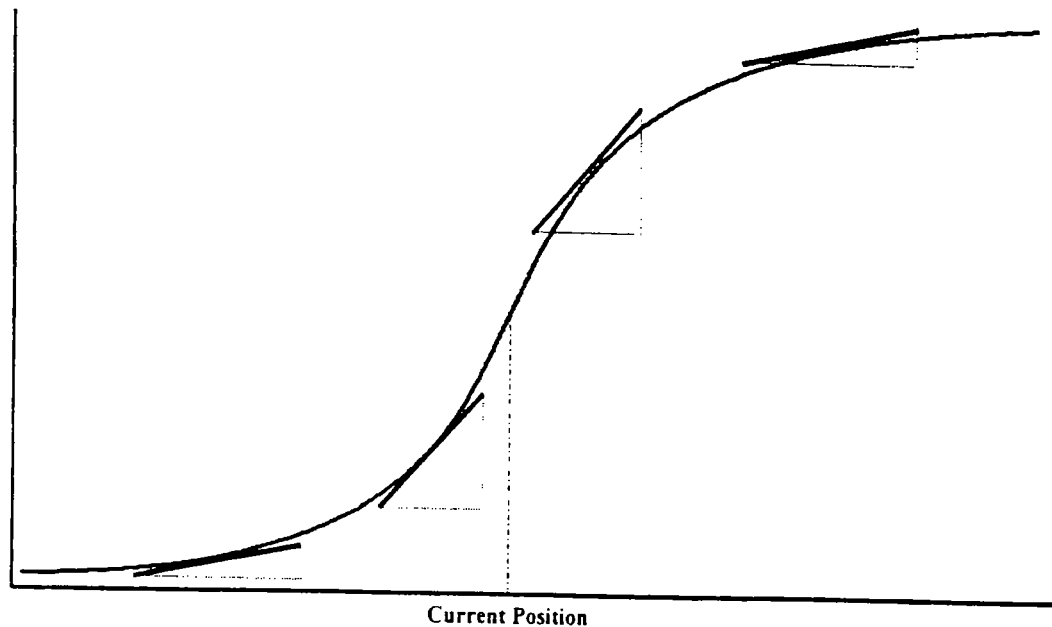


If I draw a curve representing how much my well-being goes up as my income or wealth grows – what economists call a “utility curve” – it turns out to rise less and less steeply as my wealth grows: a hundred dollars means less to Bill Gates than to someone living on a minimum-wage job.

If people’s behavior matched this graph, the small threat of a big punishment would work wonders. Recall the idea from agency theory of controlling agent behavior by an infinitesimally small risk of an enormous punishment. It might work for corporate executives; I doubt it works as well for burglars.)

Now there is a competing theory, not of rational action – I don’t think there’s any doubt that rationality implies risk aversion – but of actual behavior.

Prospect Theory



It's called "Prospect Theory," and is due to Kahnemann and Tversky. It says that in many situations actual behavior is risk-averse in gains but risk-seeking in losses. Given a choice between a week in Hawaii for sure and an even chance at two weeks in Hawaii, most people will choose the sure thing, just as risk-aversion theory would suggest.

But once we start dealing in losses from the current position – if the gamble is between a week in jail and an even chance at two weeks in jail – lots of people will act as if they're risk-seeking and take the gamble rather than settling for a sure loss. (This S shaped utility curve was first proposed by Friedman and Savage.)

So if offenders tend to behave according to prospect theory, an occasional big punishment won't deter them as well as reliable small punishments with the

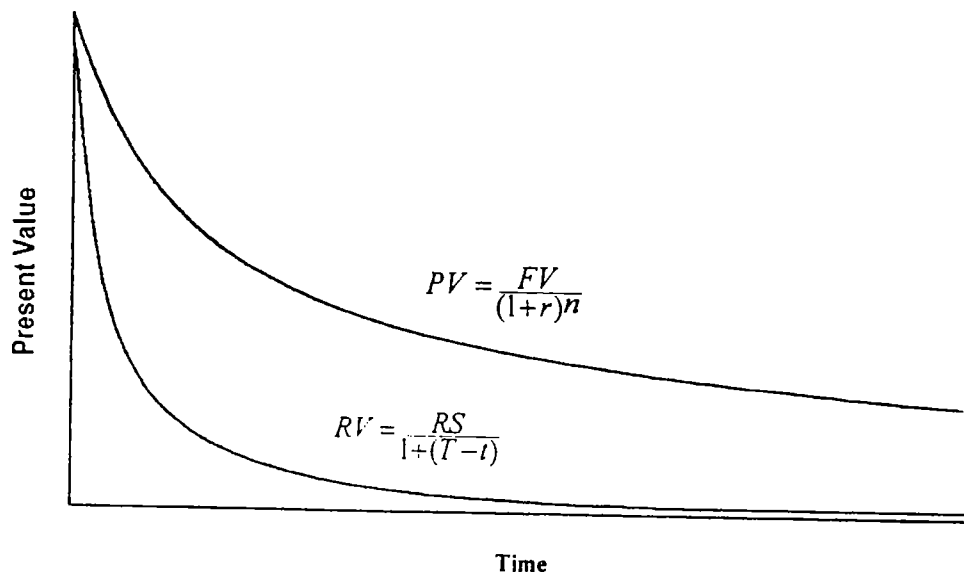
same expected value. That's part of the story about why the current prison-building boom hasn't reduced crime as much as we might have expected: we're over-relying on severity and underplaying certainty.

There's a second possible reason. Punishments arrive after crimes, in many cases months after. By definition, the last twenty-five years of a thirty-year sentence start five years from now.

Even perfectly rational people value future gains or losses less than the same-sized losses arriving right away. After all, if I have money now I can put it in the bank (or pay off my mortgage) and either way I earn, or avoid paying, interest.

Economists have a well-worked-out theory of how a rational person would trade off present versus future gains and losses. It goes under the name of discounting.

Geometric and Hyperbolic Discounting



The formula is one of geometric decay. It has the property of depending only on the distance in time between the earlier and later benefit or cost, and not at all on when the decision is made. If I have to choose between \$100 a year from now and \$110 two years from now I should make the same decision whether the decision is to be made now or next January. The decision depends only on my personal discount rate, which in turn depends on the rest of my financial picture, particularly the rates at which I can borrow or lend. The result is that the future is devalued compared to the present, but only at the rate of a few percent per year.

Again, there's an alternative theory, not of rational action but of actual behavior.

It's well-verified in the psychology and behavioral-economics laboratories, on species ranging from pigeons to sophomores.

It has a different, hyperbolic, formula, which leads to a much more rapid fall-off over time. It also depends crucially on when the decision gets made. (The capital T in the formula represents the date when the reward or punishment arrives, the little t the date when the decision gets made.)

Imagine offering a five-year-old a marshmallow now or two marshmallows tomorrow. Only a pretty tough five-year-old would be able to wait. Now offer the same child a marshmallow in a week or two marshmallows in eight days. Same choice: wait a day and double your marshmallow. But the result is likely to be quite different.

Anyone who has ever stayed up all night preparing a paper, a proposal, a presentation, or a lecture has demonstrated hyperbolic discounting, or "temporal myopia" as it's known in the literature (though it's been suggested that "temporal false perspective" would be a more accurate label).

If offenders are even more temporally myopic than the rest of us, the difference between a punishment now and a punishment six months from now may be, in Mark Twain's phrase, the difference between the lightning and the lightning bug.

One of the worst bad guys caught in the Boston crackdown remained stony-faced through his arraignment on charge under which he faced a minimum of fifteen years in prison. But he went ballistic when the judge, in granting him bail, imposed a 6 pm curfew. Why? Because the sentence was some indefinite time in the future; the curfew was that night, and that night he had things to do.

A third obvious theory is that deterrence works imperfectly because offenders mis-estimate deterrent threats.

Surveys of offenders frequently find them quite ignorant of the actual threats they face, especially under obscure punishment-enhancement laws. That suggests that it's important to communicate the threat.

Bentham said that the two most important characteristics of a deterrent punishment were certainty and celerity. Prospect theory and temporal

myopia suggest why. To Bentham's two C's I would add a third: Communication.

Communication, in this context, isn't merely verbal. Actions also communicate.

Offenders, like other people but probably more so, are likely to believe their own experience more than what they read or what others tell them. In judging the likely consequences of lawbreaking, they will refer mostly to what has happened to them.

For most offenses, no one is even arrested. Most arrests don't lead to convictions. And most convictions, especially for the minor, non-violent offenses that form the beginning of most criminal careers, don't lead to any real sanction.

The insistence on very long sentences for identified persistent serious offenders, combined with budget realities, means that the typical punishment for the first few detected offenses is probation: that is, under current conditions, nothing. That sends a very bad signal about the consequences of lawbreaking. It's as if we were trying to develop career criminals.

How is an offender supposed to judge which "last chance to go straight" is really his last? He's likely to keep testing the system until it lands on him hard, which is bad news for him and us alike.

So a first implication of this line of thinking – the line of thinking that says that offenders tend to be reckless, short-sighted, and ill-informed rather than cool calculators of likely consequences – is that every detected non-trivial violation of law ought to lead to some non-trivial deprivation of liberty.

That can't mean prison or jail – we don't have enough cells – so by definition it must mean probation. The trick is making probation mean something. That's essential for another reason as well. Since serious, persistent offenders get caught eventually, most of them are (or should be) on probation or parole if not actually behind bars.

This gives us the capacity to supervise their behavior in much more detail than applies to those whose liberty is unconditional. But the current probation and parole systems rely on the same sort of low-probability, deferred, but occasional severe sanctions used by the rest of the system.

Community corrections is the potential key to crime control. To make that potential real requires that community corrections officers have three things:

The technology to monitor behavior that occurs out of their presence.

The authority to impose rapid and predictable sanctions

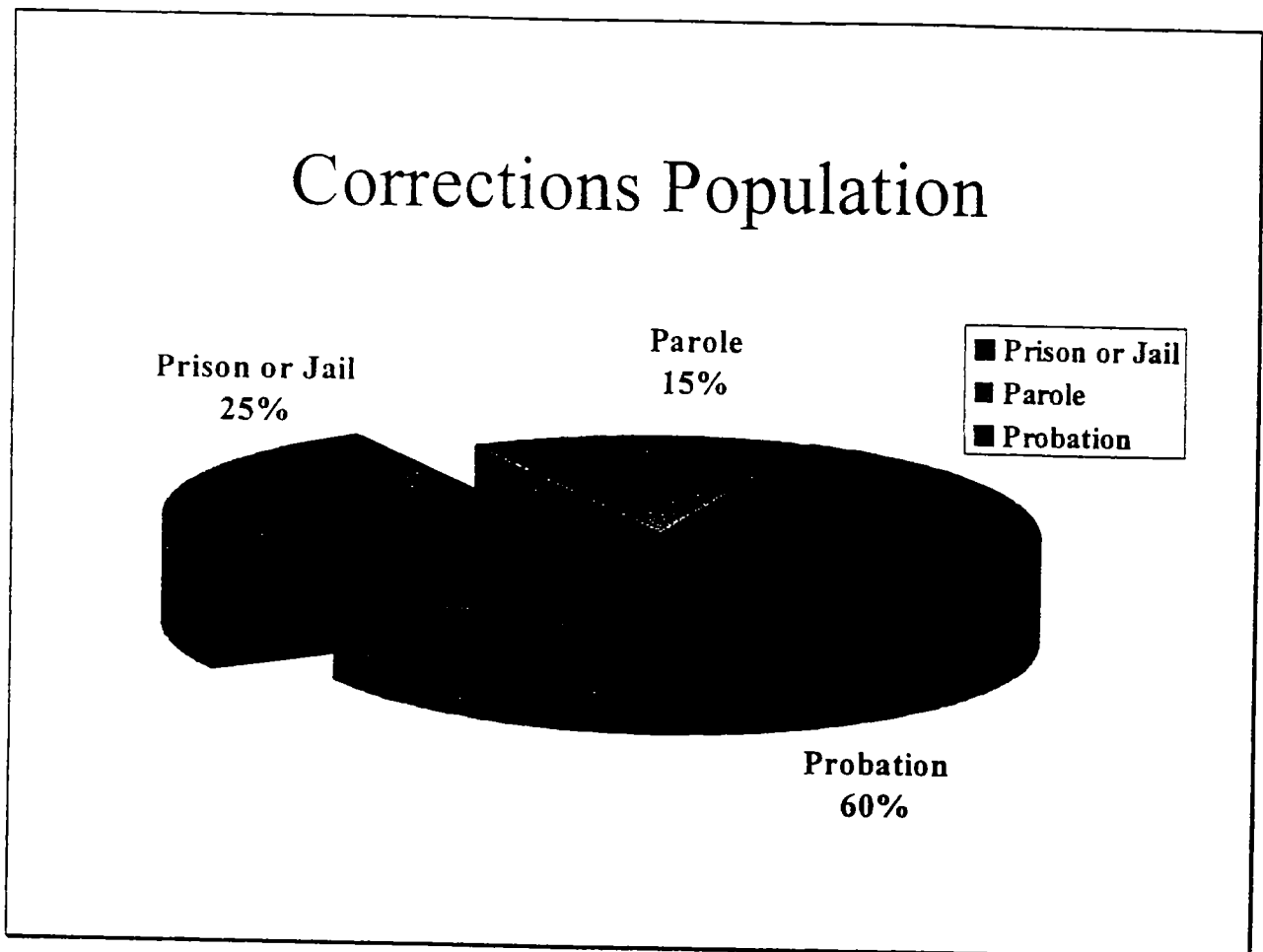
The resources (budget and manpower) to acquire and use the technology and administer the authority

[For example, if every cocaine-using burglar on probation faced two drug tests a week, with two days' confinement right away for every missed or "dirty" test we could eliminate about 40% of the total market for cocaine and substantially reduce the amount of time that population spends behind bars. The drug test is a way to monitor, in five minutes and for five dollars, one slice of the offender's behavior over the past seventy-two hours.

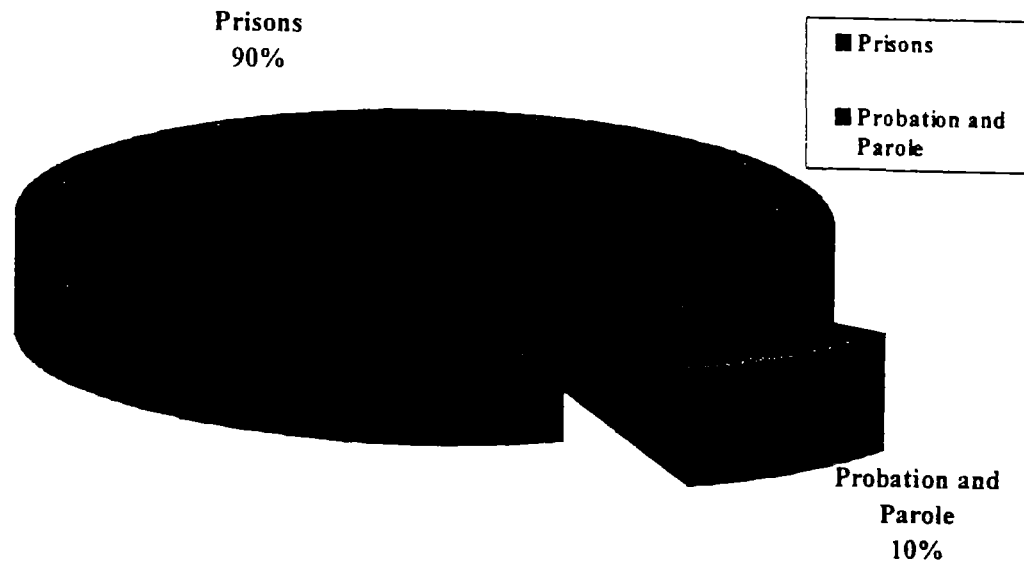
Another potentially important technology of community corrections is electronic position monitoring. But my point for today is not the technical details, but the principle of establishing behavioral standards and enforcing them with swift and consistent sanctions.]

Giving the community corrections system that new technology and authority will require more resources: a "caseload" of 300 implies that very little effective supervision can occur.

To make this work, we should be prepared to reallocate money away from prisons and jails – which with about one fifth of the total corrections population account for nearly 90% of corrections spending – and toward probation and parole.



Corrections Spending



But just adding more bodies without adding technology and authority contributes little to crime control. Current probation supervision in Los Angeles is effectively nothing, and twice, or even four times, nothing is still nothing. Pouring resources into a fundamentally misconceived process just increases its futility.

In short, we need to apply to crime control the common-sense principles that apply to child-raising and puppy-training.

So much for the behavioral economics of crime control. Now for the "tipping" part.

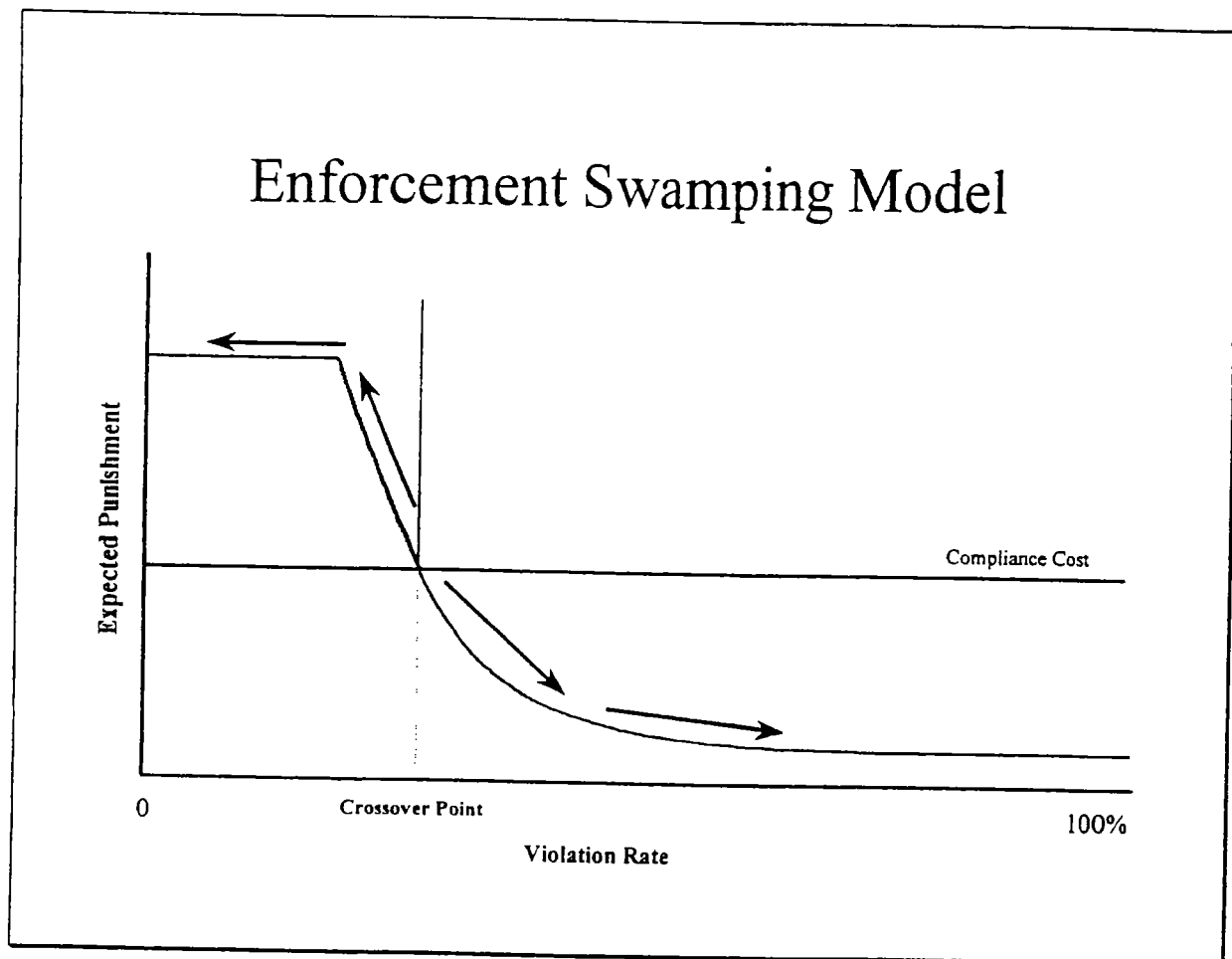
Even for perfectly rational offenders, the rational amount of offending by any one person depends in part on how many other people are committing the same offense in the same area. Thus decisions to offend are interdependent

decisions. If punishment capacity is scarce, punishment-per-crime tends to fall as the rate of offending rises, as happened during the 1960s.

Therefore, some people who would not offend when offense rates are low will offend if offense rates are high, because having lots of "competition" for enforcement attention reduces their individual chances of being caught and punished. That is the logical structure of a riot.

It's described by a class of models invented by my teacher, Thomas Schelling, and known by his label of "tipping" models because of the way that results "tip" from one extreme to another after some threshold is crossed.

I call the version of tipping applicable to crime "enforcement swamping": once violations are high enough to swamp the capacity of the enforcement system, increases in offense rates will feed on themselves.



Assume a parking lot designated "Shoppers Only: No Commuter Parking." It has 1000 parking spots. Parking there is free for shoppers; commuters, if caught, face a \$15 fine. A single attendant is in charge of locating and ticketing commuter vehicles; he has the capacity to write up to 100 tickets per day. A nearby lot offers all-day parking for \$7.50.

If all of those who park illegally are ticketed, they would be better off paying for legal parking. On the other hand, if fewer than half are ticketed, then it's actually cheaper (on an expected-value basis) to park in the free lot and take your chances. So the least-cost solution to the parking problem from an individual commuter's viewpoint depends on how many of the other commuters decide to take their chances in the free lot. If more than 200 commuters risk it, they will all save money on average.

Now consider how the situation might develop over time. If very few commuters park illegally, those who do will quickly learn that it's more expensive that way. That will drive the number of illegally parked cars toward zero. On the other hand, if many commuters park illegally, that will turn out to be the cheaper option, and the number will tend to grow. Eventually, the entire lot may fill with commuters, leaving no spaces for shoppers; that too is a stable, self-reinforcing condition.

What could the parking authorities do once the high-violation equilibrium had established itself? One option is a temporary boost in ticket-writing capacity, on the model of a standard police "crackdown." In the example, if there is enough capacity to write more than 500 tickets per day, parking illegally will never be the least-average-cost option, no matter how many commuters try it, because even with 1000 violators the probability of a ticket will be more than one-half. A sanction probability of .5 is the "crossover" or "tipping" point of the system – values below that tend toward zero, while values above that tend toward one.

Once the burst of enforcement starts to drive down the number of violations, enforcement capacity can be reduced. Once the number of violators is safely below 200 per day, even a single ticket-writer will be enough to keep legal parking the cheaper option.

An alternative strategy would be to rely on a self-fulfilling bluff. Put up big signs that say "As of Monday, all illegally parked vehicles will be ticketed." If enough people believe the signs, the threat will be carried out. If it works, the bluff alone will be sufficient. Or the threat could be added to an actual boost in enforcement as a way of speeding the transition from the high-violation to the low-violation stable state.

Even if additional enforcement capacity is unavailable, all is not lost. If one-tenth of the lot is designated a "zero tolerance" area where all illegally parked vehicles will be ticketed, that threat can be carried out even with the original level of resources and 100% violations. The result will be that commuters learn not to park in the "zero tolerance" spaces. As the number of violators in that area shrinks toward zero, the zone of total enforcement can be gradually expanded without exhausting enforcement capacity. Eventually, unless the commuters can organize themselves for a campaign of massive resistance, the entire lot can be moved from a high-violation stable state to a low-violation stable state, without ever expanding the number of ticket-writers.

(Violators could be targeted on any other characteristic that doesn't include more than 10% of them in any one category: last digit of the license plate number, for example.)

There are four important implications of this model:

First, a modest increase in enforcement coming after an increase in offending may have little effect, especially if the increase is temporary or sporadic: the task is to change the entire climate of expectations that can make high offense rates self-sustaining. That's likely to require large and sustained, rather than small and temporary, enforcement interventions.

Second, since expectations matter, communicating the message that enforcement has increased is essential to success even if the offenders as individuals are perfectly rational, and even more important if some of them aren't. (A sign that says "All misparked cars will be ticketed" will be true if enough people believe it.)

That sort of advertising will also increase the value of any increase in actual enforcement. David Kennedy has proposed an innovative, communication-based approach to breaking up open retail drug markets. His approach seems likely to work at much lower cost than the standard long-term, concentrated crackdown typified by the "Pressure Point" operation that broke up the heroin bazaar on Manhattan's Lower East Side in the early 1980s, and perhaps even better than the more complex market disruption strategies pioneered by Tampa's QUAD.

Assume there's a big open market in a neighborhood called Vial City, and that we've decided to break up the market on D-Day, thirty days from now. Start now by leafletting the area with flyers saying, "We've decided to shut this market down as of [D-Day]. Don't buy or sell drugs here after that date, or we promise you will be arrested." Then have the police approach known buyers and sellers personally, conveying the same message. Note the plate numbers of non-local buyers, and send post cards to the registered owners saying, "As of [D-Day], the drug bazaar in Vial City will be closed. As a reminder, automobiles found with drugs in them are subject to seizure and forfeiture."

At D minus 14, start visiting the mothers and girlfriends of the known sellers. "Ms. Smith, please make sure Johnny isn't selling in Vial City on [D-Day]. If he does, he's sure to get busted." Keep up the leafletting and do another round of personal contacts starting at D minus 7. Put up a billboard if the budget will handle it.

On D-Day, send out some additional uniformed and undercover cops, with instructions not to "sweep the streets," but merely to make arrests if they observe dealing activity. If the publicity has worked, they will be profoundly bored. Only a few very sleepy or skeptical buyers and sellers will show up, and as soon as the arrests start to happen they're likely to make themselves scarce. The next day, the market will be as dead as vaudeville, and the courts will be less, rather than more, burdened with Vial City crack-distribution cases than they had been used to seeing.

This isn't a solution to the drug abuse problem; most (though not all) of the buyers will find other sources of supply once Vial City is closed. But it is a solution to the problem the market has imposed on Vial City's residents.

(This is more than a nice thought-experiment; someone ought to actually try it.)

Third, equal opportunity enforcement is sometimes the wrong rule. If you can't get past the crossover point for everybody, get past it for somebody and work outward. Anything that creates a subset of offenders or offenses for whom enforcement is not swamped will eventually clean that subset of offending; then you slowly expand the "clean" subset until it includes everything.

That's how the New York City subway system licked its graffiti problem. It designated – and clearly marked – 10% of its cars as "clean cars" and committed that they would never roll until they were clean of graffiti. At that point, spraying those cars became unrewarding because no one would see the tags.

At only 10%, the system could afford the commitment; if a few cars had to stand idle, that was no disaster. The Transit Authority then slowly expanded the "clean" fleet until it included all the cars. Another form of concentrated enforcement is to concentrate it, or threaten to concentrate it, on the most egregious offenders. That sets up a competition among offenders (or groups) to avoid enforcement attention. How does a Texas Ranger with only one bullet control an angry mob of 100 people? He says, "First SOB who steps forward, dies." That's part of the story of Cease-Fire in Boston.

Fourth, anything that signals high offense rates will therefore act as an invitation to offend; anything that signals low offense rates will act as a deterrent to offending. That's one reason "broken windows" strategies can work.

Conclusion: Some new principles of crime control

1. Certainty and celerity before severity.
2. Communication of threats: Don't just strike the rock, talk to the rock.
3. Some non-trivial punishment for each conviction.
4. Add technology, authority, and resources to make community corrections effective punishment. If we can't learn to punish people and control their

behavior when we're not paying for their room and board, we're out of luck.

5. Targeted zero tolerance for specific "broken-windows" behaviors keyed to specific neighborhoods, to try to move them to low-offending equilibria.
6. Targeted zero tolerance for any offending by individuals and groups whose serious offenses earn them special attention.
7. Make offenders compete to avoid enforcement attention.

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TRENDS IN JUVENILE VIOLENCE

**A Report to the United States Attorney General
on Current and Future Rates of Juvenile Offending**

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Prepared for the Bureau of Justice Statistics
United States Department of Justice
Washington, D.C.

January 1996

EXECUTIVE SUMMARY

Trends in Juvenile Violence arises out of an August 1995 briefing to United States Attorney General Janet Reno on behalf of the Office of Justice Programs. The primary theme of the briefing was the extent to which rates of juvenile homicide and other violent offenses by youth are rising and can be expected to increase further in the years ahead.

Recent reports of a declining rate of violent crime in cities across the country would seem to be at odds with the growing problem of youth violence. The overall drop in crime hides the grim truth. There are actually two crime trends in America—one for the young, one for the mature—which are moving in opposite directions.

From 1990 to 1994, for example, the overall rate of murder in America changed very slightly, declining a total of four percent. For this same time period, the rate of killing at the hands of adults, ages 25 and over declined 18 percent and that for young adults, ages 18-24 rose barely two percent; however, the rate of murder committed by teenagers, ages 14-17 jumped a tragic 22 percent.

The recent surge in youth crime actually occurred while the population of teenagers was on the decline. But this demographic benefit is about to change. As a consequence of the "baby boomerang" (the offspring of the baby boomers), there are now 39 million children in this country who are under the age of ten, more young children than we've had for decades. Millions of them live in poverty. Most do not have full-time parental supervision at home guiding their development and supervising their behavior. Of course, these children will not remain young and impressionable for long; they will reach their high-risk years before too long. As a result, we likely face a future wave of youth violence that will be even worse than that of the past ten years.

The key statistical findings of the report are highlighted below:

- From 1985 to 1994, the rate of murder committed by teens, ages 14-17, increased 172 percent. The rate of killing rose sharply for both black and white male teenagers, but not for females.
- Remaining just above one percent of the population, black males ages 14-24 now constitute 17 percent of the victims of homicide and over 30 percent of the perpetrators. Their white counterparts remained about 10 percent of the victims, about 18 percent of the perpetrators, yet declined in proportionate size of the population.
- Guns, and especially handguns, have played a major role in the surge of juvenile murder. Since 1984, the number of juveniles killing with a gun has quadrupled, while the number killing with all other weapons combined has remained virtually constant.
- The largest increase in juvenile homicide involves offenders who are friends and acquaintances of their victims.
- The differential trends by age of offender observed for homicide generalize to other violent offenses. From 1989 to 1994, the arrest rate for violent crimes (murder, rape, robbery and aggravated assault) rose over 46 percent among teenagers, but only about 12 percent among adults. In terms of arrest rates per 100,000 population, 14-17 year-olds have now surpassed young adults, ages 18-24.
- By the year 2005, the number of teens, ages 14-17, will increase by 20%, with a larger increase among blacks in this age group (26%).
- Even if the per-capita rate of teen homicide remains the same, the number of 14-17 year-olds who will commit murder should increase to nearly 5,000 annually because of changing demographics. However, if offending rates continue to rise because of worsening conditions for our nation's youth, the number of teen killings could increase even more.

The challenge for the future, therefore, is how best to deal with youth violence. Without a large-scale effort to educate and support young children and preteens today, we can likely expect a much greater problem of teen violence tomorrow. There is, however, still time to stem the tide, and to avert the coming wave of teen violence. But time is of the essence.

PRE-PUBLICATION COPY

TRENDS IN JUVENILE VIOLENCE

**A Report to the United States Attorney General
on Current and Future Rates of Juvenile Offending**

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EXECUTIVE SUMMARY

Trends in Juvenile Violence arises out of an August 1995 briefing to United States Attorney General Janet Reno on behalf of the Office of Justice Programs. The primary theme of the briefing was the extent to which rates of juvenile homicide and other violent offenses by youth are rising and can be expected to increase further in the years ahead.

Recent reports of a declining rate of violent crime in cities across the country would seem to be at odds with the growing problem of youth violence. The overall drop in crime hides the grim truth. There are actually two crime trends in America—one for the young, one for the mature—which are moving in opposite directions.

From 1990 to 1994, for example, the overall rate of murder in America changed very slightly, declining a total of four percent. For this same time period, the rate of killing at the hands of adults, ages 25 and over declined 18 percent and that for young adults, ages 18-24 rose barely two percent; however, the rate of murder committed by teenagers, ages 14-17 jumped a tragic 22 percent.

The recent surge in youth crime actually occurred while the population of teenagers was on the decline. But this demographic benefit is about to change. As a consequence of the "baby boomerang" (the offspring of the baby boomers), there are now 39 million children in this country who are under the age of ten, more young children than we've had for decades. Millions of them live in poverty. Most do not have full-time parental supervision at home guiding their development and supervising their behavior. Of course, these children will not remain young and impressionable for long; they will reach their high-risk years before too long. As a result, we likely face a future wave of youth violence that will be even worse than that of the past ten years.

The key statistical findings of the report are highlighted below:

- From 1985 to 1994, the rate of murder committed by teens, ages 14-17, increased 172 percent. The rate of killing rose sharply for both black and white male teenagers, but not for females.
- Remaining just above one percent of the population, black males ages 14-24 now constitute 17 percent of the victims of homicide and over 30 percent of the perpetrators. Their white counterparts remained about 10 percent of the victims, about 18 percent of the perpetrators, yet declined in proportionate size of the population.
- Guns, and especially handguns, have played a major role in the surge of juvenile murder. Since 1984, the number of juveniles killing with a gun has quadrupled, while the number killing with all other weapons combined has remained virtually constant.
- The largest increase in juvenile homicide involves offenders who are friends and acquaintances of their victims.
- The differential trends by age of offender observed for homicide generalize to other violent offenses. From 1989 to 1994, the arrest rate for violent crimes (murder, rape, robbery and aggravated assault) rose over 46 percent among teenagers, but only about 12 percent among adults. In terms of arrest rates per 100,000 population, 14-17 year-olds have now surpassed young adults, ages 18-24.
- By the year 2005, the number of teens, ages 14-17, will increase by 20%, with a larger increase among blacks in this age group (26%).
- Even if the per-capita rate of teen homicide remains the same, the number of 14-17 year-olds who will commit murder should increase to nearly 5,000 annually because of changing demographics. However, if offending rates continue to rise because of worsening conditions for our nation's youth, the number of teen killings could increase even more.

The challenge for the future, therefore, is how best to deal with youth violence. Without a large-scale effort to educate and support young children and preteens today, we can likely expect a much greater problem of teen violence tomorrow. There is, however, still time to stem the tide, and to avert the coming wave of teen violence. But time is of the essence.

Trends in Juvenile Violence

James Alan Fox, Ph.D.
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Since the early 1800s, criminologists have labored to measure crime levels, patterns and trends in a reliable and accurate fashion. In the United States, efforts to calibrate a reliable measure of national crime levels date back to 1930, when the FBI's Uniform Crime Reporting (UCR) program was first launched. While the UCR protocols have undergone substantial change over the years and the geographic coverage of data collection has approached virtual completeness, the so-called dark figure of crime (i.e., those crimes not reported to the police) has long been a major concern for those relying on the UCR crime index.

In response, the National Crime Survey (NCS) was initiated in 1973 by the Law Enforcement Assistance Administration, and later overhauled by the Bureau of Justice Statistics (BJS), in order to avoid the limitations inherent in official police statistics on crime incidence. While the NCS certainly reduces the dark figure of crime, critics have also raised issues surrounding random and non-random errors in the victim survey results.

The dual availability of alternative crime measures--police data on crimes/arrests and victim survey estimates--has been a two-edged sword. Although the strengths of the two major data series are complementary, discrepancies in their trends over time have often created confusion concerning which data program was more dependable for researchers and policy-makers alike.

The good news is that as the UCR and NCS initiatives have continued to be refined, their measurements are beginning to converge. Figure 1 shows four alternative indicators of the incidence of violent crime in the United States: estimated offense totals based on the NCS, estimated NCS offense counts adjusted for victim reporting rates, offenses reported to the police from the UCR, and UCR total arrests for violent offenses. For the sake of comparison, homicide counts were added to the NCS data, and simple assaults were removed.

A consistent pattern emerges since the late 1970s. In all four data series, but to varying degrees, the incidence of violence appears to have peaked or at least plateaued around 1980, and then to have subsided or at least leveled off until the mid-1980s. Since the mid-1980s, however, the incidence of violence has risen, according to all four indicators. Also noteworthy is the close agreement since 1989 in the reported NCS and UCR totals.

Much of this swing pattern was anticipated by criminologists as early as two decades ago (e.g., see J.A. Fox, *Forecasting Crime Data*,

Lexington: Lexington Books, 1978). Figure 2, for example, displays a forecast of the rate of violent crime for urban areas, generated in 1976, based on an econometric model of crime rates, clearance rates, police force size, and police expenditures, plus various demographic and socio-economic characteristics. To a large extent, the rise and fall of violent crime was predicted based on the changing size of the crime-prone age group.

The premise in *Forecasting Crime Data* was fairly simple. The explosion in crime during the 1960s and 1970s, was seen largely as the result of demographic shifts. The post-World War II babyboomers had then reached their late adolescence and early twenties, an age at which aggressive tendencies are the strongest. As the babyboom cohort matured into adulthood during the 1980s, taking on families, jobs and other responsibilities, it was expected that the violent crime rate would subside. More to the point, the projected decline in the size of the population most prone to violence would likely translate into a reduced level of crime, violence and disorder.

As it happened, a downturn in violent crime did occur, but it was short-lived. By 1986, most unexpectedly, crime trends turned for the worse. The welcomed drop in violent crime of the early 1980s evaporated prematurely after just five years. The rate of crime began to surge, despite continued shrinkage within the most crime-prone population.

This pattern can be seen most clearly in levels of homicide. In fact, most of this report will focus on this most serious form of violence. Not only do the Supplementary Homicide Reports (SHR) offer detailed, incident-based information on trends and patterns, but these data do not suffer the same kinds of reporting and definitional problems associated with other measures of violent crime.

Figure 3 plainly reveals a sudden break, beginning in the mid-1980s, in the historically close connection between the homicide rate and the percentage of young adults within the population. In essence, the composition of the crime-prone age group was changing.

It is somewhat misleading even to attempt to track an overall rate of violent crime, without accounting for age differences. As shown in Figure 4 (and Table 1), there are actually two crime trends ongoing in America--one for the young and one for the mature, which are moving in opposite directions. Since 1985, the rate of homicide committed by adults, ages 25 and older, has declined 25%, from 6.3 to 4.7 per 100,000, as the babyboomers matured into their middle-age years. At the same time, however,

the homicide rate among 18-24 year-olds has increased 61%, from 15.7 to 25.3 per 100,000. Even more alarming and tragic, homicide is now reaching down to a much younger age group--children as young as 14-17. Over the past decade, the rate of homicide committed by teenagers, ages 14-17, has more than doubled, increasing 172%, from 7.0 per 100,000 in 1985 to 19.1 in 1994. Thus, although the percentage of 18-24 year-olds has declined in recent years, younger teens have become more involved in serious violent crime, including homicide, thereby expanding the age limits of the violence-prone group to as young as 14.

Rates of homicide (both offending and victimization) have increased among white and black youth, and among males but not females. The rate of killing by white male teenagers has doubled since 1985, that by black male teens has more than tripled (see Figs. 5a,b, Table 2).

The increasing role of male teenagers and young adults in the homicide problem is quite pronounced. Males, ages 14-24 are less than eight percent of the population yet commit 48 percent of the murders. They are also 27 percent of the victims of homicide. Isolating these trends by race (see Table 3 and Figs. 6a,b), young white males, ages 14-24, have diminished in relative size to less than seven percent, but have remained 10 percent of the homicide victims and 17 percent of the perpetrators. More striking, however, is that over the past decade, black males, ages 14-24 have remained just above one percent of the population yet have expanded from 9 to 17 percent of the victims and from 17 to 30 percent of the offenders.

Trends in arrest rates by age, displayed in Figure 7a, support the results thus far based on SHR records of known offenders. For homicide, arrest rates have dropped among adults, ages 25 and over, and have increased for persons under age 25. The sharpest increase has been among teens. A similar pattern, although with a small increase among adults, has occurred for all violent crimes (homicide, rape, robbery and aggravated assault) combined. As shown in Figure 7b, teens now exceed young adults in absolute rate of arrest for violent crime overall. Conventional wisdom in criminology--that young adults generally represent the most violence-prone group--apparently needs to be modified in light of these changes. Of course, the arrest data are more difficult to interpret, because they tend to confound offense patterns with criminal justice practices. The agreement between violent arrest rates and SHR homicide data, however, lends greater credence to these findings.

Regardless of measurement, it is clear that too many teenagers in this country, particularly

those in urban areas, are plagued with idleness and even hopelessness. A growing number of teens and preteens see few feasible or attractive alternatives to violence, drug use and gang membership. For them, the American Dream is a nightmare. There may be little to live for and to strive for, but plenty to die for and even to kill for.

The causes of the surge in youth violence since the mid-1980s reach, of course, well-beyond demographics. There have been tremendous changes in the social context of crime over the past decade, which explain why this generation of youth is more violent than others before it. This generation of youth has more dangerous drugs in their bodies, more deadly weapons in their hands and a seemingly more casual attitude about violence.

The problem of kids with guns cannot be overstated in view of recent trends in gun-related killings among youngsters. As shown in Figure 8, since the mid-1980s, the number of gun-homicides, particularly with handguns, perpetrated by juveniles has quadrupled, while the prevalence of juvenile homicide involving all other weapons combined has remained virtually constant.

Guns are far more lethal in several respects. A 14-year-old armed with a gun is far more menacing than a 44-year-old with a gun. Although juveniles may be untrained in using firearms, they are more willing to pull the trigger without fully considering the consequences. Also, the gun psychologically distances the offender from the victim; if the same youngster had to kill his or her victim (almost always someone known) with hands, he or she might be deterred by the physical contact.

As shown in Figure 9, the most significant growth in terms of victim-offender patterns in juvenile homicide is found among friends and acquaintances (see also Table 4). With the spread of guns among a youthful population, combined with the cumulative, desensitizing effects of media-glamorized violence, it has become too easy for juveniles to engage in deadly disputes over small, even trivial, matters--such as a pair of sneakers, a leather jacket, a challenging glance, or no reason at all.

While the negative socializing forces of drugs, guns, gangs and the media have become more threatening, the positive socializing forces of family, school, religion and neighborhood have grown relatively weak and ineffective. Increasingly, children are being raised in homes disrupted by divorce or economic stress; too many children emerge undersocialized and undersupervised. Too many of them do not have the benefit of a strong, positive role model in their lives.

At this juncture, as many as 57% of children in America do not have full-time parental

supervision, either living with a single parent who works full-time or in a two-parent household with both parents working full-time (see Fig. 10). The lack of parental supervision for young children is nearly as great. As many as 49% of children under age six do not have the benefit of full-time parenting. While some children enjoy suitable, substitute supervision provided by friends and relatives or in day-care, far too many do not.

The problem, of course, does not end nor the solution necessarily begin with the breakdown of the traditional family. Because of deep funding cuts in support programs for youth—from after-school care to recreation, from mentoring to education—as a society, we are missing the fleeting window of opportunity to compensate for the diminished role of the family. As a consequence, children spend too little time engaged in structured activity with positive role models, and too much time "hanging out" or watching a few savage killings on television.

The problem of unsupervised youth is clearly reflected in the time-of-day patterns of juvenile violence. As shown in Figure 11, the prime-time for juvenile crime is during the after-school hours, and certainly not after midnight when curfew laws might be contemplated. For these South Carolina data, specifically, 40 percent of the juvenile violent offenses occurred after 3 PM and before 8 PM.

As if the situation with youth violence was not bad enough already, future demographics are expected to make matters even worse. Not only are today's violent teens maturing into more violent young adults, but they are being succeeded by a new and larger group of teenagers. The same massive babyboom cohort that as teenagers produced a crime wave in the 1970s has since grown up and has had children of their own. There are now nearly 40 million children in this country under the age of ten (see Fig. 12), a larger count than has existed for several decades. This "baby boomerang" cohort of youngsters will soon reach their adolescence.

By the year 2005, the number of teens, ages 14-17 will have increased 20% over its 1994 level, likely producing additional increases in crime and other social problems associated with an expanding youth population. As shown in Figure 13, the number of teenage offenders has grown in recent years, even as the population of teenagers has contracted. But now the teen population is on the upswing.

The population growth will be different for whites and blacks. The projected growth in the number of white male teens, shown in Figure 14a, will be modest, peaking in fifteen years at a level far below that of the mid-1970s. For blacks, on the other hand, the number of 14-17 year-old males will have increased 26% by 2005, and will

continue to expand well into the next century, easily surpassing the population levels of twenty years ago (see Fig. 14b).

If current age-race-sex specific rates of offending remain unchanged, the number of teens who commit murder shall increase, if only because of the demographic turnaround in the population at-risk. As shown in Figure 15, the estimated number of teen killers (known 14-17 year-old offenders plus an estimated share of unidentified offenders) could increase from nearly 4,000 per year in 1994 to almost 5,000 per year by 2005, as a result of demographic growth alone.

But all else may not be equal. Given the worsening conditions in which children are being raised, given the breakdown of all of our institutions as well as of our cultural norms, given our wholesale disinvestment in youth, we will likely have many more than 5,000 teen killers per year. Even if the recent surge in teenage homicide rates slows, our nation faces a future juvenile violence problem that may make today's epidemic pale in comparison.

The optimistic view, of course, is that there is still time to stem the tide—to prevent the next wave of youth crime. But we must act now—by reinvesting in schools, recreation, job training, support for families, and mentoring. We must act now while this baby-boomerang generation is still young and impressionable, and will be impressed with what a teacher, a preacher, or some other authority figure has to say. If we wait until these children reach their teenage years and the next crime wave is upon us, it may be too late to do much about it. It is far easier and considerably less expensive to build the child than to rebuild the teen.

The challenge for the future, therefore, is how best to deal with youth violence. Without a large-scale effort to educate and support young children and preteens today, we can likely expect a much greater problem of teen violence tomorrow. Expanding law enforcement and correctional resources will clearly help alleviate an overburdened criminal justice system, but, as always, an ounce of prevention in schools or community centers may be worth ten years of cure inside the walls of a prison cell.

Based on an August 1995 briefing to Attorney General Janet Reno, this report is supported by funds from the Bureau of Justice Statistics. Opinions and conclusions are those of the author and do not necessarily reflect the official position of the U.S. Department of Justice.

Table 1: Trends in Homicide Offending Rates by Age, Race and Sex
(Rates per 100,000 Population)

Year	Under 14	14-17	18-24	25+	Male	Female	White	Black
1976	.2	8.1	17.7	7.9	13.2	2.5	4.0	35.3
1977	.2	7.2	16.8	7.6	12.7	2.3	4.0	32.5
1978	.2	7.4	17.7	7.7	13.3	2.2	4.2	32.9
1979	.2	8.3	19.3	7.9	14.2	2.2	4.4	34.4
1980	.2	8.5	20.0	7.9	14.5	2.2	4.5	33.9
1981	.1	8.5	18.8	8.1	14.3	2.2	4.5	33.9
1982	.2	7.6	17.3	7.2	12.9	2.0	4.2	30.0
1983	.1	6.9	16.0	6.6	11.9	1.9	4.0	26.8
1984	.1	6.2	15.3	6.3	11.3	1.7	3.9	24.0
1985	.2	7.0	15.7	6.3	11.5	1.7	3.8	25.1
1986	.2	8.4	17.4	6.7	12.4	1.7	4.0	27.7
1987	.2	8.6	17.2	6.1	11.7	1.6	3.8	26.1
1988	.2	10.8	18.9	6.0	12.4	1.6	3.7	28.8
1989	.2	12.4	21.2	5.8	12.8	1.6	3.8	29.7
1990	.1	16.2	24.8	6.0	14.4	1.6	4.2	32.9
1991	.2	17.6	28.2	5.8	14.6	1.6	4.0	34.8
1992	.2	17.4	26.0	5.2	13.4	1.4	3.7	31.4
1993	.2	19.3	26.6	5.0	14.1	1.4	3.8	34.0
1994	.2	19.1	25.3	4.7	13.6	1.3	3.7	32.1

Source: FBI, Supplementary Homicide Reports, and Census Bureau, Current Population Survey. Includes known offenders only.

Table 2: Trends in Homicide Offending Rates by Age, Sex and Race Combinations
(Rates per 100,000 Population)

Year	14-17				18-24				25+			
	Male		Female		Male		Female		Male		Female	
	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black
1976	7.9	51.2	1.0	7.8	16.7	138.3	2.0	23.7	7.2	76.5	1.2	17.1
1977	7.6	44.8	.9	4.4	16.5	124.3	2.0	22.4	7.2	70.1	1.2	16.1
1978	7.7	44.4	.9	6.0	18.0	131.2	2.0	20.5	7.5	71.5	1.1	14.9
1979	9.2	47.1	.9	6.0	19.5	144.2	2.1	20.3	7.8	73.5	1.2	13.8
1980	8.9	48.9	.7	5.1	20.4	144.6	2.0	21.5	7.9	71.4	1.1	13.2
1981	8.4	55.0	1.0	6.3	19.8	135.5	1.9	17.8	8.2	72.4	1.1	13.5
1982	8.1	45.7	.9	4.4	17.5	120.8	2.0	18.6	7.6	62.3	1.1	11.6
1983	7.5	36.8	1.1	5.3	17.3	104.9	1.8	16.6	7.0	56.2	1.1	10.4
1984	6.9	33.4	.9	4.7	18.0	91.1	2.0	13.8	7.0	51.0	.9	9.2
1985	7.0	44.3	.7	4.9	17.2	101.3	1.8	13.3	7.0	50.2	.9	9.3
1986	9.0	51.0	.8	4.2	18.5	117.2	1.7	15.5	7.1	55.9	.9	9.8
1987	8.0	54.1	1.1	5.1	17.6	121.2	2.0	12.9	6.7	48.7	.9	8.4
1988	9.9	72.6	.8	5.2	16.9	146.9	2.0	15.2	6.4	50.5	.8	7.9
1989	11.5	84.6	.8	5.3	19.1	168.5	2.0	14.0	6.2	47.4	.8	8.3
1990	14.3	113.8	1.1	5.2	22.2	200.7	2.1	14.7	6.6	48.9	.8	7.7
1991	14.6	127.5	.9	7.7	23.2	241.2	1.9	15.7	6.3	46.4	.8	7.5
1992	14.4	122.5	1.0	7.5	21.7	219.0	1.7	12.8	5.5	42.6	.7	6.4
1993	14.4	151.6	1.0	6.7	20.9	215.8	1.6	14.3	5.5	39.7	.8	5.9
1994	15.6	139.6	1.1	6.7	20.9	201.0	1.6	13.1	5.3	35.5	.7	5.8

Source: FBI, Supplementary Homicide Reports, and Census Bureau, Current Population Survey. Includes known offenders only.

Table 3: Percentage of Population, Homicide Victims, and Homicide Offenders by Age, Sex and Race

	14-17				18-24				25+			
	Male		Female		Male		Female		Male		Female	
	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black
1976-78												
Population	3.4%	.5%	3.2%	.5%	5.4%	.7%	5.6%	.9%	23.9%	2.4%	26.6%	3.1%
Victims	1.6%	1.3%	.8%	.4%	8.0%	7.9%	2.8%	2.4%	27.7%	25.9%	9.5%	6.0%
Offenders	3.6%	3.5%	.4%	.5%	12.9%	13.3%	1.6%	2.6%	24.2%	24.6%	4.3%	6.8%
1979-82												
Population	3.0%	.5%	2.9%	.5%	5.4%	.8%	5.5%	.9%	24.5%	2.6%	27.3%	3.3%
Victims	1.5%	1.3%	.7%	.4%	9.0%	7.9%	3.0%	2.0%	28.8%	25.1%	9.5%	5.6%
Offenders	3.4%	3.3%	.3%	.4%	13.9%	13.7%	1.5%	2.3%	25.7%	23.8%	4.1%	5.6%
1983-86												
Population	2.6%	.5%	2.5%	.5%	5.0%	.8%	5.1%	.9%	25.3%	2.8%	27.9%	3.5%
Victims	1.2%	1.3%	.7%	.4%	8.1%	7.8%	2.8%	2.0%	28.8%	23.7%	10.9%	5.8%
Offenders	3.2%	3.1%	.4%	.4%	14.0%	12.3%	1.5%	2.0%	28.0%	23.4%	4.1%	5.3%
1987-90												
Population	2.4%	.4%	2.2%	.4%	4.4%	.7%	4.4%	.8%	26.0%	3.0%	28.4%	3.7%
Victims	1.4%	2.5%	.6%	.4%	7.4%	10.9%	2.3%	1.9%	25.5%	24.5%	10.0%	6.3%
Offenders	3.8%	5.5%	.3%	.3%	12.5%	16.7%	1.4%	1.7%	25.5%	21.9%	3.6%	4.5%
1991-94												
Population	2.2%	.4%	2.1%	.4%	4.1%	.7%	4.0%	.7%	26.2%	3.1%	28.4%	3.8%
Victims	2.1%	3.3%	.5%	.5%	8.0%	13.9%	1.9%	1.8%	23.3%	23.1%	8.7%	6.0%
Offenders	4.7%	8.3%	.3%	.4%	12.7%	21.9%	1.0%	1.5%	21.4%	18.4%	3.0%	3.5%

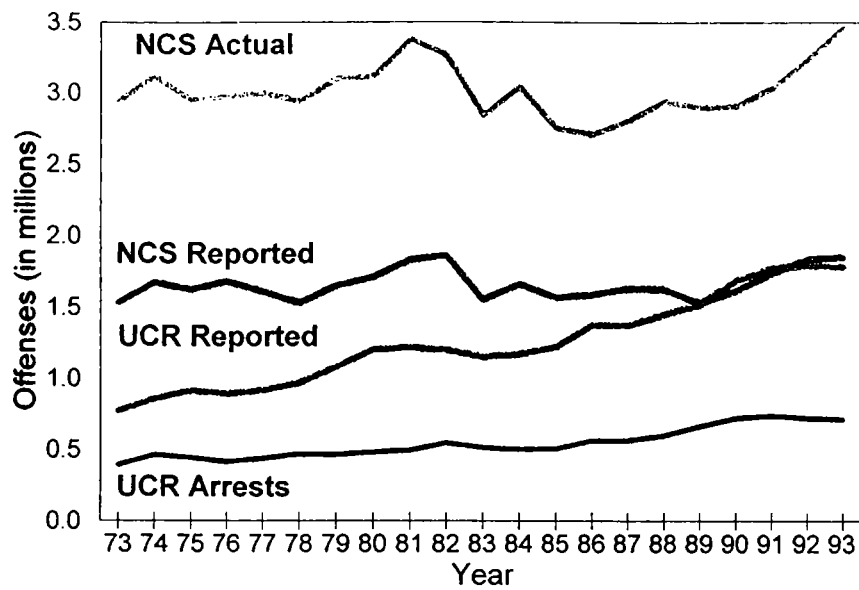
Source: FBI, Supplementary Homicide Reports, and Census Bureau, Current Population Survey. Includes known offenders only.

Table 4: Trends in Homicide Offending Patterns by Offender Age

	14-17				18-24				25+			
	76-81	82-87	88-94	Total	76-81	82-87	88-94	Total	76-81	82-87	88-94	Total
Offender Sex												
Male	89.9%	90.1%	94.5%	92.3%	87.4%	88.4%	92.4%	89.7%	82.6%	84.4%	85.7%	84.2%
Female	10.1%	9.9%	5.5%	7.7%	12.6%	11.6%	7.6%	10.3%	17.4%	15.6%	14.3%	15.8%
Offender Race												
White	49.4%	48.7%	37.0%	42.9%	47.6%	49.4%	37.9%	44.0%	47.4%	51.8%	51.3%	50.3%
Black	48.8%	49.1%	60.8%	55.0%	50.5%	48.5%	60.2%	54.0%	50.3%	46.3%	46.6%	47.8%
Other	1.8%	2.3%	2.2%	2.1%	1.9%	2.1%	1.8%	1.9%	1.7%	1.9%	2.1%	1.9%
Weapon												
Handgun	37.7%	39.1%	62.2%	50.5%	42.0%	41.0%	58.0%	48.4%	50.4%	46.4%	46.8%	47.9%
Other gun	20.2%	18.9%	15.7%	17.6%	17.4%	14.2%	13.7%	14.9%	18.5%	16.9%	14.5%	16.7%
Other	42.1%	42.0%	22.1%	31.9%	40.7%	44.9%	28.3%	36.7%	31.1%	36.7%	38.7%	35.5%
Relationship												
Family	16.7%	15.1%	8.0%	11.9%	16.0%	14.7%	9.7%	13.0%	29.1%	27.2%	25.2%	27.2%
Known	48.2%	52.7%	55.0%	52.7%	55.9%	58.3%	59.4%	58.1%	55.8%	58.1%	59.6%	57.8%
Stranger	35.1%	32.1%	37.0%	35.4%	28.0%	27.0%	30.9%	28.9%	15.1%	14.7%	15.2%	15.0%
Circumstances												
Felony	39.1%	35.5%	33.6%	35.5%	30.9%	30.7%	32.0%	31.3%	14.1%	15.9%	19.4%	16.5%
Argument	38.9%	39.3%	34.4%	36.7%	48.8%	50.3%	43.4%	47.0%	66.6%	66.1%	61.3%	64.7%
Other	22.0%	25.3%	32.0%	27.8%	20.3%	19.1%	24.6%	21.7%	19.3%	17.9%	19.2%	18.8%

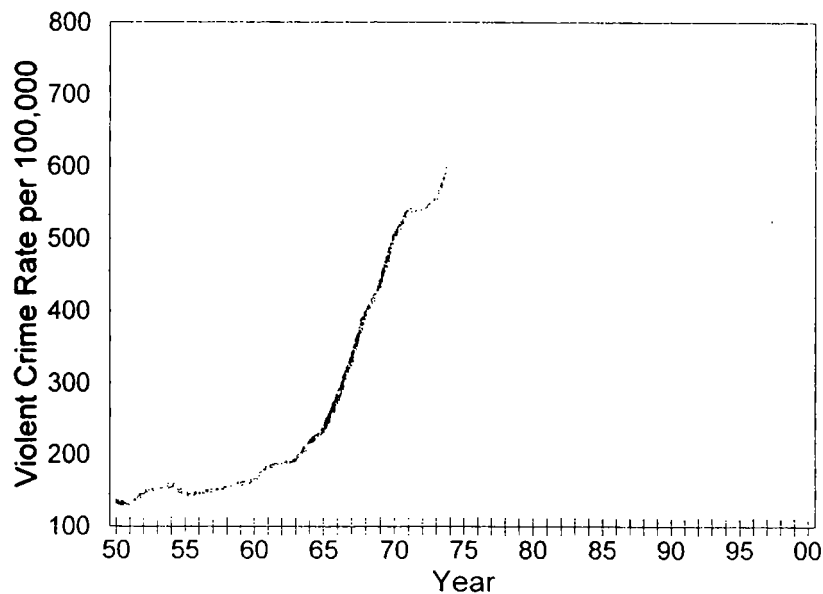
Source: FBI, Supplementary Homicide Reports, and Census Bureau, Current Population Survey. Includes known offenders only.

Fig 1. Four Measures of Violent Crime



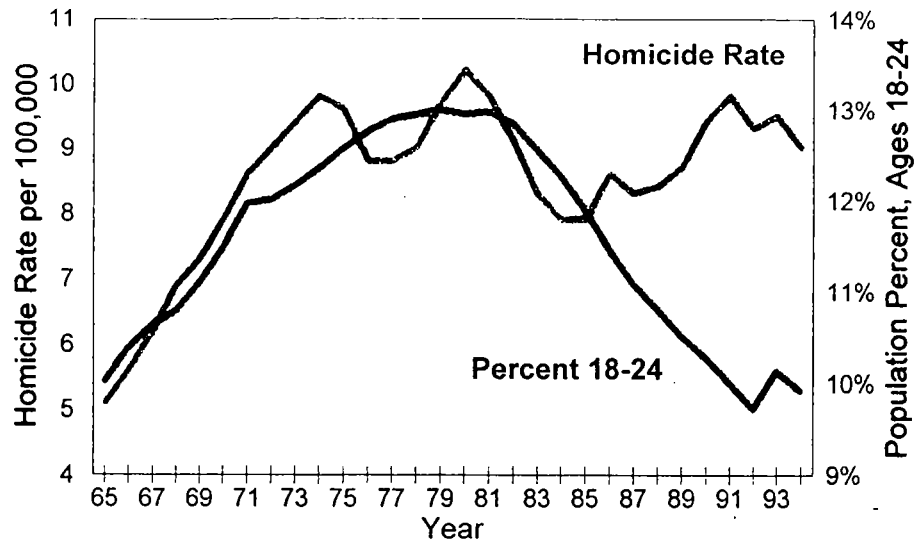
Source: BJS, National Crime Victimization Survey, and FBI, Uniform Crime Reports.
Note: Data include homicide, rape, robbery, and aggravated assault.

Fig 2. Urban Violent Crime Forecast from 1976 Model



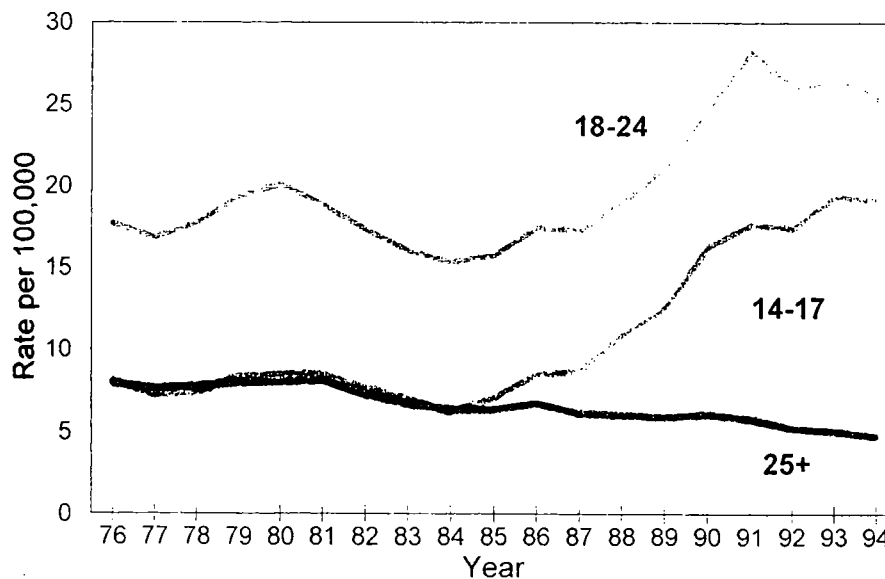
Source: J.A. Fox, *Forecasting Crime Data*,
Lexington Books, Lexington, MA, 1978

Fig 3. U.S. Homicide Rate and Percent of Population Ages 18-24



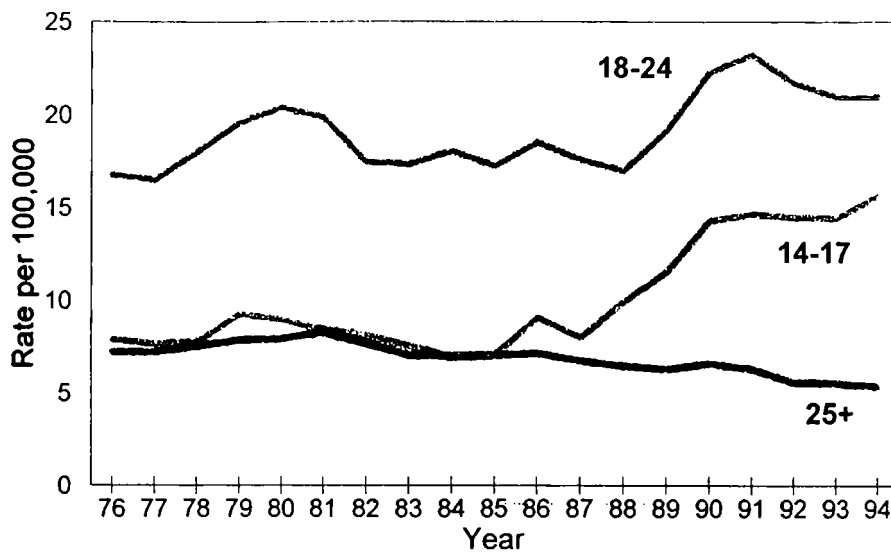
Source: FBI, Supplementary Homicide Reports and Census Bureau, Current Population Survey

Fig 4. Homicide Offending Rate by Age



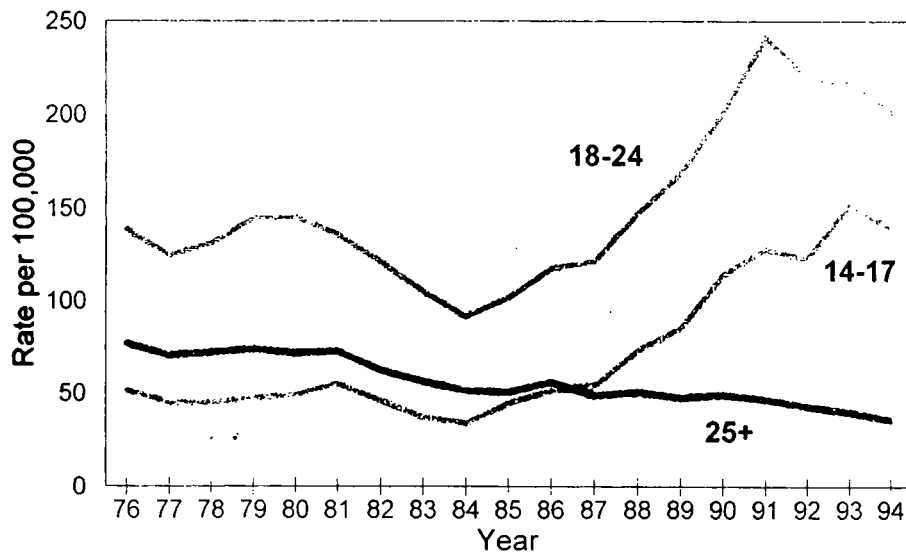
Source: FBI, Supplementary Homicide Reports and Census Bureau, Current Population Survey

Fig 5a. Homicide Offending Rate by Age, White Males



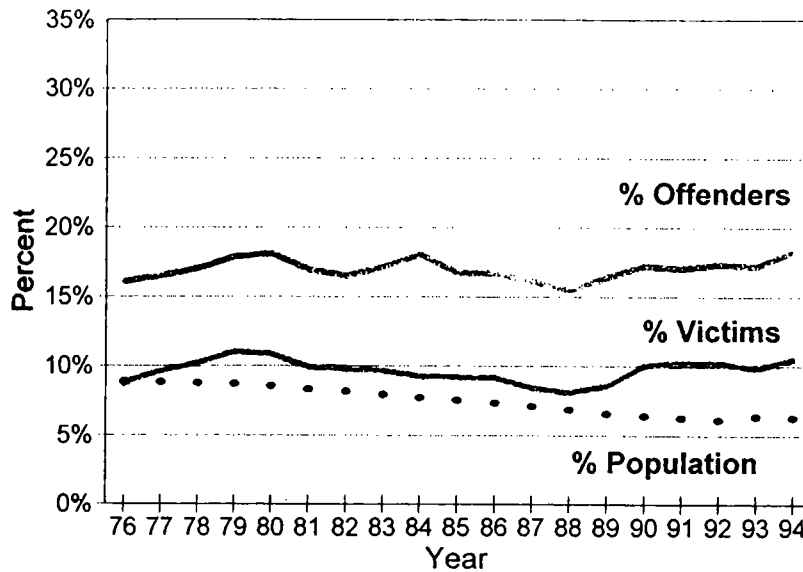
Source: FBI, Supplementary Homicide Reports and Census Bureau, Current Population Survey

Fig 5b. Homicide Offending Rate by Age, Black Males



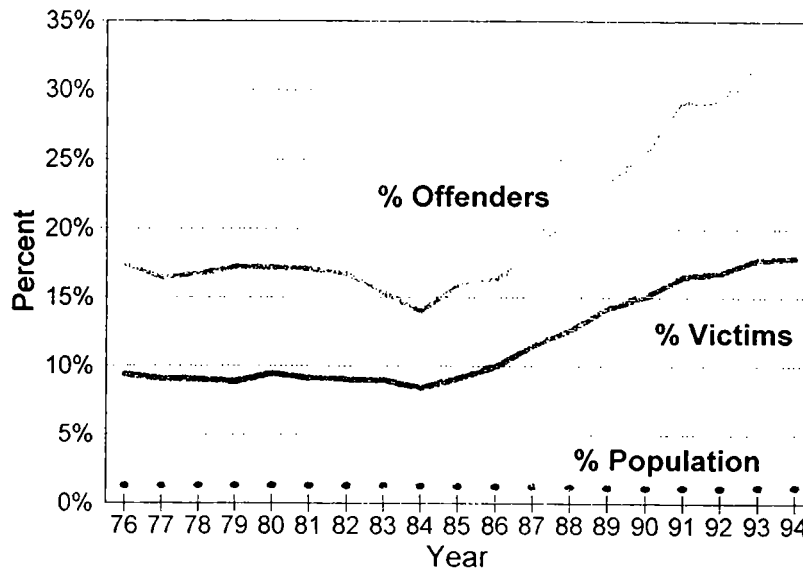
Source: FBI, Supplementary Homicide Reports and Census Bureau, Current Population Survey

Fig 6a. White Males, Ages 14-24 as Percent of Homicide Offenders, Victims and Population



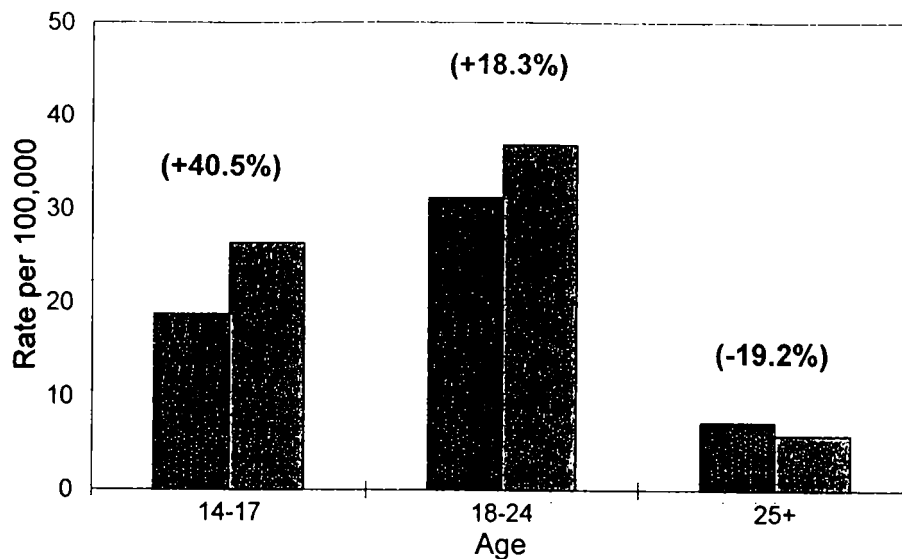
Source: FBI, Supplementary Homicide Reports and Census Bureau, Current Population Survey

Fig 6b. Black Males, Ages 14-24 as Percent of Homicide Offenders, Victims and Population



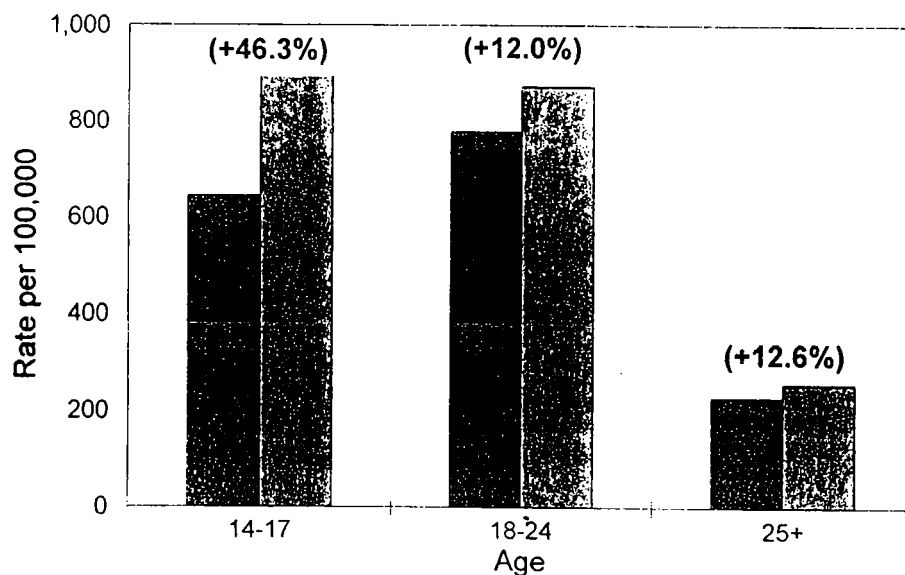
Source: FBI, Supplementary Homicide Reports and Census Bureau, Current Population Survey

Fig 7a. Homicide Arrest Rates by Age (with percent change, 1989-94)



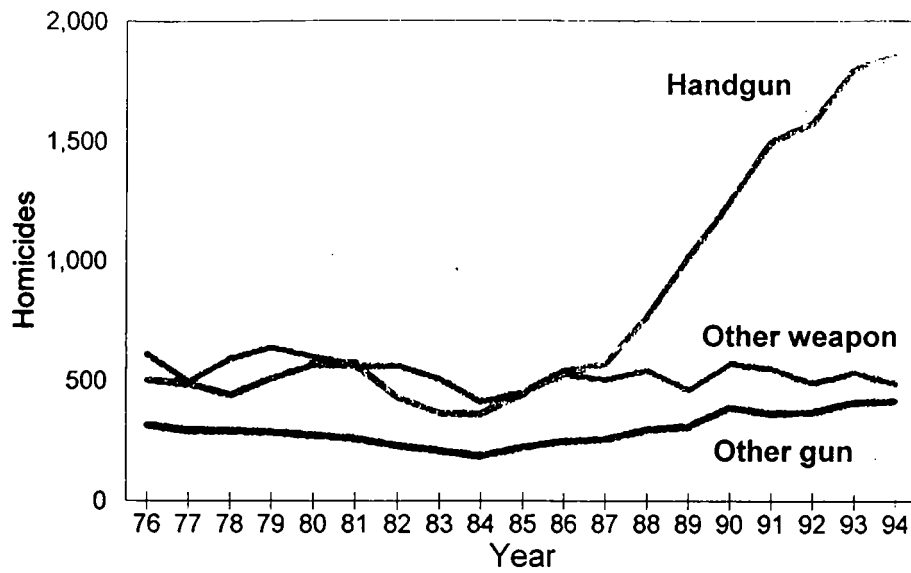
Source: FBI, Uniform Crime Reports and Census Bureau, Current Population Survey

Fig 7b. Violent Arrest Rates by Age (with percent change, 1989-94)



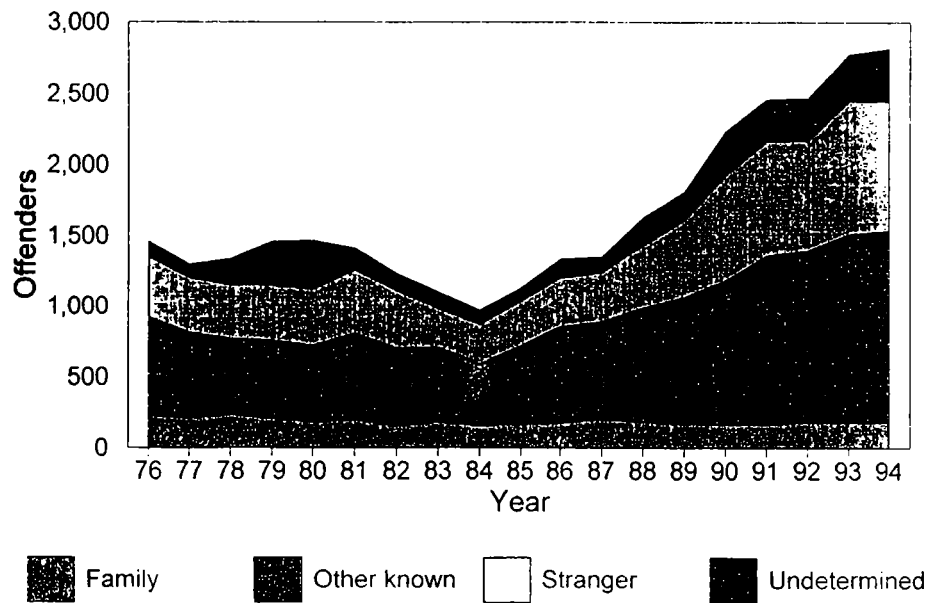
Source: FBI, Uniform Crime Reports and Census Bureau, Current Population Survey

Fig 8. Juvenile Homicides by Weapon



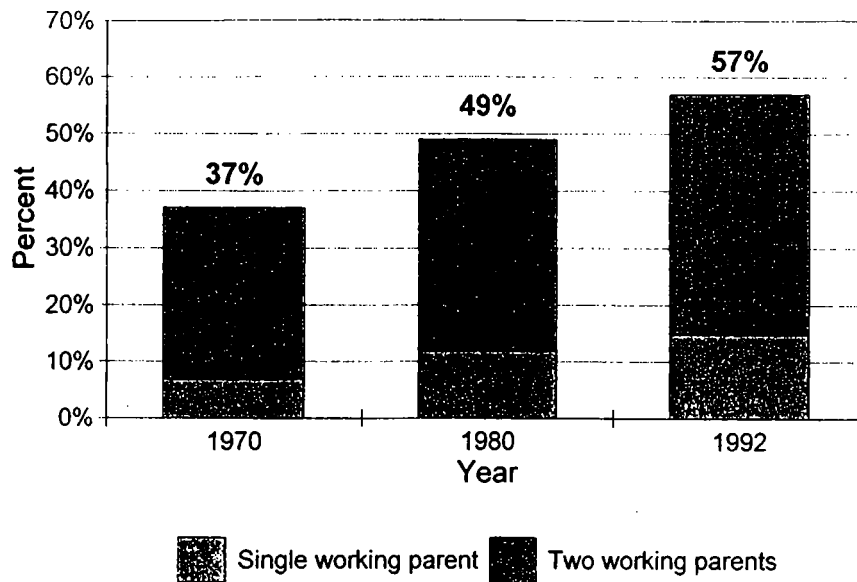
Source: FBI, Supplementary Homicide Reports

Fig 9. Juvenile Homicides by Relationship



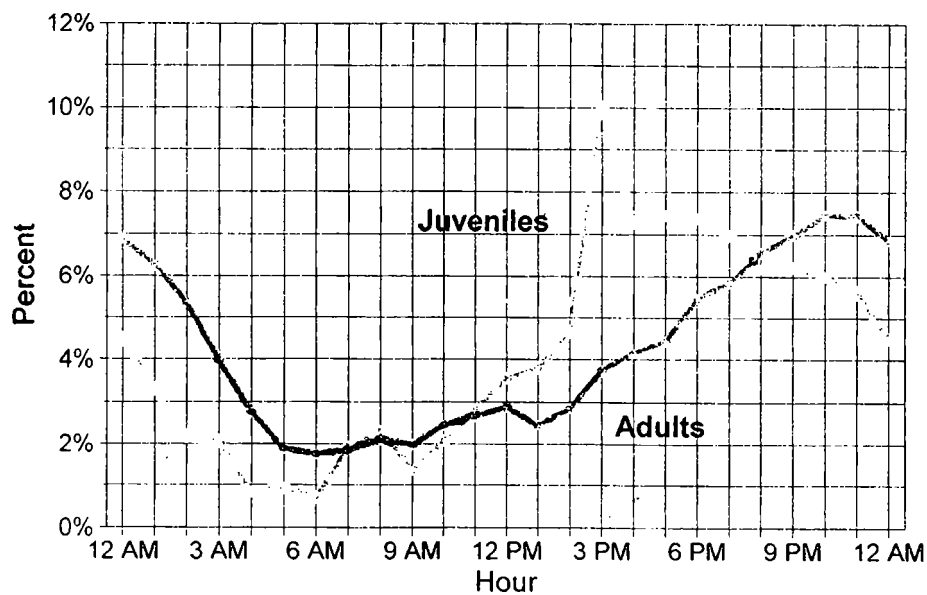
Source: FBI, Supplementary Homicide Reports

Fig 10. Percent of Families with Children Under 18 Lacking Full-time Parental Supervision



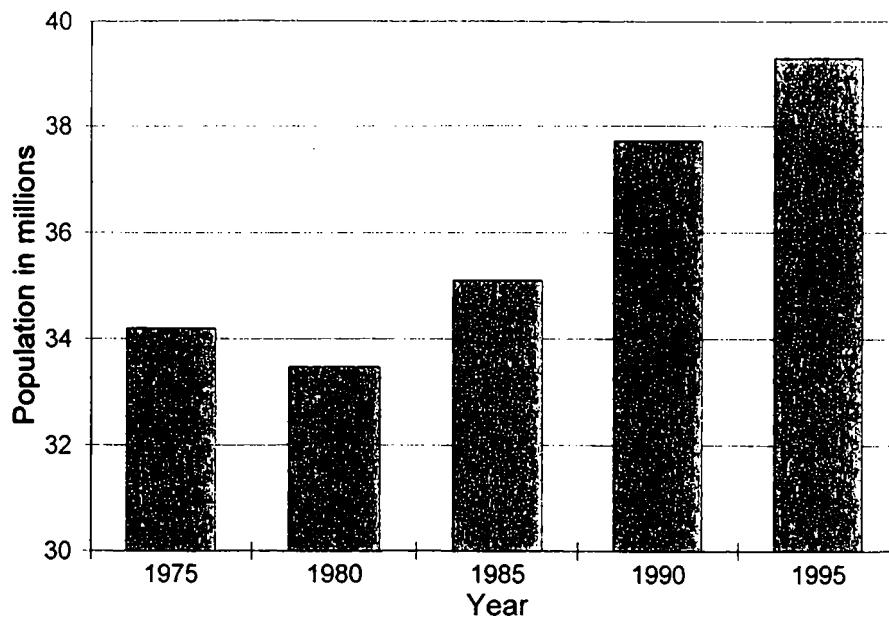
Source: Glenn Pierce, *Disinvestment in America*, and Census Bureau, *Current Population Survey*

Fig 11. Time of Offending by Age of Offender



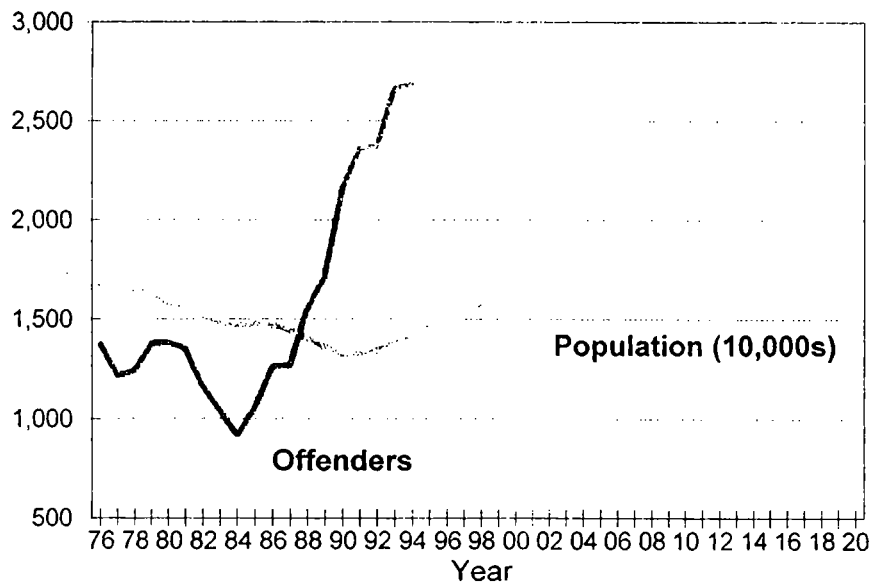
Source: FBI, *National Incident-Based Reporting System (NIBRS) for South Carolina, 1991-92*, and H. Snyder and M. Sickmund, *Juvenile Offenders and Victims: A National Report*.

Fig 12. Population Under Ten Years Old



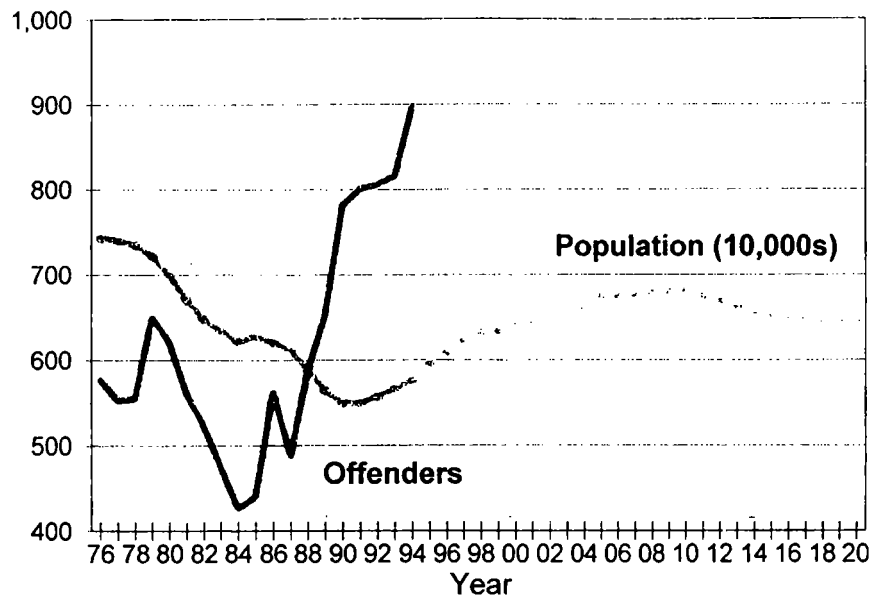
Source: Census Bureau, Current Population Survey

Fig 13. Population and Offenders, Ages 14-17



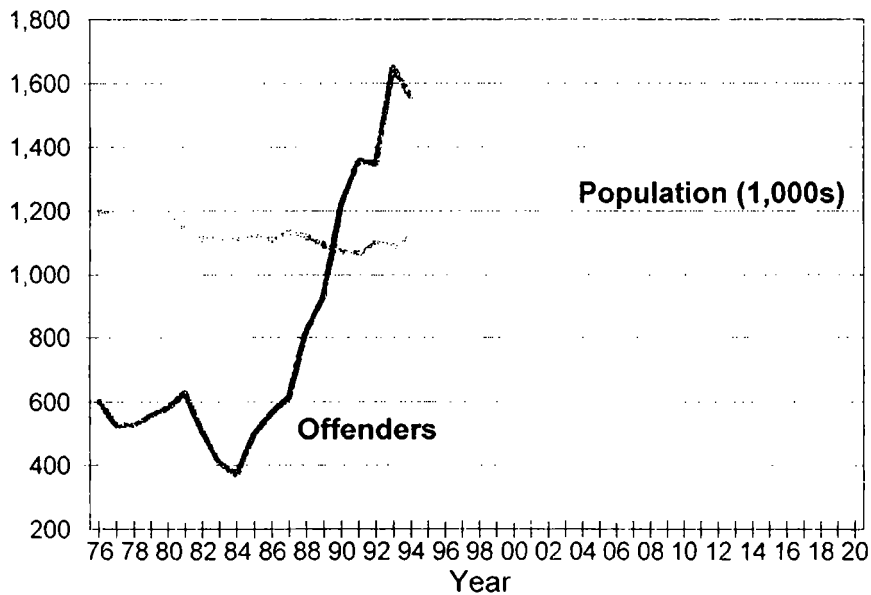
Source: FBI, Supplementary Homicide Reports, and Census Bureau, Current Population Survey and Population Projections of U.S.

Fig 14a. Population and Offenders, White Male, Ages 14-17



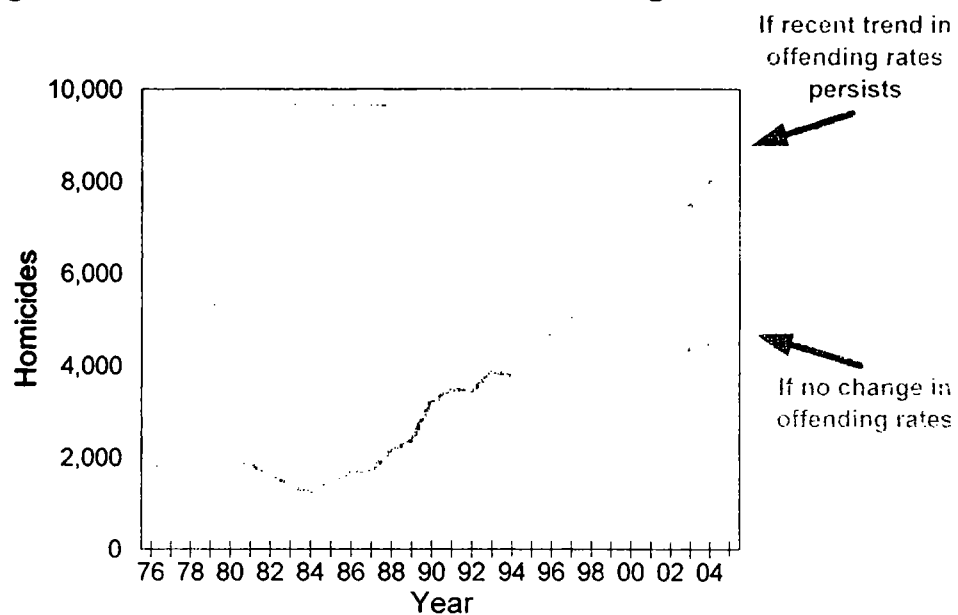
Source: FBI, Supplementary Homicide Reports, and Census Bureau, Current Population Survey and Population Projections of U.S.

Fig 14b. Population and Offenders, Black Male, Ages 14-17



Source: Supplementary Homicide Reports, Current Population Survey, and Population Projections of U.S.

Fig 15. Forecast of Homicide Offenders, Ages 14-17



Source: FBI, Supplementary Homicide Reports, and Census Bureau, Current Population Survey, and Population Projections of US

AUTHOR'S NOTE

Most of the tabulations contained in this report utilized a cumulative, 1976-1994 data file of the FBI's *Supplementary Homicide Reports (SHR)*, with incident records updated in December 1995. In order to ensure comparability with published homicide rates, the SHR records were weighted in such a way as to match the SHR victim count to the estimated homicide count contained in the printed *Crime in the United States*. On average, the cases were weighted upward by 8.75 percent.

Except for Figure 15, offender data represent incidents in which characteristics of the offender were known. For Figure 15, demographic characteristics of unknown offenders were estimated or imputed from known victim and incident information

A number of abbreviations and shortened terms are used throughout this report. FBI refers to the Federal Bureau of Investigation, and BJS to the Bureau of Justice Statistics. Homicide includes murder and non-negligent manslaughter, and excludes justifiable homicides. The term "juvenile" refers to persons under the age of 18, while "teen" and "teenager" are employed for youngsters between the ages of 14 and 17 inclusive. Also, "young adult" refers to the age group 18-24.

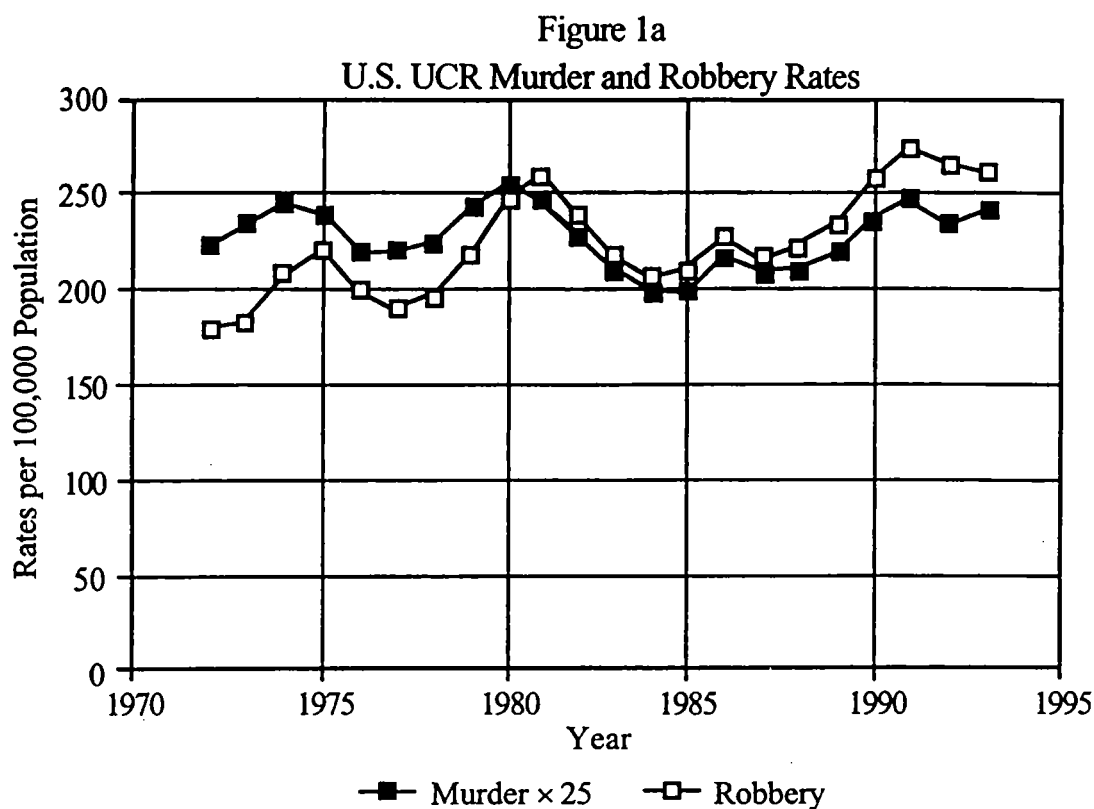
Several individuals read and commented on earlier versions of this report. I am grateful to Jan Chaiken, John Laub, Michael Maltz, and Marianne Zawitz for their input.

THE JOURNAL OF CRIMINAL LAW AND CRIMINOLOGY

YOUTH VIOLENCE, GUNS, AND THE ILLICIT-DRUG INDUSTRY

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suprised to see Figure 1a,² the graph of the most serious violent crimes, murder and robbery, and Figure 1b, the graph of robbery and burglary,³ over the twenty-two year period from 1972 to 1993.⁴ These graphs present a picture of oscillation around a strikingly flat trend. The crime rates have generally remained within a fairly confined range of 200 to 250 per 100,000 population for robbery, and eight to ten per 100,000 for murder. Both the murder and the robbery rates peaked in about 1980, declined through the early 1980s, and then climbed again during the late 1980s with the intensification of the crack epidemic and the “war on drugs.” Over this period, there is no statistically significant trend for murder, a slight upward trend for robbery (an annual increase of 3.0 robberies per 100,000, or 1.35% of the

² Note that the murder rate in Figure 1a is scaled up by a factor of 25 and the burglary rate in Figure 1b is scaled down by a factor of 6 to make the patterns over time comparable.

³ The data for Figure 1 are taken from FEDERAL BUREAU OF INVESTIGATION, CRIME IN THE UNITED STATES: UNIFORM CRIME REPORTS [hereinafter UNIFORM CRIME REP. in footnotes and UCR in text]. These reports are published annually by the FBI on the basis of reports by police departments, which, in turn, are based primarily on the reports of crimes by victims, with the obvious exception of murder.

⁴ Seeing this long-term pattern is much more useful than the simple year-to-year up-or-down shifts that are usually offered by the press. The typical journalistic practice of reporting an up-tick on page one and a down-tick on a back page undoubtedly contributes to shaping the common perceptions that the trend is upward only.

gence might be explained as follows: a robbery is a quick and convenient way for a drug user not earning his money from selling drugs to get his drug money. In contrast, a burglar still has to dispose of his property, through a fence or otherwise, and users in urgent need of drugs may choose to avoid that complication.

B. DEMOGRAPHIC-SPECIFIC RATES

The aggregate rates reflect a combination of changes in the crime-committing propensity of particular demographic groups and changes in demographic composition, particularly groups with relatively high crime involvement. One can partition these factors by examining changes in demographic-specific rates. The three principal measured demographic variables—age, race, and gender—account for large differences in the involvement in crime. The measure that accounts for the greatest difference is gender, but it is the least useful to explore because gender composition is not changing appreciably. Age, on the other hand, is one of the most important factors affecting crime rates and *has* been changing significantly in recent years. Therefore, it is useful to examine age-specific crime rates. This section also explores race, an important factor, especially in violent crime.

1. Age

Age is so fundamental a construct that its relationship to offenses is usually designated as the “age-crime curve.” These graphs depict the ratio of the number of people of each age, a , who are arrested for crime type i , $A_i(a)$, to the total population of that age,⁶ $N_i(a)$, as a function of age.

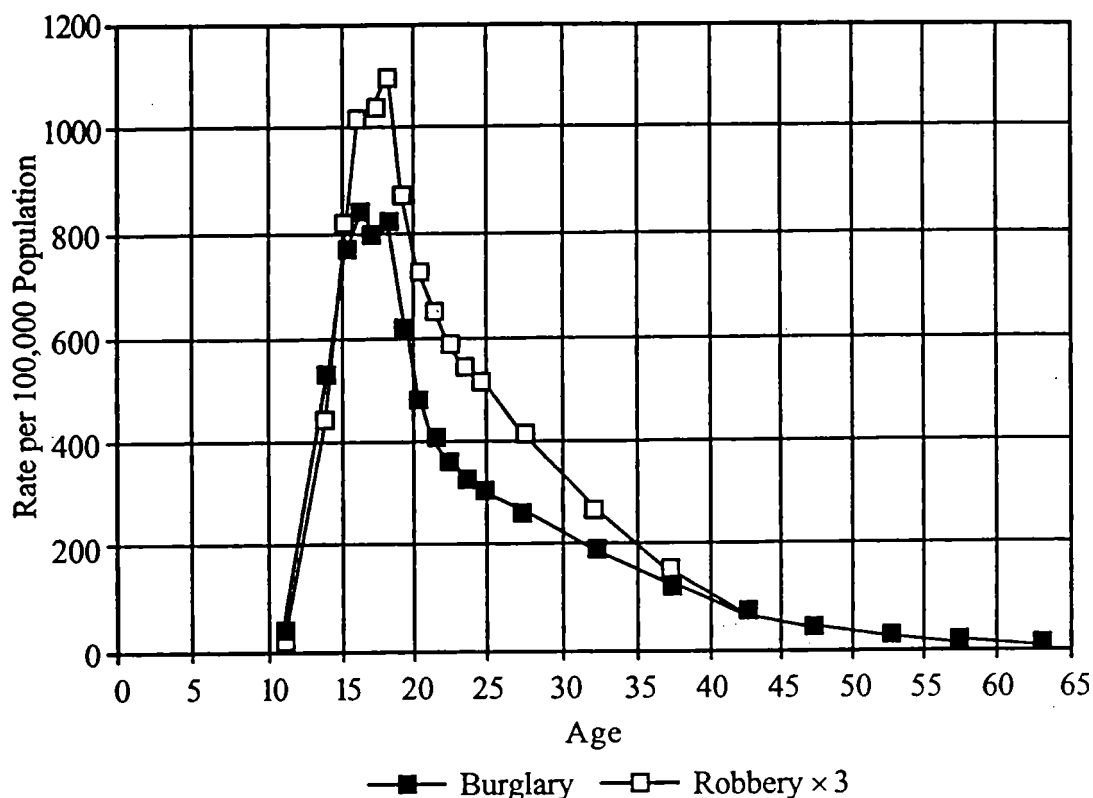
a. Robbery and Burglary

Figures 2a and 2b contrast the patterns for robbery (scaled up by a factor of three)⁷ and burglary in 1985 and in 1992. First, note that

⁶ Arrest is most commonly used as the proxy for offenders because the demographic characteristics of offenders are usually unknown, but are easy to establish for arrestees. Studies that have compared victim reports of the demographics of offenders with those of arrestees (for personal crimes like robbery and aggravated assault) find that the two have tended to be closely related. See, e.g., Michael J. Hindelang, *Race and Involvement in Common Law Personal Crimes*, 43 AM. SOC. REV. 93, 93 (1978). The data on age-specific rates are drawn from the FEDERAL BUREAU OF INVESTIGATION, AGE-SPECIFIC ARREST RATES AND RACE-SPECIFIC ARREST RATES FOR SELECTED OFFENSES, 1965-1992 (1993).

⁷ As was done in Figures 1a and 1b, we have scaled up the robbery arrest rates here by a factor of three to make them comparable with the rates for burglary. Kenneth Powell, of the Center for Disease Control and Prevention, in private communication has raised a question about the distinction between the scaling ratio of six used in Figure 1b (compar-

Figure 2b
Age-Specific Arrest Rates
Robbery and Burglary in 1992

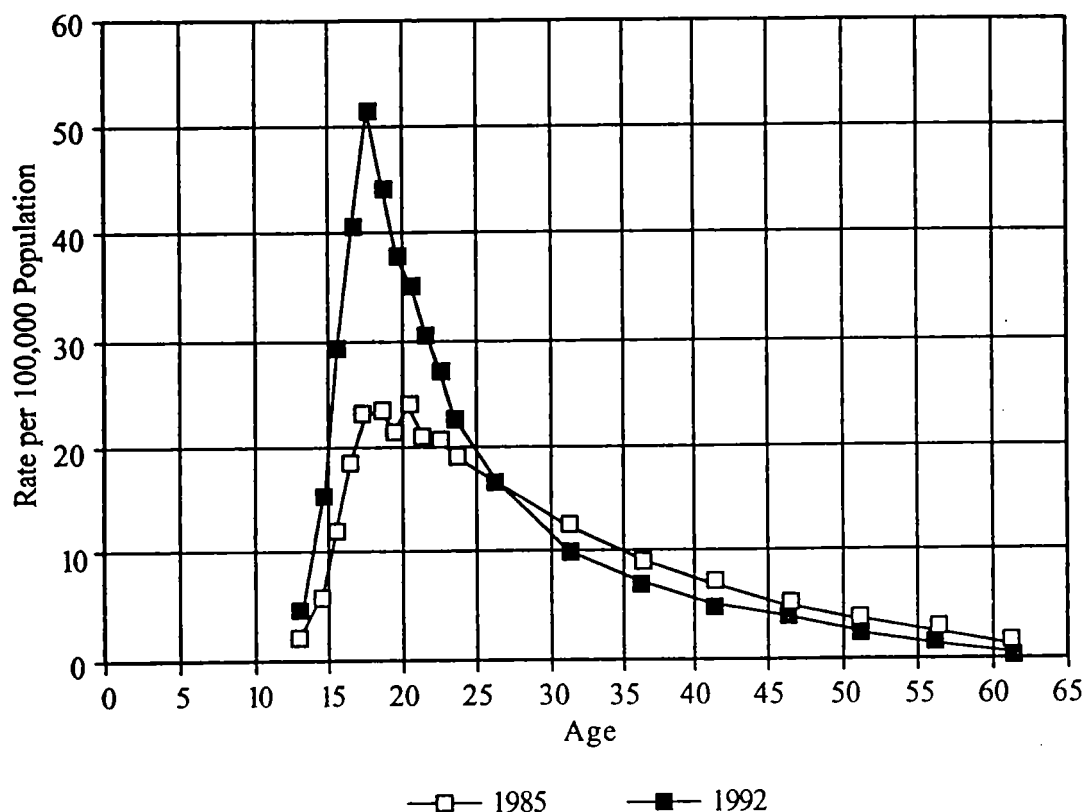


The information of these age-specific patterns is particularly relevant to the various proposals for life sentences without parole for people convicted of their third felony, popularly known as the “three strikes and you’re out” law. The age-specific pattern information is especially relevant if the felonies characterized as “strikes” include robbery, which they often do since robbery is classified as a “violent” crime, or burglary because of the few burglars or robbers that appear at age fifty. “Careers” in these two *property* crimes are relatively short and have largely concluded by the time the offender reaches age fifty. But the life expectancy at age fifty, even in 1991, was still over twenty-five years,⁸ especially with the good care a convicted criminal is likely to get in prison. Strikes should be limited to only serious violent offenses, which display longer criminal careers.⁹ The long duration of

⁸ See U. S. BUREAU OF THE CENSUS, STATISTICAL ABSTRACT OF THE U.S. 87, table 115 (1994).

⁹ See Alfred Blumstein & Jacqueline Cohen, *Characterizing Criminal Careers*, 237 SCIENCE 985 (1987); ALFRED BLUMSTEIN ET AL., CRIMINAL CAREERS AND “CAREER CRIMINALS” 1-12 (1986) for consideration of the issues involved and estimates of the duration of criminal careers.

Figure 3b
Age-Specific Murder Arrest Rate
1985 and 1992



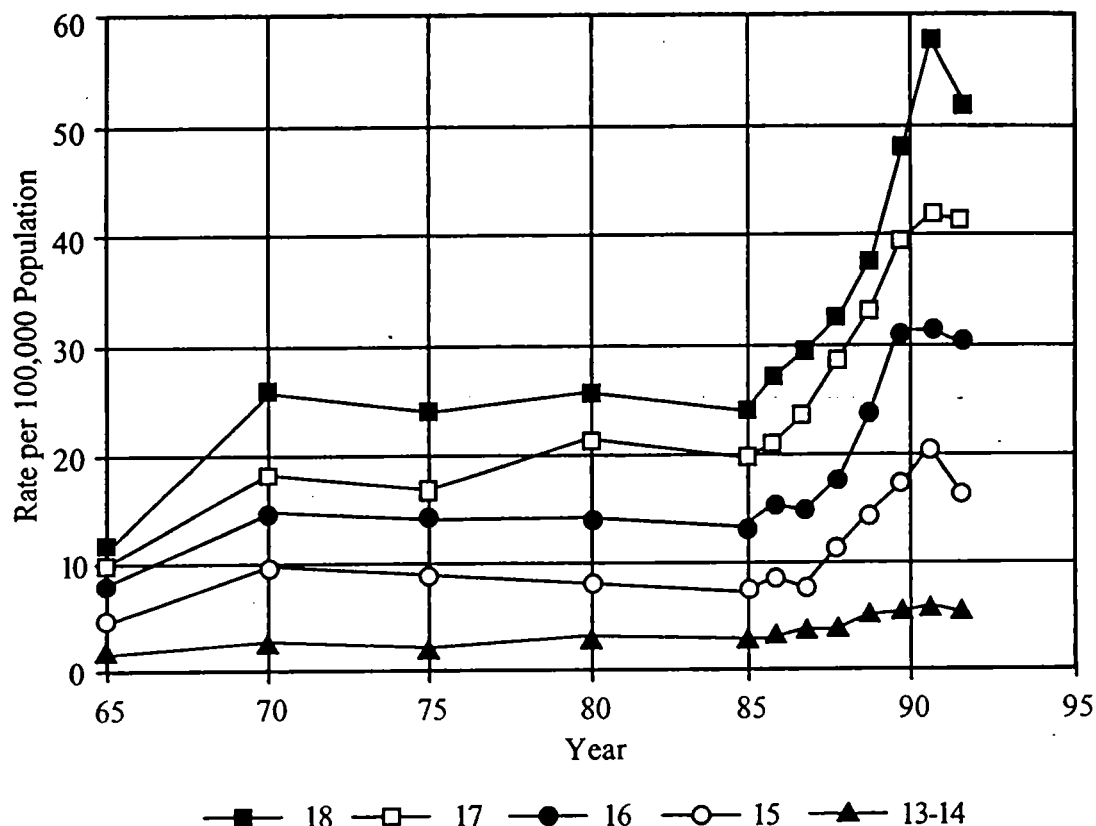
there clearly has been a marked change from the fairly flat-peaked patterns of 1985 (which are very similar to the patterns for 1965 and 1970 of Figure 3a) to the sharp peak that appears at age eighteen and the surrounding ages in 1992.

A different view of these same age-specific arrest rates is presented in Figure 4a,¹¹ which depicts the time trends in the age-specific rates for the individual ages from eighteen through twenty-four, the ages around the peaks of the graphs in Figure 3. From 1965 to 1970 there is a general increase in murder arrest rates at all these ages. Second, the murder arrest rate for ages eighteen through twenty-four was virtually the same throughout the fifteen year period of 1970 through 1985; this reflects the relative flatness of the peak of the graphs for those years in Figure 3.

Third, at age twenty-four there was no strong trend, certainly not an upward trend, and perhaps a slight downward trend, from 1970 through 1992. Figure 3 confirms that this stability is largely the case

¹¹ In Figure 4, for the years prior to 1985, only the five-year points are shown because the rates have been reasonably stable. Annual rates are shown for each of the years 1985 through 1992 because they display much more significant change.

Figure 4b
Trends in Age-Specific Murder Arrest Rates
Trends for Individual Young Ages



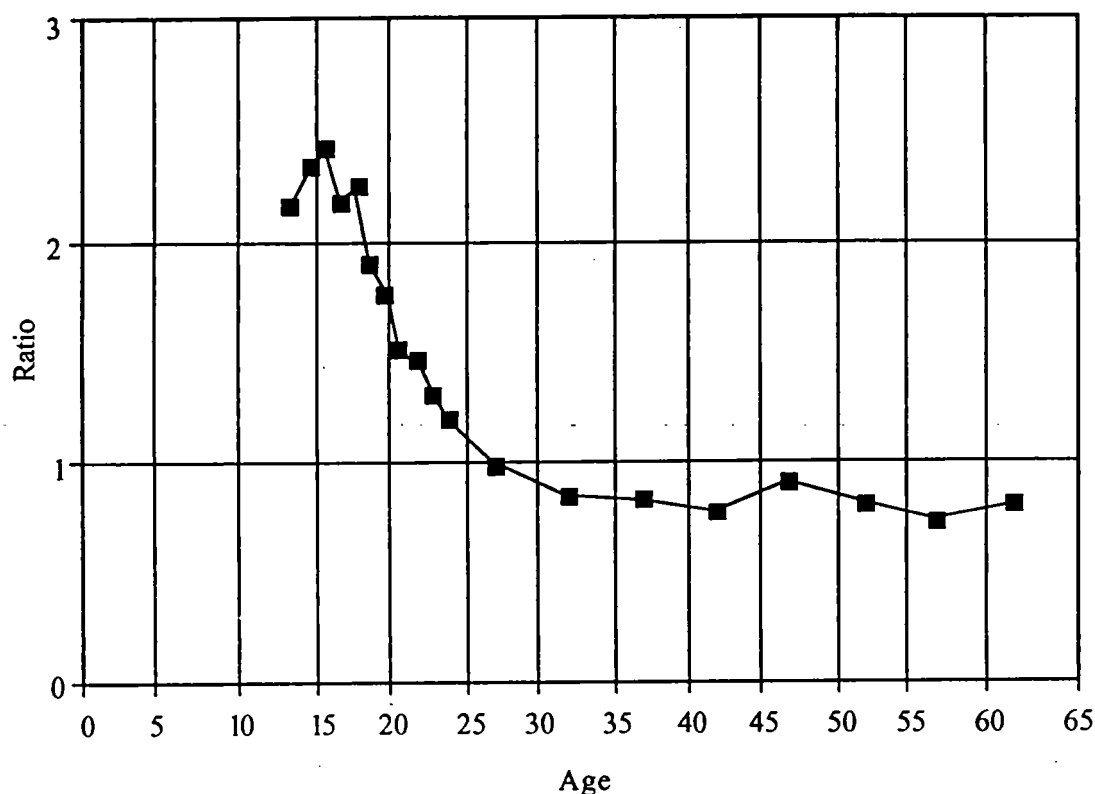
as shown in Figure 4c. Indeed, Figure 4d, which depicts the ratio of the age-specific murder rates in 1992 to that in 1985, highlights the fact that all rates for eighteen year olds and younger have doubled, and those for twenty-five year olds and older have declined.

Much of the growth in the homicide rate in the late 1980s, as shown in Figure 1a, is attributable to the spurt in the murder rate by young people since 1985. This is in marked contrast to the growth between 1965 and 1970, which was largely an across-the-board increase for all ages.

We can estimate the "excess murders"¹² attributable to the rise in the murder rate by the young people covering, for example, the ages of fifteen through twenty-two, from 1986 through 1992. We estimated

¹² We define "excess murders" as those attributable to the increase in the murder arrest rate above the mean rate for each age that prevailed over the 1970-1985 period. The rates are based on arrests rather than on actual murders committed, but since the number of murder arrests in a year is generally roughly equal to the number of murders reported, we make the calculation by assuming one murder per arrest. Since some murders lead to multiple arrestees and some murderers commit multiple murders, this is a reasonable approximation.

Figure 4d
Ratio: 1992/1985 Age-Specific Murder Arrest Rates

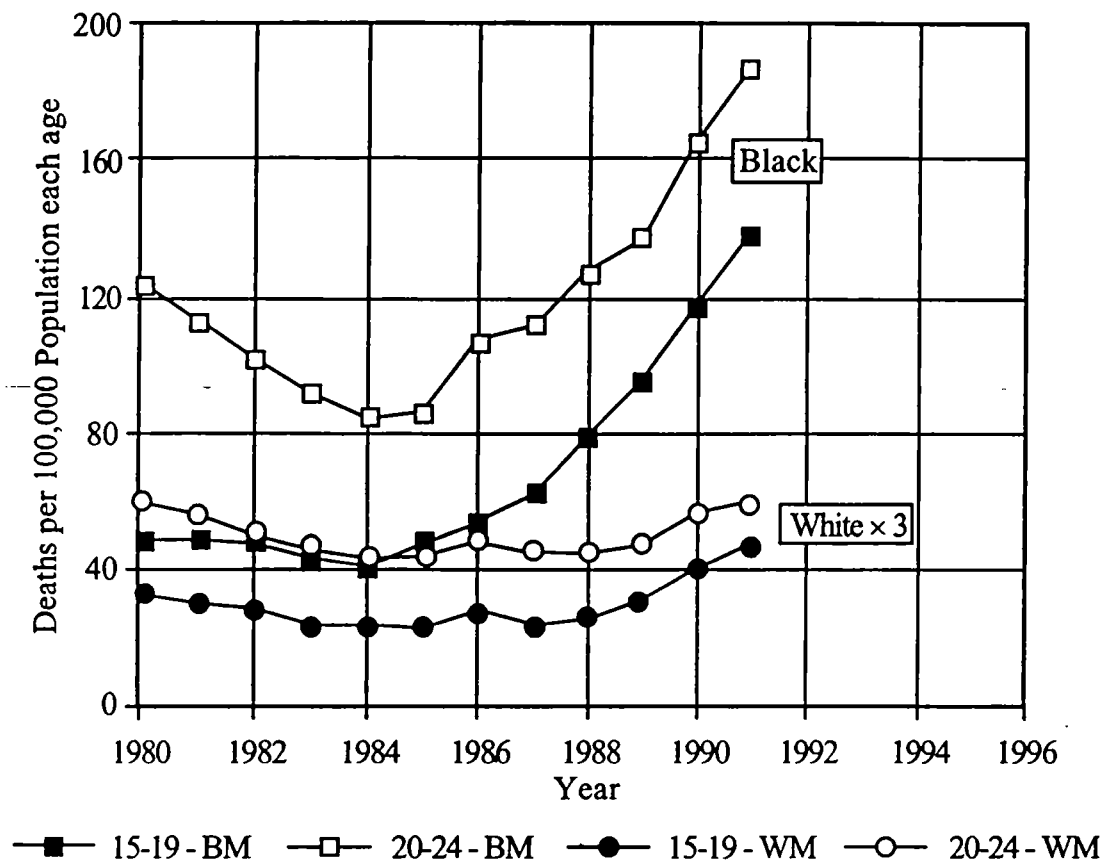


in family structure, economic opportunity, community culture, discrimination experiences, and many other individual and group factors that distinguish races, especially blacks from whites in America.

The crime types in which white and nonwhite rates differ most markedly are robbery and murder. Figure 5,¹⁴ which displays the homicide offending rate by males in the fourteen to seventeen age range, highlights the race differences in level and rate of change since 1985. The figure shows the major growth in the rates of homicide since 1985, especially for young African-American males, and their important contribution to the growth of the teenage age-specific murder rates of Figure 4. The annual rate for whites averaged 8.13 homicides per 100,000 population from 1976 through 1987 and then climbed rapidly, almost doubling in the next four years, from a rate of 7.6 per 100,000 in 1987 to 13.6 in 1991. The rates for African-American males more than doubled in those four years, from 50.4 in 1987 to 111.8 in 1991, and tripled from 32.0 per 100,000 in 1984 to 111.8 in 1991.

¹⁴ The data for Figure 5 were generated by Glenn Pierce and James Fox from the FBI's Supplementary Homicide Reports, based on reports on individual homicides by police departments in the United States.

Figure 6
Homicide Rates by Victim Age, 1980-91
White and Black Males, 15-19 and 20-24

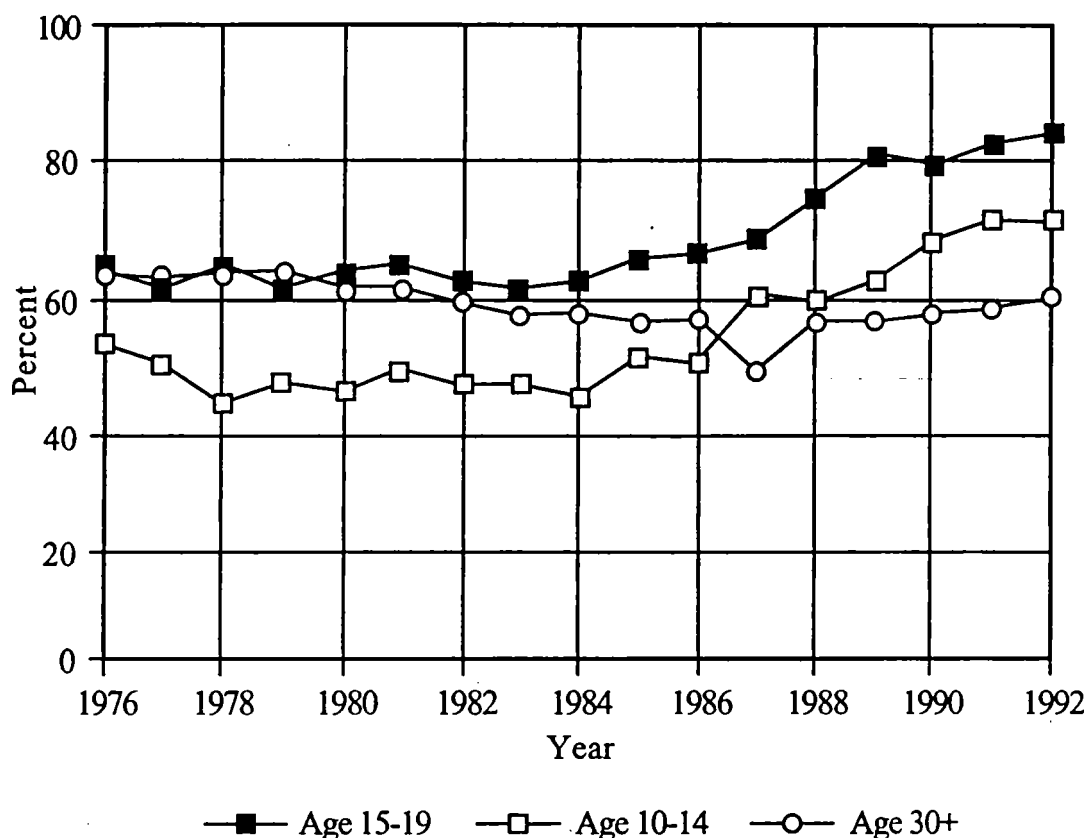


1. Strangers

A second facet causing concern is the greater degree to which homicide by the young is committed against strangers. Drive-by shootings are particularly distressing in this regard, because it may appear that the target was chosen at random and that innocent bystanders may be hit. Any person's concern about his vulnerability is heightened. Since murders have traditionally been seen as a result of conflict between intimates, people who are confident about their intimates' non-violent nature need not become alarmed when that murder rate goes up. But when there is a sense that more murders are being committed against strangers, any person can conceive of himself as a potential target.

Today, murders by young people are more likely to target strangers. For example, analysis of the FBI's Supplementary Homicide Reports for 1991, reveals that 28% of the homicides committed by people under twenty-five were against strangers, whereas only 18% of

Figure 8
Percent Homicide Victims Killed by Guns
by Victim Age—U.S.

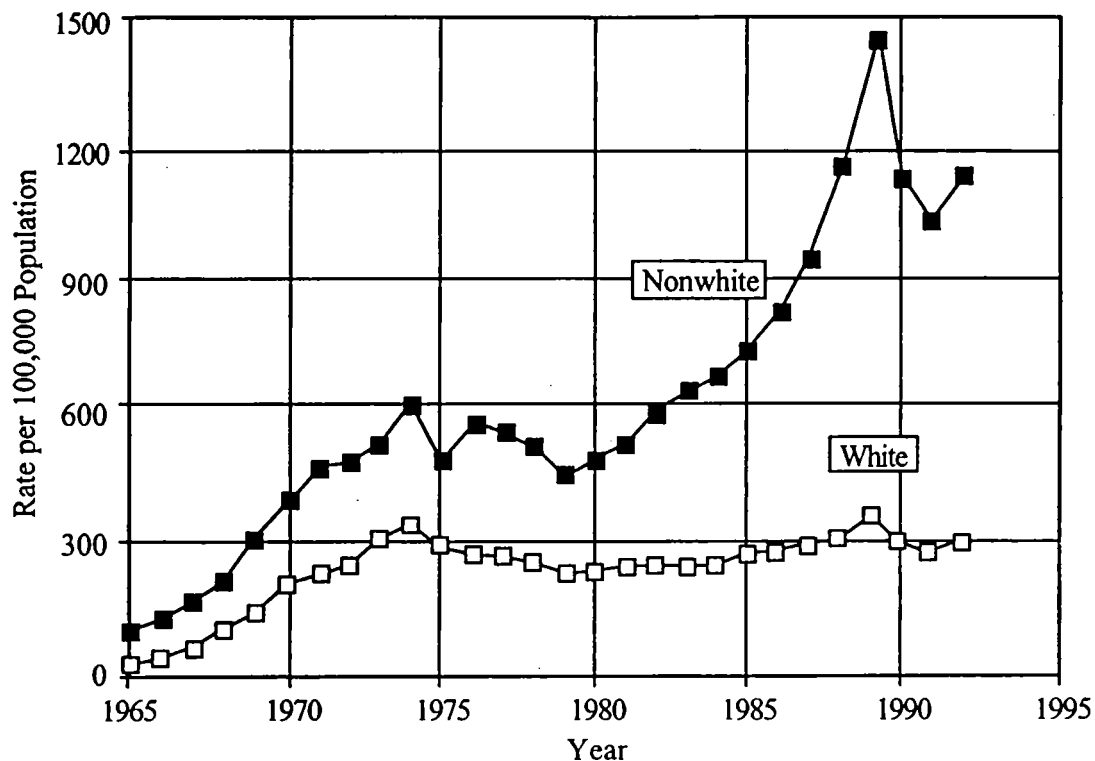


involved a gun and the remaining 41% involved some other form of weapon.¹⁷ From Figure 7, we can see that beginning in 1985, and especially in 1988, there was a steady growth in the use of guns by juveniles, with no corresponding upward trend (indeed, a continuation of a slight downward trend) in non-gun homicides.

Those changes are also reflected in Figure 8, which shows the difference by victim age (which is also a reflection of perpetrator's age) in the percent of victims killed by guns. For victims over age thirty, the fraction killed by guns has declined a small but statistically significant ($t=3.2$) average of 0.46 percentage points per year over the sixteen years from 1976 through 1991. But for victims in the fifteen to nineteen age range, that rate has gone from an average 63% (with no statistically significant trend) from 1976 through 1984 to a level of 85% in 1992 (an average annual increase of 3.0 percentage points from 1984 to 1992). For the younger victims, ages ten to fourteen, the earlier rate was lower (49%, also with no statistically significant trend

¹⁷ These estimates were calculated from the data presented in Figure 7.

Figure 9
Drug Arrest Rate



various ways in which this readiness to engage in systemic violence stimulates the individuals involved to engage in violence *outside* any connection to the drug industry.

There is a fourth, still broader connection that should also be considered: the *community disorganization* effect of the drug industry and its operations on the larger community. This includes the manner by which the norms and behaviors within the drug industry, which can become an important activity within some communities, influences the behavior of others who have no direct connection to the drug industry. For example, the influence of the widespread prevalence of guns among drug sellers may stimulate others in the community to similarly arm themselves for self-defense, to settle their own disputes that have nothing to do with drugs, or to gain respect.²²

²² Elijah Anderson, *The Code of the Streets*, 273 ATLANTIC MONTHLY, May 1994, at 80-94. Anderson highlights the importance of gaining respect as an important motivating factor in individual behavior in urban ghettos. In a survey of juveniles incarcerated for serious crimes and of students in center-city high schools, 22% of the students were found to possess guns, 12% carry them most of the time, and another 23% carry guns "now and then." *Id.* The inmates and the students offered similar reasons for carrying guns: 70% of the inmates and 68% of the students cited protection as the main reason for their most recent gun acquisition. See J.F. SHELEY & J.D. WRIGHT, THE NATIONAL INSTITUTE OF JUSTICE, GUN ACQUISITION AND POSSESSION IN SELECTED JUVENILE SAMPLES (1993).

enforcement, this difference is magnified because African-American drug sellers tend to operate in the street where they are vulnerable to arrest, whereas white sellers are more likely to operate indoors. Figure 10 also highlights the degree to which non-white juveniles were recruited into the drug industry beginning in 1985.²⁵ Their amenability to such recruitment was undoubtedly enhanced because of their pessimism—or perhaps even hopelessness—as they weighed their opportunities in the legitimate economy, and the increasing demands for skills in order to gain effective entry.

III. A HYPOTHESIZED PROCESS

In the previous discussion, we have identified three major changes that have occurred in the short period between 1985 and 1992:

- 1) homicide rates by youth eighteen and under have more than doubled, while there has been no growth in homicide rates by adults twenty-four and older (Figure 4d),
- 2) the number of homicides juveniles commit with guns has more than doubled, while there has been no change in non-gun homicides (Figure 7), and
- 3) the arrest rate of non-white juveniles on drug charges has more than doubled, while there has been no growth in the drug arrest rate for white juveniles (Figure 10).

Because these changes are sufficiently focused on young people, they have not had a major impact on aggregate murder rates (Figures 1). Whatever major impact they may have had is counteracted by the decline in the murder rate for older people (Figure 4d). The important feature of the three doublings highlighted above is that they occurred after a prior fifteen years of relative stability.

One explanation for this array of changes from a stable pre-1985 period to a rapidly deteriorating post-1985 period derives from examining the changes in the illegal drug markets associated with the introduction of crack cocaine. Crack was introduced at different times in different parts of the country, but the leading edge of that introduction appears to have occurred in the larger cities, such as New York

(1993), based on data from NATIONAL INSTITUTE OF DRUG ABUSE, NATIONAL HOUSEHOLD SURVEY ON DRUG ABUSE: POPULATION ESTIMATES (1991). These results are complicated by the many problems with self-report data, non-respondents, and evidence that blacks are more likely than whites to underreport their involvement in criminal activity. See MICHAEL HINDELANG ET AL., *MEASURING DELINQUENCY* (1981).

²⁵ It is interesting to note from Figure 10 that in 1975 a policy shift reversed the then rapidly growing drug arrest rate—primarily for marijuana offenses—of whites, whose arrest rate for drugs exceeded that of non-whites throughout the 1970s.

ous than a bloody nose can now turn into shootings as a result of the presence of guns.²⁷ This may be exacerbated by the problems of socialization associated with high levels of poverty, high rates of single-parent households, educational failures, and a widespread sense of economic hopelessness. But those factors have been changing gradually over the years, and so they cannot readily provide the explanation for the sharp changes that began to take place in the mid-1980s.

By the time people reach the more mature ages beyond the early twenties, it appears that they do develop some prudence, are more cautious even if they are armed, and display greater restraint in the use of guns.²⁸ Also, because the older adults in their mid-twenties are not as tightly networked as the younger people, the gun diffusion process is likely to be much slower and less widespread.²⁹

The validity of these hypothesized processes can be tested with city-level data on drugs, guns, and homicides. Drug markets flourished at different times in different cities, reportedly early in New York and Los Angeles, later in Washington and Pittsburgh. The sharp change that took place in the national statistics in about 1985 should have been displayed in the city-level data shortly after the crack markets began functioning. In some cities that change should occur early, and in other cities the change should be later. But, if the above hypothesized process is correct, the shifts in drug arrests and youth homicides should occur at about the same time in the same city.

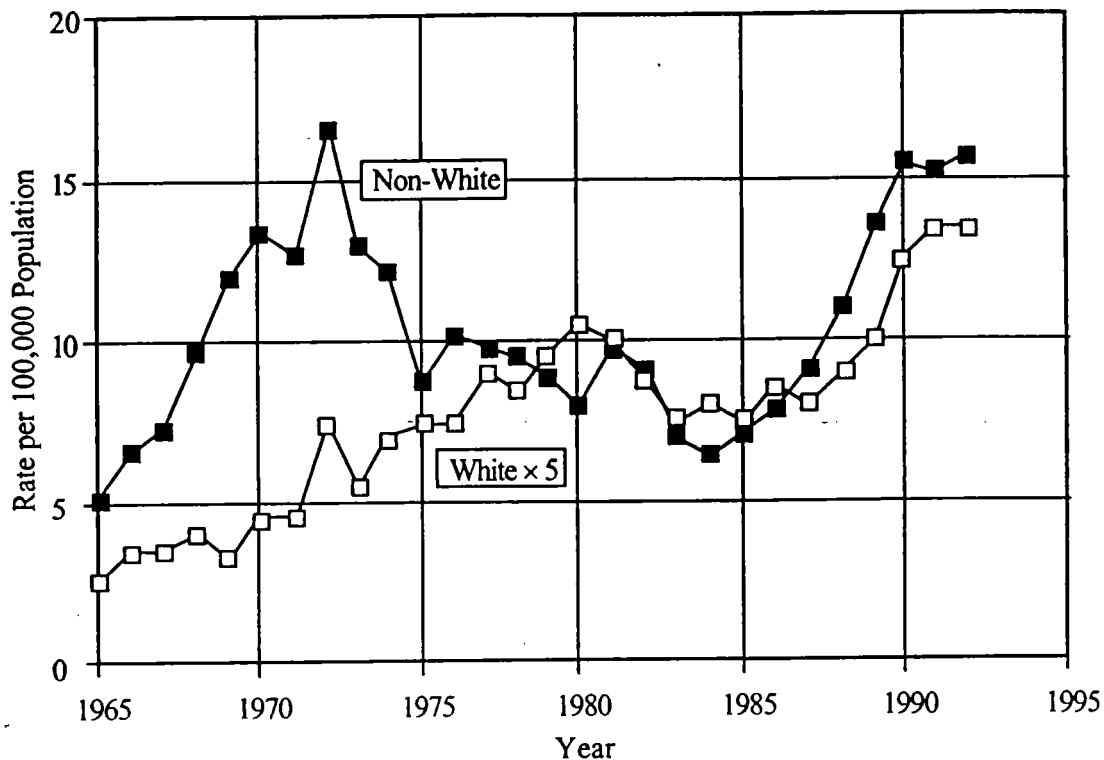
There is additional evidence that is consistent with the hypothesis of the diffusion of guns from drug markets through the larger community of juveniles. Figures 11a and 11b present the arrest rates for murder for adults and juveniles by race. We see from Figure 11a that since 1980 both white and non-white adults have followed the same negative trend, even though there has been a large difference in their involvement in drug markets (see Figure 9). In contrast, the rates for juveniles—whites and non-whites—have grown markedly since 1985, when the drug arrest rate for non-whites began to climb. The murder

²⁷ My colleague, Joel Tarr, has called my attention to a passage in a Jane Addams' text in which some thirteen year old boys are taunting each other. JANE ADDAMS, *SPIRIT OF YOUTH AND THE CITY STREETS* 61 (1972) (original edition published in 1909). One of them goes into the house to get a gun. *Id.* He shoots the taunter through the head and kills him. *Id.* Ms. Addams notes that "This tale could be duplicated almost every morning; what might be merely a boyish scrap is turned into a tragedy because some boy has a revolver." *Id.*

²⁸ That inference would be reasonable from the evidence of the decline in the homicide rate in the mid-twenties and beyond.

²⁹ As an alternative possibility, we may be witnessing a cohort effect, and the eighteen year olds involved in the higher homicide rates may possibly continue their recklessness. That issue remains to be watched and explored.

Figure 11b
Murder Arrest Rate — Juveniles



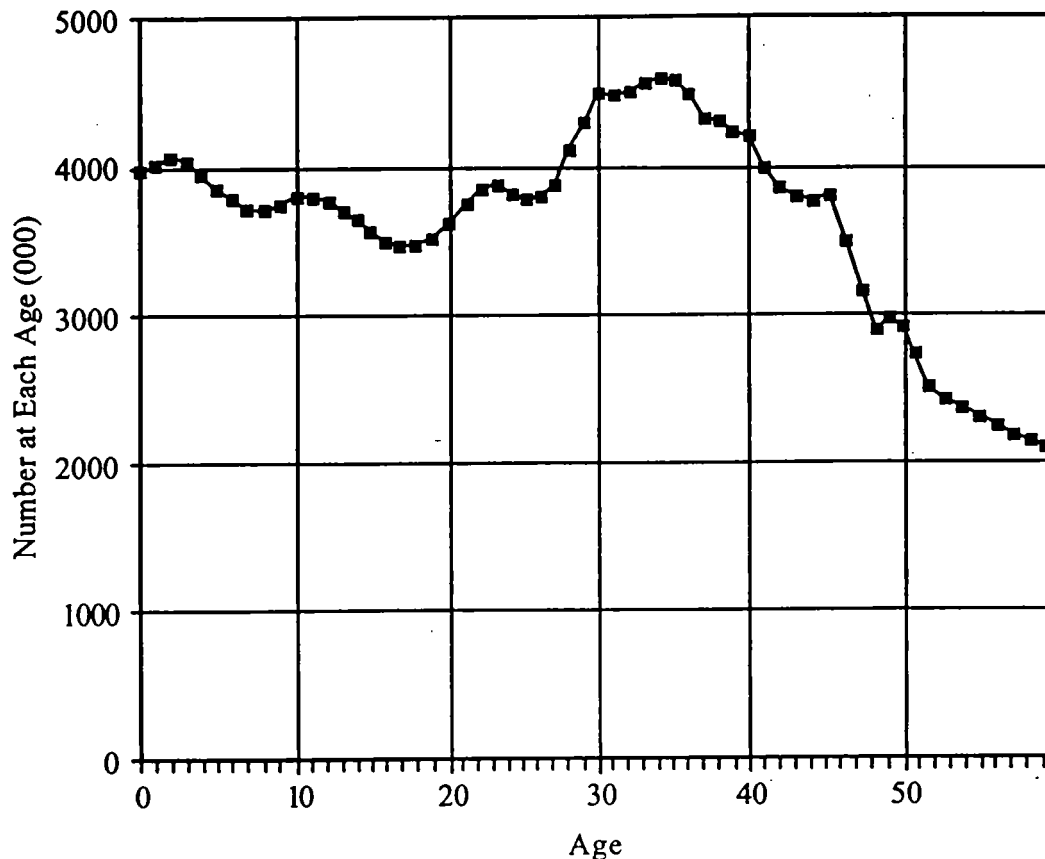
are almost universal, and require more active and skillful enforcement. The need is particularly salient in those communities where the homicide rates have risen dramatically, probably coincident with the location of drug markets. James Q. Wilson has made some concrete proposals for pursuing such efforts, including a call for improved devices for detecting guns at a distance.³⁰ Further evidence of the need to continue gun confiscation comes from an experiment conducted in Kansas City, Missouri, which assessed the impact of greater enforcement of laws against the carrying of concealed weapons. In a report of the results of that experiment, Sherman et al. note that the intensified enforcement in one patrol beat led to an increase of 65% in gun seizures and a decrease of 49% in gun crimes, with no comparable improvement (indeed, somewhat of a deterioration) in a comparison beat.³¹ This experiment provides a clear indication that intensified enforcement can make a difference in both increasing gun confiscation and reducing the number of gun crimes.

It is also important to address the illegal gun markets that are selling guns to young people. There are important illegal markets

³⁰ James Q. Wilson, *Just Take Away the Guns*, N.Y. TIMES MAG., March 20, 1994, at 47.

³¹ See LAWRENCE W. SHERMAN ET AL., THE NATIONAL INSTITUTE OF JUSTICE, THE KANSAS CITY GUN EXPERIMENT (1995).

Figure 13
Age of U.S. Population in 1994



The excess murder rate certainly should encourage efforts to diminish the size of the illegal market. Such efforts could be pursued through greater investment in treatment, through more effective prevention, and through finding medical means of providing drugs to certified addicts, such as those who are supported with SSI payments because of their addiction. These efforts will not eliminate the illegal markets, but they should reduce the demand and volume of activity within those markets.

The nation has yet to undertake a careful assessment of the costs and benefits of the current policies. Perhaps concern about the excess murders we continue to experience might contribute to the recognition of its urgency.³²

Perhaps more fundamentally, there continues to be a critical

³² A call for such an assessment was made by former Surgeon General Joycelyn Elders and was ignored as a result of the aggressive political response. It is an assessment I suggested in my Presidential Address to the American Society of Criminology in November 1992, to be carried out by a Presidential Commission with major research support from the National Academy of Sciences. See Alfred Blumstein, *Making Rationality Relevant*, 31 CRIMINOLOGY 1, 16 (1992).

Blumstein, Alfred. (1995). "Youth Violence, Guns and the Illicit-Drug Industry" in The Journal of Criminal Law and Criminology. Vol. 86, No. 1, Fall 1995; pps. 10-36.

I. Predominate change in Homicide

A. Increase in Youth Population

1. Growth begin in mid-1980s
2. Due to recruitment of young people into illicit drug markets
3. Since markets are illegal
 - a. participants must arm themselves for self-protection
4. Results in frequent resorting to guns as a major escalation of the violence
 - a. Characterized encounters among teenage males

B. Crime over 20-Year Period

1. Flat trend
 - a. Confined to 200 to 250 per 100,000 for robbery
 - b. Confined to 8 to 10 per 100,000 for murder
 - c. Peaked in 1980
 1. Declined until late 1980s
 2. Rose with crack epidemic and the War on Drugs
2. No significant trend for murder
3. Robbery slightly increased
4. Slight downward trend for burglary
5. Robbery is a quick and convenient way for a drug user not earning his money from selling drugs to get his/her drug money
6. A burglar still has to dispose of his property, through a fence or otherwise

1. Users in urgent need of drugs may choose to avoid that complication

II. Demographic-Specific Rates

A. Age

1. Crime peaks at age 17 and falls off by the early 20s
 - a. age 21 for burglary
 - b. 24 for robbery
2. Suggest people commit robbery later than burglary and finish later
3. A change in age-specific rates is a principle factor affecting the aggregate rates.
4. Two patterns occur during these periods
 - a. Relevant to the various proposals for life sentences without parole for people convicted of their third felony
 1. "Three Strikes and You're Out"
 2. Crime careers are short
 - a. Most stop and are jailed by 50 years old

B. Murder

1. Contrasts age-specific patterns for robbery and burglary
2. Flat-peak for all ages between 18 and 24
3. Peaked in 1985 and dropped afterward to 1992
4. Coincides with groups of ages that occurred in 1965, 1970, 1985, and 1992
5. Trends
 - a. From 1965 to 1970, there is a general increase in murder arrests rates at all ages
 - b. A murder arrest rate for ages 18 - 24 is the same throughout the 15-year period of 1970 to 1985

- c. At 24, there is no strong trend
 - 1. Slight downward trend from 1970 to 1982
- d. large increases in murder rates for ages younger than 24 begin shortly after 1985 and the rate of increase was inversely related to age
 - 1. For age 18, the age displaying the sharp peak in 1992, the increase from 1985 to 1992 is 100 percent
 - 2. Attributable to spurt in growth rate from 1965 to 1970

III. Race

- A. Rates for whites and blacks doubled
- B. major facets
 - 1. Major increase in the murders committed by the very young
 - 2. From 1976 to 1985, 59 percent of all homicides committed by juveniles involved a gun and remaining 41 percent involved other weapons
 - 3. Difference by victim age in the difference of victims age (for explicit details, see page 25)

IV. Drug-Crime Connection

- A. 32 percent of prisoners used cocaine or crack regularly
- B. Fifteen percent use heroin and opiates regularly
- C. Three Components
 - 1. Pharmacolgocial/Psychological
 - a. Drug causes criminal activity
 - 2. Economic/compulsive crimes
 - a. Drug users to support their use with crime
 - 3. Systemic Crime
 - a. Crime committed as regular part of doing business in the drug industry

4. Community Disorganization

- a. considers the norms and behaviors within the drug industry that influence others who have no direct connection to the drug industry
- b. Drug wars focus more on minority communities than white communities
 - 1. Easier to find blacks because they operate in the streets
 - 2. Whites operate behind closed doors

IV. A Hypothesized Process

A. Three major Changes that Occurred between 1985 and 1992

- 1. Homicide rates by youth 18 and younger have doubled, while there has been no growth in homicide rates by adults 24 years and older
- 2. The number of homicides juveniles commit with guns has more than doubled, while there has been no change in non-gun homicides
- 3. The arrest rate of non-white juveniles on drug charges has more than doubled, while there has been no growth in the drug arrest rates for white juveniles
- 4. The important feature of the three doubling highlighted above this state they occurred after a prior 15-year stability
- 5. Due to changes in the drug market
 - a. Crack-cocaine
 - 1. Low income could afford it
 - 2. Dealers could recruit new sellers
 - a. Juveniles work cheaper than adults
 - b. Juveniles will take greater risks than adults
 - c. Kids would take guns and drugs to school to diffuse them
 - d. The more guns there are in a community, the incentive for any single individual to arm himself

increases

e. Skirmishes that would have ended in bloody noses now lead to death by gunshots

1. Increased by high levels of poverty
2. higher number of single parent households
3. educational failures
4. Economic hopelessness

f. Changes in early 20s

1. Due to change in maturity
2. People less clannish by this time

V. Diminish the size of the drug market

- A. Consider legalization
- B. Invest more in treatment
- C. Find medical means of providing drugs to certify addicts
 1. Would reduce the demand and volume of market activity
- D. Needs careful cost-benefit assessment of current drug policy
- E. Bring in people from all walks of life to discuss the issue

LAW AND CONTEMPORARY PROBLEMS

YOUTH VIOLENCE IN BOSTON: GUN MARKETS, SERIOUS YOUTH OFFENDERS, AND A USE- REDUCTION STRATEGY

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SCHOOL OF LAW • DUKE UNIVERSITY

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Philip J. Cook
Special Editor

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YOUTH VIOLENCE IN BOSTON: GUN MARKETS, SERIOUS YOUTH OFFENDERS, AND A USE-REDUCTION STRATEGY*

DAVID M. KENNEDY,** ANNE M. PIEHL,*** AND ANTHONY A. BRAGA****

I

INTRODUCTION

Since the mid-1980s, there has been a dramatic increase in youth gun violence.¹ In most areas, juveniles and many other youth are legally prohibited from purchasing firearms, especially handguns. As a result, many firearms utilized in youth crimes are obtained through active and pervasive illicit gun markets. There is currently very little being done to address these illicit markets,² while at the same time the capacity of police departments to design and implement creative new operational strategies (through "community" and "problem-solving" policing) is increasing. Approaches focusing on illicit firearms markets thus seem a logical and potentially productive strategy. Finally, while enforcement and prevention efforts have so far paid relatively small dividends in reducing youth gun violence, attacking illicit gun markets is an idea which at least has not yet failed.³

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1. Between 1984 and 1994, juvenile (under 18) homicide victimizations committed with handguns increased by 418%, and juvenile homicide victimizations committed with other guns increased by 125%. During this time period, black males ages 14 through 24 have remained at approximately 1% of the population, but have increased from 9 to 17% of homicide victims and from 17 to 30% of homicide offenders. See JAMES A. FOX, U.S. DEP'T OF JUSTICE, TRENDS IN JUVENILE VIOLENCE: A REPORT TO THE UNITED STATES ATTORNEY GENERAL ON CURRENT AND FUTURE RATES OF JUVENILE OFFENDING (1996). From 1979 through 1989, the firearm homicide rate for persons 15 through 19 years of age increased 61% from 6.1 to 11.1 deaths per 100,000; during the same period, the non-firearm homicide rate decreased 29%, from 3.4 to 2.4 deaths per 100,000. Rates for black males were higher than for any other race-sex group, regardless of degree of urbanization. See Lois A. Fingerhut et al., *Firearm and Nonfirearm Homicide Among Persons 15 Through 19 Years of Age*, 267 JAMA 3048 (1992).

2. For more on these points, see David M. Kennedy, *Can We Keep Guns Away From Kids?*, 18 AM. PROSPECT 74, 76 (1994).

3. The idea of attacking illicit firearms markets is not a new one, although it has received little attention relative to other gun control and gun crime reduction approaches and has been little explored

A. The Boston Gun Project

Since late 1994, the authors of this article have been working with the Boston Police Department to design a problem-solving intervention addressing youth gun violence in Boston. The authors wished to address the epidemic of youth gun violence and, therefore, focused on "youth" twenty-one years old and under rather than on legal juveniles. At the outset of the project, attention was focused primarily on understanding and addressing the local illicit firearms market. Massachusetts regulates guns more tightly than most states. It is for all practical purposes illegal for those under twenty-one years old to buy handguns in Massachusetts and illegal for those under eighteen years old to buy long guns and ammunition. Those age eighteen to twenty-one can buy long guns and ammunition if issued a state permit to do so, while those twenty-one years old and over can also buy handguns if issued a state permit. Special exemptions exist for those aged eighteen to twenty who require a handgun as a condition of employment in law enforcement and for those under eighteen who obtain state permits to possess long guns for hunting and target-shooting purposes by submitting affidavits from adult legal guardians.⁴ It is thus strictly possible that some guns are being diverted from youth to youth, or bought by youth for their own criminal use under certain circumstances.⁵ The legal special exemptions are rarely utilized, however, particularly for handguns and particularly in the urban areas where youth violence is a problem. More to the point, it is virtually unheard of for guns taken away from youthful offenders or used by youthful offenders in crimes to have been legally purchased by anybody twenty-one years old or under.⁶ With the exception, therefore, of guns obtained legally from adults or "borrowed" from homes in which they are legally possessed, gun acquisition by youthful offenders in the state is very much an illicit-market problem.⁷

operationally, particularly by state and local authorities. See, e.g., STEVEN BRILL, WASHINGTON, DC POLICE FOUNDATION, FIREARM ABUSE: A RESEARCH AND POLICY REPORT 113-43 (1977); ROCHESTER POLICE DEPARTMENT, FINAL REPORT: GUN ABUSE REDUCTION UNIT (1980); UNDERSTANDING AND PREVENTING VIOLENCE 270-78 (Albert J. Reiss & Jeffrey A. Roth eds., 1993); Kennedy, *supra* note 2, at 76; Mark H. Moore, *Keeping Handguns From Criminal Offenders*, 455 ANNALS AM. ACAD. POL. & SOC. SCI. 107-09 (1981) [hereinafter *Keeping Handguns*]; Mark H. Moore, *The Bird in Hand: A Feasible Strategy for Gun Control*, 2 J. POL'Y ANALYSIS & MGMT. 188-93 (1983) [hereinafter *The Bird in Hand*]. For an analysis suggesting that illicit market approaches are unlikely to be effective, see Christopher S. Koper & Peter Reuter, *Suppressing Illegal Gun Markets: Lessons From Drug Enforcement*, 59 LAW & CONTEMP. PROBS. 119 (Winter 1996).

4. MASS. GEN. LAWS ch. 140 (1994).

5. The possibilities are that long guns are being diverted to youth, or being bought for their own criminal use, by members of the following groups: 18- to 21-year-olds who possess normal state permits; individuals age 21 and over who possess normal state permits; youth under 18 who possess a legal special permit; or 18- to 20-year-olds who possess a legal special permit.

6. Interview with Lennie Ladd, Special Agent, Boston Regulatory Office, Bureau of Alcohol, Tobacco, and Firearms (Jan. 1996).

7. See JOSEPH F. SHELEY & JAMES D. WRIGHT, NAT'L INST. OF JUSTICE, GUN ACQUISITION AND POSSESSION IN SELECTED JUVENILE SAMPLES 6-7 (Dec. 1993) (suggesting that these licit transfer/borrowing routes are actually relatively infrequent among juveniles).

The joint work of the authors and the police department was intended to proceed by convening an interagency working group, performing original research into Boston's youth violence problem and gun markets, crafting a city-wide, interagency problem-solving strategy, implementing that strategy, and evaluating its impact. The authors have played an active role in all aspects of this process, including the following: constituting, convening, and chairing the working group meetings; conducting research; suggesting and exploring intervention possibilities; helping design the larger strategy that emerged from these proceedings; presenting the strategy to policy-making levels in participating agencies; and designing and performing the evaluation. These activities clearly depart from the strict, or at least more heavily, research and evaluation roles usually played by scholars. There are, of course, powerful traditions and norms connected with these more traditional scholarly functions.⁸ The authors, by contrast, regard the Boston Gun Project in part as an experiment in a kind of integrated academic/practitioner partnership perhaps more suitable for policy exercises that blend research, policy design, action, and evaluation.⁹

The research involved has been an unusual combination of quantitative and qualitative analyses. It has revealed the central role of an illicit gun market featuring a flow of relatively new semiautomatic weapons. It has also revealed the central role of a small cadre of highly active gang members as both perpetrators and victims of homicide. Both the gun market and violent gangs seem vulnerable to innovative, but practicable, interventions. A coordinated, interagency strategy has been crafted and is currently being implemented. This article describes the framework for the project, some of its research activities and findings, and the operational strategy that has resulted.

B. Illicit Gun Markets

To disrupt the illicit markets that provide guns to youth, it would be helpful, first, to understand the markets. Some key issues are the following:

Are what we call illicit gun markets in fact "markets" at all, that is, do they have meaningful pricing regimes, are they organized, are suppliers in business over time, or are they more like bartering and trading systems?

Are the markets that supply youths and adults different?

8. See, e.g., LaMar T. Empey, *Field Experimentation in Criminal Justice: Rationale and Design*, in HANDBOOK OF CRIMINAL JUSTICE EVALUATION 143-76 (Malcom Klein & Katherine Teilmann eds., 1980); Lawrence W. Sherman, *Herman Goldstein: Problem-Oriented Policing*, 82 J. CRIM. L. & CRIMINOLOGY 690, 693 (1991).

9. See, e.g., David M. Kennedy & Mark H. Moore, *Underwriting the Risky Investment in Community Policing: What Social Science Should be Doing to Evaluate Community Policing*, 17 JUST. SYS. J. 271-89 (1995); Kurt Lewin, *Group Decision and Social Change*, in READINGS IN SOCIAL PSYCHOLOGY 197 (Theodore M. Newcomb et al. eds., 1947); Mark H. Moore, *Learning While Doing: Linking Knowledge to Policy in the Development of Community Policing and Violence Prevention in the United States*, in INTEGRATING CRIME PREVENTION STRATEGIES: MOTIVATION AND OPPORTUNITIES 12-28 (Per-Olof Wickstrom ed., forthcoming).

Do different kinds of criminals get their illegal guns in different ways?

Do the guns associated with different kinds of crimes and criminals differ in meaningful ways: for example, type, brand, age, caliber, source?

How much of the illicit market is supplied by larger "firms," and how much by smaller or episodic dealers? What constitutes a larger "firm?"

How many of these "firms" are primarily in the business of selling illegal guns? How much of the illicit "trade" is buying and selling among strangers? How much is buying and selling among acquaintances? How much is trading and borrowing among acquaintances? How much is trading and borrowing among family members?

To what extent is the illicit trade interstate, and to what extent intra-state? Are those markets supplying adults, youth, and criminals of different kinds different on this dimension?

How much of the illicit market is supplied by theft, and is this proportion getting larger or smaller?

How much of the illicit market is supplied by "scofflaw" federal firearms licensees ("FFLs")?

How much of the illicit market is supplied by fairly direct ("straw purchaser") diversion from the legal primary (FFL) and secondary markets?

How much of the illicit market is supplied by, or operated along channels associated with, the drug trade?

How do gun prices change—if they do change—at different points along the illicit market?

Do any of the above dimensions differ by region or by changes in state and local regulatory regimes?

Unfortunately, our knowledge on these points is primitive. There has been, as noted, very little enforcement attention devoted to illicit gun markets; this is matched by a paucity of research. The research that has been conducted mostly predates the youth gun violence problem, addressing itself instead to how adult felons, who are legally enjoined from buying and owning guns, obtain firearms.¹⁰ Several basic findings emerged from this literature.

One such finding concerned the structure of the illicit gun market. This market appeared to be primarily composed of many small, multi-faceted operations rather than large, dedicated ones.¹¹ The latter did exist and seemed most often organized to move large quantities of weapons from states with few restrictions on gun purchases to states with strict ones. For the most part,

10. See, e.g., JAMES D. WRIGHT & PETER H. ROSSI, ARMED AND CONSIDERED DANGEROUS: A SURVEY OF FELONS AND THEIR FIREARMS 39 (1986); JAMES D. WRIGHT ET AL., UNDER THE GUN: WEAPONS, CRIME, AND VIOLENCE IN AMERICA 175-88 (1983); BRILL, *supra* note 3, at 23-31; *Keeping Handguns*, *supra* note 3, at 102.

11. See, e.g., ROCHESTER POLICE DEPARTMENT, *supra* note 3; *The Bird in Hand*, *supra* note 3, at 188-93; *Keeping Handguns*, *supra* note 3, at 102.

however, both the multiplicity of sources for illegal weapons—thefts from homes, thefts from gun dealers, improper sales from licensed dealers, private dealers, and diversion of guns obtained through legal purchase—and the ease and convenience of dealing them alongside other contraband eliminated the need for powerful organizations to acquire and distribute black-market guns.¹² Examinations of illicit gun dealers show the bulk of them to be small and episodic; many of them appeared to be fences selling guns as they would any other illicit commodity, more or less as thieves bring them in.¹³ These studies were unable, however, to establish the contribution to the sum total of illicitly trafficked firearms of, on the one hand, a relatively small number of high-volume traffickers and, on the other hand, a relatively large volume of small-volume traffickers. This remains a key, and vexing, problem.¹⁴

Another finding concerned the importance of stolen guns.¹⁵ Since many stolen firearms are taken from private residences, and since there are estimated to be some 200 million guns in private hands,¹⁶ the pool of available weapons—even if other supplies could be interrupted—is enormous. This *stockpile* of firearms dwarfs even the considerable annual *flow* of guns sold new at retail. One study of the firearms used in Boston felonies showed that forty percent of them had been stolen;¹⁷ a survey of convicted felons showed from forty to seventy percent of felons obtaining their most recent handgun through theft.¹⁸ Not surprisingly, many felons had little difficulty obtaining firearms. In one survey of incarcerated felons, three-quarters said they would have no trouble arming themselves upon release, “in a matter of a few hours or, at most, a few days,” through theft, from friends, or through simple purchase.¹⁹ Felons identified as “handgun predators”—with more experience of and with greater commitment to gun crimes—were even more certain they could arm themselves, half within a few hours and almost all within a few days.²⁰

More recent survey research on juveniles paints a strikingly similar picture. A recent study of juvenile gun ownership by Joseph Sheley and James Wright,

12. See, e.g., *Keeping Handguns*, *supra* note 3, at 96-101; *The Bird in Hand*, *supra* note 3, at 190-92; Philip J. Cook & Mark H. Moore, *Gun Control*, in CRIME 288 (James Q. Wilson & Joan Petersilia eds., 1995).

13. See *Keeping Handguns*, *supra* note 3, at 105.

14. Recent research suggests that much trafficking may be relatively concentrated, at least at the early end of its diversion from the licit market. Half of all Bureau of Alcohol, Tobacco, and Firearms firearms traces are associated with less than half a percent of all federal firearms licensees (“FFLs”). See GLENN L. PIERCE ET AL., OFFICE OF ENFORCEMENT, U.S. BUREAU OF ALCOHOL, TOBACCO, AND FIREARMS, THE IDENTIFICATION OF PATTERNS IN FIREARMS TRAFFICKING: IMPLICATIONS FOR FOCUSED ENFORCEMENT TRAFFICKING 14-15 (Dec. 1995).

15. More than 300,000 guns were reported stolen in 1994; most were handguns. See MARIANNE W. ZAWITZ, BUREAU OF JUSTICE STATISTICS, GUNS USED IN CRIMES 6 (1995). It is generally assumed that many, perhaps most, stolen guns are not reported.

16. See Cook & Moore, *supra* note 12, at 268.

17. See *Keeping Handguns*, *supra* note 3, at 107.

18. See WRIGHT & ROSSI, *supra* note 10, at 193-97.

19. *Id.* at 214, 212-13 tbl. 11.

20. *Id.* at 18, 214.

conducted in four urban areas with high rates of youth gun violence, showed that eighty-six percent of incarcerated juveniles surveyed and thirty percent of male high school students surveyed had owned guns. Seventy percent of inmates and forty-one percent of students said that obtaining guns was "no trouble at all" and street prices for firearms were well below normal retail prices.²¹ Juveniles' guns came from a variety of sources: theft from individuals, houses, and stores; borrowing from friends and family; and purchase from friends, family, drug dealers, and gun stores.²² The survey could reveal little about the original source of guns bought on the street, whether, for instance, they were purchased or stolen. The researchers concluded that, given the reported frequency of both theft and transfer among friends and family, it was likely that "theft and burglary were the ultimate source of many of the guns acquired by the juveniles surveyed, but only occasionally the proximate source."²³

C. The Decoupling/Fear Story: A Tale of Two Markets

Running through recent research on youth violence is the powerful role of fear in driving youth gun acquisition.²⁴ For some years, it has been a commonplace that the decade-old surge in youth gun violence stemmed from inner-city crack cocaine trafficking.²⁵ There is reason to believe, however, that gun

21. See SHELEY & WRIGHT, *supra* note 7, at 5-6; JOSEPH F. SHELEY & JAMES D. WRIGHT, IN THE LINE OF FIRE: YOUTH, GUNS, AND VIOLENCE IN URBAN AMERICA 46 (1995); see also James D. Wright et al., *Kids, Guns, and Killing Fields*, SOC'Y, Nov./Dec. 1992, at 84, 86-87.

22. Christopher S. Koper and Peter Reuter argue that these features of the gun stockpile, gun flow, and illicit gun trafficking patterns will render illicit trafficking efforts, whether aimed at adults or youth, ineffective because of the difficulty of identifying and preventing gun trafficking transactions and transfers. See Koper & Reuter, *supra* note 3. Other conceptions of trafficking prevention suggest opportunities in addition to transaction-focused enforcement. See Mark Kleiman & Rebecca Young, *Factors of Production in Retail Drug Dealing*, URB. AFF. REV. 730 (1995); David M. Kennedy, *Guns and Youth: Disrupting the Market 2-10* (unpublished paper presented at the 45th Annual Meeting of the American Society of Criminology, Oct. 30, 1993). For accounts of how these frameworks have played out in street drug enforcement, see DAVID M. KENNEDY, NAT'L INSTITUTE OF JUSTICE, CLOSING THE MARKET: CONTROLLING THE DRUG TRADE IN TAMPA, FLORIDA 4-8 (Program Focus series, April 1993); Mark Kleiman, *Crackdowns: the Effects of Intensive Enforcement on Retail Heroin Dealing*, in STREET-LEVEL DRUG ENFORCEMENT: EXAMINING THE ISSUES 3-34 (Marcia R. Chaiken ed., 1988); Mark Kleiman & Kerry D. Smith, *State and Local Drug Enforcement: In Search of a Strategy*, in DRUGS AND CRIME 69-108 (Michael Tonry & James Q. Wilson eds., 1990); David M. Kennedy, *Fighting the Drug Trade in Link Valley*, Kennedy School of Government Case Program C16-90-935.0 4-7 (1990).

23. See SHELEY & WRIGHT, *supra* note 7, at 6.

24. SHELEY & WRIGHT, *supra* note 7, at 7; CARL S. TAYLOR, DANGEROUS SOCIETY 23 (1990); SCHOOL OF PUBLIC HEALTH, HARVARD UNIVERSITY, A SURVEY OF THE AMERICAN PEOPLE ON GUNS AS A CHILDREN'S HEALTH ISSUE iv-v (1993) (LH Research, Study 930018); SHELEY & WRIGHT, *supra* note 21, at 62-67; Peter Ash et al., *Gun Acquisition and Use by Juvenile Offenders*, 275 JAMA 1756-57 (1996); Wright et al., *supra* note 21, at 88.

25. See, e.g., UNDERSTANDING AND PREVENTING VIOLENCE 201-05 (Albert Reiss & Jeffrey Roth eds., 1995); Alfred Blumstein, *Youth Violence, Guns, and the Illicit-Drug Industry*, 86 J. CRIM. L. & CRIMINOLOGY 10 (1995); Jeffrey Fagan & Ko-lin Chin, *Violence as Regulation and Social Control in the Distribution of Crack*, in DRUGS AND VIOLENCE. RESEARCH MONOGRAPH OF THE NATIONAL INSTITUTE ON DRUG ABUSE 8 (Mario de la Rosa et al. eds., 1989); Jeffrey Fagan & Ko-lin Chin, *Initiation into Crack and Cocaine: A Tale of Two Epidemics*, 16 CONTEMP. DRUG PROBLEMS 579

acquisition is today not so closely linked to drug trafficking. In particular, it appears that the urban environment has become so threatening even for youth not involved in the drug trade that many are arming themselves (and engaging in other nominally self-protective behavior such as joining gangs)²⁶ for self-defense. We may thus be entering into a second phase of the impact of drugs and drug trafficking on troubled communities.²⁷

In the first phase, trafficking and competition among traffickers caused high levels of violence, just as occurred during Prohibition. This violence emerged from business interests and was instrumental in protecting these interests.²⁸ It also, however, profoundly escalated the level of fear and weaponry in affected communities.²⁹ Drug traffickers, many of them young and not particularly measured, armed themselves. The streets were the marketplace, so robberies were attempted, and business disputes were often settled, in public. Many traffickers were part-timers, in and out of the business, but once they had guns, they often kept and carried them. The trade was ruled by the same self-regulation that governs all illicit enterprises—those who offend get hurt³⁰—but since traffickers were numerous and widely distributed throughout the community, the gangland ethos of violence often came to govern even more ordinary interactions.

This new regime of guns and violence has created a very high level of fear among young men in affected communities.³¹ More than forty percent of the

(1989); Kennedy, *supra* note 2, at 11.

26. Young men are often motivated to join a neighborhood gang to protect themselves from violence or the threat of violence by rival gangs in proximate neighborhoods. See, e.g., JAMES DIEGO VIGIL, *BARRIO GANGS* 129-31 (1988); FELIX PADILLA, *THE GANG AS AN AMERICAN ENTERPRISE* 62-68 (1992).

27. See Kennedy, *supra* note 2, at 11, 12.

28. For more discussion on the systemic violence associated with drug market dynamics, see, for example, BRUCE D. JOHNSON ET AL., *TAKING CARE OF BUSINESS: THE ECONOMICS OF CRIME BY HEROIN USERS* 174-75 (1985); Paul J. Goldstein, *The Drugs-Violence Nexus: A Tripartite Conceptual Framework*, 15 J. DRUG ISSUES 493 (1985); Ansley Hamid, *The Political Economy of Crack-Related Violence*, 17 CONTEMP. DRUG PROBLEMS 31-78 (1990). Terry Williams, through his ethnography in youth cocaine trafficking circles in New York in the late 1980s, regularly found himself in settings he describes as follows: "The apartment is crowded with teenagers, all wearing half-laced sneakers and necklace ropes of gold. Doorbells ring every few minutes, white powder dusts table tops, jagged edge matchbook covers and dollar bills seem to flow from hand to hand. The talk is frenetic, filled with masterful plans and false promises. Everybody has a girl. Everybody has cocaine. Everybody has a gun." TERRY WILLIAMS, *THE COCAINE KIDS: THE INSIDE STORY OF A TEENAGE DRUG RING* 1 (1989).

29. See, e.g., Kennedy, *supra* note 2, at 15-17; Blumstein, *supra* note 25, at 22-32.

30. See Goldstein, *supra* note 28, at 497-501; Hamid, *supra* note 28, at 31-78.

31. One could describe some neighborhoods as having "tipped," from ones characterized by, and producing, more or less safe "street" conditions to ones characterized by, and producing, fear, aggression, and violence. Other analyses of "tipping" phenomena are Schelling's analysis of white flight, see THOMAS SCHELLING, *MICROMOTIVES AND MACROBEHAVIOR* 101-02 (1978), Crane's analysis of the effect of high-status workers in a neighborhood on the development of youth, see Jonathan Crane, *The Epidemic Theory of Ghettos and Neighborhood Effects on Dropping out and Teenage Childbearing*, 96 AM. J. SOCIOLOGY 1226 (1991). Gladwell's discussion of possible explanations for recent dramatic declines in crime in New York City, see Malcolm Gladwell, *The Tipping Point*, THE NEW YORKER, June 3, 1996, at 32, and Loftin's contagion model to explain growth in gangs and gang violence, see Colin Loftin, *Assaultive Violence as Contagious Process*, 62 BULL. N. Y. ACAD. MED. 550 (1984).

high school students surveyed by Sheley and Wright reported having been shot at or threatened with a gun; nearly half knew schoolmates who had actually been fired on.³²

Not surprisingly, these youths sometimes arm themselves as a means of self-defense. Sheley, Wright, and M. Dwayne Smith report that for the high-school students they surveyed, a population not heavily involved in drug trafficking, "the desire for protection and the need to arm oneself against enemies were the primary reasons to obtain a gun, easily outpacing all other motivations."³³ Nearly a quarter had done so, and more than a third carried a gun at least occasionally.³⁴

In such an environment, the "senseless" shootings that have become an urban commonplace should come as no surprise. These kids are armed, edgy, and believe that they cannot be insulted or walk away from a fight without irretrievably losing face and thereby risking additional victimization.³⁵ They are surrounded by violence, leading them to feel that they have few alternatives. They cannot get out of Dodge, nor is anybody making them check their guns at the edge of town. It is more surprising, perhaps, that there is not even more gun violence.

If this picture is correct, that is, if the youth gun problem has become "decoupled" from the drug and gang activity that sparked it some ten years ago, it is an important insight. It implies that measures aimed only at drug trafficking, gang activity, and serious offenders will not be sufficient responses to the problem. It also seems very likely, however, that drug trafficking, serious offenders, and gangs remain a core part of the problem. In Sheley and Wright's 1993 survey, gun possession was associated with drug activity, and the "seriously troublesome" inmates they surveyed were more likely than the students they surveyed to have owned guns, to have carried guns, to have had ready access to guns, to have owned assault-style weapons, to have owned sawed-off shotguns, to have owned semiautomatic pistols, to have owned large numbers of guns, and to have been involved (as both offenders and victims) in violence. Inmates who had trafficked in guns were more involved in gun ownership, gun use, and the commission of other crimes. Those who had gone out of state to buy guns for resale were even more involved.³⁶

Conflicts between street gangs have long been noted to fuel much of the youth violence in major cities.³⁷ Sheley and Wright found gang membership

32. See SHELEY & WRIGHT, *supra* note 7, at 4.

33. See Wright et. al., *supra* note 21, at 88.

34. *Id.*

35. See John Rich & David Stone, *The Experience of Violent Injury for Young African-American Men: The Meaning of Being a "Sucker,"* 11 J. GEN. INT. MED. 77-82; Elijah Anderson, *The Code of the Streets*, ATLANTIC MONTHLY, May 1994, at 80-94.

36. See SHELEY & WRIGHT, *supra* note 21, at 64.

37. See, e.g., CAROLYN R. BLOCK & RICHARD BLOCK, NAT'L INST. OF JUSTICE, STREET GANG CRIME IN CHICAGO 1-8 (1993); G. DAVID CURRY ET AL., NAT'L INST. OF JUSTICE, GANG CRIME AND LAW ENFORCEMENT RECORDING KEEPING 3-7 (1994); WALTER B. MILLER, VIOLENCE BY YOUTH

associated with gun ownership, gun theft, gun sale, gun sharing, and other crimes, and with norms promoting gun ownership and use.³⁸ In surveys of arrestees in several cities, Scott Decker and Susan Pennell found gun ownership to have a higher correlation with gang membership than with drug dealing.³⁹

If this picture is correct—if a relatively small number of serious, often gang-involved offenders is one of the main drivers of a larger cycle of fear, gun acquisition, and violence—then gun-market approaches to the youth gun violence problem face a number of serious difficulties. Market-focused interventions are likely to be aimed at reducing access to guns, raising prices, increasing the likelihood that youth will “cash in” the value their weapons represent, and increasing consumers’ and dealers’ perceptions of vulnerability to enforcement aimed at criminal gun-market activity.⁴⁰ In the market driven largely by fear, and perhaps also by style and status issues, these steps may be powerful. In the market driven by criminal behavior, gang membership, and, perhaps, settled aspects of character, they are less likely to be powerful. The serious offender population will tend to be more determined, more criminal, and more likely to need guns for criminal activity and especially drug-market activity, will have greater access to more sources of guns, and, in all likelihood, will be more able to afford the higher prices of firearms. One must fear that these youths will turn to sawed-off long guns if their supplies of handguns are interrupted, a fear supported by Sheley and Wright’s research.⁴¹

These are also, unfortunately, the youth least likely to be influenced by such demand-side interventions as in-school violence reduction curricula, anti-gun violence community campaigns, and the like, particularly after they have already begun to exhibit serious criminal activity.⁴² It would be nice, therefore, if one could invent either demand-side or supply-side interventions likely to have an impact on this population.

GANGS AND YOUTH GANGS AS A CRIME PROBLEM IN MAJOR AMERICAN CITIES 30-44 (1975); Malcolm Klein & Cheryl Maxson, *Street Gang Violence*, in VIOLENT CRIME AND VIOLENT CRIMINALS 198-203 (Neil A. Weiner et al. eds., 1989).

38. See SHELEY & WRIGHT, *supra* note 21, at 95-118.

39. SCOTT DECKER & SUSAN PENNELL, ARRESTEES AND GUNS: MONITORING THE ILLEGAL FIREARMS MARKET 1 (1995).

40. See, e.g., Kennedy, *supra* note 2, at 17-21; Philip J. Cook et al., *Regulating Gun Markets*, 86 J. CRIM. L. & CRIMINOLOGY 59-92 (1995); Philip J. Cook & James A. Leitzel, “Perversity, Futility, Jeopardy”: An Economic Analysis of the Attack on Gun Control, 59 LAW & CONTEMP. PROBS. 91 (Winter 1996).

41. A parallel on all these counts can be drawn with those adult felons Wright and Rossi identified as “handgun felons” in their work in the 1980s on adult gun criminals. See WRIGHT & ROSSI, *supra* note 10, at 220-23.

42. For an overview of the difficulties of intervening in the behavior of chronic youth offenders and some promising approaches, see TED PALMER, THE RE-EMERGENCE OF CORRECTIONAL INTERVENTION 108 (1992); Troy L. Armstrong, *Introduction*, in INTENSIVE INTERVENTIONS WITH HIGH RISK YOUTHS 1 (Troy L. Armstrong ed., 1991).

II

THE BOSTON GUN PROJECT

It is these core ideas—the key role of illicit markets in supplying youth with guns, the possible role of fear and self-defense in driving gun acquisition, and the problem of a small core of serious youthful offenders—that have framed the Boston Gun Project.

The work of the project's interagency working group, which has met roughly biweekly since early 1995, in the production of research and analysis, in the design of the intervention, and in the implementation of the intervention is perhaps unprecedented in Boston for any substantive crime problem and has resulted in a provocative sharing of information, perspective, and institutional capacities. Membership in the working group currently consists of the Boston Police Department, the Bureau of Alcohol, Tobacco, and Firearms ("BATF"); the U.S. Attorney for the Commonwealth of Massachusetts, the Suffolk County District Attorney, the Massachusetts Department of Probation, City of Boston youth outreach workers, the Massachusetts Department of Parole, City of Boston school police, and the authors.⁴³ Data have been collected from these and other agencies; members of the working group (and other agency personnel) have shared their views and experiences; and interviews have been conducted with young probationers to learn about youth behavior, their environment, and their acquisition, carrying, and use of weapons.

The result has been new knowledge and new operational ideas, and a strategy based on both that is currently being implemented by working group participants. Also emerging is an understanding of the importance of a small core group of offenders in driving the city's youth violence problem and a new possibility for regulating their behavior through demand-side interventions.⁴⁴

43. Additional assistance has been provided by the following: the Boston School Department; the Massachusetts Department of Youth Services; the Office of the Attorney General for the State of Massachusetts; the Massachusetts Department of Public Health; and others. Members of the working group were as follows: William Johnston, Paul F. Joyce Jr., Gary French, Fred Waggett, Robert Fratalia, and Jim Jordan of the Boston Police Department; Phil Tortorella and Lennie Ladd of the BATF; William Stewart and Richard Skinner of the Department of Probation; Timothy Feeley and Ted Heinrich of the Office of the U.S. Attorney; Hugh Curran, Elizabeth Keeley, and John Burke of the Suffolk County District Attorney's Office; Tracy Litthcut of the Boston Community Centers; Tim Zadai of the Department of Parole; James MacGillivray of the Crime and Justice Foundation/Project Turnaround; and David M. Kennedy, Anne Piehl, and Anthony Braga of the Kennedy School of Government. Additional participation and support has been provided by, especially, Commissioner Paul Evans and Superintendent James Claiborne of the Boston Police Department, Special Agent in Charge Jeff Roehm of the BATF, Deputy Commissioner Ron Corbett of the Department of Probation, Research Director Scott Taberner of the Department of Youth Services, U.S. Attorney Donald Stern, Suffolk County District Attorney Ralph Martin, Catherine Barber and the staff of the Weapon Injury Surveillance Project at the Department of Public Health, and Ken Caldwell of the Boston School Department.

44. This traditional supply/demand framework is useful up to a point, but ultimately, it is not as particular as one might wish. For analyses of illicit markets using more differentiated frameworks, see Kleiman & Young, *supra* note 22, at 731-46; David M. Kennedy, *Guns and Youth: Disrupting the Market* 1-20 (Oct. 1993) (unpublished manuscript, on file with author).

These demand-side findings appear to be, if anything, more promising than the supply-side possibilities on which the project originally intended to focus. We begin, therefore, with the demand side. We will then treat our supply-side findings and the operational ideas that flow from them. Finally, we will present a coordinated strategy that links both demand- and supply-side interventions.

A. Youth Gun Violence In Boston

Boston's youth violence problem is, at least in its broad aspects, typical of that facing other cities. Measured as a homicide problem, it is confined almost entirely to the city's poor black neighborhoods, chiefly Roxbury, Dorchester, and Mattapan (Figure 1),⁴⁵ is concentrated among fifteen to twenty-one year old black males (Figure 2 and Table 1), is largely a firearm problem (seventy-two percent of all homicide victims twenty-one years old and under between 1990 and 1994 were killed with firearms), and generally represents around a third of the city's total homicides, with a decline to around a quarter in 1994 (Figure 3).

Analysis of youth emergency room visits for non-fatal gunshot and sharp instrument wounds showed that injuries are both more numerous in the neighborhoods affected by high levels of gun homicide and exhibit a different pattern. Outside the affected neighborhoods, gunshot woundings are greatly outnumbered by sharp instrument woundings. For instance, in South Boston the count of gunshot injuries to sharp instrument injuries was 2:14 for 1992 to 1994. Inside the affected neighborhoods, however, numbers of gunshot woundings draw equal to or even exceed sharp instrument woundings. For instance, in Roxbury, the count of gunshot injuries to sharp instrument injuries for 1992-1994 was 129:118.⁴⁶ This is evidence of both a more severe problem and a different pattern of weapon use, and it is possible evidence of a different dynamic driving weapon use.

Both young residents and practitioners paint a picture that fits with both the "decoupling/fear" and the "serious youth offender" hypotheses. Youth interviewed recently in Boston portray themselves as choosing between living an ordinary life—including having friends and going out at night—with attendant risks of gun violence, or isolating themselves from friends and community to avoid those risks.⁴⁷ Police, probation officers, gang streetworkers,⁴⁸ and youth

45. We would like to thank Charles Ellis of MaconUSA for his generous help in facilitating certain of the mapping tasks in this project. All tables and figures appear in the appendix, which begins on page 184.

46. These figures were drawn from the Massachusetts Department of Public Health's Weapon-Related Injury Surveillance System ("WRISS"). The Roxbury figures sum zip code-based figures for Roxbury, Grove Hall, and Roxbury Crossing. For 1992 to 1994, all zip code areas of Boston with at least one gang (as described *infra*) had a gunshot to sharp instrument wound count of 337:380; nongang zip code areas a count of 21:117. Special WRISS runs for Boston were provided by the Department of Public Health to the authors and are available upon request.

47. Youth interviewed have been a convenience sample of probationers, and thus undoubtedly have views and experiences biased toward those of at-risk and criminally involved youth. Youth were introduced to the authors by probation officers or, in one case, the director of a day-reporting program

describe a world in which a relatively small number of very scary kids profoundly affected the nature of community life and the behavior of other kids. Indeed, police gang officers and probation officers said flatly at the outset of the project that they knew essentially all those youth who had killed, or were killed, by gun violence. Probation officers said that it was rare to lose a kid to gun violence who had not previously been on probation, and the dark joke among gang officers was whether it would be ethical to take out life insurance on certain kids. Their experience was that youth tended to cite self-defense to explain their gun acquisition; Boston police gang officers spoke of the recent phenomena of young men "with a gun in one pocket and a scholarship in the other."

Practitioners had a very particular view of what was going on in the city. Some of their convictions can be captured more or less as follows: The gun violence problem was a gang problem, at least insofar as the worst offenders driving a large cycle of fear, gun acquisition, and gun use were gang members; most victims and offenders were gang members, known to authorities, and had been formally court-involved, sometimes but not usually on gun charges; most violence was not about drugs and drug-market issues or about turf but was more "personal;" acts of violence involving members of different gangs often sparked vendetta-like "beefs" that were assumed by both (or several) gangs; most of the youth involved were not "bad" or inherently dangerous, and many were participating because gang membership had become a means of self-protection (albeit with its own serious risks); and only a tenth or so of gang members were consistently dangerous and frightening, and they set the tone of street life both for the other members of their gangs and, to a lesser but significant extent, for the community as a whole.

It is worth noting that while Boston authorities use the word "gang," as we will here, it is in some sense a term of convenience meaning in practice only "self-identified group of kids who act corporately (at least sometimes) and violently (at least sometimes)."⁴⁹ What "gang" means in Boston bears little resemblance to what it means in, for instance, Chicago and Los Angeles.⁵⁰ Thus the following findings, as far as we know, apply only to Boston. But the Boston results were quite striking.

and interviewed either individually or in focus groups during late winter 1994/ summer 1995. Statements attributed to youth herein are generalizations drawn by the authors from these interviews.

48. Statements herein attributed to agency personnel emerged during the working group process described *infra*. This process included not only formal working group meetings but also ride-alongs with police officers, informal one-on-one conversations, and the like. Nearly all of the process giving rise to the basic description of the gun/gang universe in Boston, as related *infra*, occurred during the late winter, summer, and fall of 1995.

49. We recognize that defining the term "gang" is a very complex issue. See Richard A. Ball & G. David Curry, *The Logic of Definition in Criminology: Purposes and Methods for Defining "Gangs."* 33 CRIMINOLOGY 225 (1995).

50. This commonplace finding is critical to the analysis and comprehension of gang and group-related youth crime and violence. The character of criminal and disorderly youth gangs and groups varies widely both within and across cities. See CURRY ET AL., *supra* note 37, at 2.

B. The Demand Side: Youth, Crime, and Gangs

1. *Victims and Offenders.* We began our analysis of these issues by examining two populations: One population of 155 youth twenty-one years old and under who had been killed by guns or knives in the five years from 1990 to 1994,⁵¹ and one of the 125 youth twenty-one years old and under known to have killed, by gun or knife, someone twenty-one years old and under in the same period. We chose twenty-one as a cutoff age somewhat arbitrarily; we were primarily interested in the "youth homicide problem," which is clearly not limited to legal juveniles (in Massachusetts, those under seventeen), but we did not wish to confuse our analysis by extending it too far into age groups associated with more traditional criminal activity.⁵² We focused on gun homicides for obvious reasons. We included knife homicides because we suspected that guns and knives were to some extent substitutable for one another, and because our larger interest was in youth homicide as such.⁵³

First, analysis of the 155 victims and of the 125 known offenders indicated a population with a high level of prior criminal involvement. Of the 155 victims, seventy-five percent (117) had been arraigned in Massachusetts courts prior to their killings; nineteen percent (twenty-nine) had been committed to a Massachusetts Department of Youth Services ("DYS") facility or an adult correctional facility; forty-two percent (sixty-five) had been sentenced to probation; and fourteen percent (twenty-two) were on probation when they were killed. The 117 victims with criminal histories had, collectively, been charged with an average of 9.5 offenses per victim: 173 drug offenses; 291 property offenses; 225 armed violent offenses; 132 unarmed violent offenses; seventy-eight firearms offenses; twenty offenses involving other weapons; 196 disorder offenses; and two homicides. Of the 125 known murderers, seventy-seven percent (ninety-six) had, before committing their homicides, been arraigned in Massachusetts courts, twenty-six percent (thirty-three) had been committed to a DYS or adult facility, fifty-four percent (sixty-eight) had been sentenced to probation, and twenty-six percent (thirty-three) were on probation when they killed. The ninety-six offenders with criminal histories had, collectively, been charged before committing their homicides with an average of 9.7 offenses per killer: 141 drug offenses; 248 property offenses; 160 armed violent offenses; 151 unarmed violent offenses; 71 firearms offenses; 8 offenses

51. This sample excluded four obviously non-"street" crimes that otherwise fit this profile (one accident, one suicide, and two fetal homicides).

52. Given the conclusion that emerged from our research that we were dealing primarily with a gang-involved population, an age cut-off as high as 24 would probably have been realistic; according to our practitioner partners, at around that age, male gang members in Boston seem to "age out" of gangs or change their pattern of gang behavior toward somewhat calmer money-making activities.

53. As our interest expanded to include gang homicide, it became clear that it would have been appropriate to include homicide by other means as well. However, our larger analysis would probably not have been overly influenced by doing so. This would have involved an additional 26 incidents or 14% of what would then have been a total of 181 incidents.

involving other weapons; 146 disorder offenses; and 3 prior homicides.⁵⁴ More than thirty percent of all victims and offenders—and more than forty percent of victims and offenders known to the criminal justice system—had ten or more arraignments⁵⁵ (Table 2).

It is difficult to compare these victim/offender profiles to baseline information on criminal histories for the youth in the three Boston neighborhoods where most of these murders occurred.⁵⁶ We believe criminal involvement for both victims and offenders to be well above the norm. Note, however, that the line of inquiry we are pursuing is not the usual "dangerous offender" approach to identifying criminals at high risk for serious violence. In the dangerous offender approach, the goal is to highlight future violent offenders by finding patterns in their records. Thus, the question of the distinguishability of the criminal careers of violent and nonviolent offenders is crucial.⁵⁷ Our inquiry, however, explores the argument of practitioners in the Boston Gun Project working group that they *were* already more or less aware of the youth at high risk for violent offenses, *and* that these youth are high-rate offenders (and probationers and gang members)—nearly the reverse, in fact, of the dangerous offender strategy.

2. *Gangs.* Next, we estimated the number and size of the city's gangs and mapped their turf, antagonisms, and alliances.⁵⁸ This mapping was performed

54. These arraignment histories were generated by running victims' and offenders' names through the Massachusetts Criminal Offender Record Information System. Thus, any non-Massachusetts offenses would not have been captured. A methodological note on this process, including assignment and coding rules, is available from the authors upon request.

55. The worst 5% and worst 10% of the 125 offenders were responsible for 20% and 36% of 1,009 total arraignments, respectively. The worst 5% and worst 10% of the 155 victims were responsible for 17% and 33% of 1,277 total arraignments, respectively. Both concentration of offending and "skewness" is characteristic of general and offending populations. See MARVIN E. WOLFGANG ET AL., *DELINQUENCY IN A BIRTH COHORT* 88-105 (1972); PETER GREENWOOD, RAND CORPORATION, *SELECTIVE INCAPACITATION* 11-26 (1982); Alfred Blumstein, *Crime Control Strategies Using Criminal Career Knowledge*, in *CRIMINAL CAREERS AND CAREER CRIMINALS* 31-54 (Alfred Blumstein et al. eds., 1986). There is surprisingly little research on the actual criminal backgrounds of homicide victims and offenders. However, it has long been known that homicides are likely to take place among family, intimates, and friends. See Colin Loftin et al., *An Attribute Approach to Relationships Between Offenders and Victims in Homicide*, 78 J. CRIM. L. & CRIMINOLOGY 259 (1987). Homicides are also likely to be part of a pattern of continuing violence (especially, but not exclusively, for domestic homicide). See Angela Browne, *Assault and Homicide at Home: When Battered Women Kill*, 3 ADVANCES IN APPLIED SOC. PSYCHOL. 57 (1986). Homicide offenders are also likely to commit their murders in the course of long criminal careers. See BUREAU OF JUSTICE STAT., U.S. DEPT OF JUSTICE, *MURDER IN LARGE URBAN COUNTIES* 8 (1988). Homicide victims and offenders are even likely to share networks and similar social milieus. See James Garofalo, *Reassessing the Lifestyle Model of Criminal Victimization*, in *POSITIVE CRIMINOLOGY* 23-42 (Michael Gottfredson & Travis Hirschi eds., 1987); J. Lauritsen et al., *The Link Between Offending and Victimization Among Adolescents*, 29 CRIMINOLOGY 265 (1991).

56. The systems do not permit, for instance, selection of individuals by age, neighborhood of residence, or probation status.

57. See GREENWOOD, *supra* note 55, at x-xiv; Blumstein, *supra* note 55, at 109-54.

58. For a complete discussion of the mapping exercise, see David Kennedy et al., *The (Un)Known Universe: Mapping Gangs and Gang Violence in Boston*, in *CRIME MAPPING AND CRIME PREVENTION* (David Weisburd & J. Thomas McEwen eds., forthcoming).

by the authors using input from the following sources: the Boston Police Department's Youth Violence Strike Force, probation officers, especially officers involved in an innovative Boston-focused community probation program,⁵⁹ and city "streetworkers," gang prevention and mediation specialists attached to the mayor's office. There was considerable agreement among the three groups, with the streetworkers estimating marginally higher gang memberships than the police and probation officers. The researchers did not specify what "gang" meant or what was to count as a gang; however, in practice, the practitioners used the conception mentioned above. Remarks such as "[group in question] isn't a gang anymore, they just sell drugs" were common. As this remark suggests, Boston's gang landscape is dynamic. According to street-level authorities and gang members themselves, gangs change form, appear, and disappear, albeit slowly.⁶⁰

Our gang-mapping exercise focused on the Boston neighborhoods at high risk for youth violence. According to this process, Boston has some sixty-one gangs, with 1,100-1,300 members, in Roxbury, Dorchester, Mattapan, Hyde Park, the South End, and Jamaica Plain. Only a few of these gangs reach the sixty to 100 member range, with membership of less than ten not uncommon (Table 3). Gang membership estimates were not limited to those twenty-one years old and under, but encompassed all those believed to be active gang members. In order to estimate the proportion of Boston youth involved in gangs, we compared the membership estimates to 1990 Boston census data for the youth fourteen to twenty-four years old. Using this method, the 1,100-1,300 youth involved represent only about three percent of the youth in those neighborhoods, and only about one percent of Boston's youth.⁶¹

Geographically, the gang landscape is highly balkanized (Figure 4). Gang turfs often occupy only a piece of a block and rarely take up more than a few blocks; some gangs claim only a particular (and often small) apartment building and the street immediately around it.⁶² Network constructions of gang conflicts show complicated patterns (Figure 5). Several aspects, however, are particularly

59. This program, called "Nightlite," puts probation officers on patrol, accompanied by police officers, in the evening in Boston's high-risk neighborhoods.

60. Street gangs and gang activity tends to occur in cycles according to seasonal, group dynamic, and epochal variations; these variations have been documented in Boston, New York, Chicago, Los Angeles, Baltimore, and Washington, D.C. See Malcolm W. Klein, *Street Gang Cycles*, in CRIME 217 (James Q. Wilson & Joan Petersilia eds., 1995).

61. US Census data for Boston in 1990 show 123,791 youths city-wide in the 14-24 age group ($1,300/123,791=0.01$), and 49,794 in all census neighborhoods (Hyde Park, Jamaica Plain, North Dorchester, Roxbury, South Dorchester, South End) with at least one gang ($1,300/49,794=0.026$). The small proportion of Boston's youth involved in gangs is consistent with estimates of youth participation in gangs from other cities. See Finn-Aage Esbensen & David Huizinga, *Gangs, Drugs, and Delinquency in a Survey of Urban Youth*, 31 CRIMINOLOGY 565-87 (1993); IRVING SPERGEL, THE YOUTH GANG PROBLEM: A COMMUNITY APPROACH 30-33 (1995).

62. The sum total geographic area of the 61 gang turf areas is less than 4% of the City of Boston. About 25% of selected crimes and calls for police service (youth homicide, weapons offenses, simple and aggravated assault, drug arrests, armed robbery, and "shots fired" calls) occur inside the gang areas. See Kennedy et al., *supra* note 58.

noticeable: Certain particularly significant "nodes" (Castlegate, Academy) seem evident, and identifiable, more or less pervasive, but often quiescent rivalries outnumber "live" and active rivalries.

3. *Gangs and Homicide Victimization.* Finally, the team of police, probation, and streetworkers examined the five-year list of homicide victimizations to see which were connected to this universe of gangs and gang disputes. Some sixty percent of the homicides can, with some confidence, be attributed to the gangs.⁶³ This is a conservative estimate, since cases in which the circumstances were unknown or ambiguous were considered not gang-related.⁶⁴ The majority of the homicides identified as gang-related were not about drugs, money, turf, or other issues in which the violence could reasonably be construed as instrumental.⁶⁵ They were usually, as both gang members and street-level city authorities hold, personal and vendetta-like.⁶⁶ (This does not, of course, mean that current vendettas might not have started, at some point, over drug- and money-related issues, only that if they did have such a genesis, they had taken on independent life by the time our examination took place.) They were also, for the most part, not "senseless" or random, at least to the participants.

63. These classifications are not based on official information about homicides and do not represent the official position of any agency or any part of any agency.

64. Law enforcement agencies in different cities use different definitions for "gang-related" crime, which affect the amount of gang-related crimes reported. For example, Los Angeles police define crime as "gang-related" when gang members participate, regardless of motive; Chicago police use a more restrictive definition and classify homicides as "gang-related" only if there is a gang motive evident. See Cheryl Maxson & Malcolm W. Klein, *Street Gang Violence: Twice as Great or Half as Great?*, in *GANGS IN AMERICA* 6 (C. Ronald Huff ed., 1990). For our purposes, homicides were considered connected to gangs if (1) the murderer was a gang member and (2) the motivation behind the murder was known or believed to be connected to gang activity, or if (1) the victim was a gang member and (2) the motivation behind the murder was known or believed to be connected to gang activity. Thus, the killing of a gang member by another gang member in a dispute over contested turf would be considered gang-related; the killing of a non-gang bystander during the same dispute would be considered gang-related; the killing of a gang member by a non-gang member during a robbery attempt would not be considered gang-related. Most of the homicides about which police, probation officers, and streetworkers were knowledgeable fell reasonably clearly into these categories. Those homicides about which they were not knowledgeable were considered not gang-related. The assignment process also suggested that the original pool of 155 homicides could arguably be reduced, since some of the killings represented were not of the "street" character the gun project is designed to address; these include, for instance, domestic homicides committed by non-youth.

65. Most research on gang violence has found that violent behavior tends to be expressive rather than instrumental. See Scott Decker, *Collective and Normative Features of Gang Violence*, 13 *JUST. Q.* 243 (1996). However, Sanchez-Jankowski's ten-year observational study of gangs in Los Angeles, New York City, and Boston argued that gangs are purposive organizations and much gang violence is instrumental in nature. See MARTIN SANCHEZ JANKOWSKI, *ISLANDS IN THE STREET* 176-80 (1991).

66. Research has found most gang violence to be retaliatory in nature. See, e.g., BLOCK & BLOCK, *supra* note 37, at 8; SCOTT DECKER & BARRICK VAN WINKLE, *LIFE IN THE GANG: FAMILY, FRIENDS, AND VIOLENCE* 186 (1996); Klein & Maxson, *supra* note 37, at 9. Colin Loftin argues that a contagion model can be used to explain growth in gangs and gang violence. Retaliatory violent acts and threats of violence support the spreading and growth of gangs within and across neighborhoods. Three conditions must be present for contagion to occur: a spatial concentration of assaultive violence, a reciprocal nature to assaultive violence, and an escalation in assaultive violence. See Loftin, *supra* note 31, at 550-55.

They had a history, however absurd to observers, and the episode was part of a larger story.⁶⁷

4. *The Larger Picture.* A clear picture thus emerges. Most, though not all, of Boston's young homicide victims and offenders emerge from a universe of gang membership and activity; they are high-rate criminal offenders⁶⁸ who are known to local authorities, institutionally and personally, and they move in a universe of gang membership, geography, antagonisms, and alliances which, while complicated, is to a considerable extent apprehensible to close outside students. These sixty-one gangs and the three percent of the local youth they represent are clearly central players in the city's youth gun problem.

As we shall see, this was a fundamentally positive discovery, since it arguably lends itself to a powerful set of interventions that would not be effective if homicide offending and victimization were more diffusely distributed among nongang and noncriminal youth. It also raised other serious concerns, however, principally that the public and even local authorities might conclude that if youth homicide in the city consisted primarily of "players" killing one another, then perhaps it was not so great a problem after all.

The working group was prepared to say several things in response to such a reaction. First, gang members do not deserve to die, and gang members cannot be allowed to kill. Second, the community impact of the youth homicide problem was dire and was affecting both adults and young people across whole neighborhoods. Additionally, the working group sought to reiterate its basic conviction that much gang formation and youth gun acquisition and use was spurred by fear. While gang crime and gun violence is unacceptable and has to be stopped, the choice of many young people to join gangs and get guns is not impossible to understand. Once they do so, it is clear, they are at very high

67. In a recent instance, a long-time gang member was wounded by his best friend's sister's boyfriend in a cap to a dispute that had run for the better part of two years. The sister would feud with her brother and call her boyfriend in for help; the boyfriend and brother would argue and the gang member would get involved out of solidarity with his friend; that made him the boyfriend's enemy, and the boyfriend and the gang member had been shooting at each other intermittently for the duration of the dispute. Wounded and on the mend, the gang member told his probation officer he was going to kill the boyfriend. The probation officer suggested police intervention as an alternative, which the gang member accepted. He was found shot in his bed not long thereafter.

68. Gang members are involved in far more delinquent and criminal behavior than their non-gang counterparts. See, e.g., Esbensen & Huizinga, *supra* note 61, at 565-87; BLOCK & BLOCK, *supra* note 37, at 7; JOHN HAGEDORN, PEOPLE AND FOLKS 99-105 (1988); Jeffrey Fagan, *Social Processes of Delinquency and Drug Use Among Urban Gangs*, in GANGS IN AMERICA 75 (C. Ronald Huff ed., 1990); Jeffrey Fagan, *The Social Organization of Drug Use and Drug Dealing Among Urban Youth*, 27 CRIMINOLOGY 633 (1989); Malcolm Klein et al., *The Impact of Police Investigation on Police Reported Rates of Gang and Non-gang Homicides*, 24 CRIMINOLOGY 489 (1986); Maxson & Klein, *supra* note 64, at 202-03; Terrance Thornberry et al., *The Role of Juvenile Gangs in Facilitating Delinquent Behavior*, 30 J. RES. CRIME & DELINQ. 55 (1993).

The criminal behavior of gang members has also been described as "cafeteria-style" offending with gang members engaged in a wide range of illicit activity, ranging from minor property and disorder crimes to serious and violent offenses. Our somewhat different finding, that youth homicide victims and offenders with a high likelihood of gang involvement also display cafeteria-style offending, is nonetheless consistent. See also HAGEDORN, *supra*; Fagan (both), *supra*; Klein & Maxson, *supra*.

risk—on the order of a one in seven chance—of dying by gang violence.⁶⁹ This is a dynamic for which many of the people involved are not entirely responsible and from which they should be protected. In practice, it was virtually never necessary to deploy these arguments except in response to community and agency respondents who were themselves concerned that others in the city might not be concerned about gang member-on-gang member violence.

III

A TACTIC AND A STRATEGY: COERCED USE REDUCTION

The facts that youth who kill and are killed are often known to the police and probation officers, act with their fellows in groups, and tend to commit a variety of crimes, often in a rather public fashion, offers a certain amount of leverage. This basic outline had long been known to the city's law enforcement authorities and had been the basis for a largely arrest-oriented strategy aimed at gang members. "The tactic," according to one gang officer, "is just to get them, get them, get them and finally build up such an arrest record that finally [the Suffolk County District Attorney's Office] will direct-indict them and put them away."⁷⁰ Reconsidering these facts and the limits of the traditional enforcement approach led the Boston Gun Project Working Group to a possible strategic innovation.

On occasion, the Boston Police Department has mounted a special kind of operation when gang activity erupted into its most vicious mode, that is, when the gun homicides, assaults, and use (brandishing, expressive shooting, and the like) resulted in so many deaths and injuries and were such powerful sources of general community fear.⁷¹ These special operations have had three essential elements. One is a focus on all available legal enforcement levers. The Department's Youth Violence Strike Force, in conjunction with probation officers and other outside agencies, has pursued the aggressive maintenance of order with the gangs. Gang members are prevented from publicly dealing and using drugs, and from committing minor legal violations like driving unregistered cars and public drinking. They are forced to observe strictly their terms

69. We arrive at this estimate by noting that there are, on average, about 20 gang members killed each year, for an annual homicide victimization risk of 1.5% ($20/1300=0.0154$), or 1,500/100,000. Taking a hypothetical gang membership "spell" at 9 years, between the ages of 16-24, gives us a homicide victimization risk of 14%, or 1:7. This is, of course, crude; not all gang members are equally at risk for victimization, not all will be gang members as long (or as briefly) as 9 years, and the size of our gang pool may well change over time. It is certainly true, however, that gang membership is extraordinarily risky. Exactly how much of this risk is due to self-selection into gangs, and how much to the dynamics of gang life, remains difficult to determine.

70. Grace Suh, *Violent Crime in Boston and the Response of the Boston Police Department: An Evaluation of the Anti-Gang Violence Unit* (unpublished policy analysis exercise, Kennedy School of Gov't, Harvard University 1993).

71. For a discussion of gangs and gang violence as sources of community fear and dread, see JACK KATZ, *THE SEDUCTIONS OF CRIME* 128-38 (1988).

of probation and parole, which can include school attendance, strict curfews, and area restrictions. Additionally, gang members are subject to service of outstanding warrants and the like. Because the members of particular gangs are fairly well known to police, probation officers, and streetworkers, and because these officials can readily gather more intelligence as required, these actions are carefully focused on active gang members and often on those gang members most deeply involved in the active disputes. Thus, uninvolved youth do not seem to be adversely affected. The second element is an explicit communication campaign, often carried out face-to-face between police officers and gang members, to deliver the message that it is violence that has provoked this unusual, heightened activity, and that it will take an end to the violence to make it stop. Third, gang mediation specialists are deployed and other social services mobilized. The gun violence seems invariably to stop. One such operation in Dorchester's Wendover Street area resulted in not only the suppression of a severe gang violence problem but also the surrender of over a dozen handguns.

While this approach has been used infrequently, we believe that it might undergird a city-wide violence and gun use reduction strategy. The aim will be to make this concerted, interagency response the norm where gang violence is concerned, to make gang members understand that this is now the case, and to back it up with a predictability, speed, and weight that will eventually prevent gang violence even when police and other authorities are not present. The goal, unlike most other enforcement-oriented "suppression" approaches, will not be to attack or eliminate gangs as such, or to prevent all gang-related crime; it will be explicitly focused on violence and violence prevention.⁷²

To that end, the gun project working group has designed a strategy that will involve heightened surveillance for shooting and other selected incidents, and allow rapid identification of violence and violent groups. This operation will be coordinated among the agencies represented on the Boston Gun Project Working Group, with a correspondingly large menu of available interventions and sanctions (from probation curfew checks to federal prosecution). It will be implemented in close coordination with a communications strategy designed to inform at-risk youth unambiguously of the new rules applicable in Boston: no violence, or else face powerfully enhanced enforcement attention. Offending youth will not, of course, be offered protection or a "pass" for criminal activity in exchange for foregoing violence (and ordinary "baseline" police, probation, and other such activity will continue), but they will be made to understand that violence will bring swift and comprehensive attention. District patrol officers will be incorporated into each "calming" operation and will continue after the special interagency teams have moved on. If violence reoccurs, the interagency focus will be renewed.

72. See Malcolm W. Klein, *Attempting Gang Control by Suppression: The Misuse of Deterrence Principles*, in *THE MODERN GANG READER* 88-111 (Malcolm W. Klein et al. eds., 1995).

In effect, the police and other authorities are admitting that they cannot quell all the illegal activity connected with gangs everywhere in the city, all of the time. They will, however, be making it plain to gangs that they can stop it at any *particular* place at any *particular* time,⁷³ and that violence will henceforth be the chief determinant of how those resources are allocated.⁷⁴ Interestingly, this policy will move any impact of the strategy beyond both gun violence and youth violence to include gang violence as such, with prospective impact on both gun and nongun violence committed by older gang members as well.

A. Communicating the Strategy: Marketing Deterrence

The working group's policy is, in its broadest sense, a classic deterrence strategy.⁷⁵ Boston's authorities will not be able to prevent gang violence unless gang members believe that unpleasant consequences will follow on violence and gun use and choose to change their behavior. It is thus crucial that gang youth

73. Research has found that police officers can be successful in shutting down illicit activity in specific high crime areas. Specifically, intensive law enforcement efforts have been found to be effective in controlling drug markets and hot spots of firearm violence. See KENNEDY, CONTROLLING THE MARKET, *supra* note 22, at 4-8; Lawrence W. Sherman & Dennis P. Rogan, *The Effects of Gun Seizures on Gun Violence: "Hot Spots" Patrol in Kansas City*, 12 JUST. Q. 755 (1995); David Weisburd & Lorraine Green, *Policing Drug Hot Spots: The Jersey City Drug Markets Analysis Experiment*, 12 JUST. Q. 711 (1995).

74. When this portion of the strategy was presented to the Boston Police Department command staff, one senior officer observed that this was a familiar idea. In fact, it is what the department has always done when a police officer is wounded. This raises the interesting question of how, in fact, it became a norm in criminal circles that police officers were for the most part off limits. One suspects that his account explains this.

75. Much of the literature evaluating deterrence focuses on the effect of changing the certainty, swiftness, and severity of punishment associated with certain acts on the prevalence of those crimes. See, e.g., Samuel Cameron, *The Economics of Crime Deterrence: A Survey of Theory and Evidence*, 41 KYKLOS 301 (1988); Philip J. Cook, *Punishment and Crime: A Critique of Current Findings Concerning the Preventive Effects of Punishment*, 41 LAW & CONTEMP. PROBS. 164 (Winter 1977); see also Steven D. Levitt, *Why Do Increased Arrest Rates Appear to Reduce Crime: Deterrence, Incapacitation, or Measurement Error?*, Working Paper #5268 (NBER, 1995) (focusing on arrest rates rather than sanctions by looking at arrest rates using aggregate data); Raymond Paternoster, *The Deterrent Effect of the Perceived Certainty and Severity of Punishment: A Review of the Evidence and Issues*, 4 JUST. Q. 101 (1987); Lawrence W. Sherman & Richard A. Berk, *The Specific Deterrent Effects of Arrest for Domestic Assault*, 49 AM. SOC. REV. 261 (1984) (looking at experimental evidence on the effect of arrests for domestic violence on repeat offending).

In addition to any increases in certainty, severity, and swiftness of sanctions associated with youth violence, we also hope to gain deterrence through the advertising of the law enforcement strategy, and the personalized nature of its application. The effective operation of general deterrence is dependent on the communication of punishment threats to the public. As Zimring and Hawkins observe, "the deterrence threat may best be viewed as a form of advertising." FRANKLIN E. ZIMRING & GORDON J. HAWKINS, *DETERRENCE: THE LEGAL THREAT IN CRIME CONTROL* 142 (1973). One noteworthy example of this principle is an evaluation of Massachusetts' 1975 Bartley-Fox amendment, which introduced a mandatory minimum one-year prison sentence for the illegal carrying of firearms. The high degree of publicity attendant upon the amendment's passage, some of which was inaccurate, was found to increase citizen compliance with existing legal stipulations surrounding firearm acquisition and possession, some of which were not in fact addressed by the amendment. See James A. Beha II, *And Nobody Can Get You Out: The Impact of a Mandatory Prison Sentence for the Illegal Carrying of a Firearm on the Use of Firearms and on the Administration of Criminal Justice in Boston—Part I*, 57 B.U. L. REV. 96 (1977).

understand the new regime that the city is seeking to impose. Boston's agencies can do a great deal to communicate likely consequences and intended results, as well as explain various actions as the strategy unfolds, to the target audience. Selecting messages and avenues to "advertise" the new regime will thus be an essential part of the larger strategy.

There are various communication routes available. One is probation officers: many of the gang members are on probation, most gangs have a member on probation, and virtually all gang members interact with probationers. The working group intends to use probation officers both to get out the basic use reduction message and to update gang members as the strategy proceeds. Another is semiformal meetings between the authorities and gang members, with gang members invited to attend if they are willing or, again, required to attend as a condition of probation. Adult and juvenile correctional facilities offer literal captive audiences. Other possibilities exist as well. In all cases, the working group intends to communicate the same basic themes. At the outset of the intervention, the message will be, essentially, that it is a new game in town where violence is concerned; that the authorities intend to respond to violence in a rapid, powerful, concerted, and predictable fashion; that all the authorities represented on the working group are sharing information and intelligence regularly; that violence will bring the imposition of a wide variety of sanctions; and that various kinds of help are available for those who wish it. As the intervention proceeds, the message will address its implementation and the logic thereof: "Gang X broke the rules and this is what happened to them; this is how we're making our decisions, and how to keep the same thing from happening to you."

B. Triggering Intervention

One interesting aspect of designing this approach has been considering what should count as the sort of event that triggers such intervention. Gun homicides and assaults clearly count but are, fortunately, relatively rare. Gun possession and carrying should probably count, but they are hard to ascertain. Furthermore, until some effective way to force kids to turn in their guns is developed,⁷⁶ a focus on possession and carrying would require simultaneous intervention for most or all of the gangs in the city, which is clearly impractical. The correct triggers appear to include the following: gun homicide, assault, brandishing, and firing; knife and other homicide and serious assault; and

76. One gun recovery strategy the working group is considering incorporating into its larger strategy is the consensual search program developed by the St. Louis Police Department. See Richard Rosenfeld & Scott H. Decker, *Consent to Search and Seize: Evaluating an Innovative Youth Firearm Suppression Program*, 59 LAW & CONTEMP. PROBS. 197 (Winter 1996). In the Boston strategy, attempts to win parental approval to search for firearms would be focused on known gang members as part of focused "calming" interventions, and information that violence would bring such attention would be delivered to gang members as part of the strategy's overall communications effort.

possibly other violent and fear-producing behavior to be assessed on a locale-by-locale basis.

C. Displacement and Gang Rivalries

Unlike most enforcement strategies, displacement⁷⁷ is in this instance *implosive* rather than *explosive*: When authorities suppress gang activity, and perhaps especially when police disarm gangs, it attracts violence to those gangs from rival gangs. This is felt acutely by gang members themselves. Boston Police Department gang officers report fervent requests by gang members in, for instance, the recently "calmed" Wendover Street area that police *not* leave once they have restored order in the area because these kids fear attention from their nearby Magnolia Street rivals.

Here, the map of gang rivalries and alliances will play an important part. When the police and others intervene to quell gang violence and gunfire, the map will be used to determine the next stop for the intervention team. For instance, if Wendover is calmed, Magnolia should be warned that they are under particular scrutiny; if Magnolia needs to be calmed, Humboldt, Fayston, and Walnut Street should be warned, and so on (Figure 5). If the peace is broken, it will be picked up by the district maintenance team, by community sources, and in incident reports, and the calming operation will be renewed. The hope is to protect not only the youth in the Wendover and Magnolia gangs, but also the peace that the strategy brings to those areas.

D. The "Firebreak" Hypothesis

It is important to note that the use-reduction strategy is designed to work at two levels. It is intended to prevent, or shorten, active gang conflicts. More importantly, it is intended to interrupt the currently self-sustaining cycle of fear, weapon acquisition and use, and violence that we hypothesize to be driving youth violence in Boston. If gang violence can be prevented for some meaningful period, the youth violence problem may reestablish itself at a new and lower equilibrium, as youths' fear, use of weapons, and violent behavior all attenuate. In the language the Gun Project Working Group came to use, a period of reduced violence could act as a "firebreak" across the current violence dynamic. The larger hope, then, is that a successful intervention to reduce gang violence in the short term will have a disproportionate, sustainable impact in the long term.

This use-reduction strategy is, alone, potentially powerful. Any measures to impede youthful offenders' access to firearms could only strengthen it. To this question, we now turn.

77. Displacement is the shifting of the incidence of crime to another forum, time, or locale. Thomas A. Repetto, *Crime Prevention and the Displacement Phenomenon*, 22 CRIME & DELINQUENCY 166 (1976); see also Robert Barr & Kenneth Pease, *Crime Placement, Displacement, and Deflection*, in 12 CRIME AND JUSTICE: A REVIEW OF RESEARCH 277 (Michael Tonry & Norval Morris eds., 1990).

IV

THE SUPPLY SIDE: BOSTON'S ILLICIT GUN MARKET

A. Views

As with the nature of youth violence, there were, at the outset of the Boston Gun Project, certain widely held beliefs among practitioners concerning the nature of the illicit markets that supplied youths with guns. These were more or less as follows: Youthful offenders' guns were being "run" up from Southern states with lax gun laws; the typical mode of gun trafficking was a rather large-scale gun-running operation; and kids wanted new semiautomatics only one or two steps from retail sale (guns "new in the box," as police and probation officers put it), primarily in the higher-powered "weapon of choice" calibers of 9 mm and .380. The half-dozen or so major trafficking cases in Boston since the late 1980s fit this picture, suggesting to many that the basic shape of trafficking in the city was of rather high-volume, interstate gun runners.

Agents from the Bureau of Alcohol, Tobacco, and Firearms ("BATF") who did undercover investigations in the city believed, however, that at least half of the Boston market was supplied by very small episodic diversions such as straw purchasers who dealt only one or two guns at a time, often infrequently. Further, they believed that such "traffickers" received essentially no enforcement attention. Finally, it was widely felt that gang members shared guns among themselves, making the stockpile they held effectively much larger than a raw count would indicate.

Interviews with youthful probationers made clear that guns are fairly easy to obtain in Boston, either by buying them illegally or by borrowing them from friends and associates. They confirmed that there is a great deal of sharing of guns in the city. Thus, although a given gang may have only one or a few guns, everyone in the gang has access to a gun if desired. This sharing seems to eliminate any need for a rental market, which had been reported in Boston but does not in fact seem to exist. Unlike adult felons, youthful offenders seem to prefer new (rather than used or stolen) guns. They regularly use the phrase "new in the box" to describe the last gun they bought.

The interviews also revealed that youth do not get guns from house burglaries. There seem to be two reasons for this. First, they prefer more modern and stylish semiautomatic weapons (which entered civilian stockpile in volume only in the 1970s and 1980s⁷⁸) rather than the older revolvers most readily available through burglary and the used market.⁷⁹ Second, street

78. GARY KLECK, *POINT BLANK: GUNS AND VIOLENCE IN AMERICA* 72 (1991).

79. There is some evidence that gang members, in particular, seek more sophisticated and powerful weaponry than their rivals. Gang members attempt to acquire numerous guns and greater firepower in the belief that winning the "arms race" will increase their personal protection and reduce their likelihood of victimization. See RUTH HOROWITZ, *HONOR AND THE AMERICAN DREAM* (1983); Del

wisdom suggests that a bargain (often stolen) gun may have "a body" on it, and they wish to avoid being caught and charged with crimes they personally did not commit. They often especially want Glock and Intratec weapons.⁸⁰ They also report multiple and diffuse channels for these new or nearly new weapons such as reliable local sources, small-scale episodic sources like out-of-state relatives, and friendship networks willing to trade a gun or gun purchase for drugs.

B. Boston Gun Traces

Fortunately, the data existed to test at least some of these propositions. Since 1991, the Boston Police Department and the BATF have been tracing every gun coming into police hands.⁸¹ This BATF trace data set, which incorporated Boston Police Department information with BATF trace results, turned out to be an enormously rich resource. It contains 3,543 records for guns where the age of the associated suspect is known (Figure 6) and 1,550 records for guns associated with suspects ages twenty-one and under. Unless otherwise noted, the following analyses refer to this latter pool.

The majority of charges associated with the recovery of the gun was simple possession (1,186, or seventy-seven percent). Two hundred sixty-nine charges, about seventeen percent, were non-possession crimes (Table 4).⁸² Certain

Stover, *A New Breed of Youth Gangs is on the Prowl and a Bigger Threat Than Ever*, 173 AM. SCH. BOARD J. 19 (1986). These qualitative insights are supported by Block and Block's quantitative research on the increasing use and lethality of firearms in gang homicides in Chicago. BLOCK & BLOCK, *supra* note 37, at 1. Also, Hutson and his colleagues report that a major cause of gang-related homicide is the increased use of firearms, particularly semi-automatic handguns. H. Range Hutson et al., *The Epidemic of Gang-Related Homicides in Los Angeles County From 1979 Through 1994*, 274 JAMA 1031 (1995).

80. The authors suspect that the preference for Glock semiautomatic pistols stems from their status as the Boston Police Department's issue weapon: conversations with police officers from other big-city jurisdictions suggest that this pattern holds elsewhere. Intratec firearms are low quality but fierce looking.

81. This arrangement was put in place by retired BATF special agent David Carlson, now of Northeastern University, and is maintained by BATF Intelligence Research Specialist Diane Campbell. It appears to be the only data set of its kind presently available. The Chicago Police Department has also recently begun to trace all of its guns, as will the 17 cities incorporated into the Treasury Department's Youth Crime Gun Interdiction Initiative, established in July 1996. See Fox Butterfield, *Federal Program Will Track Sales of Guns to Youths*, N.Y. TIMES, July 8, 1996, at A1.

82. Our trace data set from the Boston Regulatory Office of the BATF included the following: name of the person from whom the gun was taken (if applicable); date of birth of the person from whom the gun was taken (if applicable); location of gun recovery; nature of the incident that led to the recovery; Boston Police Department incident report designator; kind of gun (revolver, semiautomatic pistol, rifle, shotgun); caliber or gauge; serial number; obliterated serial number designator (if applicable); in what state gun was first sold at retail (if available); and the date the gun was first sold at retail (if available). Other information in BATF possession, such as the name of retail outlets and the names of first purchasers, was not provided to the authors. Since this trace data set includes essentially all guns recovered by police over an extended period, it does not suffer from the major sources of bias often encountered when using trace information, such as selective tracing by police and disproportionate numbers of noncrime guns. Our data set included 1550 guns associated with persons age 21 and under: 1186 (76.5%) associated with simple possession offenses; 269 (17.4%) associated with "substantive crimes" such as assault, armed robbery, and homicide; and 95 (6.1%) associated with other categories such as found guns. Examination of the data set shows that it is not biased by potential problems such as large seizures of guns from traffickers, large numbers of multiple recoveries, and the

information, such as type, brand, caliber, and whether serial numbers had been obliterated, was available for all 1,550 firearms. Other kinds of information—the state in which the guns had first been sold at retail and the date on which they had been sold—were available only for the 809 firearms BATF could trace to FFLs, first retail purchasers, or both. We will call these *traceable* firearms (Table 5). Analysis of the 1,550 guns recovered from youth age twenty-one and under during the five years clearly showed that most had been picked up in the same neighborhoods most suffering from the symptoms of youth gun violence (youth homicide, high ratios of gun woundings to knife woundings, shots fired, gangs, and high incidence of serious crime).

1. *What Kind and What Caliber?* More than eighty percent of the firearms recovered from youth were handguns, and over half of all firearms were semiautomatic pistols (Table 6). Calibers were fairly widely spread among, in descending order, .22, .25, 9 mm, .38, .380, .32, and 12 gauge, all of which represented at least five percent of the total. The top five calibers made up seventy-one percent of all guns (Table 7). Both of the top calibers, .22 and .25, were relatively small and low-powered.

2. *What Make of Guns Are They?* Since semiautomatic handguns were clearly the youth weapon of choice, we examined which brands were most represented. Only five brands of semiautomatic pistols represent nearly half the semiautomatic pistols recovered (Table 8). Whether this represents price, availability, style, or size concerns is unknown. It is useful information, however, for such things as watching for multiple purchases of guns and for informing street enforcement operations such as reverse stings.⁸³ It is also a warning to take survey and ethnographic findings about youth gun preference with a grain of salt. Boston kids may indeed prefer (as they say they do⁸⁴) Glock and Intratec weapons, but they tend actually to possess other guns.

like. Since June 1994, BATF has not traced guns manufactured prior to 1985; since March 1995, BATF has not traced guns manufactured prior to 1990. The latter restriction does not materially affect this data set, which runs through May 1995 and thus contains very few traces submitted between March and May of that year. The former restriction may; guns rejected as "Unable to Trace," an omnibus BATF category including guns rejected under the prior-to-1985 rule, jumped from 16% of all traces between January and June of 1994 to 28% of all traces between July and December of 1994. This may bias our time to crime estimates and source-state breakdowns slightly toward guns less than 10 years old, but should not influence comparisons between different offender age and crime type categories. The trace data set still, of course, represents guns recovered by the police, and is not a perfect sample of guns used in crime. Except where noted, all analyses reported in this paper are for the period January 1991 to May 1995.

83. A firearms reverse sting would involve, for example, an undercover officer selling disabled firearms to gang members known to be in the market for guns; it would obviously be useful in such an enterprise to know what firearms were in demand on the street. This remains a hypothetical tactic and has not been used in Boston.

84. See *supra* note 81 and accompanying text.

3. *Where Do the Guns Come From?* Contrary to the belief of most in the local law enforcement community, a source-state analysis of traceable guns showed that a plurality originated in Massachusetts. A full thirty-four percent of traceable guns were first sold at retail in Massachusetts (Table 9). The next largest source state was Georgia, with eight percent. No other southern state broke five percent, and all Southern states combined add up to only thirty-one and a half percent. All contiguous and New England states (excepting Massachusetts) add up to less than fifteen percent. Boston had, unexpectedly, both a local and a "southern pipeline" firearms problem.

4. *How Old Are They?* A "time-to-crime" analysis (a measure of the time between the first retail sale of the gun and the date at which it came into police hands) of traceable guns (more accurately, in this case, a "time to recovery" analysis) shows a distinctly skewed distribution. Fully sixteen percent of traceable guns were recovered by police when the guns were less than a year old, and another ten percent when they were between a year and two years old; thus, slightly more than a quarter of traceable guns were recovered when they were less than two years old. Recoveries of guns by each additional year of age then fall steadily. At the opposite extreme, a total of thirty-one percent of traceable guns were ten years old or older.

Examining the time-to-crime for types of guns points to a faster flow of semiautomatic weapons. More than forty percent of traceable semiautomatic pistols show a time-to-crime of less than two years, with only fourteen percent being ten years old or more. Traceable revolvers, by contrast, appear as only five percent in the two-years-or-less category and sixty percent in the ten-years-or-more category. Traceable shotguns (seventeen percent and thirty-two percent) and rifles (sixteen percent and forty-five percent) fall in the middle (Figure 7).

A more fine-grained analysis of the first two years' 215 "fast" guns also shows a skewed distribution, with half of these guns falling into the first eight months. Nearly all of these guns (180, or eighty-four percent) are semiautomatic pistols, which move slightly faster (Figure 8). And a brand analysis of those "fast" guns shows a preponderance of the top-five "favorite" makes.

"Fast" guns showed distinct caliber characteristics. Here, the higher-powered 9 mm and .380 dominate markedly, together representing more than half of the entire pool, and the top five calibers comprise nearly eighty-four percent of all guns (Table 7).

It should be emphasized that these time-to-crime distributions cannot, by definition, incorporate guns that the BATF was unable to trace to an FFL. Many of these were simply too old to trace. Thus, these figures overestimate the proportion of new guns and underestimate the skew of the distribution. This holds for all time-to-crime distributions presented in this paper. However, these distortions appear to be less significant for youths' guns than for adults' guns. There are two BATF trace categories broadly indicative of pre-1968

manufacture, "too old to trace" and "no serial number."⁸⁵ We examined both youths' guns and guns recovered from those age thirty and over. We removed from each pool guns with obliterated serial numbers⁸⁶ and estimated the pre-1968 guns as a proportion of each pool. Seventeen percent of youths' guns, versus twenty-two percent of adults' guns, were pre-1968.⁸⁷ This suggests that the propensity toward newer guns found in traceable youths' guns also holds across the whole pool of guns recovered from youth.

Finally, we examined the time-to-crime of some particularly popular semiautomatic pistols. Some of these showed even brisker patterns (Figure 9). Fifty-five percent of traceable Davis pistols showed time-to-crime of less than two years, and seventy-two percent of less than three years. Ninety percent of traceable Lorcin pistols showed time-to-crime of less than two years. Fifty-five percent of traceable Bryco/Jennings pistols showed time-to-crime of less than two years. Traceable Raven pistols, by contrast, moved less quickly, with sixteen percent in the first two years and twenty-eight percent ten years old or more.

Here, then, was a partial qualification, and a partial yet very important validation, of the impressions of practitioners and the statements of youth interviewees. Not all guns were "new in the box" semiautomatics. But more than a quarter of all traceable guns recovered by police were less than two years old, and the newest of those guns both moved rapidly to the streets and into police hands and were overwhelmingly the semiautomatics—many of them 9 mm and .380 caliber—practitioners and interviewees identified as "problem" guns or "guns of choice."

This was, fundamentally, good news, for the simple reason that the newer a gun is, and the fewer hands it has passed through, the easier it is to investigate its diversion and its diverters and to mount prosecutions. This is one way in which the illicit gun market is fundamentally different from drug markets: There is, albeit sometimes at considerable temporal remove, paperwork on guns.⁸⁸ The BATF can often find out where a gun was manufactured or imported, where it was first sold at retail, and who bought it. Investigations can

85. "Too old to trace" is a BATF category reserved for pre-1968 firearms. "No serial number" generally, but not invariably, indicated pre-1968 manufacture. Exceptions would include certain post-1968 foreign firearms subsequently brought into the United States, post-1968 domestic firearms improperly manufactured without serial numbers, and police department coding errors on trace requests, particularly with regard to obliterated or difficult-to-locate serial numbers. These exceptions are uncommon. Interview with Lennie Ladd, Special Agent, Boston Regulatory Office, BATF (Jan. 1996).

86. As we will discuss below, youths are found in possession of guns with obliterated serial numbers at a higher rate than adults, and there are other reasons to believe that these guns are relatively new.

87. This analysis is drawn from David M. Kennedy et al., *Gun Buy-Backs: Where Do We Stand and Where Do We Go?*, in *UNDER FIRE: GUN BUY-BACKS, EXCHANGES, AND AMNESTY PROGRAMS* 148 (Martha R. Plotkin ed., 1996). An analysis of guns recovered as part of two Boston buy-back programs suggests that they bear relatively little resemblance to possession and substantive crime guns recovered from either youths or adults.

88. The most meaningful exception to this rule is for guns stolen from FFLs. Even here, however, the BATF can trace the gun from the manufacturer to the FFL in question.

be built on that information, whether the object is to uncover a particular low-volume straw purchaser or identify a large trafficking operation. And for investigative purposes, the newer the gun is the better: Records are likely to be better and more available; individuals listed on paperwork are easier to find; guns are less likely to have been resold, given away, or stolen; and the chain of transfer to illicit consumers is likely to be shorter. A ten-year-old .38 revolver is likely to be an investigative dead end. A six-month-old 9 mm semiautomatic, by contrast, holds promise.

One cannot tell from these data whether the flow of "fast" guns is the product of, at one extreme, a few high-volume gun traffickers or, at the other, a multitude of small-volume straw purchasers. If, however, one believes that interstate gun trafficking requires at least a modicum of organization and capital, then there is evidence that the "fast" guns may be the product of such higher-volume trafficking. Analysis of the source states of "fast" guns shows that they are more likely to be from Southern states and less likely to be from Massachusetts (Table 9).⁸⁹ This is partial confirmation of the impressions of police and probation officers that the "problem" guns of "problem" youth come from out of state. This, too, is good news, since trafficking enforcement could aspire to take out these firms, based on investigations of "fast" guns, with a disproportionate impact on the overall flow of high-risk weapons.⁹⁰

5. *Guns with Obliterated Serial Numbers.* It is reasonable to think that an even larger proportion of youths' guns are "fast" guns. Nearly twenty percent of the guns in the five-year trace data set were untraceable because their serial numbers had been obliterated (Table 5). Nearly three-quarters of these guns were semiautomatic pistols. Most were recovered in the same neighborhoods suffering from youth gun violence, and there was a heavy representation of our familiar top five favorite brands.

We can tell neither where these guns were first purchased nor how old they are. One can, however, make inferences, particularly with regard to time-to-crime. The fact that they are largely semiautomatics suggests that they are newer rather than older simply because semiautomatics tend to be more recent additions to the civilian stockpile. It also suggests that they were purchased rather than stolen since semiautomatics are less readily available through burglary.

There are fundamentally only three reasons to obliterate a serial number: to avoid being tied to a burglary through possession of a firearm whose serial number has been reported to police; to avoid being connected to a crime gun

89. Another possibility is that local purchasers and suppliers have personal and family ties that link them with the Southern states. In actuality, most of the larger gun trafficking cases prosecuted in Boston since the late 1980s share both characteristics. They featured more organized gunrunners using friends and family in Southern states as an opportunity to acquire firearms.

90. For more evidence that relatively new guns are used disproportionately in crime, see Franklin Zimring, *Street Crime and New Guns: Some Implications for Firearms Control*, 4 J. CRIM. JUST. 95 (1976).

one has purchased legally; and to avoid being identified through BATF records as the straw seller, or buyer, of a gun with paperwork on it. Only the third reason is likely to apply here.⁹¹ Having hard information on the times-to-crime of guns with obliterated serial numbers might thus shift the time-to-crime profile of our gun pool toward faster-moving guns, particularly among semiautomatic pistols.

To the extent that these guns can have their serial numbers restored, which is sometimes technically feasible, they will be open to enforcement attention, and should clearly receive it. For instance, a top-five make semiautomatic pistol from Georgia recovered in Roxbury with an obliterated serial number is probably a prime candidate for investigation and enforcement. Both the seller and the buyer of the weapon seem likely to be more serious offenders.

6. *"Possession" versus "Substantive Crime" Guns.* We performed these same analyses separately for the 1186 guns associated with simple possession charges ("possession" guns) and the 269 guns associated with non-possession crimes ("substantive crime" guns) included in the trace data set.⁹² Certain important differences emerged. The type of gun associated with substantive crimes was somewhat less likely to be a semiautomatic pistol or a revolver, with the substitution largely to shotguns. The proportion of in-state guns jumps markedly, and that of the combined southern states drops somewhat (Table 10). The proportion of guns with a time-to-crime of two years or less drops slightly (Figure 10). Most interesting is a fifty percent reduction in guns with obliterated serial numbers (Table 10). All of these changes with regard to substantive crime offenders are in keeping with an image of a better-connected criminal with a tools-of-the-trade outlook toward weapons, a willingness to use long guns, and more likely to use older and stolen weapons.

These findings are in keeping with the idea that there are less and more serious consumers of illicit firearms, that different types of consumers have different acquisition patterns, and, as has already been noted, they diminish the promise of a market disruption strategy to reduce youth gun violence. If the most serious youth offenders use firearms that are older, more likely to be long guns, and more likely to be stolen, the impact on them of a trafficking enforcement strategy will be less powerful.

However, if those youth with the most serious criminal intent, as measured by their behavior, show this pattern of gun acquisition, then the fact that other, presumably less serious youth show a different pattern is in keeping with the notion that there is something other than serious criminal intent driving their

91. It is logically possible, of course, that our obliterated guns include weapons that were obliterated years ago and are only now turning up in the hands of youth. The type and brand distribution of these guns suggests that this is not in fact the case.

92. When examining firearms characteristics associated with possession and substantive crimes, we omit firearms not explicitly linked in our data set with one of these categories (95, or 6.1%, for those 21 and under).

gun acquisition. Possibly, as hypothesized, the driving force is the fear/self-defense/youth culture dynamic. At least part of this dynamic is currently being driven by the ready availability and the widespread possession, carrying, brandishing, and firing of firearms: not only by actual firearms assaults. And to the extent that that dynamic can be interfered with by interfering with gun trafficking, a market disruption strategy remains a logical pursuit.

7. *Adults' Guns.* An important question is whether there are distinct youth and adult gun markets. As one indicator, we analyzed older populations in the Boston Police Department/BATF trace data set, broken down into simple possessors and substantive crimes (Table 10). Those twenty-two to twenty-nine years old showed relatively minor differences when compared to youth. Those thirty years old and up, however, were quite different.⁹³

Older possessors were less likely to have semiautomatic pistols (much less likely in the case of substantive crime offenders) and more likely to have long guns, especially in the case of substantive crime offenders. Adult possession offenders fell between youth possession and youth substantive crime offenders on the likelihood that their guns were first sold at retail in Massachusetts, but fully sixty-five and a half percent of adult substantive crime offenders had guns from Massachusetts (and only 12.7 percent from southern states). Both adult classes also had strikingly low rates of obliterated serial numbers. This last fact, particularly in conjunction with the existing research linking serious adult felons to stolen guns, adds weight to the idea that the high rate of serial number obliteration among youth is a sign that they are acquiring new guns only a few steps from first retail sale. Finally, both youth categories, possession and substantive crimes, showed faster overall time-to-crime for traceable guns than both adult categories (Figure 10).⁹⁴

The differences between adults and youths suggest that the illicit market that supplies guns to youths is peculiarly open to enforcement attention. Youthful offenders' high proportion of handguns, particularly semiautomatics, the quicker time-to-crime of their guns, and their high proportion of obliterated serial numbers all suggest the higher relative importance of a *flow* of relatively new

93. A far larger proportion (446 or 39.4%) of the 1132 guns associated with persons 30 and over are neither "possession" guns nor "substantive crime" guns. More than 60% of these are guns taken by police for "safekeeping," a practice followed by many departments when they find adults in the possession of guns officers feel may be a hazard to the possessors or to others (typical circumstances would include domestic disturbances, DUI traffic stops, and the like). We have excluded these guns from our analysis of possession versus substantive crimes.

94. On all these counts, plus—by definition—a propensity toward committing (or at least being arrested for) serious crimes at relatively advanced ages, these adult substantive crime offenders look very much like those Wright and Rossi identified in their 1986 research as "handgun predators." WRIGHT & ROSSI, *supra* note 10, at 39. This is clearly the group least likely to be affected by gun market disruption strategies. However, to the extent that, as seems the case, the general idea of gun market strategies has been neglected because of the difficulty of preventing gun acquisition by such serious older offenders, it is worth noting that our other classes of offenders, including adult possession offenders, show patterns of acquisition that look more promising. Not all offenders are handgun-predator type offenders, and gun market strategies should not be judged as if they are.

weapons. The discovery that youth want and obtain newer guns diminishes the single strongest reason for thinking that there is no utility in intervening in the illicit market. Boston's youths' guns—any of them, at any rate—do not appear to be stolen.⁹⁵ That is reason for considerable hope.⁹⁶

C. Sheley and Wright Revisited

These findings suggest a revisiting of Sheley and Wright's conclusion that most juveniles' guns are stolen and that diversion of firearms from retail sources does not constitute a problem.⁹⁷ Several possibilities exist for the difference between their conclusion and ours.

One possibility is that the frames of the studies are different. Sheley and Wright looked at legal juveniles in four urban areas, whereas we are looking at those twenty-one years old and under in only one urban area. Differences in age groups and in city-specific gun acquisition behavior could account for the differences in results.

Another possibility is that the categorization procedures typically followed in surveys of illicit gun acquisition obscure the actual sources of the firearms in question as well as the relative importance of those sources. Julius Wachtel notes the "vexing problem" that in such surveys "straw purchases are typically not assigned to a discrete category," thus minimizing the significance of transactions only one or a few steps from first retail sale.

Instead, these cases are usually deconstructed so that they fall into whatever class seems to offer the best fit (for example, "family and friends"). Purported buyers thus become both a gun's proximate source as well as its origin. This practice deflates retail statistics and obscures the potential significance of surrogate transactions (that is, straw purchases).⁹⁸

This process is clearly at work in Sheley and Wright's analysis. Six percent of the inmates and twenty-three percent of the students they surveyed indicated

95. BATF does inquire about stolen guns; the status of 3448 (80%) of 4,293 firearms in their database was checked with the National Crime Information Center ("NCIC") and the Treasury Enforcement Communications System ("TECS"). Only 4% (141) of the entire data set were reported stolen. For firearms associated with adults (ages 22 and older), 2.7% (46 of 1691) were reported stolen; stolen firearms associated with youth were somewhat higher at 4.2% (50 of 1177). However, since many stolen guns are never reported to authorities, it is impossible to know how close these figures are to reality.

96. We have emphasized that to our knowledge our findings are Boston-specific. Still, other studies of youths' firearm use and preference—while not fully compatible with our analysis—appear congruent. Block and Block's study of gang homicide in Chicago found both an increase in gun use and an increase in the use of semiautomatics between 1987 and 1990. BLOCK & BLOCK, *supra* note 37. It should be noted that the Blocks studied homicide, not possession, and found a greater increase in the use of large-caliber weapons, some but not all of which would have been semiautomatic. *Id.* Sheley and Wright found semiautomatics and revolvers roughly equal in popularity among incarcerated juvenile felons; while they could not examine the age of these weapons, the semiautomatic weapons would likely have been newer, for reasons discussed above. The students they surveyed were somewhat more likely to own semiautomatics. See SHELEY & WRIGHT, *supra* note 7, at 7.

97. See *supra* notes 21-23 and accompanying text.

98. Julius Wachtel, Sources of Crime Guns in Los Angeles, California, Paper presented at the annual meeting of the Academy of Criminal Justice Sciences 11 (Mar. 14, 1996).

that they had obtained their most recent handgun from a family member. Thirty percent of inmates and thirty-eight percent of students obtained their most recent handguns from a friend. It is simply not possible to unpack from their data how many of these guns entered illicit channels through theft or retail purchase. It is impossible to tell, from Sheley and Wright's study, the age of these handguns. It is likely, in fact, that many of those surveyed did not themselves know how their guns entered the illicit market. It is clear, however, that a substantial proportion of the "family and friends" transfers represent illicit trafficking of guns close to first retail sale. Sheley and Wright note that

a total of 32 percent of the inmates and 18 percent of the students had asked someone to purchase a gun for them in a gun shop, pawnshop, or other retail outlet; 49 percent of the inmates and 52 percent of the students mentioned a friend as the person requested to buy a gun; and 14 percent of the inmates and 18 percent of the students had turned to family members.⁹⁹

Some of these juveniles' guns were thus purchased for them from retail outlets by straw purchasers; others entered illicit pipelines through purchase at retail and then made their way to them quickly but after passing through more than one set of hands.

It is, as we have noted, impossible to tell from Sheley and Wright's survey research, and perhaps from any survey research, the magnitude of this kind of close-to-retail diversion. Based on their own findings, however, it seems unreasonable to conclude, as they do, that attention to retail diversion would be fruitless because "[juveniles] rarely obtain their guns through such customary outlets."¹⁰⁰ This is true only if one takes the narrowest possible construction of "obtain," that is, direct purchase at retail by the juveniles themselves. Taking only a slightly broader construction, the problem could become much greater, and attention to it much more productive.

V

DISRUPTING THE MARKET

Based on this information, the working group has identified a number of steps to impede the functioning of Boston's illicit gun market. Completely shutting down the illicit gun market is and will remain an impossibility. It is simply too easy to divert firearms from legal channels to illegal ones. However, it is clear that dealing in illicit guns in Boston is currently perceived by youths to be a largely risk-free enterprise: a perception doubtless shared by adult traffickers who provide them with guns. The working group's goal is to alter that perception markedly, particularly in the gang circles in which most youth homicides are committed, and inhibit illegal trading in guns as much as possible.

One obvious step is to focus on the "faster" part of the market. A surveillance system has been put in place to take advantage of the existing, and

99. SHELEY & WRIGHT, *supra* note 7, at 6-7.

100. *Id.* at 10.

critically important, tracing arrangements between the Boston Police Department and BATF. This system simply flags for active investigation every trace that shows a time-to-crime of less than thirty months. Higher investigative priority will also be given to traces showing more popular gun types, traces obtained from guns with restored obliterated serial numbers, guns from high-risk neighborhoods, and guns associated with known gang members or gang territories.

Another obvious step is to examine the trace data set for patterns involving FFLs and first purchasers. FFLs and first purchasers associated with multiple crime guns are clear investigative opportunities. In neither case can it be concluded from the data alone that a crime has been committed—traffickers could simply be favoring particular FFLs or multiple guns could be stolen from legitimate first purchasers—but traditional investigative techniques will doubtless reveal some to be illicit traffickers.

Another step, now in progress, involves linking the trace data set and investigative activities to historical information about gang membership and gang turf. The working group is currently making its way back through the five-year Boston Police Department/BATF trace data set and identifying which gun possessors were gang members. Locations where the Boston Police Department recovered firearms can also be coded and the results mapped. This will give two overlapping “catchment” areas: guns recovered from known gang members and guns recovered from known gang areas. The BATF can then examine these gang-specific pools of guns and traces for patterns in source states, first purchasers, and FFLs. For gangs with known alliances that facilitate common gun sources, the data can be pooled and analyzed.

The slower time-to-crime portion of the gun trade can be addressed using more traditional policing and investigative techniques. Here, it is investigative leads that are currently in short supply.

Since gun-possession and gun-trafficking penalties are relatively low (at least in the absence of serious prior criminal histories), authorities have not historically been successful in “turning” arrestees and getting information on their sources and clients. As a result, officers from the Boston Police Youth Violence Strike Force have recently begun focusing on offenders arrested on serious non-gun charges. That is, they attempt to extract gun market information from those facing heavy penalties for drug dealing and violent crimes. They report good success, with arrestees more willing to give up information on gun dealing than on narcotics and other crimes.

This technique may well also yield information on those trafficking newer guns. To the extent that Sheley and Wright’s finding that juvenile gun dealers are among the most criminally active of juvenile offenders¹⁰¹ holds true for slightly older dealers, it seems likely that successful operations based on these

101. See *supra* notes 33-41 and accompanying text.

leads will pay benefits not only in trafficking prevention but also as a *de facto* dangerous offender strategy.

Insight into youth gun preferences may make aiming plausible and appealing reverse stings at high-risk gang members more effective. Of course, there are important public safety considerations with such methods. Under no circumstances should guns be put on the street by law enforcement. However, the gun project working group members feel that appropriate reverse stings may be manageable. Again, with the aim of poisoning the market (rather than the unattainable aim of shutting the market down), the group anticipates using probation officers and other channels to communicate to high-risk youth that the judicial system will now be trading in gun information and that undercover investigators and "gun dealers" are present in the city.

Under ordinary circumstances, one would anticipate that cracking down on the more easily investigable "faster" segment of the market would simply displace purchasers to older (including stolen) guns. This will no doubt occur. However, to the extent that guns become harder to obtain, prices will increase, and this substitution will not be complete.¹⁰² To the extent that the use reduction strategy is effective, it will also reduce this substitution. Finally, if our hypothesis is correct that there is a dynamic linking fear to gun acquisition, even a temporary disruption of the firearms market can contribute to interrupting that dynamic. If the interruption occurs before the market adjusts, the market disruption intervention will be productive.

VI

EVALUATION

What we have described so far is a strategy, developed with our assessment of Boston's youth violence problem and the capabilities of working group agencies in mind. The true test of the endeavor is whether it reduces youth violence in the city. This section outlines our plans for evaluating the Boston Gun Project.

Most experimental evaluations of crime-control interventions of the kind we propose assess impacts by comparing "treatment" areas, such as precincts or other police reporting areas, to areas of a city that were not targeted by the intervention. The comparison areas are generally selected, in advance, to be as similar as possible to the locations selected for intervention. During the period of the experiment, any activities in the comparison areas are maintained at previous levels and using prior methods. The comparison areas are used as a "control group," intended to reflect any influences that would have affected the treatment areas in the absence of the intervention. Evidence of an impact, then,

102. Also, to the extent that youthful consumers genuinely worry about guns not "new in the box" having been previously used in a crime, this too will inhibit substitution of older guns.

is a reduced level of crime (however measured) in the treatment area relative to the control areas.

Our evaluation design departs from this standard approach. Most importantly, the Boston problem-solving enterprise was aimed at a city-wide problem (that is, at all areas of the city with a serious youth violence problem). There can be no control areas (or control gangs) set aside within the city because of the following: (1) the aim is to do something about serious youth violence wherever it presents itself in the city; (2) the target of the intervention has been defined as the self-sustaining cycle of violence in which all gangs were caught up and to which all gangs contributed; and (3) the communications strategy is explicitly intended to affect the behavior of gangs and individuals not directly subjected to enforcement attention. It will thus be impossible to compare areas and groups affected by the strategy to similar areas and groups not affected.

Further, while gang crime in Boston clearly manifests itself in geographically concentrated "hot spots," networks of gang affiliation and antagonism often do not respect hot spot boundaries, and unlike most efforts to attack such hot spots through place-focused interventions, our network-focused intervention will not necessarily be aimed at hot spots.¹⁰³ Finally, rather than trying to protect certain areas or groups from the intervention, as in the traditional experimental design, the working group went to considerable effort to design an intervention that would create "spillover" effects onto other gangs and neighborhoods—through the communications strategy, interfering in active or nascent gang vendettas, fear reduction, and the like. Thus, if the intervention were entirely successful, a traditional evaluation would find no impact—youth homicide would fall in the targeted areas (due to enforcement) and in all other areas of the city (due to deterrence and a reduction in the fear/self defense dynamic, restricted gun availability, and the like).

As a result, the overall impact of the intervention will be measured by assessing changes in overall levels of youth violence in Boston relative to changes in youth violence in other similar cities over the same time period. In this design, the other cities will together act as a comparison group. The comparison group is designed to control for any national trends in violence that would have also occurred in Boston in the absence of our effort.¹⁰⁴ Thus, changes (or the lack thereof) in youth violence in Boston relative to those observed in other cities will be taken as the result of the project.

Strictly speaking, it is important to view any impacts identified by such an evaluation as the result of the problem-solving approach rather than the result of any given tactic. We view the intervention in its most expansive form,

103. See Kennedy, *supra* note 58.

104. For two reasons it is not possible to rely upon older youth as a comparison group for this intervention. First, the data reveals that the trends in homicide are very different for youth relative to adults. Second, as noted above, the boundaries of the intervention are porous, and it may be expected to impact upon violence not strictly the target of the effort.

including all of the research, strategy development, and implementation activities of the working group. We feel this is appropriate given that the specifics of the strategy and tactics were not known at the outset, but were developed as part of the process.¹⁰⁵

In order to understand how any impacts were achieved (or, conversely, why the intervention failed), we will also consider in detail the intermediate goals of the project: disrupting illicit gun markets, reducing youth gang violence, and reducing levels of fear among youth. We will measure these by using surveys and ethnographic research, comparing pre- and post-intervention differences in Boston to other cities to the extent possible. The findings from this part of the evaluation will help us interpret any overall impact by pointing to the likely routes that yielded any impact.

Additionally, we will prepare a process history of our efforts—intended to memorialize the process of research, analysis, planning, and implementation—as a reference tool for other jurisdictions contemplating similar interventions and for students of problem solving. The process history will be based on regular site visits, participant interviews, and activity and statistical data (such as police reports and activity logs) collected by participating institutions. It will address the following issues: baseline police and other activities to address youth gun violence; the formation and functioning of the problem-solving team; research activities; the design of the intervention; the modification of the intervention during implementation; impact of local politics and local bureaucracies on the problem-solving process; necessary levels of organizational support; and impressions of participants, the community, and youth regarding the intervention's effectiveness, costs, benefits, lessons learned, and fruitful next steps.

VII

CONCLUSION

The Boston Gun Project is an attempt to bring a problem-solving strategy to bear on youth violence in a particular city. We wished to learn more about youth violence, youth gun violence, and gun trafficking, to craft interventions based on that knowledge, to implement the interventions, and to evaluate their impact.

The first half of that agenda appears largely on track. Gun Project participants have made important and sometimes unexpected discoveries about the nature of youth violence in Boston: the centrality of gangs and gang conflict, the criminality of both victims and offenders, and the "knownness" of high-risk individuals and groups to front-line police, probation, and gang

105. It is worth noting that, by taking this approach, we depart from much of what is known in the literature as evaluation of "problem-solving policing." See, e.g., LAWRENCE SHERMAN ET AL., NAT'L INST. OF JUSTICE, THE KANSAS CITY GUN EXPERIMENT 9 (1995). We feel that those efforts are more properly seen as evaluations not of the problem-solving process but of particular tactics. For more on this subject, see Kennedy & Moore, *supra* note 9, at 274-78.

mediation workers. They have made important and sometimes unexpected discoveries about the illicit gun market, including the importance of intrastate trafficking, the disproportionate taste of youth relative to other criminal consumers for new semiautomatic pistols, and their apparent preference for particular brands of those pistols. They have also made discoveries about the youth's disproportionate reliance, relative to other criminal consumers, on flows of guns from southern states, and especially, the significance of a large and highly investigable flow of "fast" time-to-crime weapons.

The Gun Project working group has crafted innovative use-reduction and gun market disruption schemes, and these schemes have received the operational support of participating agencies. If successful, the use-reduction strategy will help control the most dangerous and frequent of Boston's youthful violent offenders, reduce the fear felt by other youth who, as a result, are acquiring guns and other weapons, and reduce demand for guns. It should reduce the fear of violence that leads many youth to join gangs and thus reduce gang participation and promote a clearer distinction between truly dangerous offenders and those motivated by fear and the desire for self-defense.¹⁰⁶ Disrupting the gun market will help reduce violence in both groups. A careful communications campaign will enhance the effectiveness of all parts of the strategy. It seems at least plausible that the demand-side and the supply-side strategies, together, could have the desired violence- and fear-reducing effect.

Whether the strategies can in fact be implemented as designed, how they will be adapted and modified in practice, and whether they will in fact have the desired impact, remain to be seen. The latter, of course, will be the final test of the larger problem-solving enterprise.

106. The use-reduction and gun market strategies may or may not have a powerful impact on youth homicides that do not seem closely tied to gangs and gang violence. That piece of the problem deserves separate attention, a matter to which the working group is now turning.

APPENDIX

FIGURES 1-10

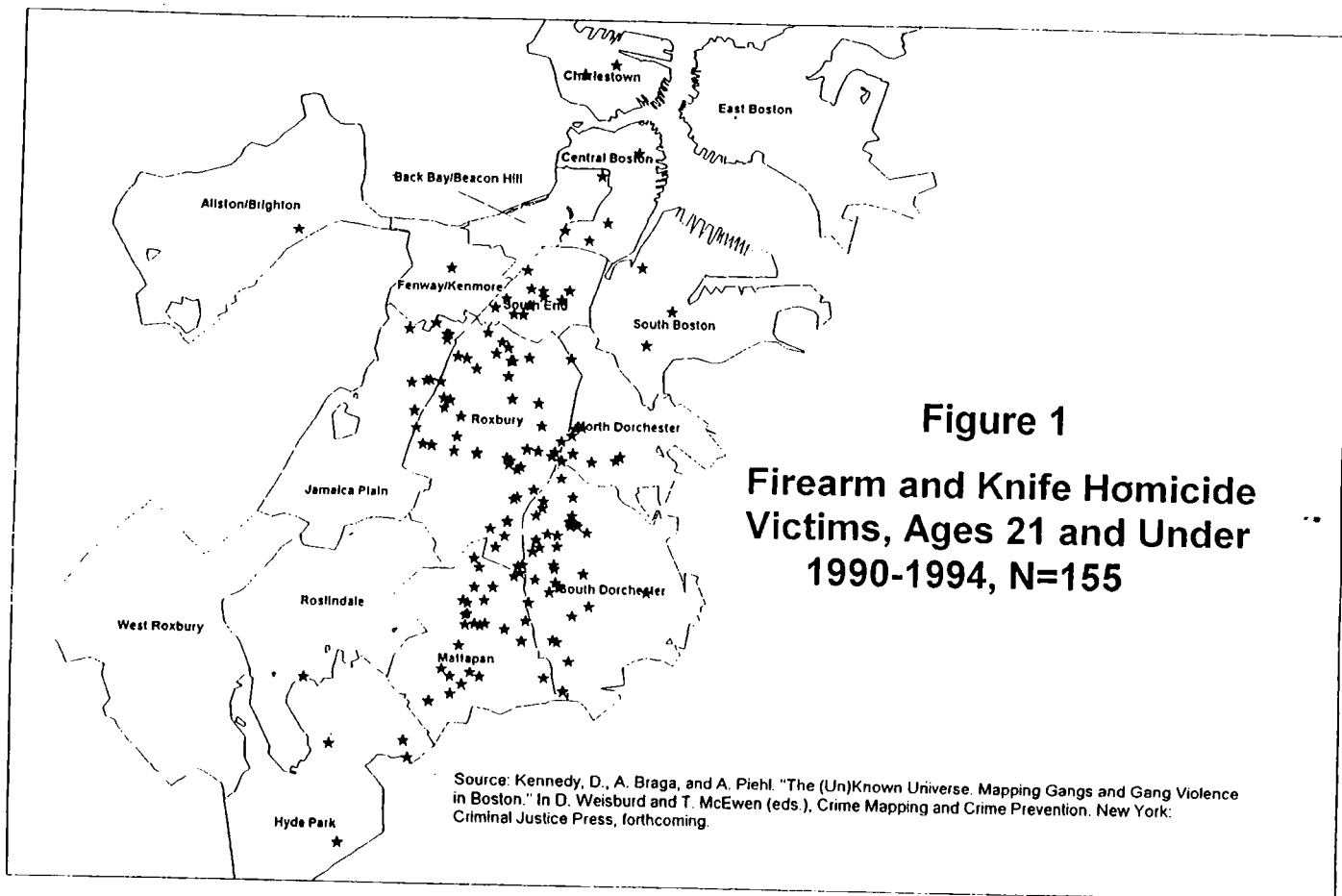


FIGURE 2
AGE DISTRIBUTION OF GUN AND KNIFE HOMICIDE
VICTIMS, AGES 21 & UNDER
1990-1994, N=155

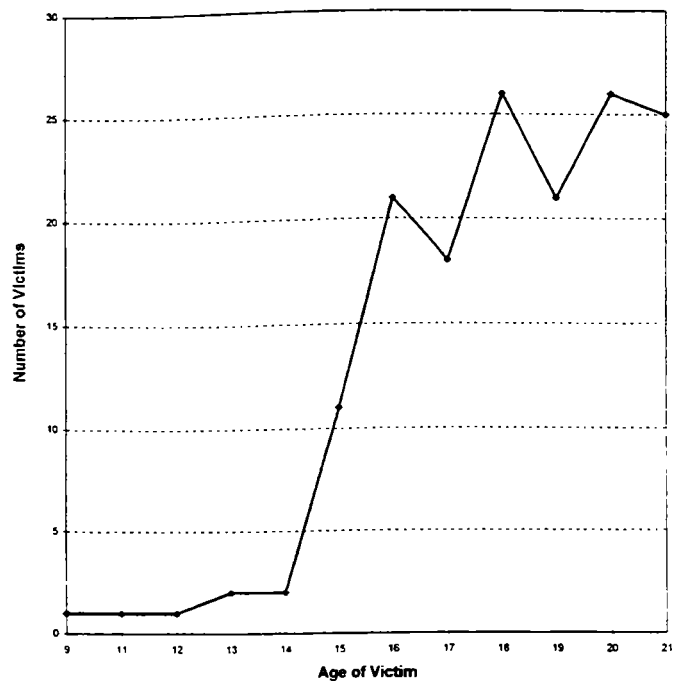
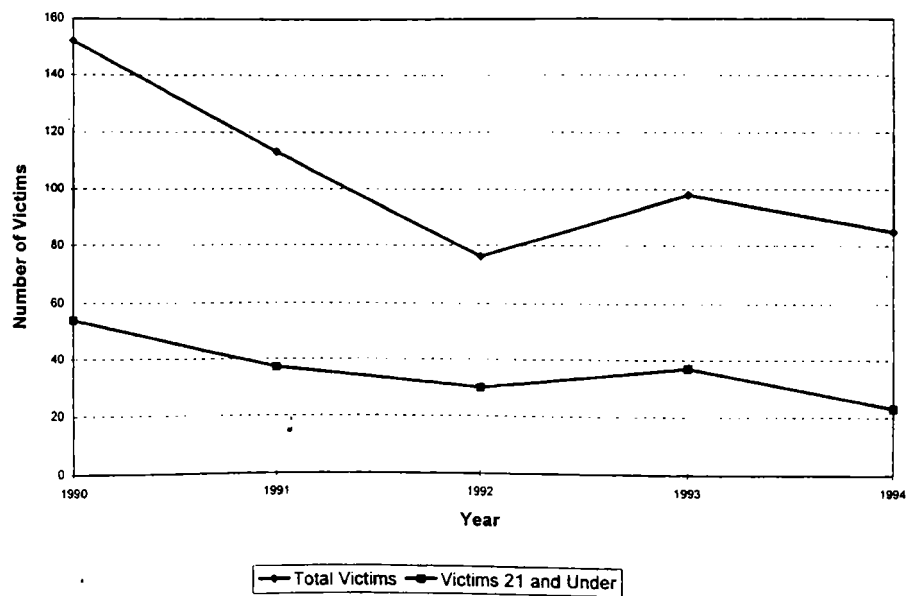


FIGURE 3
BOSTON HOMICIDE VICTIMS, 1990-1994



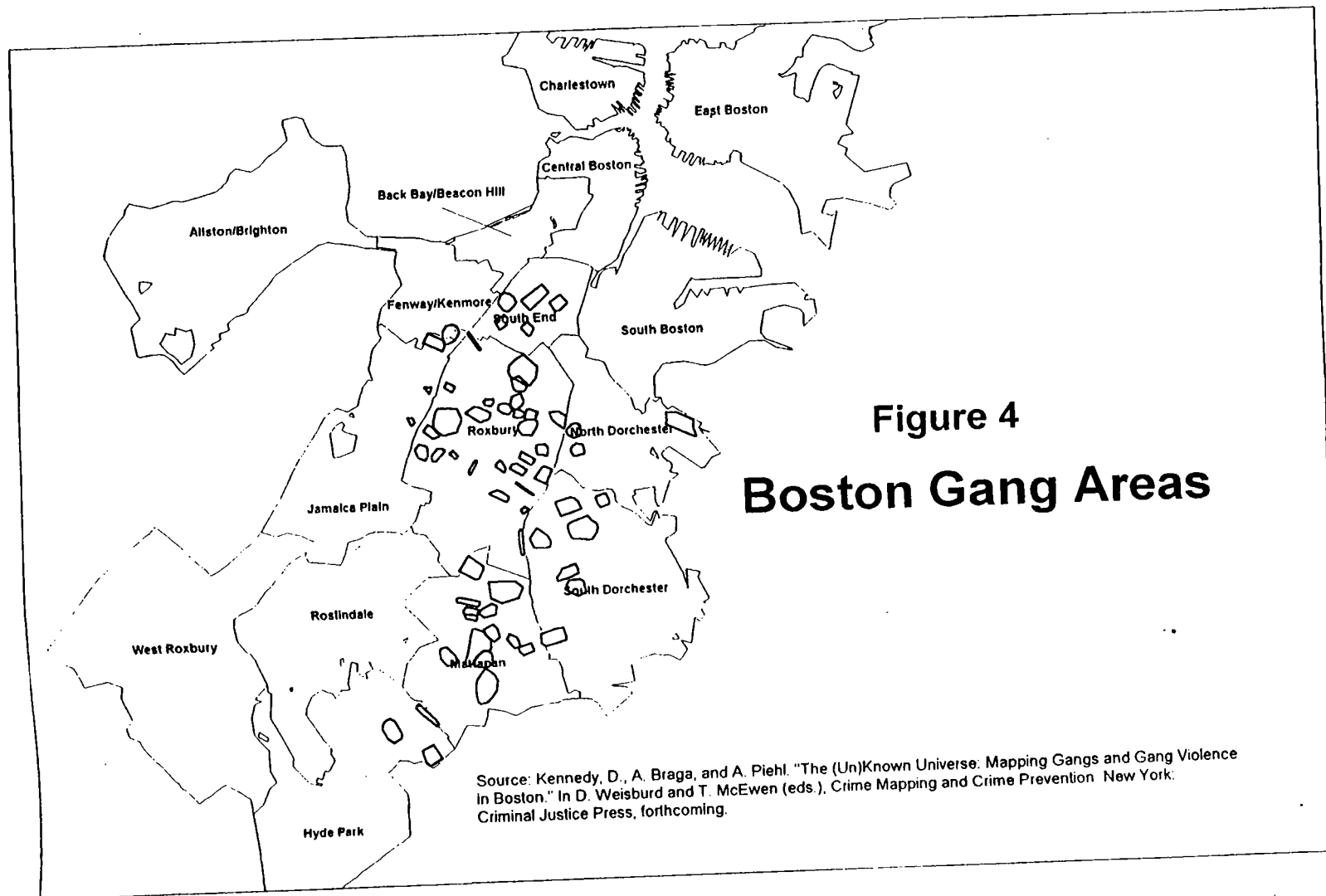


Figure 5

BOSTON GANG CONFLICT NETWORK

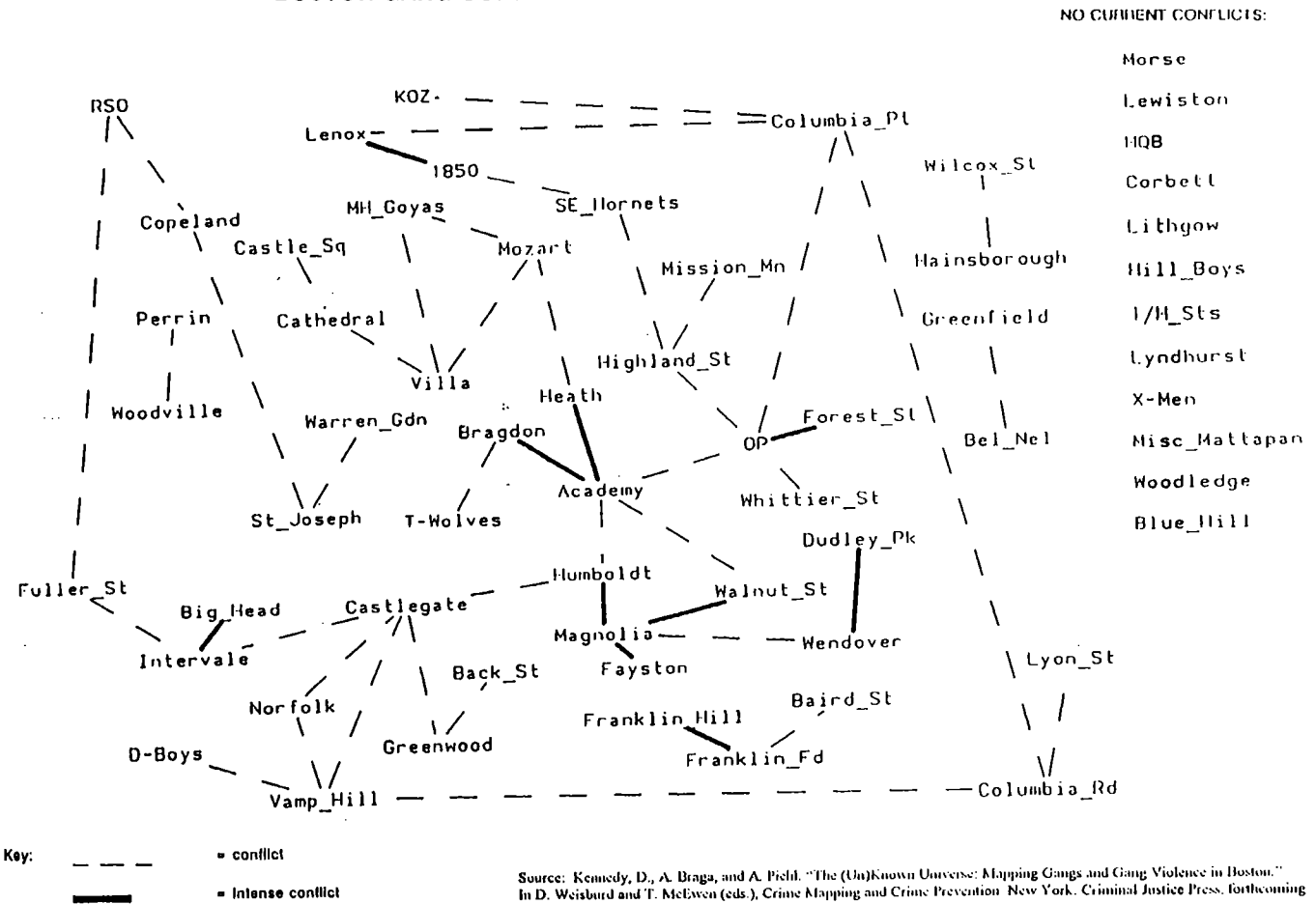


FIGURE 6
AGE DISTRIBUTION OF OFFENDERS IN ATF TRACE DATABASE,
JANUARY 1991-MAY 1995, N=3,543

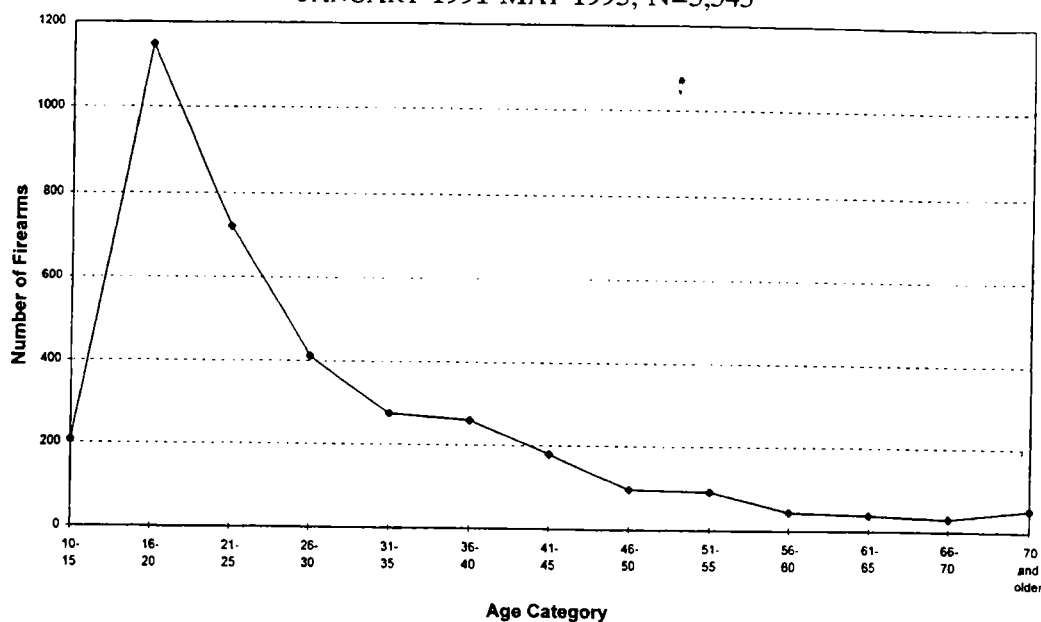


FIGURE 7
TIME FROM FIRST RETAIL SALE TO RECOVERY BY TYPE OF FIREARM,
TRACEABLE FIREARMS, PERSONS 21 AND UNDER

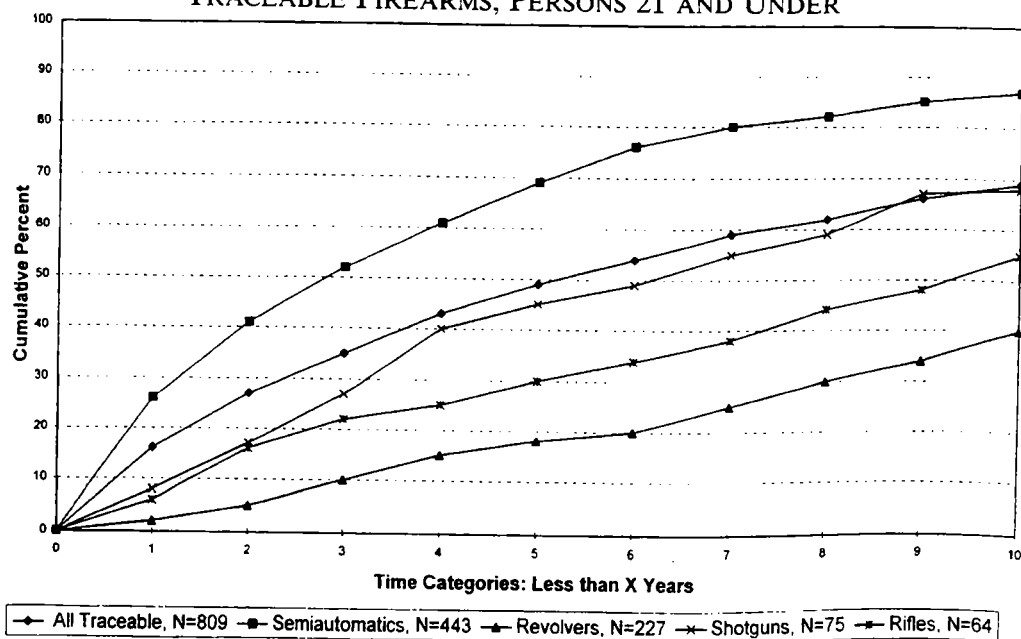


FIGURE 8
TIME FROM FIRST RETAIL SALE TO RECOVERY
TRACEABLE SEMIAUTOMATIC PISTOLS LESS THAN 2 YEARS OLD
PERSONS 21 AND UNDER

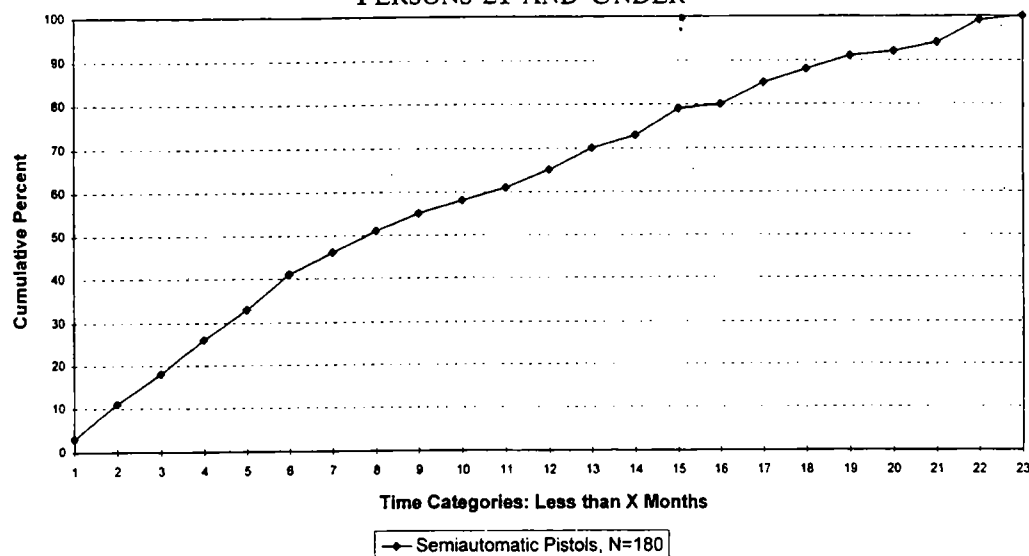


FIGURE 9
TIME FROM FIRST RETAIL SALE TO RECOVERY SEMIAUTOMATIC
PISTOL BRANDS, TRACEABLE FIREARMS, PERSONS 21 AND UNDER

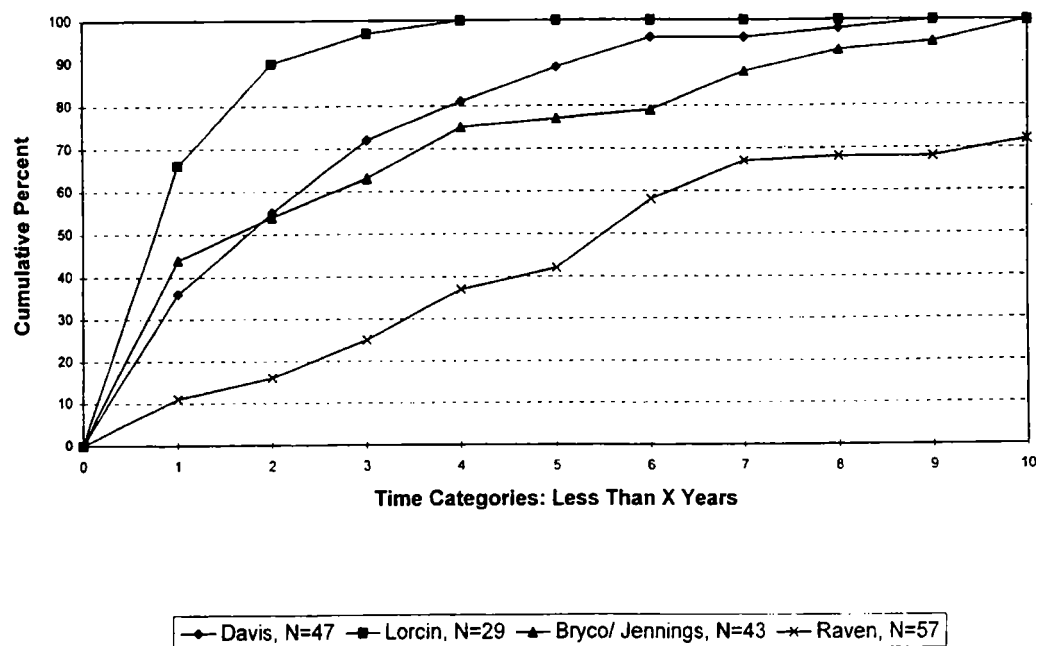
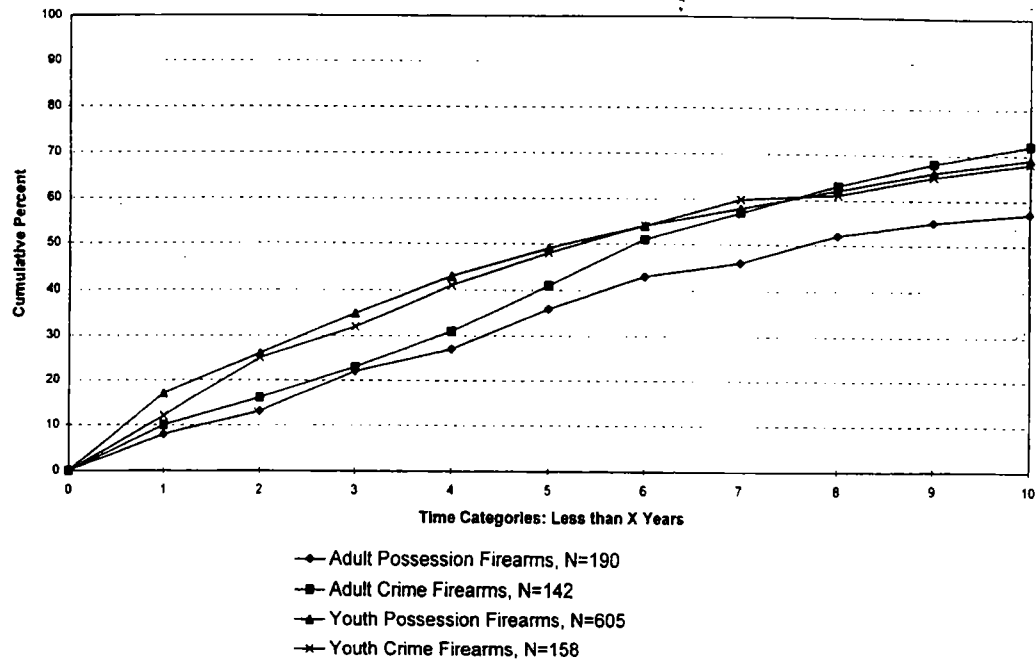


FIGURE 10
TIME FROM FIRST RETAIL SALE TO RECOVERY
ADULT (30 AND OLDER) AND YOUTH (21 AND UNDER)
TRACEABLE CRIME AND POSSESSION FIREARMS



TABLES 1-10

TABLE 1
GENDER AND RACIAL CHARACTERISTICS OF GUN
AND KNIFE HOMICIDE VICTIMS, AGES 21 AND YOUNGER
(N=155)

	<u>Number</u>	<u>Percent</u>
<u>Gender</u>		
Male	137	88.3
Female	18	11.6
<u>Race</u>		
Black	114	73.5
Hispanic	26	16.8
White	11	7.1
Asian	4	2.6

TABLE 2
OFFENSE DISTRIBUTION OF HOMICIDE VICTIMS AND OFFENDERS

<u>Number of Arraignments</u>	<u>Victims (N=155)</u>	<u>Offenders (N=125)</u>
0	24.5%	23.2%
1	7.7%	4.8%
2	5.2%	5.6%
3	5.2%	4.0%
4	4.5%	8.0%
5	5.2%	6.4%
6	6.5%	8.0%
7	4.5%	4.0%
8	1.3%	3.2%
9	1.9%	1.6%
10 or more	33.5%	31.2%

TABLE 3
DISTRIBUTION OF ESTIMATED GANG SIZE
CITY OF BOSTON

<u>Range</u>	<u>Number</u>	<u>: Percent</u>
Less than 10	11	18.0
10-19	21	34.4
20-29	7	11.5
30-39	8	13.1
40-49	1	1.6
50-59	2	3.3
60-69	2	3.3
70-79	0	0.0
80-89	0	0.0
90-99	1	1.6
More than 100	1	1.6
Unknown	7	11.5

Source: David Kennedy, Anthony Braga, & Anne Piehl, *The (Un)known Universe: Mapping Gangs and Gang Violence in Boston*, in *CRIME MAPPING AND CRIME PREVENTION* (David Weisburd & J. Thomas McEwen eds., forthcoming).

TABLE 4
DISTRIBUTION OF SUBSTANTIVE CRIME CHARGES ASSOCIATED WITH
RECOVERED GUNS
SUSPECTS AGES 21 AND YOUNGER
(N=269)

<u>Crime</u>	<u>Number</u>	<u>Percent</u>
Assault	115	42.7
Assault & Battery with a Deadly Weapon	44	16.4
Homicide	44	16.4
Armed Robbery	42	15.6
Shootings/Shots Fired	8	2.9
Search Warrants	7	2.6
Discharge with Intent to Injure	4	1.5
Accidental Discharge	2	0.7
Carjacking	2	0.7
Attempted Homicide	1	0.4

TABLE 5
FIREARMS RECOVERED FROM SUSPECTS 21 AND UNDER
RESULTS OF BATF TRACE
(N=1,550)

<u>Result</u>	<u>Number</u>	<u>Percent</u>
Traced to Purchaser	443	28.6
Obliterated Serial Numbers	305	19.7
Traced to Dealer	223	14.4
Unable to Trace*	196	12.6
Too Old to Trace**	142	9.2
No Record with Dealer	87	5.6
No Serial Number	68	4.4
Traced to Police Department	21	1.4
Out of Business Records	20	1.3
Reported Stolen from Dealer or Purchaser	18	1.2
Trace by Other Law Enforce- ment Agency (ongoing or previous investigation on firearm)	9	0.6
Trace in Progress	8	0.5
Traced to Foreign Country	2	0.1
Trace Resubmitted to BATF National Trace Center	1	0.1

* "Unable to trace" is a BATF category used when (1) BATF is unable to locate an importer, an FFL, or a manufacturer, (2) when trace requests list improper serial numbers or models; or (3) when the firearm was manufactured prior to 1985 (these firearms were not traced after June 1994) or prior to 1990 (not traced after March 1995).

** "Too old to trace" is a BATF category reserved for pre-1968 firearms. "No serial number" generally, but not invariably, indicated pre-1968 manufacture. Exceptions would include certain post-1968 foreign firearms subsequently brought into the United States, post-1968 domestic firearms improperly manufactured without serial numbers, and police department coding errors on trace requests, particularly with regard to obliterated or difficult-to-locate serial numbers.

TABLE 6
TYPE OF FIREARM, SUSPECTS 21 AND UNDER
(N=1,550)

<u>Type</u>	<u>Number</u>	<u>Percent</u>
Semiautomatic Pistol	807	52.1
Revolver	465	30.0
Rifle	132	8.5
Shotgun	146	9.4

TABLE 7
CALIBER OR GAUGE OF FIREARMS RECOVERED FROM SUSPECTS
21 AND UNDER

<u>Caliber/Gauge</u>	<u>All Firearms</u> (N=1,550)		<u>Firearms Less than 2 Years Old</u> (N=215)	
	<u>N</u>	<u>Percent</u>	<u>N</u>	<u>Percent</u>
.22	276	17.8	19	8.8
.25	227	14.6	39	18.1
9mm	215	13.9	58	27.0
.38	198	12.8	4	1.9
.380	180	11.6	52	24.2
.32	133	8.6	11	5.1
12 gauge	102	6.6	12	5.6
.357	73	4.7	3	1.4
.45	52	3.4	6	2.8
.30	23	1.5	0	0.0
20 gauge	19	1.2	1	0.5
.44	15	1.0	2	1.0
.40	6	0.4	5	2.3
All Other Calibers	31	2.0	3	1.4

TABLE 8
TOP FIVE BRANDS OF SEMIAUTOMATIC PISTOLS

Brand	Number	Percent
Raven	90	11.2
Davis	89	11.0
Bryco/Jennings	58	7.2
Lorcin	53	6.6
Colt	39	4.8

Table 9
SOURCE OF TRACEABLE FIREARMS RECOVERED FROM SUSPECTS
21 AND UNDER

Source State	All Traceable (N=809)	New Firearms* (N=215)	Possession (N=605)	Substantive Crime (N=158)
Massachusetts	34.0%	26.5%	30.7%	41.1%
Southern States	31.5%	38.6%	33.9%	28.5%
Other States	34.5%	34.9%	35.4%	30.4%

* "New firearms" are firearms recovered less than two years after first retail sale.

TABLE 10

FIREARM CHARACTERISTICS OF POSSESSION AND SUBSTANTIVE CRIME FIREARMS
YOUTH (21 AND UNDER) AND ADULT (30 AND OLDER)

	Youth		Adult	
	Possession N=1186	Substantive Crime N=269	Possession N=462	Substantive Crime N=224
Recoveries ¹	81.5%	18.5%	67.3%	32.7%
Semiautomatic	53.2%	52.0%	41.6%	33.5%
Long gun ²	15.0%	23.1%	27.3%	39.1%
Obliterated	21.8%	13.4%	9.5%	2.7%
Source State ³				
Massachusetts	30.7%	41.4%	35.2%	65.5%
Southern states	33.9%	28.5%	27.6%	12.7%

¹ Recovery percents were calculated based on the pools of possession and substantive crime guns; the 95 youth guns and 446 adult guns recovered under other circumstances, such as found guns or safekeeping were excluded from these analyses.

² Shotguns and rifles.

³ The percentage of guns originating from Massachusetts or Southern states was calculated from traceable firearms; the traceable firearm Ns were as follows: youth possession firearms, N=605; youth substantive crime firearms, N=158; adult possession firearms, N=253; and adult substantive crime firearms, N=142.

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Carnegie Mellon

Received in
OK from
Analysis
3/6/96

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of Urban Systems and Operations Research

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February 19, 1996

President Bill Clinton
The White House
1600 Pennsylvania Avenue
Washington, D.C. 20005

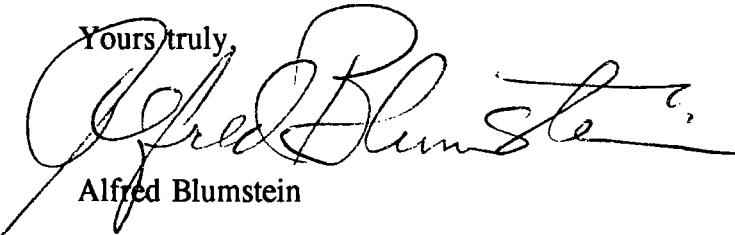
Dear Mr. President:

I am pleased to accept your invitation to participate in your March 7 Conference on Youth, Drug Use, and Violence. It is clearly a major issue, and I will be pleased to have the opportunity to contribute.

As background material, you and your staff may be interested in the enclosed paper, "Youth Violence, Guns, and Illicit-Drug Markets," which was just published in the *Journal of Criminal Law and Criminology*. It is obviously directly relevant to the Conference, but the major thrust of the linkage focuses on the illicit-drug markets more than on the pharmacological effects of the drugs themselves, thereby highlighting the complexity of the problem. The paper highlights the importance of the gun problem, especially in the hands of impulsive young people, and certainly supports your efforts at achieving more effective control over the distribution of guns. If you think it would contribute to the Conference, I would be pleased to present some of the highlights from that paper, including some more recent information and analyses.

I look forward to a most important and stimulating Conference.

Yours truly,


Alfred Blumstein

ALFRED BLUMSTEIN

ALFRED BLUMSTEIN is J. Erik Jonsson University Professor of Urban Systems and Operations Research and former Dean (from 1986 to 1993) at the H. John Heinz III School of Public Policy and Management of Carnegie Mellon University.

He has had extensive experience in both research and policy with the criminal justice system since serving the President's Commission on Law Enforcement and Administration of Justice in 1966-67 as Director of its Task Force on Science and Technology.

Dr. Blumstein was a member of the National Academy of Sciences Committee on Research on Law Enforcement and the Administration of Justice from its founding in 1975 until 1986. He served as Chairman of that committee between 1979 and 1984, and has chaired the committee's panels on Research on Deterrent and Incapacitative Effects, on Sentencing Research, and on Research on Criminal Careers. He is currently a member of the Academy's Commission on Behavioral and Social Sciences and Education.

On the policy side, Dr. Blumstein served from 1979 to 1990 as Chairman of the Pennsylvania Commission on Crime and Delinquency, the state criminal justice planning agency for Pennsylvania. He has also been a member of the Pennsylvania Commission on Sentencing since 1986.

His degrees from Cornell University include a Bachelor of Engineering Physics and a Ph.D. in Operations Research.

He was President of the Operations Research Society of America in 1977-78, he was awarded its Kimball Medal "for service to the profession and the society" in 1985, and its President's Award in 1993 "for service to society." He was president of the Institute of Management Sciences (TIMS) in 1987-88 and is the current President-Elect of the Institute for Operations Research and the Management Sciences (INFORMS) recently created by the merger of ORSA and TIMS. He is a Fellow of the American Association for the Advancement of Science (AAAS).

Dr. Blumstein is a Fellow of the American Society of Criminology, was the 1987 recipient of the Society's Sutherland Award for "contributions to research," and was the president of the Society in 1991-92.

His research over the past twenty years has covered many aspects of criminal-justice phenomena and policy, including crime measurement, criminal careers, sentencing, deterrence and incapacitation, prison populations, flow through the system, demographic trends, juvenile violence, and drug-enforcement policy.

PRE-PUBLICATION COPY

TRENDS IN JUVENILE VIOLENCE

**A Report to the United States Attorney General
on Current and Future Rates of Juvenile Offending**

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Prepared for the Bureau of Justice Statistics
United States Department of Justice
Washington, D.C.

January 1996

EXECUTIVE SUMMARY

Trends in Juvenile Violence arises out of an August 1995 briefing to United States Attorney General Janet Reno on behalf of the Office of Justice Programs. The primary theme of the briefing was the extent to which rates of juvenile homicide and other violent offenses by youth are rising and can be expected to increase further in the years ahead.

Recent reports of a declining rate of violent crime in cities across the country would seem to be at odds with the growing problem of youth violence. The overall drop in crime hides the grim truth. There are actually two crime trends in America--one for the young, one for the mature--which are moving in opposite directions.

From 1990 to 1994, for example, the overall rate of murder in America changed very slightly, declining a total of four percent. For this same time period, the rate of killing at the hands of adults, ages 25 and over declined 18 percent and that for young adults, ages 18-24 rose barely two percent; however, the rate of murder committed by teenagers, ages 14-17 jumped a tragic 22 percent.

The recent surge in youth crime actually occurred while the population of teenagers was on the decline. But this demographic benefit is about to change. As a consequence of the "baby boomerang" (the offspring of the baby boomers), there are now 39 million children in this country who are under the age of ten, more young children than we've had for decades. Millions of them live in poverty. Most do not have full-time parental supervision at home guiding their development and supervising their behavior. Of course, these children will not remain young and impressionable for long; they will reach their high-risk years before too long. As a result, we likely face a future wave of youth violence that will be even worse than that of the past ten years.

The key statistical findings of the report are highlighted below:

- From 1985 to 1994, the rate of murder committed by teens, ages 14-17, increased 172 percent. The rate of killing rose sharply for both black and white male teenagers, but not for females.
- Remaining just above one percent of the population, black males ages 14-24 now constitute 17 percent of the victims of homicide and over 30 percent of the perpetrators. Their white counterparts remained about 10 percent of the victims, about 18 percent of the perpetrators, yet declined in proportionate size of the population.
- Guns, and especially handguns, have played a major role in the surge of juvenile murder. Since 1984, the number of juveniles killing with a gun has quadrupled, while the number killing with all other weapons combined has remained virtually constant.
- The largest increase in juvenile homicide involves offenders who are friends and acquaintances of their victims.
- The differential trends by age of offender observed for homicide generalize to other violent offenses. From 1989 to 1994, the arrest rate for violent crimes (murder, rape, robbery and aggravated assault) rose over 46 percent among teenagers, but only about 12 percent among adults. In terms of arrest rates per 100,000 population, 14-17 year-olds have now surpassed young adults, ages 18-24.
- By the year 2005, the number of teens, ages 14-17, will increase by 20%, with a larger increase among blacks in this age group (26%).
- Even if the per-capita rate of teen homicide remains the same, the number of 14-17 year-olds who will commit murder should increase to nearly 5,000 annually because of changing demographics. However, if offending rates continue to rise because of worsening conditions for our nation's youth, the number of teen killings could increase even more.

The challenge for the future, therefore, is how best to deal with youth violence. Without a large-scale effort to educate and support young children and preteens today, we can likely expect a much greater problem of teen violence tomorrow. There is, however, still time to stem the tide, and to avert the coming wave of teen violence. But time is of the essence.

Trends in Juvenile Violence

James Alan Fox, Ph.D.
Northeastern University

Since the early 1800s, criminologists have labored to measure crime levels, patterns and trends in a reliable and accurate fashion. In the United States, efforts to calibrate a reliable measure of national crime levels date back to 1930, when the FBI's Uniform Crime Reporting (UCR) program was first launched. While the UCR protocols have undergone substantial change over the years and the geographic coverage of data collection has approached virtual completeness, the so-called dark figure of crime (i.e., those crimes not reported to the police) has long been a major concern for those relying on the UCR crime index.

In response, the National Crime Survey (NCS) was initiated in 1973 by the Law Enforcement Assistance Administration, and later overhauled by the Bureau of Justice Statistics (BJS), in order to avoid the limitations inherent in official police statistics on crime incidence. While the NCS certainly reduces the dark figure of crime, critics have also raised issues surrounding random and non-random errors in the victim survey results.

The dual availability of alternative crime measures--police data on crimes/arrests and victim survey estimates--has been a two-edged sword. Although the strengths of the two major data series are complementary, discrepancies in their trends over time have often created confusion concerning which data program was more dependable for researchers and policy-makers alike.

The good news is that as the UCR and NCS initiatives have continued to be refined, their measurements are beginning to converge. Figure 1 shows four alternative indicators of the incidence of violent crime in the United States: estimated offense totals based on the NCS, estimated NCS offense counts adjusted for victim reporting rates, offenses reported to the police from the UCR, and UCR total arrests for violent offenses. For the sake of comparison, homicide counts were added to the NCS data, and simple assaults were removed.

A consistent pattern emerges since the late 1970s. In all four data series, but to varying degrees, the incidence of violence appears to have peaked or at least plateaued around 1980, and then to have subsided or at least leveled off until the mid-1980s. Since the mid-1980s, however, the incidence of violence has risen, according to all four indicators. Also noteworthy is the close agreement since 1989 in the reported NCS and UCR totals.

Much of this swing pattern was anticipated by criminologists as early as two decades ago (e.g., see J.A. Fox, *Forecasting Crime Data*,

Lexington: Lexington Books, 1978). Figure 2, for example, displays a forecast of the rate of violent crime for urban areas, generated in 1976, based on an econometric model of crime rates, clearance rates, police force size, and police expenditures, plus various demographic and socio-economic characteristics. To a large extent, the rise and fall of violent crime was predicted based on the changing size of the crime-prone age group.

The premise in *Forecasting Crime Data* was fairly simple. The explosion in crime during the 1960s and 1970s, was seen largely as the result of demographic shifts. The post-World War II babyboomers had then reached their late adolescence and early twenties, an age at which aggressive tendencies are the strongest. As the babyboom cohort matured into adulthood during the 1980s, taking on families, jobs and other responsibilities, it was expected that the violent crime rate would subside. More to the point, the projected decline in the size of the population most prone to violence would likely translate into a reduced level of crime, violence and disorder.

As it happened, a downturn in violent crime did occur, but it was short-lived. By 1986, most unexpectedly, crime trends turned for the worse. The welcomed drop in violent crime of the early 1980s evaporated prematurely after just five years. The rate of crime began to surge, despite continued shrinkage within the most crime-prone population.

This pattern can be seen most clearly in levels of homicide. In fact, most of this report will focus on this most serious form of violence. Not only do the Supplementary Homicide Reports (SHR) offer detailed, incident-based information on trends and patterns, but these data do not suffer the same kinds of reporting and definitional problems associated with other measures of violent crime.

Figure 3 plainly reveals a sudden break, beginning in the mid-1980s, in the historically close connection between the homicide rate and the percentage of young adults within the population. In essence, the composition of the crime-prone age group was changing.

It is somewhat misleading even to attempt to track an overall rate of violent crime, without accounting for age differences. As shown in Figure 4 (and Table 1), there are actually two crime trends ongoing in America--one for the young and one for the mature, which are moving in opposite directions. Since 1985, the rate of homicide committed by adults, ages 25 and older, has declined 25%, from 6.3 to 4.7 per 100,000, as the babyboomers matured into their middle-age years. At the same time, however,

the homicide rate among 18-24 year-olds has increased 61%, from 15.7 to 25.3 per 100,000. Even more alarming and tragic, homicide is now reaching down to a much younger age group--children as young as 14-17. Over the past decade, the rate of homicide committed by teenagers, ages 14-17, has more than doubled, increasing 172%, from 7.0 per 100,000 in 1985 to 19.1 in 1994. Thus, although the percentage of 18-24 year-olds has declined in recent years, younger teens have become more involved in serious violent crime, including homicide, thereby expanding the age limits of the violence-prone group to as young as 14.

Rates of homicide (both offending and victimization) have increased among white and black youth, and among males but not females. The rate of killing by white male teenagers has doubled since 1985, that by black male teens has more than tripled (see Figs. 5a,b, Table 2).

The increasing role of male teenagers and young adults in the homicide problem is quite pronounced. Males, ages 14-24 are less than eight percent of the population yet commit 48 percent of the murders. They are also 27 percent of the victims of homicide. Isolating these trends by race (see Table 3 and Figs. 6a,b), young white males, ages 14-24, have diminished in relative size to less than seven percent, but have remained 10 percent of the homicide victims and 17 percent of the perpetrators. More striking, however, is that over the past decade, black males, ages 14-24 have remained just above one percent of the population yet have expanded from 9 to 17 percent of the victims and from 17 to 30 percent of the offenders.

Trends in arrest rates by age, displayed in Figure 7a, support the results thus far based on SHR records of known offenders. For homicide, arrest rates have dropped among adults, ages 25 and over, and have increased for persons under age 25. The sharpest increase has been among teens. A similar pattern, although with a small increase among adults, has occurred for all violent crimes (homicide, rape, robbery and aggravated assault) combined. As shown in Figure 7b, teens now exceed young adults in absolute rate of arrest for violent crime overall. Conventional wisdom in criminology--that young adults generally represent the most violence-prone group--apparently needs to be modified in light of these changes. Of course, the arrest data are more difficult to interpret, because they tend to confound offense patterns with criminal justice practices. The agreement between violent arrest rates and SHR homicide data, however, lends greater credence to these findings.

Regardless of measurement, it is clear that too many teenagers in this country, particularly

those in urban areas, are plagued with idleness and even hopelessness. A growing number of teens and preteens see few feasible or attractive alternatives to violence, drug use and gang membership. For them, the American Dream is a nightmare: There may be little to live for and to strive for, but plenty to die for and even to kill for.

The causes of the surge in youth violence since the mid-1980s reach, of course, well-beyond demographics. There have been tremendous changes in the social context of crime over the past decade, which explain why this generation of youth is more violent than others before it. This generation of youth has more dangerous drugs in their bodies, more deadly weapons in their hands and a seemingly more casual attitude about violence.

The problem of kids with guns cannot be overstated in view of recent trends in gun-related killings among youngsters. As shown in Figure 8, since the mid-1980s, the number of gun-homicides, particularly with handguns, perpetrated by juveniles has quadrupled, while the prevalence of juvenile homicide involving all other weapons combined has remained virtually constant.

Guns are far more lethal in several respects. A 14-year-old armed with a gun is far more menacing than a 44-year-old with a gun. Although juveniles may be untrained in using firearms, they are more willing to pull the trigger without fully considering the consequences. Also, the gun psychologically distances the offender from the victim; if the same youngster had to kill his or her victim (almost always someone known) with hands, he or she might be deterred by the physical contact.

As shown in Figure 9, the most significant growth in terms of victim-offender patterns in juvenile homicide is found among friends and acquaintances (see also Table 4). With the spread of guns among a youthful population, combined with the cumulative, desensitizing effects of media-glamorized violence, it has become too easy for juveniles to engage in deadly disputes over small, even trivial, matters--such as a pair of sneakers, a leather jacket, a challenging glance, or no reason at all.

While the negative socializing forces of drugs, guns, gangs and the media have become more threatening, the positive socializing forces of family, school, religion and neighborhood have grown relatively weak and ineffective. Increasingly, children are being raised in homes disrupted by divorce or economic stress; too many children emerge undersocialized and undersupervised. Too many of them do not have the benefit of a strong, positive role model in their lives.

At this juncture, as many as 57% of children in America do not have full-time parental

supervision, either living with a single parent who works full-time or in a two-parent household with both parents working full-time (see Fig. 10). The lack of parental supervision for young children is nearly as great. As many as 49% of children under age six do not have the benefit of full-time parenting. While some children enjoy suitable, substitute supervision provided by friends and relatives or in day-care, far too many do not.

The problem, of course, does not end nor the solution necessarily begin with the breakdown of the traditional family. Because of deep funding cuts in support programs for youth--from after-school care to recreation, from mentoring to education--as a society, we are missing the fleeting window of opportunity to compensate for the diminished role of the family. As a consequence, children spend too little time engaged in structured activity with positive role models, and too much time "hanging out" or watching a few savage killings on television.

The problem of unsupervised youth is clearly reflected in the time-of-day patterns of juvenile violence. As shown in Figure 11, the prime-time for juvenile crime is during the after-school hours, and certainly not after midnight when curfew laws might be contemplated. For these South Carolina data, specifically, 40 percent of the juvenile violent offenses occurred after 3 PM and before 8 PM.

As if the situation with youth violence was not bad enough already, future demographics are expected to make matters even worse. Not only are today's violent teens maturing into more violent young adults, but they are being succeeded by a new and larger group of teenagers. The same massive babyboom cohort that as teenagers produced a crime wave in the 1970s has since grown up and has had children of their own. There are now nearly 40 million children in this country under the age of ten (see Fig. 12), a larger count than has existed for several decades. This "baby boomerang" cohort of youngsters will soon reach their adolescence.

By the year 2005, the number of teens, ages 14-17 will have increased 20% over its 1994 level, likely producing additional increases in crime and other social problems associated with an expanding youth population. As shown in Figure 13, the number of teenage offenders has grown in recent years, even as the population of teenagers has contracted. But now the teen population is on the upswing.

The population growth will be different for whites and blacks. The projected growth in the number of white male teens, shown in Figure 14a, will be modest, peaking in fifteen years at a level far below that of the mid-1970s. For blacks, on the other hand, the number of 14-17 year-old males will have increased 26% by 2005, and will

continue to expand well into the next century, easily surpassing the population levels of twenty years ago (see Fig. 14b).

If current age-race-sex specific rates of offending remain unchanged, the number of teens who commit murder shall increase, if only because of the demographic turnaround in the population at-risk. As shown in Figure 15, the estimated number of teen killers (known 14-17 year-old offenders plus an estimated share of unidentified offenders) could increase from nearly 4,000 per year in 1994 to almost 5,000 per year by 2005, as a result of demographic growth alone.

But all else may not be equal. Given the worsening conditions in which children are being raised, given the breakdown of all of our institutions as well as of our cultural norms, given our wholesale disinvestment in youth, we will likely have many more than 5,000 teen killers per year. Even if the recent surge in teenage homicide rates slows, our nation faces a future juvenile violence problem that may make today's epidemic pale in comparison.

The optimistic view, of course, is that there is still time to stem the tide--to prevent the next wave of youth crime. But we must act now--by reinvesting in schools, recreation, job training, support for families, and mentoring. We must act now while this baby-boomerang generation is still young and impressionable, and will be impressed with what a teacher, a preacher, or some other authority figure has to say. If we wait until these children reach their teenage years and the next crime wave is upon us, it may be too late to do much about it. It is far easier and considerably less expensive to build the child than to rebuild the teen.

The challenge for the future, therefore, is how best to deal with youth violence. Without a large-scale effort to educate and support young children and preteens today, we can likely expect a much greater problem of teen violence tomorrow. Expanding law enforcement and correctional resources will clearly help alleviate an overburdened criminal justice system, but, as always, an ounce of prevention in schools or community centers may be worth ten years of cure inside the walls of a prison cell.

Based on an August 1995 briefing to Attorney General Janet Reno, this report is supported by funds from the Bureau of Justice Statistics. Opinions and conclusions are those of the author and do not necessarily reflect the official position of the U.S. Department of Justice.

Table 1: Trends in Homicide Offending Rates by Age, Race and Sex
(Rates per 100,000 Population)

Year	Under 14	14-17	18-24	25+	Male	Female	White	Black
1976	.2	8.1	17.7	7.9	13.2	2.5	4.0	35.3
1977	.2	7.2	16.8	7.6	12.7	2.3	4.0	32.5
1978	.2	7.4	17.7	7.7	13.3	2.2	4.2	32.9
1979	.2	8.3	19.3	7.9	14.2	2.2	4.4	34.4
1980	.2	8.5	20.0	7.9	14.5	2.2	4.5	33.9
1981	.1	8.5	18.8	8.1	14.3	2.2	4.5	33.9
1982	.2	7.6	17.3	7.2	12.9	2.0	4.2	30.0
1983	.1	6.9	16.0	6.6	11.9	1.9	4.0	26.8
1984	.1	6.2	15.3	6.3	11.3	1.7	3.9	24.0
1985	.2	7.0	15.7	6.3	11.5	1.7	3.8	25.1
1986	.2	8.4	17.4	6.7	12.4	1.7	4.0	27.7
1987	.2	8.6	17.2	6.1	11.7	1.6	3.8	26.1
1988	.2	10.8	18.9	6.0	12.4	1.6	3.7	28.8
1989	.2	12.4	21.2	5.8	12.8	1.6	3.8	29.7
1990	.1	16.2	24.8	6.0	14.4	1.6	4.2	32.9
1991	.2	17.6	28.2	5.8	14.6	1.6	4.0	34.8
1992	.2	17.4	26.0	5.2	13.4	1.4	3.7	31.4
1993	.2	19.3	26.6	5.0	14.1	1.4	3.8	34.0
1994	.2	19.1	25.3	4.7	13.6	1.3	3.7	32.1

Source: FBI, Supplementary Homicide Reports, and Census Bureau, Current Population Survey. Includes known offenders only.

Table 2: Trends in Homicide Offending Rates by Age, Sex and Race Combinations
(Rates per 100,000 Population)

Year	14-17				18-24				25+			
	Male		Female		Male		Female		Male		Female	
	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black
1976	7.9	51.2	1.0	7.8	16.7	138.3	2.0	23.7	7.2	76.5	1.2	17.1
1977	7.6	44.8	.9	4.4	16.5	124.3	2.0	22.4	7.2	70.1	1.2	16.1
1978	7.7	44.4	.9	6.0	18.0	131.2	2.0	20.5	7.5	71.5	1.1	14.9
1979	9.2	47.1	.9	6.0	19.5	144.2	2.1	20.3	7.8	73.5	1.2	13.8
1980	8.9	48.9	.7	5.1	20.4	144.6	2.0	21.5	7.9	71.4	1.1	13.2
1981	8.4	55.0	1.0	6.3	19.8	135.5	1.9	17.8	8.2	72.4	1.1	13.5
1982	8.1	45.7	.9	4.4	17.5	120.8	2.0	18.6	7.6	62.3	1.1	11.6
1983	7.5	36.8	1.1	5.3	17.3	104.9	1.8	16.6	7.0	56.2	1.1	10.4
1984	6.9	33.4	.9	4.7	18.0	91.1	2.0	13.8	7.0	51.0	.9	9.2
1985	7.0	44.3	.7	4.9	17.2	101.3	1.8	13.3	7.0	50.2	.9	9.3
1986	9.0	51.0	.8	4.2	18.5	117.2	1.7	15.5	7.1	55.9	.9	9.8
1987	8.0	54.1	1.1	5.1	17.6	121.2	2.0	12.9	6.7	48.7	.9	8.4
1988	9.9	72.6	.8	5.2	16.9	146.9	2.0	15.2	6.4	50.5	.8	7.9
1989	11.5	84.6	.8	5.3	19.1	168.5	2.0	14.0	6.2	47.4	.8	8.3
1990	14.3	113.8	1.1	5.2	22.2	200.7	2.1	14.7	6.6	48.9	.8	7.7
1991	14.6	127.5	.9	7.7	23.2	241.2	1.9	15.7	6.3	46.4	.8	7.5
1992	14.4	122.5	1.0	7.5	21.7	219.0	1.7	12.8	5.5	42.6	.7	6.4
1993	14.4	151.6	1.0	6.7	20.9	215.8	1.6	14.3	5.5	39.7	.8	5.9
1994	15.6	139.6	1.1	6.7	20.9	201.0	1.6	13.1	5.3	35.5	.7	5.8

Source: FBI, Supplementary Homicide Reports, and Census Bureau, Current Population Survey. Includes known offenders only.

Table 3: Percentage of Population, Homicide Victims, and Homicide Offenders by Age, Sex and Race

	14-17				18-24				25+			
	Male		Female		Male		Female		Male		Female	
	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black
1976-78												
Population	3.4%	.5%	3.2%	.5%	5.4%	.7%	5.6%	.9%	23.9%	2.4%	26.6%	3.1%
Victims	1.6%	1.3%	.8%	.4%	8.0%	7.9%	2.8%	2.4%	27.7%	25.9%	9.5%	6.0%
Offenders	3.6%	3.5%	.4%	.5%	12.9%	13.3%	1.6%	2.6%	24.2%	24.6%	4.3%	6.8%
1979-82												
Population	3.0%	.5%	2.9%	.5%	5.4%	.8%	5.5%	.9%	24.5%	2.6%	27.3%	3.3%
Victims	1.5%	1.3%	.7%	.4%	9.0%	7.9%	3.0%	2.0%	28.8%	25.1%	9.5%	5.6%
Offenders	3.4%	3.3%	.3%	.4%	13.9%	13.7%	1.5%	2.3%	25.7%	23.8%	4.1%	5.6%
1983-86												
Population	2.6%	.5%	2.5%	.5%	5.0%	.8%	5.1%	.9%	25.3%	2.8%	27.9%	3.5%
Victims	1.2%	1.3%	.7%	.4%	8.1%	7.8%	2.8%	2.0%	28.8%	23.7%	10.9%	5.8%
Offenders	3.2%	3.1%	.4%	.4%	14.0%	12.3%	1.5%	2.0%	28.0%	23.4%	4.1%	5.3%
1987-90												
Population	2.4%	.4%	2.2%	.4%	4.4%	.7%	4.4%	.8%	26.0%	3.0%	28.4%	3.7%
Victims	1.4%	2.5%	.6%	.4%	7.4%	10.9%	2.3%	1.9%	25.5%	24.5%	10.0%	6.3%
Offenders	3.8%	5.5%	.3%	.3%	12.5%	16.7%	1.4%	1.7%	25.5%	21.9%	3.6%	4.5%
1991-94												
Population	2.2%	.4%	2.1%	.4%	4.1%	.7%	4.0%	.7%	26.2%	3.1%	28.4%	3.8%
Victims	2.1%	3.3%	.5%	.5%	8.0%	13.9%	1.9%	1.8%	23.3%	23.1%	8.7%	6.0%
Offenders	4.7%	8.3%	.3%	.4%	12.7%	21.9%	1.0%	1.5%	21.4%	18.4%	3.0%	3.5%

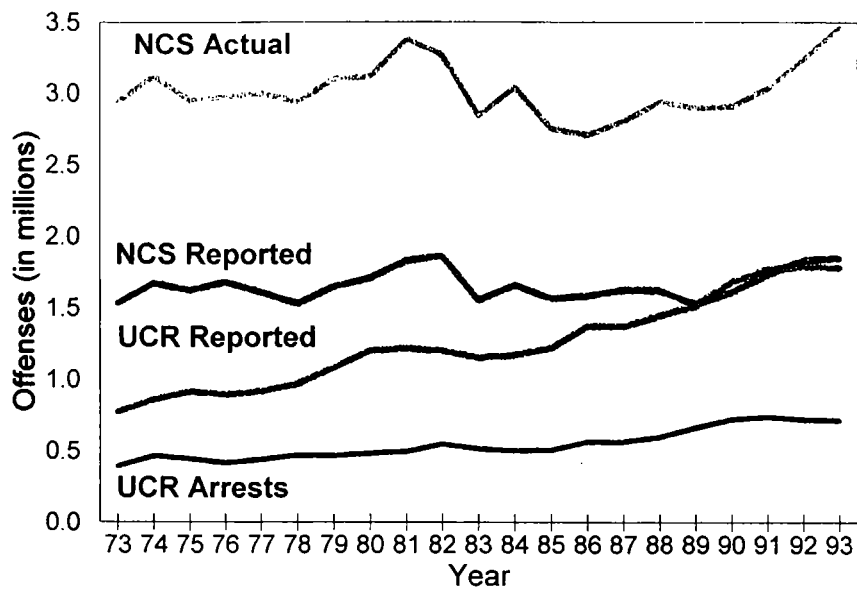
Source: FBI, Supplementary Homicide Reports, and Census Bureau, Current Population Survey. Includes known offenders only.

Table 4: Trends in Homicide Offending Patterns by Offender Age

	14-17				18-24				25+			
	76-81	82-87	88-94	Total	76-81	82-87	88-94	Total	76-81	82-87	88-94	Total
Offender Sex												
Male	89.9%	90.1%	94.5%	92.3%	87.4%	88.4%	92.4%	89.7%	82.6%	84.4%	85.7%	84.2%
Female	10.1%	9.9%	5.5%	7.7%	12.6%	11.6%	7.6%	10.3%	17.4%	15.6%	14.3%	15.8%
Offender Race												
White	49.4%	48.7%	37.0%	42.9%	47.6%	49.4%	37.9%	44.0%	47.4%	51.8%	51.3%	50.3%
Black	48.8%	49.1%	60.8%	55.0%	50.5%	48.5%	60.2%	54.0%	50.3%	46.3%	46.6%	47.8%
Other	1.8%	2.3%	2.2%	2.1%	1.9%	2.1%	1.8%	1.9%	1.7%	1.9%	2.1%	1.9%
Weapon												
Handgun	37.7%	39.1%	62.2%	50.5%	42.0%	41.0%	58.0%	48.4%	50.4%	46.4%	46.8%	47.9%
Other gun	20.2%	18.9%	15.7%	17.6%	17.4%	14.2%	13.7%	14.9%	18.5%	16.9%	14.5%	16.7%
Other	42.1%	42.0%	22.1%	31.9%	40.7%	44.9%	28.3%	36.7%	31.1%	36.7%	38.7%	35.5%
Relationship												
Family	16.7%	15.1%	8.0%	11.9%	16.0%	14.7%	9.7%	13.0%	29.1%	27.2%	25.2%	27.2%
Known	48.2%	52.7%	55.0%	52.7%	55.9%	58.3%	59.4%	58.1%	55.8%	58.1%	59.6%	57.8%
Stranger	35.1%	32.1%	37.0%	35.4%	28.0%	27.0%	30.9%	28.9%	15.1%	14.7%	15.2%	15.0%
Circumstances												
Felony	39.1%	35.5%	33.6%	35.5%	30.9%	30.7%	32.0%	31.3%	14.1%	15.9%	19.4%	16.5%
Argument	38.9%	39.3%	34.4%	36.7%	48.8%	50.3%	43.4%	47.0%	66.6%	66.1%	61.3%	64.7%
Other	22.0%	25.3%	32.0%	27.8%	20.3%	19.1%	24.6%	21.7%	19.3%	17.9%	19.2%	18.8%

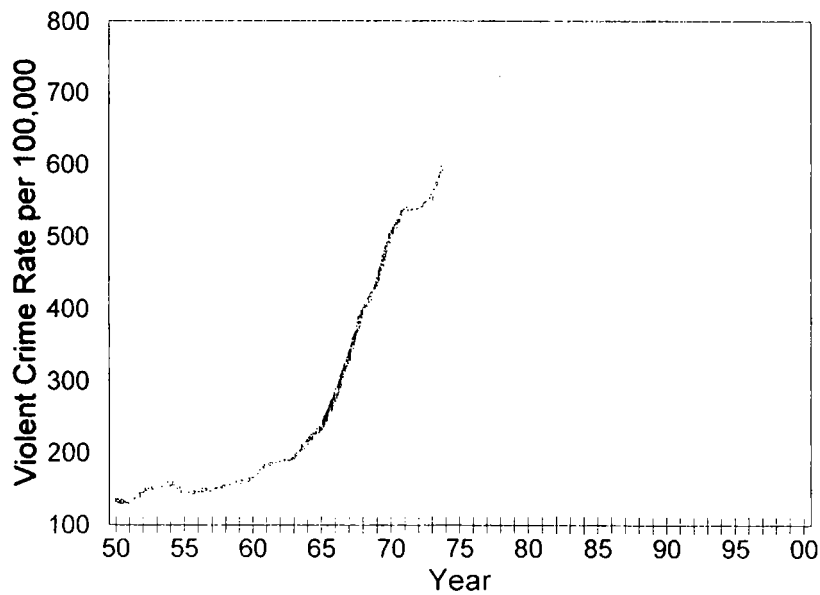
Source: FBI, Supplementary Homicide Reports, and Census Bureau, Current Population Survey. Includes known offenders only.

Fig 1. Four Measures of Violent Crime



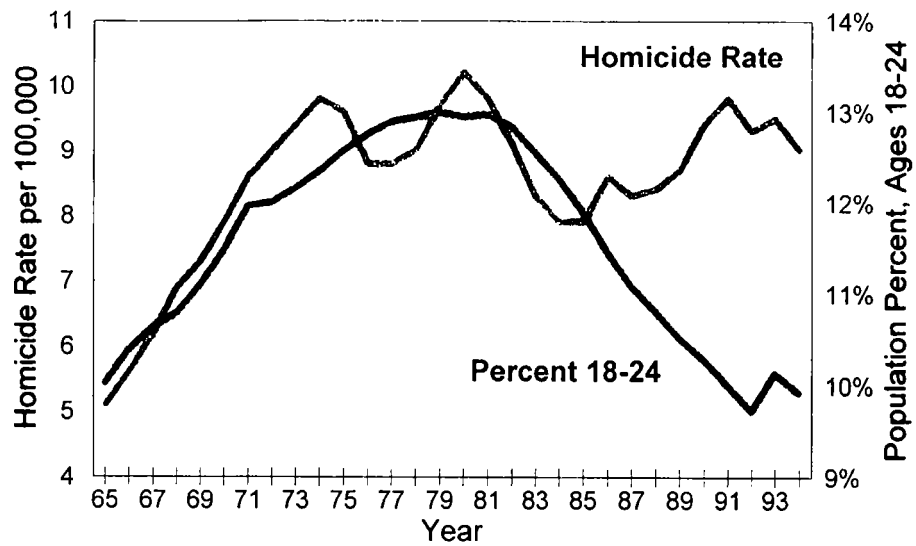
Source: BJS, National Crime Victimization Survey, and FBI, Uniform Crime Reports.
Note: Data include homicide, rape, robbery, and aggravated assault.

Fig 2. Urban Violent Crime Forecast from 1976 Model



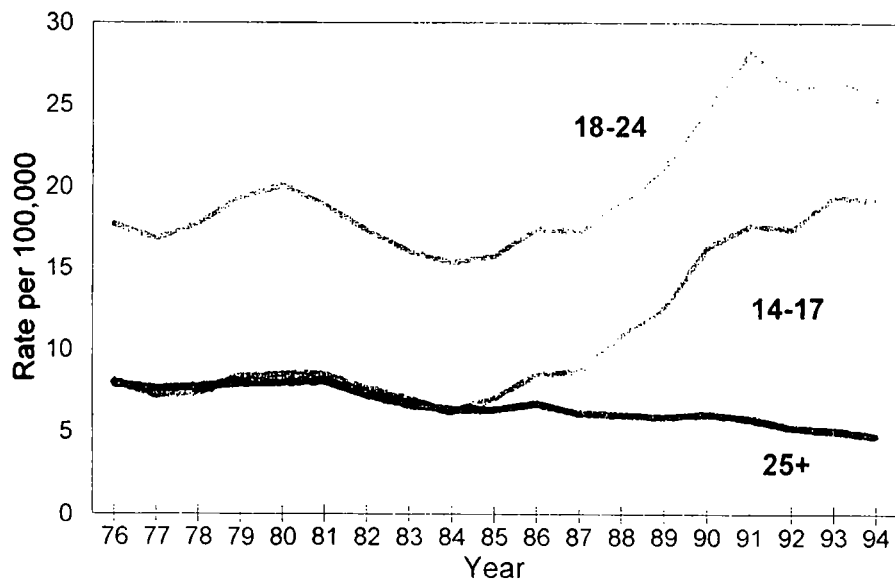
Source: J.A. Fox, *Forecasting Crime Data*,
Lexington Books, Lexington, MA, 1978

Fig 3. U.S. Homicide Rate and Percent of Population Ages 18-24



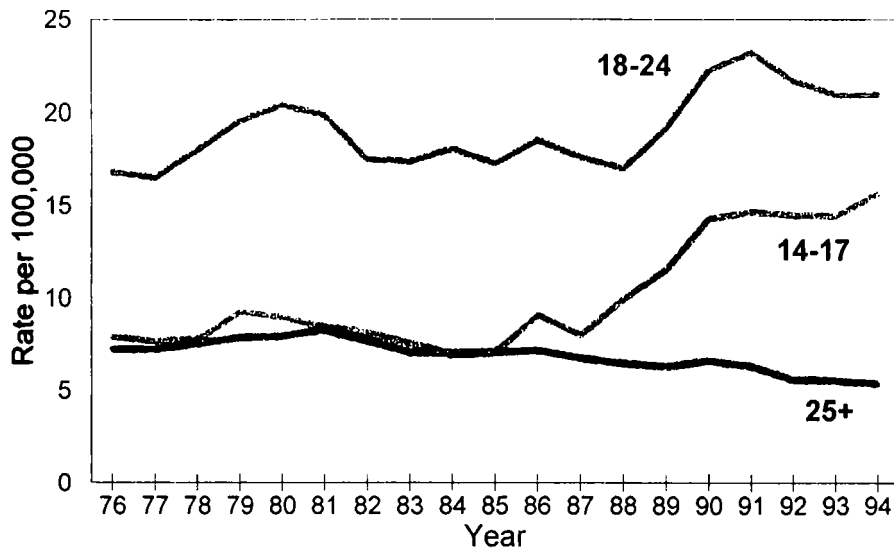
Source: FBI, Supplementary Homicide Reports and Census Bureau, Current Population Survey

Fig 4. Homicide Offending Rate by Age



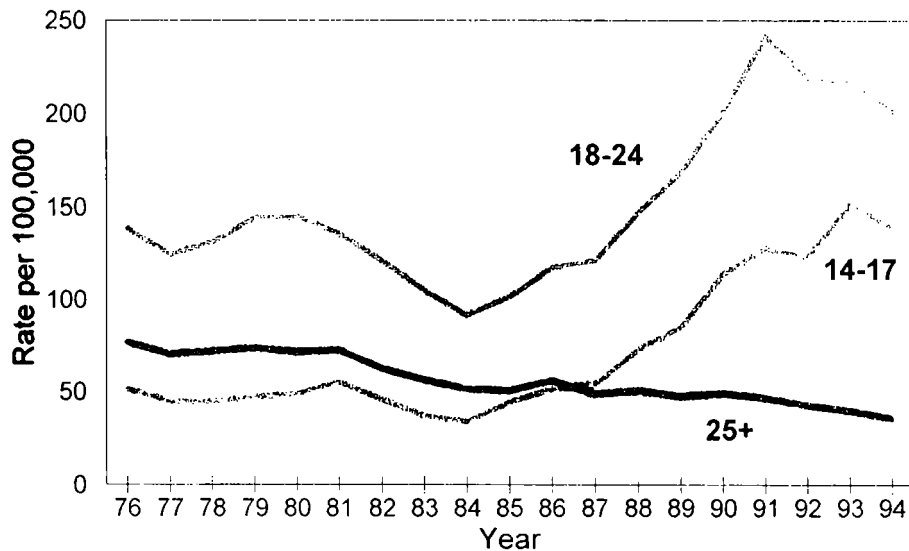
Source: FBI, Supplementary Homicide Reports and Census Bureau, Current Population Survey

Fig 5a. Homicide Offending Rate by Age, White Males



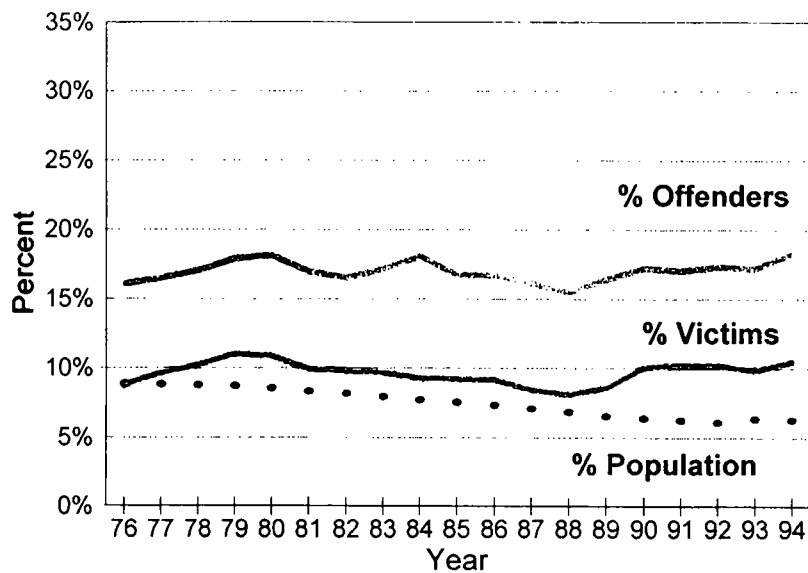
Source: FBI, Supplementary Homicide Reports and Census Bureau, Current Population Survey

Fig 5b. Homicide Offending Rate by Age, Black Males



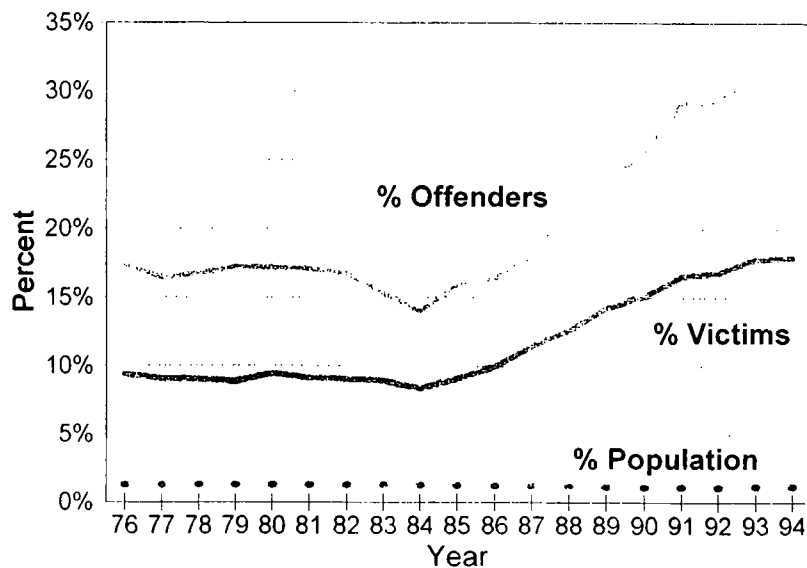
Source: FBI, Supplementary Homicide Reports and Census Bureau, Current Population Survey

Fig 6a. White Males, Ages 14-24 as Percent of Homicide Offenders, Victims and Population



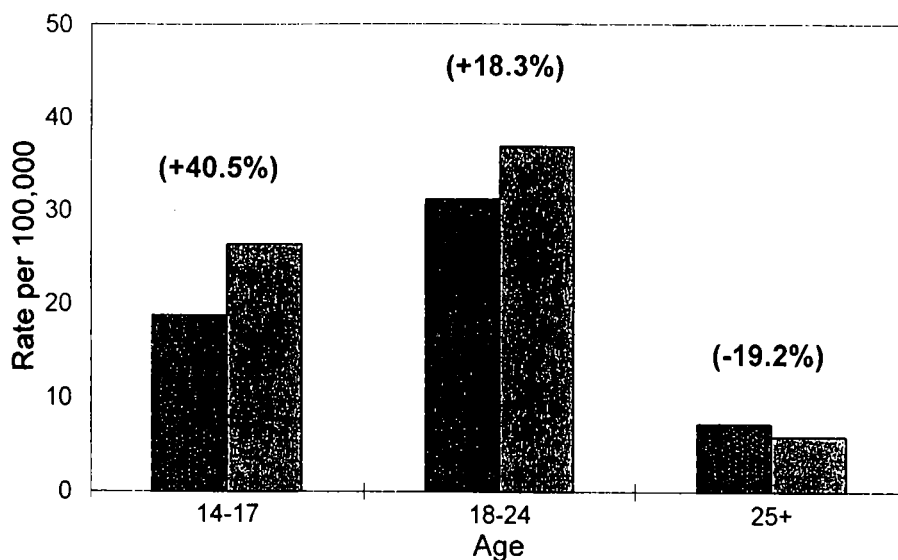
Source: FBI, Supplementary Homicide Reports and Census Bureau, Current Population Survey

Fig 6b. Black Males, Ages 14-24 as Percent of Homicide Offenders, Victims and Population



Source: FBI, Supplementary Homicide Reports and Census Bureau, Current Population Survey

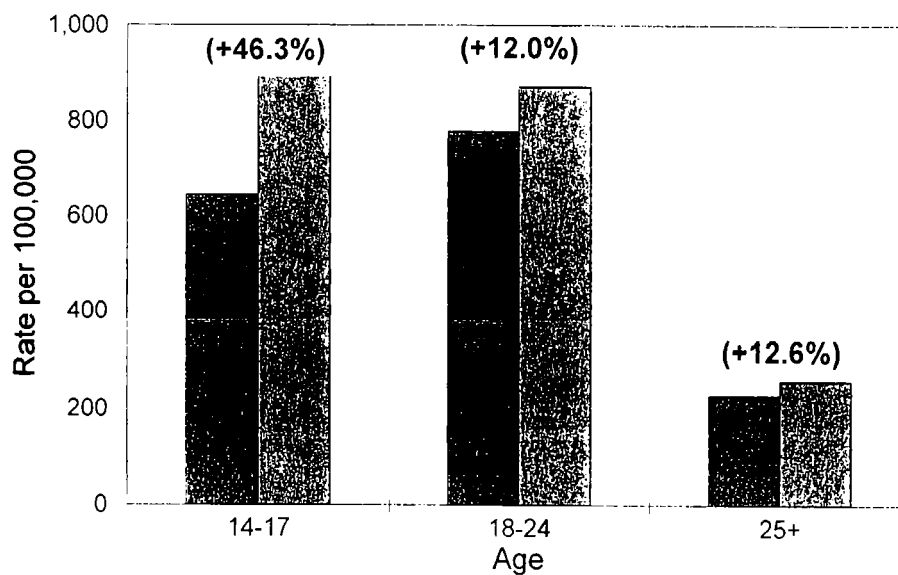
Fig 7a. Homicide Arrest Rates by Age (with percent change, 1989-94)



Source: FBI, Uniform Crime Reports and Census Bureau, Current Population Survey

1989 1994

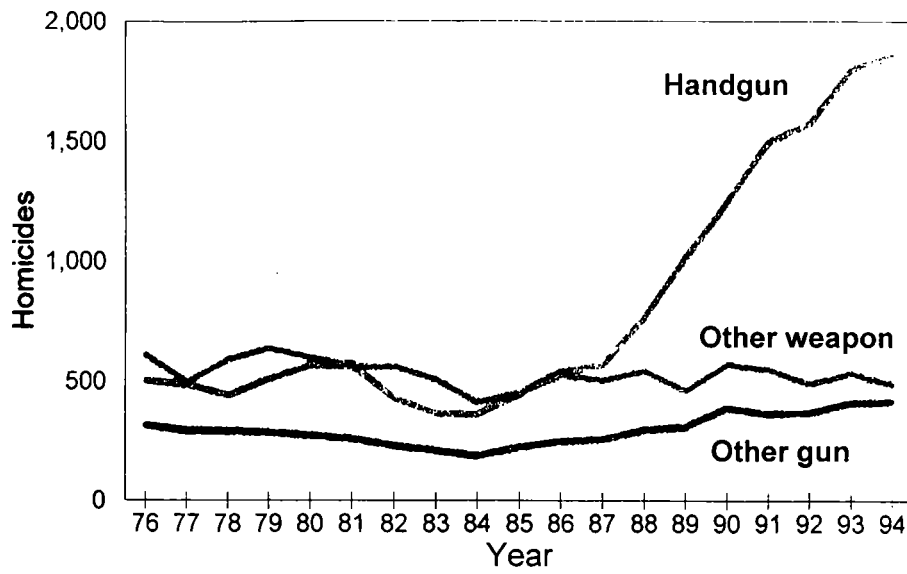
Fig 7b. Violent Arrest Rates by Age (with percent change, 1989-94)



Source: FBI, Uniform Crime Reports and Census Bureau, Current Population Survey

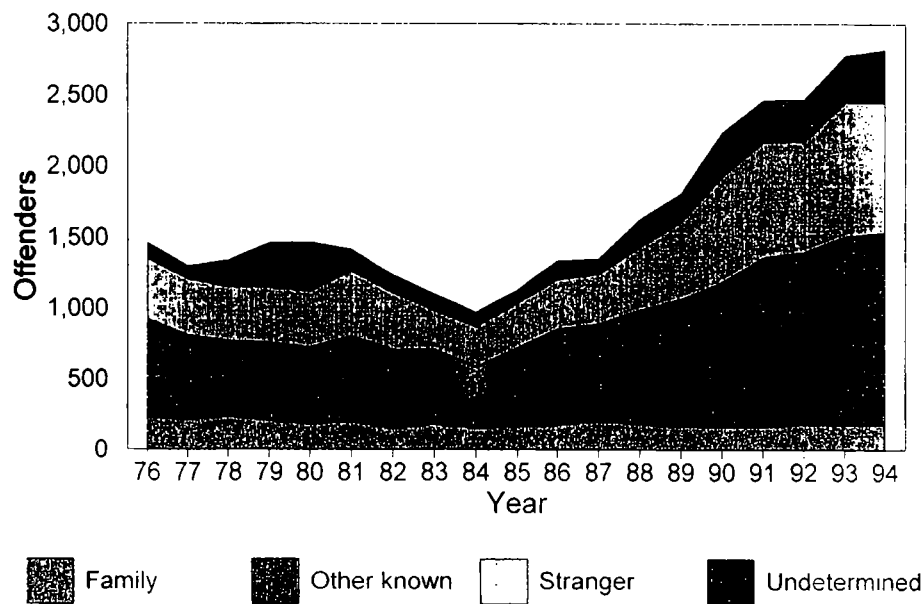
1989 1994

Fig 8. Juvenile Homicides by Weapon



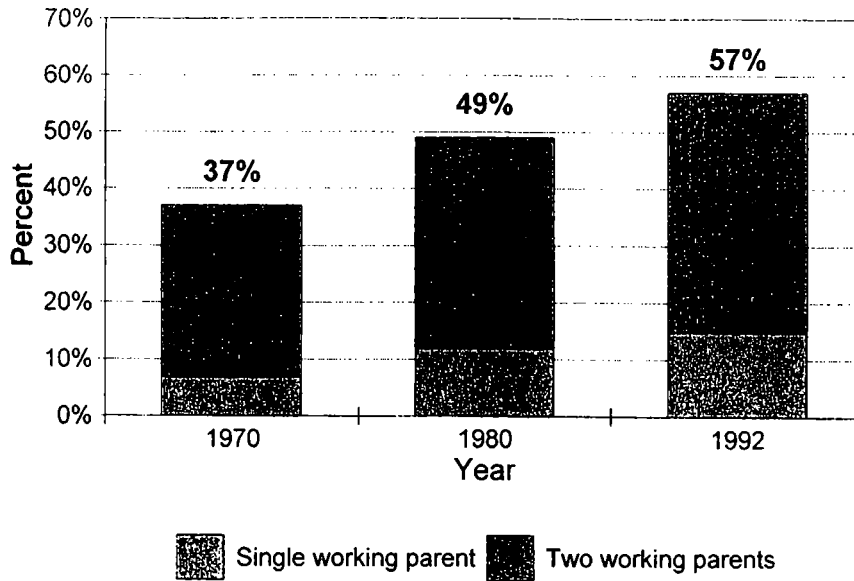
Source: FBI, Supplementary Homicide Reports

Fig 9. Juvenile Homicides by Relationship



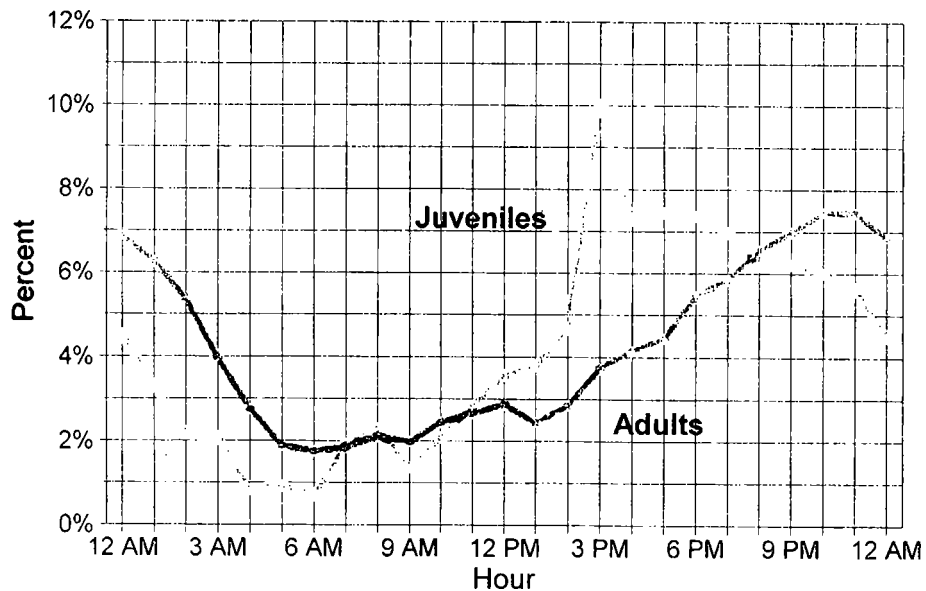
Source: FBI, Supplementary Homicide Reports

Fig 10. Percent of Families with Children Under 18 Lacking Full-time Parental Supervision



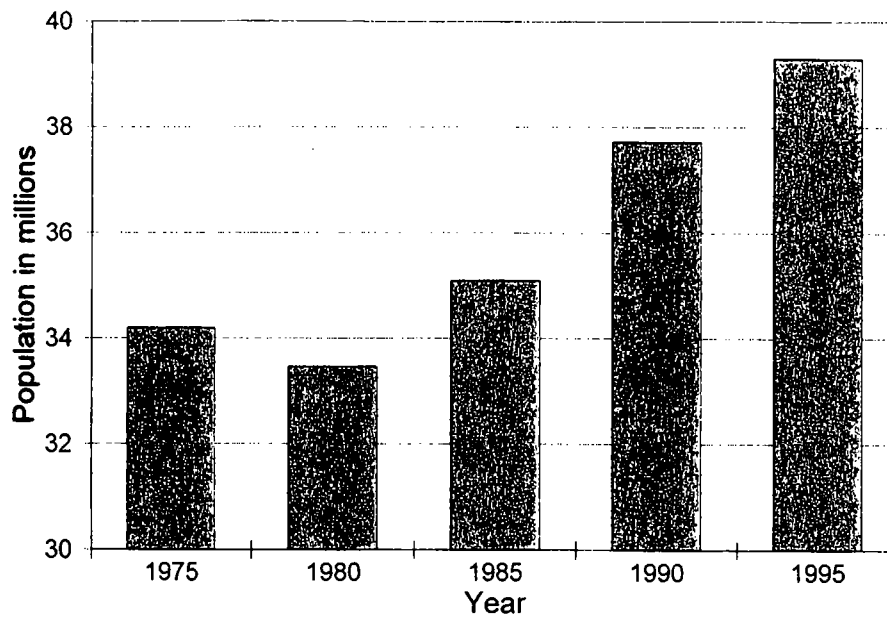
Source: Glenn Pierce, *Disinvestment in America*, and Census Bureau, *Current Population Survey*

Fig 11. Time of Offending by Age of Offender



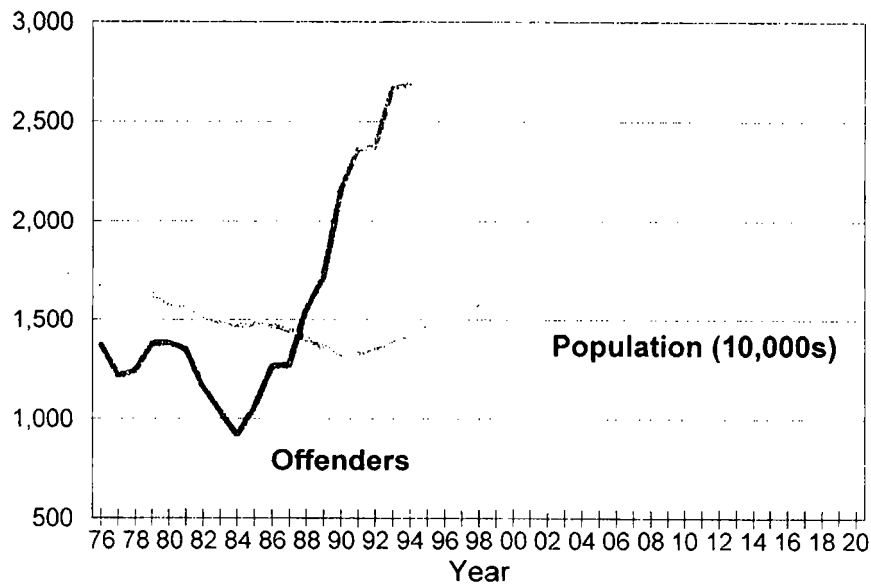
Source: FBI, *National Incident-Based Reporting System (NIBRS) for South Carolina, 1991-92*, and H. Snyder and M. Sickmund, *Juvenile Offenders and Victims: A National Report*.

Fig 12. Population Under Ten Years Old



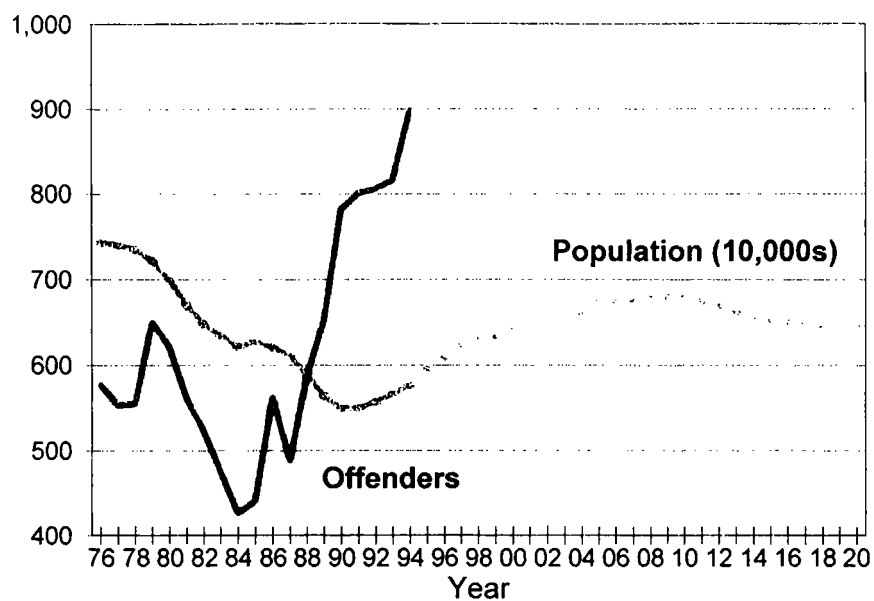
Source: Census Bureau, Current Population Survey

Fig 13. Population and Offenders, Ages 14-17



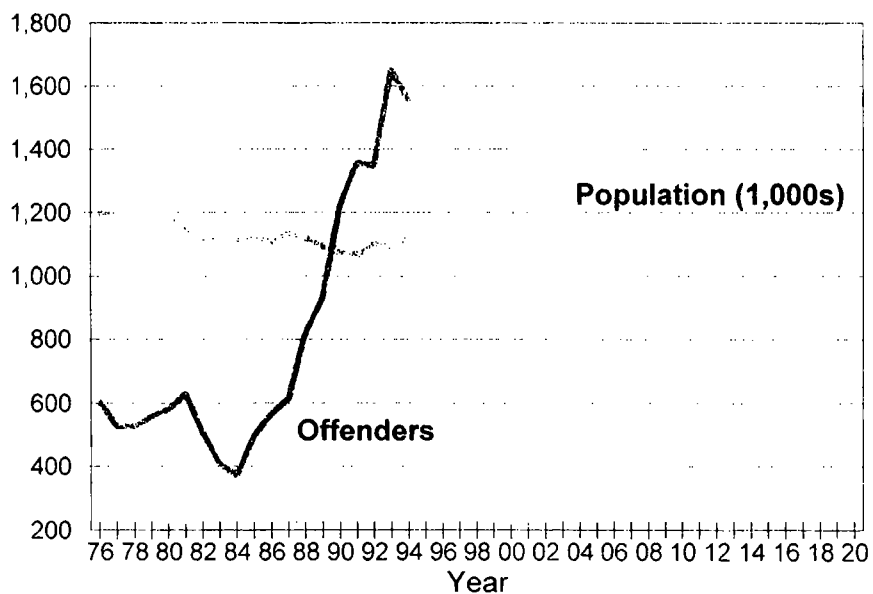
Source: FBI, Supplementary Homicide Reports, and Census Bureau, Current Population Survey and Population Projections of U.S.

Fig 14a. Population and Offenders, White Male, Ages 14-17



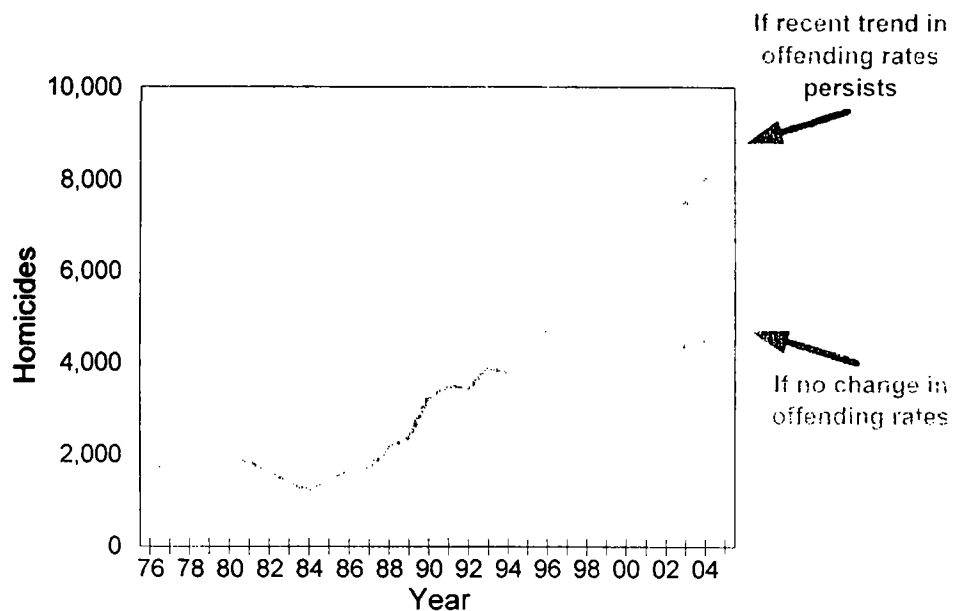
Source: FBI, Supplementary Homicide Reports, and Census Bureau, Current Population Survey and Population Projections of U.S.

Fig 14b. Population and Offenders, Black Male, Ages 14-17



Source: Supplementary Homicide Reports, Current Population Survey, and Population Projections of U.S.

Fig 15. Forecast of Homicide Offenders, Ages 14-17



Source: FBI, Supplementary Homicide Reports, and Census Bureau, Current Population Survey, and Population Projections of US

AUTHOR'S NOTE

Most of the tabulations contained in this report utilized a cumulative, 1976-1994 data file of the FBI's *Supplementary Homicide Reports (SHR)*, with incident records updated in December 1995. In order to ensure comparability with published homicide rates, the SHR records were weighted in such a way as to match the SHR victim count to the estimated homicide count contained in the printed *Crime in the United States*. On average, the cases were weighted upward by 8.75 percent.

Except for Figure 15, offender data represent incidents in which characteristics of the offender were known. For Figure 15, demographic characteristics of unknown offenders were estimated or imputed from known victim and incident information

A number of abbreviations and shortened terms are used throughout this report. FBI refers to the Federal Bureau of Investigation, and BJS to the Bureau of Justice Statistics. Homicide includes murder and non-negligent manslaughter, and excludes justifiable homicides. The term "juvenile" refers to persons under the age of 18, while "teen" and "teenager" are employed for youngsters between the ages of 14 and 17 inclusive. Also, "young adult" refers to the age group 18-24.

Several individuals read and commented on earlier versions of this report. I am grateful to Jan Chaiken, John Laub, Michael Maltz, and Marianne Zawitz for their input.