

American Youth Violence: A Cautionary Tale

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*Franklin E. Zimring*

# American Youth Violence: A Cautionary Tale

## ABSTRACT

Violence by young offenders has long been a concern of students of juvenile delinquency. Until the 1980s, juveniles had high rates of committing less serious assaults but accounted for less than 10 percent of homicides, a proportion to which they have since returned. But the late 1980s produced an epidemic of gun homicides by juveniles and young adults, which led in the mid-1990s to warnings about an emerging group of “superpredators” and to fabulously inaccurate predictions of “a coming storm of juvenile violence.” Just as the rhetoric was reaching its crescendo, youth homicide rates began their largest drop in modern history. Several problematic assumptions underlay the faulty predictions and offer lessons about how to avoid catastrophic errors in the prediction of crime rates. Some of the same problems reappear in more recent scholarly analyses.

Acts of life-threatening violence by young persons are important and troublesome events in developed nations for a variety of reasons: they are the most serious crimes young persons commit and thus test the degree to which legal principles can mitigate penal responses; they happen at the beginning of social and criminal careers and thus may be signals of protracted dangerousness; and they follow closely on periods of child development and dependence so that the crimes of the young also clearly implicate failures of family, government, and society. It is therefore no surprise that youth violence has been the focus of

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scholarly concern in the pages of *Crime and Justice* on a consistent basis throughout 35 years of publication (see the list of articles in App. A).

But there were three special developments in the United States over the period since 1975 that compelled special scholarly concern with youth violence. The first special feature of the late twentieth century was a baby boom that propelled an expansion of children and adolescents all through the 1960s and early 1970s just as crime rates in urban America were also expanding. Youth violence had become a much more important concern simply because there were so many more young people in the American mix.

The second special element of the period was an explosion of rates of youth homicide in urban areas during the 8 years after 1984. The escalating rates of youth homicide started after the youth population peak (in 1975) during a period when the population of older juveniles was declining.

This explosive increase in youth homicide touched off the third element of the story, predictions of continuing growth in American violence on the horizon, a moral panic in the media and government inspired by PhDs warning that “a bloodbath” was on the horizon that would be the result of an emerging generation of “juvenile superpredators.” While the ink was still wet on these dire predictions, rates of youth homicide were already dropping—the beginning of an era of declining rates of lethal violence by youth unprecedented in magnitude in the modern era. The contrast between predicted and actual rates of homicide arrests for the middle term was five to one. James Alan Fox had projected a volume of juvenile homicide arrests of “almost 5,000 per year by 2005, as a result of demographic growth alone” but then concluded that “we will likely have many more than 5,000 teen killers” (1996, p. 3). Yet the actual number of arrests in that age group in 2005 was 1,073.

This essay focuses on trends over time in serious youth violence since 1975 and on what the catastrophic errors of the 1990s teach us about youth violence and the limits of criminological projection. The first section provides a profile of statistical sources on youth violence with emphasis on the distinctive features of violent crime during adolescence. The second then profiles the age-specific trends in homicide after 1980 that provoked the moral panic in the 1990s and provides details on the assumptions used to project future problems. A third section details the trends of homicide after 1994 for different age

groups and suggests substantive reasons why the direction and magnitude of juvenile homicide were the reverse of what was predicted. A brief concluding section applies the lessons learned since 1995 to a risk-averse discussion of future trends in youth homicide.

The jump in youth homicide in the mid-1980s was tied to a sharp increase in gun use by younger offenders. What happened after 1995 was a classic regression toward prior proportions of youths to total homicide that interacted with general declines to produce huge drops in youth violence. The regression scenario was not considered by the superpredator predictors of the mid-1990s. That error should not be repeated. The prospects for future trends in youth violence are most likely to be in the same direction and have the same magnitude as the rates for offenders over 20.

### I. Youth Violence: A Profile

Two sources of information are available about the incidence and character of youth violence in the United States: official statistics from police and health departments and survey research estimates that come from interviews with samples of the population about whether and in what respects they have been crime victims in the recent past.

Because the victims of an offense will frequently not know much about the offender, there are important limits to using such surveys to determine offender characteristics, even in violent episodes in which the victim comes in contact with the offender. So most of the information available about the incidence and character of youth violence in the United States comes from police statistics.

But police statistics on the age of criminal offenders will not be available for the majority of all the offenses known to the police because an offender has not been identified. Detailed and accurate information on the age of criminal offenders can be taken only from cases in which a particular suspect has been arrested or otherwise identified, and, as I show later in this section, estimating the true prevalence of criminal offense responsibility from arrest or suspect counts is often problematic.

#### A. Official Statistics

There are five crime categories used in uniform crime reporting statistics that involve the immediate threat or imposition of personal

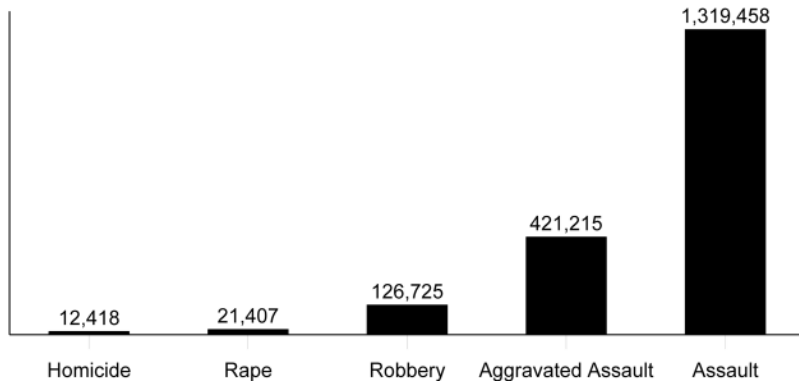


FIG. 1.—Police-defined crimes of violence in the United States, 2009. Source: FBI Uniform Crime Reports, 2009.

injury: homicide, rape, robbery, aggravated assault, and assault. Homicide and rape are the most serious of the police-classified offenses and also the lowest-incidence crimes. The total number of intentional killings estimated by police statistics is around 13,000 per year, and health department death statistics stay quite close to this level. The number of rapes reported in the United States by the FBI's Uniform Crime Reports is also small at just over 20,000, though this is regarded as a very substantial undercount. The two more frequent "index" crimes of violence, robbery and aggravated assault are heterogeneous in severity. Robberies vary from unarmed extortions to dangerous encounters with loaded guns. While assaults must be "aggravated" by either an intent to injure or the threat to use a deadly weapon to be upgraded to the index categories, they vary in severity. Figure 1 shows the varying scale for police-defined crimes of violence in the United States in reports for 2009.

With arrests used as one measure of crime (because age-specific detail can be added to it), homicides produced 2 percent of all index violent crime arrests in 2009. When arrests for the less serious assault category are added into the mix, homicide arrests are just over 0.6 percent of violence arrests.

Figure 2 provides some measure of the concentration of various violent crimes among younger adolescents by showing the percentage of all arrests for the eight index crimes and for nonindex assault in 2009.

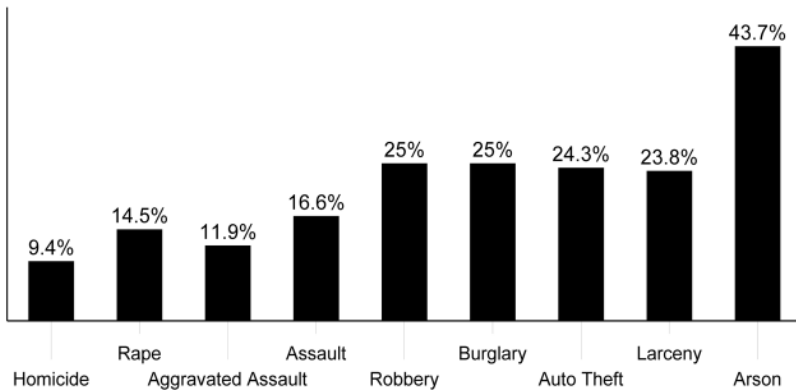


FIG. 2.—Under-18 share of arrests, nine offenses, United States, 2009. Source: FBI Uniform Crime Reports, 2009.

The youth share of violent crimes is at the low end of index offenses for four of the five violent crimes. The fifth, robbery, at 25 percent, clusters with burglary and the other property crimes at almost twice the concentration of murder, aggravated assault, and rape.

But these police-based statistics both underestimate the amount and the concentration of violence among the young and overstate the youth share of violence. The first reason the “under-18” share of arrests understates the relationship between youth and violence is that it cuts off the youth category pretty early in the developmental process. Adding in violent crimes up to age 21 or 23 would more than double the youth segment. The second reason that the under-18 share of arrests is an undercount is that official statistics do not fully reflect the assaults and fights among teens that are frequent during middle and late adolescence. Victim surveys identify the ages 15–19 as the highest-assault age group, and 12–15 ties with young adulthood for second place (Zimring 1998, chap. 2). Teen males often do not report such conflict to the police, and police will often take such events lightly if injuries are not severe. In one sense, however, arrest statistics exaggerate the amount of youth violence because younger offenders get arrested in groups, an issue I return to later in this section (see fig. 4).

### *B. Is Youth Violence Different?*

For the most part, patterns of youth violence resemble patterns of violence by older persons: concentrated in the same genders (males), the same kinds of conflicts, and the same disadvantaged minority segments of the community (Zimring 1998, pp. 20–30). There are three important respects in which youth violence, particularly under age 18, differs from the behaviors found among older populations: high volume, low seriousness, and group involvement.

The high volume of violence during adolescence is not in serious dispute in the United States, but the extent to which it crosses gender and class boundaries and the degree to which very serious violence is broadly distributed among boys is not clear. The prevalence of assault among boys is substantial, but how serious are most of these male peer assaults? And while fighting is a relatively common rite of passage among boys in the teen years, we are less confident about the extent and severity of assaults initiated by adolescent girls. If arrest statistics are an accurate measure, assaultive behavior is even more concentrated in males during teen years than after (see Zimring 1998, chap. 3). But is the arrest rubric itself a product of police discounting of girl violence?

The high rates of youth assaults that are common are usually counterbalanced by the relatively low severity of most youth assaults. Figure 3 contrasts homicide and self-reported assault victimization rates for three age groups. I use data for 1991, a year that was close to the high point for youth homicide discussed in the next section. The best evidence that youth assaults are less serious is that the youngest group in the figure has the same reported incidence of self-reported assault victimization (7.5 per 1,000) as 20–24-year-olds but a much lower homicide victimization rate (6.8 vs. 41 per 100,000).

The third specific marker of youth violence is the very high prevalence of group involvement. The official statistics on almost all forms of adolescent criminality show high levels of group involvement. Figure 4 demonstrates this pattern for homicide by showing the ratio of homicide arrests to victims associated with the arrests for three different age groups in the United States in 2008–9.

The group involvement and multiple arrests of juvenile offenders produce two arrests for every victim of this age group, while the oldest age group produces what is essentially a one-to-one ratio. The young adult rate is 1.44, between the juvenile and older-adult ratios.

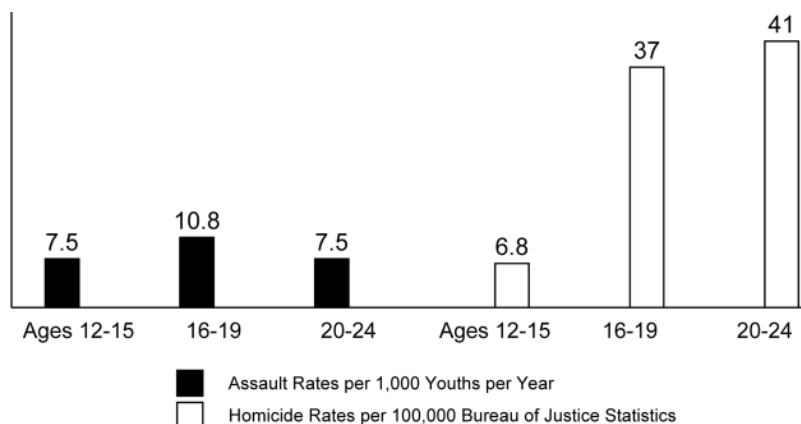


FIG. 3.—Male homicide and assault victimization rates by age, 1991. Source: National Center for Health Statistics (1991, p. 36); US Department of Justice, Bureau of Justice Statistics (1991, p. 24, table 5).

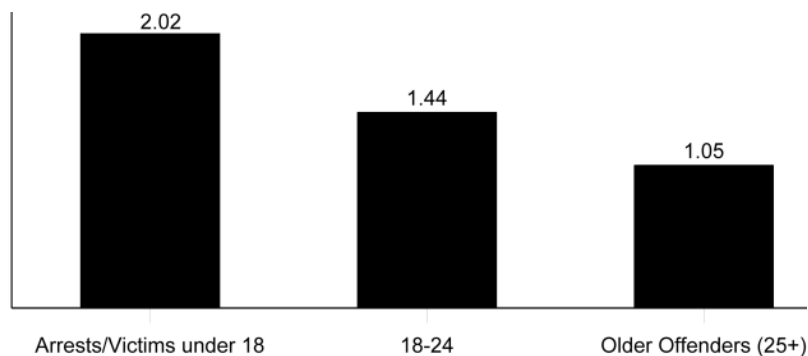


FIG. 4.—Ratio of arrests for homicide to homicide victims, United States, 2008–9. Source: FBI Uniform Crime Reports, Supplementary Homicide Reports.

For most nonserious assaults, the net effect of undercounting offenses and multiple arrests is almost certainly to undercount total juvenile assaults and to underestimate the proportionate share of assaults committed by youths. For homicides, however, there is no undercount, and the much larger role of multiple arrests in the 1990s produces a significant overestimate of the proportionate share of homicides.



For homicides a comparison of homicide arrest rates for juveniles with homicide arrest rates for persons over 25 is a very misleading indication of the risk to victims posed by the two age groups because the number of victims generated by each 100 homicide arrests of juveniles is half that of the over-25 offender set. The impact of multiple arrests and the clearest way to correct the distortions produced by arrest patterns are discussed later in this analysis.

## II. The Late 1980s Homicide Epidemic and the Projections It Produced

The pattern of violent crime in the last four decades of the twentieth century breaks into three distinct suberas, as shown in figure 5. The first era of homicide experience was during the decade after 1964, when homicide rates doubled in the United States. The second era of fluctuation without clear trend lasted from the mid-1970s to the early 1990s, when rates first dropped in the mid-1970s, then climbed back to the 1974 high in 1980, and then dropped in the early 1980s, only to go up again after 1985 to near the 1974 and 1980 high points in 1991. This second era was followed by nearly a decade of decline.

The trend line for homicide victimization between ages 15 and 19 provides reports for every 10 years from 1950 until 1980 and annual

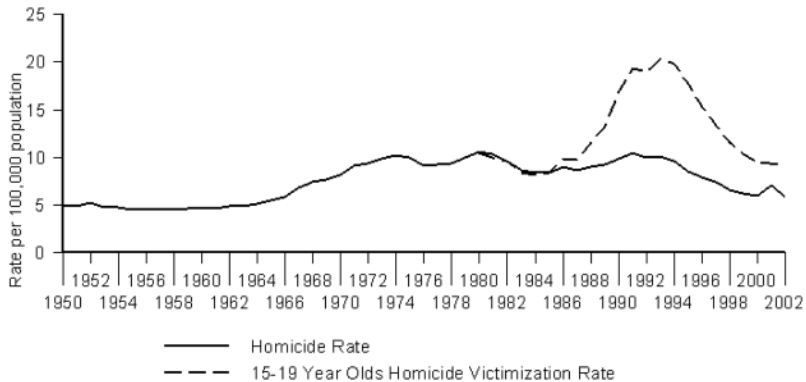


FIG. 5.—Homicide rates by year and 15–19-year-olds' homicide victimization rate in the United States, 1960–2002. Source: National Center for Health Statistics (2005); Centers for Disease Control and Prevention (2004, table 45).

reports thereafter. The early 1980s level is approximately twice the 1950 rate but then spikes sharply after 1985 to peak at 20 per 100,000.

The last half of the 1980s was a particularly sharp disappointment in the United States when homicide rates increased. Rates of imprisonment had expanded as never before and were expected to reduce crime through substantial incapacitation (Zimring and Hawkins 1995), and the aging of baby boomers also had reduced the proportion of the population in high-risk youth ages. Yet homicide and life-threatening violence increased almost as much as during the late 1970s, and the rebound of the late 1980s was concentrated among younger offenders. Some of the most dramatic contrasts over time were based on the increases in cases in which municipal police identified the suspect as under 18 when the crime was committed. The sharpest increases were noted in the monthly supplemental homicide reports that were the basis for Fox's (1996) analysis:

Since 1985, the rate of homicide committed by adults, ages 25 and older, has declined 25 percent, from 6.3 to 4.7 per 100,000 as the baby boomers matured into their middle-age years. At the same time, however, the homicide rate among 18 to 24-year-olds has increased 61 percent 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 percent, from 7.0 per 100,000 in 1985 to 19.1 in 1994. (Fox 1996, p. 2)

Fox's 1996 report created a figure from Supplementary Homicide Report (SHR) data adjusted to cover missing reporting sites, reproduced here as figure 6. The data in Fox's table present an estimated rate of offending and show a clear contrast after 1985 between sharp upward trends for juveniles and young adults and low rates for older groups with some downward draft. In this analysis, the rates of homicide offending were the highest for the young adult group, but the sharpest increase after 1985 occurred for the 14–17-year-old group, with a peak rate 172 percent higher. Fox then constructed two projections, a "high" and a "low" projection for 2010, using the pre-1995 trends in his table. The low projection assumed that rates per 100,000 youths would stay at their peak 1994 rates for the next 15 years and then adjusted the volume for each protected year by that year's pop-

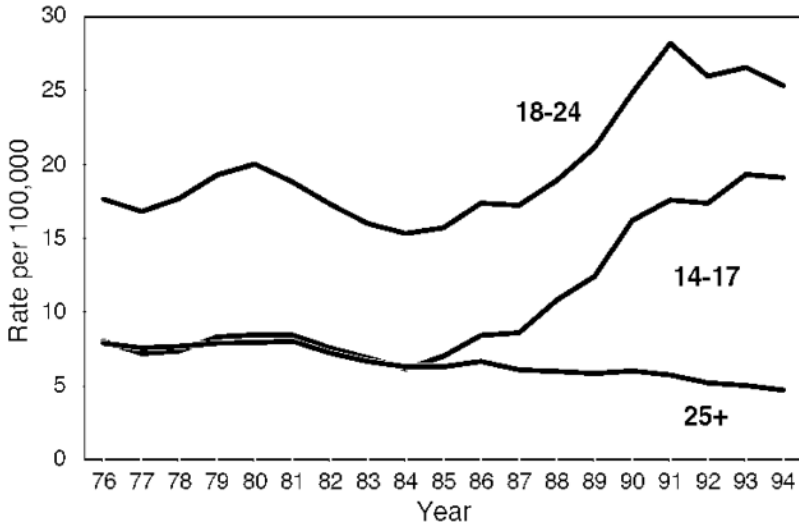


FIG. 6.—Homicide offending rate by age. Source: Fox 1996 (based on FBI Supplementary Homicide Reports and Current Population Survey).

ulation 14–17. Because the population in the age group expands, this method produces Fox’s “almost 5,000 per year as a result of demographic growth alone” (Fox 1996, p. 3). The second projection (Fox labels this one “high”) assumes that the offending rate will continue to expand as it had in recent years. This method produces a projected 8,000 “juvenile killers” by 2005. There is no express rationale for assuming the continued expansion of this peak rate for another decade. Perhaps Fox was trying to imagine the worst outcome of any likelihood. There are a variety of indications that he was presenting these two versions of the future as exhausting the likely or possible trends. He labels one “low” even though it produces the highest volume of juvenile homicide offending ever by 2005 and calls the other (and even higher) projection “high,” suggesting that he is exhausting the field of choice. But he never says why his low total assumes no decline from the peak rate in his historical series.

While Fox spent most of his mid-1990s analysis on the arrest and suspect statistics of the prior decade, John DiIulio of Princeton emphasized the interaction of high mid-1990s crime rates with changes that were taking place in the age structure of the US population. Re-

viewing the SHR numbers in the Fox analysis, DiIulio concluded that “the youth crime wave has reached horrific proportions” but added, “what is really frightening everyone from D.A.s to demographers . . . is not what’s happening now but what’s just around the corner—namely a sharp increase in the number of super crime-prone males. . . . By 2005, the number of males in this age group [14–17] will have risen about 25 percent overall and 50 percent for blacks. . . . Americans are sitting atop a demographic time bomb” (DiIulio 1995, pp. 23–24).

DiIulio’s demographic time bomb was based on two substantially inconsistent projection techniques. The first method was based on an assumption that fixed proportions of a youth population become serious offenders. The origination of this formula was DiIulio’s teacher at Harvard, James Q. Wilson, who assumed that the 6 percent of Philadelphia boys born in 1945 who had five or more police contacts prior to age 18 were a fixed proportion of serious offenders (Wolfgang, Figlio, and Sellin 1972). Wilson then argued that an expansion in the youth population of 1 million produces 500,000 extra adolescent males. Extrapolating from the 6 percent chronic finding, Wilson tells us to expect “30,000 more muggers, killers, and thieves than we have now” (1995, p. 507).

DiIulio used this logic but with different time horizons and adjectives. He notes that the total population of boys under 18 is expected to grow from 32 million to 36.5 million, a total of 4.5 million prior to 2010. Using the Philadelphia cohort 6 percent finding, he multiplies the 4.5 million additional male children under 18 in the United States by 2010 to project “approximately 270,000 more super-predators” (DiIulio 1995). The ninefold increase between the Wilson and DiIulio totals happens because the time period and number of extra youths are expanded but also, and more importantly, because Wilson confines his analysis to adolescents while DiIulio assumes that 6 percent of all children alive in 2010 will be superpredators. The logic is still a fixed proportion of a variable population. That slightly more of these superpredators would be under age 4 in 2010 than over age 14 I had reason to point out (Zimring 1996).

But DiIulio is not content to assume only a fixed proportion of criminal threats, noting that the offense severity profile increased between the two Philadelphia birth cohort juvenile eras: “Each generation of crime-prone boys has been about three times as dangerous as the one before it. For example, the crime-prone boys born in Philadelphia in

1958 went on to commit about three times as much serious crime per capita as their older cousins in the [first Philadelphia birth cohort]" (1995, p. 24). So DiIulio is ready to argue that the rate of serious youth crime is dynamic rather than constant and things have been getting worse. But if the rate and seriousness of youth crime vary over time, why should we assume that the 6 percent estimate of serious offenders is constant or for that matter that the size of the youth population is a major variable in predicting the criminological future?

By the middle of 1996, complaints based on what Philip Cook and John Laub call cohort effects were taking center stage—allegations that the current youth generation were a breed apart (Cook and Laub 1998). In the coauthored volume *Body Count*, published in 1996, Bennett, DiIulio, and Walters argue that the concentrated social disadvantages of fatherless families had created a high incidence of what they call "moral poverty," which all but guarantees violent criminal careers. "Four of 10 children go to sleep without fathers who live in their homes. . . . We have come to the point in America where we are asking prisons to do what fathers used to do" (1996, p. 196).

The impact of predictions based on projections of increasing youth violence on the political process was not small. In 1996, Representative Bob McCollum of Florida, the chairman of the House Subcommittee on Crime, testified at a Senate hearing: "Today's enormous cohort of 5-year-olds will be tomorrow's teenagers. This is ominous news given that most violent crime is committed by older juveniles. . . . Put these demographic facts together and brace yourself for the coming generation of 'super-predators'" (McCollum 1996, p. 2).

I do not mean to suggest that projections of increasing juvenile homicides let alone nightmare predictions of coming generations of juvenile superpredators met with universal academic acceptance. The Cook and Laub analysis in these pages separated fact from science fiction with clarity and vigor (Cook and Laub 1998, 2002; Zimring 1998). For the most part, however, the academic reaction to the demographic time bomb rhetoric was silence, whether respectful or not. The empirical criminologists whose cohort findings provided a framework for the Wilson and DiIulio predictions apparently did not participate in the public discourse about juvenile crime futures. And the prospect of impending juvenile risk seemed to offer rhetorical opportunities for the left (Fox complaining about inadequate support for youth services) as well as Bennett and DiIulio's right-wing diagnosis

of moral poverty and prescription of prison expansion. The “demographic time bomb” looked to be the next big thing in a period that had already endured the War on Drugs and three-strikes-and-you’re-out phenomena.

*What Happened Next?* But what happened next was the most sustained and substantial decline in youth homicide in modern US history. Youth homicide arrests had actually begun to drop in 1994 so that the “low” estimate in Fox’s figure 6 projection for 1996—the year his analysis was published—was already 33 percent higher than the actual FBI numbers. By 2005 the total volume of SHR homicide arrests and suspects under 18 had dropped by two-thirds instead of increasing by almost 40 percent, and this very large decline in homicide volume took place even as the youth population had expanded and the proportion of the youth population from traditional high-rate minority groups had also expanded. Every demographic determinant in the predictions made by Fox, Wilson, and DiIulio had come to pass, but the violent crime outcomes had been turned upside down. What turned Fox’s 40 percent increase into a 67 percent decrease was only one variable: the rate of juvenile homicide involvement. Figure 7 tells the tale by tracing the rate per 100,000 for ages 13–17 through more than a quarter century.

After rising in the late 1970s, the youth homicide rate turns down sharply through the early 1980s before beginning the ascent that was the centerpiece of the Fox and DiIulio concerns. Even as the alarms of the mid-1990s were being sounded, the rate of homicide attributable to juveniles began its steep and sustained drop.

In both the increase after the mid-1980s and its decline after 1993, the homicide patterns of ages 18–24 paralleled the roller-coaster ride of age-specific homicide rates as shown in figure 8. The timing of the ups and downs for the two groups is very close, with a correlation over time of .95 (Zimring and Rushin 2013, p. 13).

In retrospect, the predictions of a coming storm of juvenile violence were classic false predictions on a par with pushing Internet stocks in 2000 or recommending Greek government bonds in 2007. But was this simply bad timing or was it also problematic criminology? The question is an important one because discovering mistakes that should have been foreseen in 1995 can reduce the margin of error as we think about what should determine the character and rate of youth violence in the

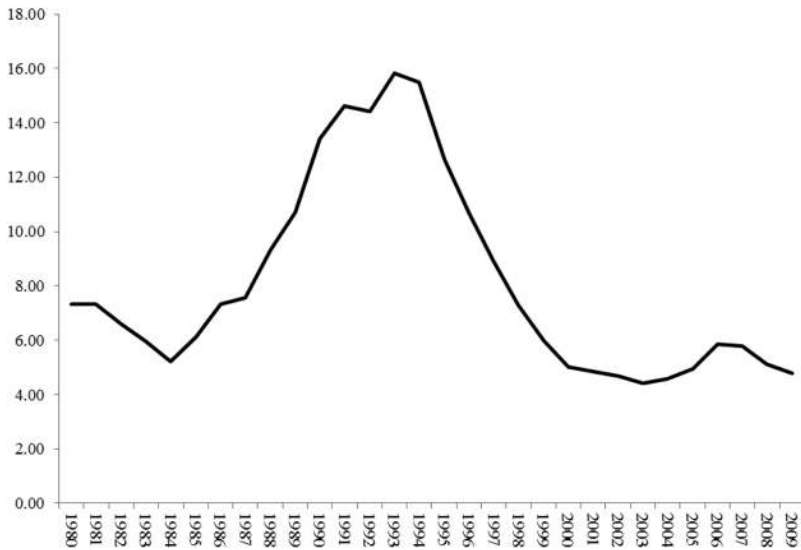


FIG. 7.—Rate of juvenile homicide arrest rates. Source: FBI Uniform Crime Reports, Supplementary Homicide Reports.

coming decades. Are there lessons to be learned, or is the recent history of forecasting on this topic an uncorrectable blind gamble?

### III. An Anatomy of Catastrophic Error

The previous section of this essay mentioned a few ways in which the methods and assumptions in Fox's projections differed from those by Wilson and DiIulio. There were, however, four problems manifest in all of the "coming storm" predictions that were errors in judgment even from the perspective of 1996: failing to recognize the plenary power of rate fluctuations in determining homicide trends, failing to account for regression to historically typical levels as a probable future outcome, assuming that fluctuations in the number and demographic character of future population were a major influence on crime volume, and mistaking simultaneous movements in youth and young adult violence for juvenile-only cohort effects that signal long-term changes in rates of crime and violence as a group ages through the life cycle.

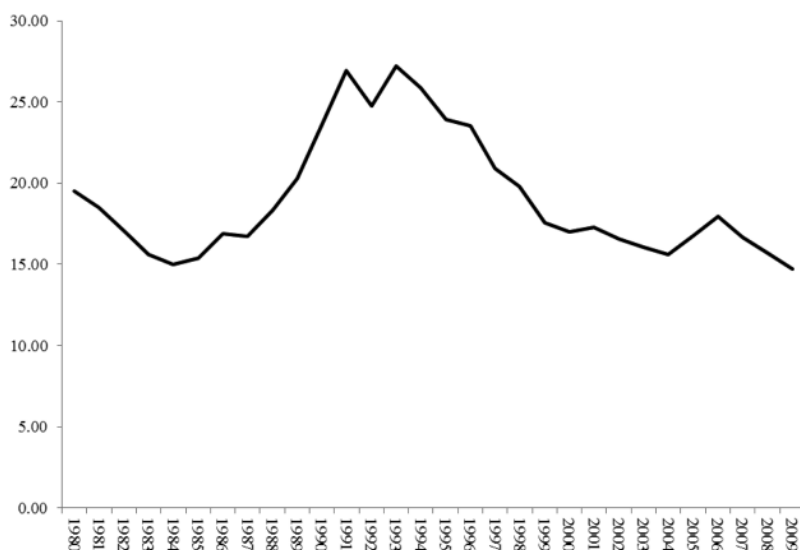


FIG. 8.—Young adult homicide arrest rates. Source: FBI Uniform Crime Reports, Supplementary Homicide Reports.

#### *A. The Plenary Power of Rate Variations in Juvenile Homicide*

What I am calling the plenary power of rates on the volume of juvenile violence was a central fact in the epidemic that led to “coming storm” predictions. The youth population actually decreased in the 7 years after 1984, when killings committed by juveniles increased. All the extra killings come from higher rates of killings attributed to juveniles. As a matter of strict arithmetic, more than 100 percent of the increase in youth homicide after 1984 came from rates going up because the higher rates had to compensate for fewer kids. Since the period just prior to the mid-1990s had been dominated by variability in rates, the people making future projections should have been on notice that the dominant factor in future homicide rates would not be the number of juveniles at risk but rather the trends in homicide rates per 100,000.

Sure enough, more than 100 percent of the decline in juvenile homicide that followed the dire predictions of the mid-1990s was also the result of rate changes because the youth population had expanded modestly. The extreme variability of homicide rates—almost tripling



then declining by two-thirds in just over 20 years—means that 15 percent or 20 percent variations in total population will probably play a minor part in the total volume of serious youth violence. So what can be precisely estimated 10 and 15 years in the future—the population of youths and young adults—will not make much difference, and what will be the largest determinant of youth homicide—trends in rates—cannot be predicted with any confidence.

The extreme variability in homicide rates that produced the Fox and DiIulio projections also should have worried Wilson and DiIulio away from expecting a fixed 6 percent of the youth population as violent. The variability of homicide rates from 1980 to 1994 undercut Fox's assumptions in a slightly different way. At no point in his analysis of the growth of youth homicide from 1984 onward does Fox suggest either an explanation for the upward slope or a behavioral model of what determines rate fluctuations. So he cannot explain the extreme fluctuations that he documents. But how can he predict future variations if he cannot explain past variations? He never discloses this. Instead, he produces two straight-line models, each of which is based on a single assumption never justified. The "low" future merely assumes that the rate per 100,000 of juvenile homicides will stay at its 1994 level (an all-time high) for the foreseeable future. The high-projection model assumes that the upward growth in homicide rates will continue without interruption for the projectable future. A look back at figure 7 will demonstrate that the actual variations in rates since 1980 conform to neither of these assumptions, with some downward variation after 1980 before an upward shift. So Fox had no behavioral or historical model to project future rates, despite the fact that rate fluctuations are the dominant feature in the magnitude of youth violence.

Both Fox and DiIulio believed that rates of youth violence would go up from 1994 levels. DiIulio mentions that the incidence of serious crime went up between the juvenile years of the 1945 Philadelphia birth cohort (1957–63) and the juvenile years of the 1958 Philadelphia cohort (1970–76) and suggests that this is likely to continue.

The behavioral emptiness of the Fox projections published in 1995 can best be illustrated by a parallel exercise of projecting juvenile homicide rates using 2005 as the base year. The high estimate, shown in figure 9, parallel to that of Fox in 1996, would take the 2006 rate of SHR juvenile homicides and assume that it will continue with adjust-

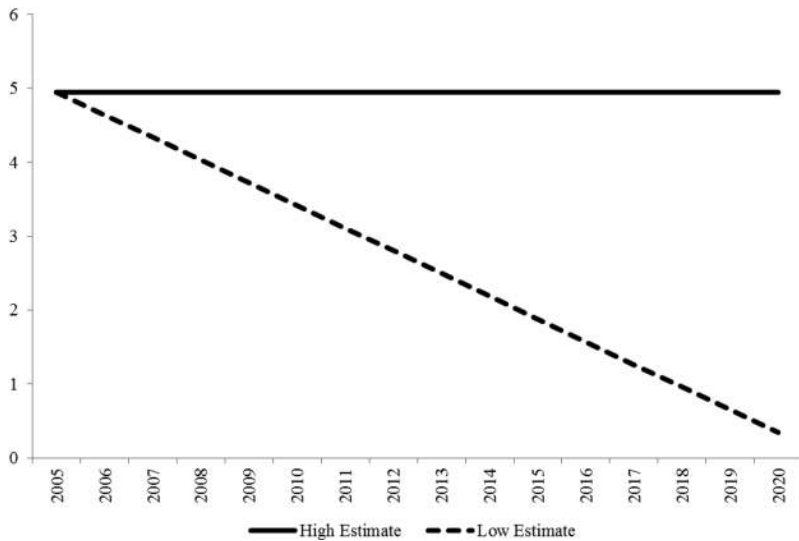


FIG. 9.—High and low volumes of juvenile homicide offending, 2005–20. Source: Author's projections.

ments only for anticipated changes in the population aged 13–17. The low estimate would project continued downward rate levels.

Each of these projections assumes that juvenile homicide rate trends will do something they have never done before: either continue without significant change for 12 years or follow an uninterrupted downward trend for more than 20 years. Neither projection allows for an increase in juvenile homicide offending. Why? Have social or economic trends improved? No. But the crime trends preceding year 1 have changed.

For DiIulio, the 1995 assumption that crime trends would continue to get worse has been falsified. Will he still believe that a fixed percentage of the youth population will be “juvenile superpredators”? So one important vice of all the 1995 and 1996 predictions was that they did not allow for the known variability of crime rates despite the fact that rate changes had been the only significant moving part in the decade that produced their alarm.

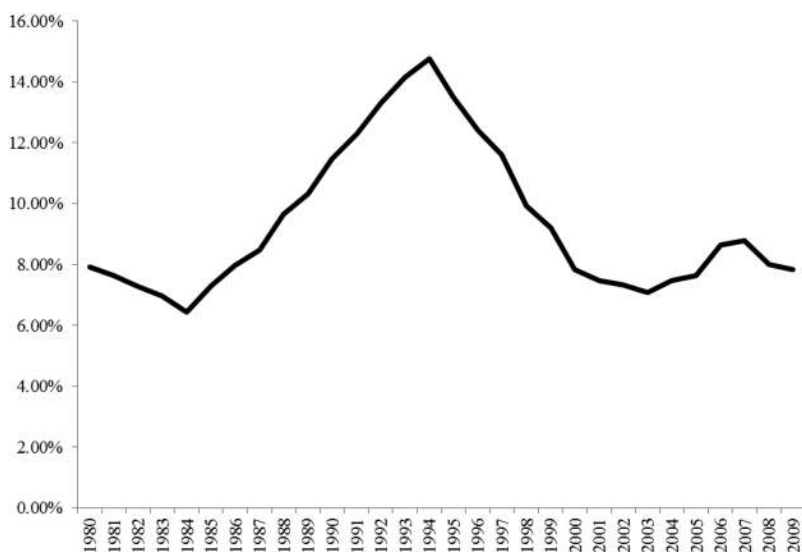


FIG. 10.—Juveniles as a percentage of total homicide arrests. Source: FBI Uniform Crime Reports, Supplementary Homicide Reports.

### *B. Regression and the Lessons of History*

When historical patterns have been cyclical, any “straight-line” projections that either forbid variation (the Fox low projection in fig. 6) or push it all in one direction (Fox’s high projection) must assume that long-term historical trends have changed. And this ignores a common pattern of statistical accounts of crime over time: regression toward long-term mean patterns. With respect to youth homicide, a good illustration is a charting of the share of all homicide arrests attributable to persons under 18 in the United States. Figure 10 tells this story for the period 1980–2009.

What figure 10 shows is that the percentage of total homicide arrests or attributions in the SHR increased over the period after 1984 to a rate double the level in the early years of the series and then returned to near the beginning proportion. The steep increase in the share of all arrests attributed to juveniles in the years after 1984 does not translate into any direct information on the future rate of juvenile offending, of course, because we would have to know future homicide offense rates for older offenders to translate any guesses we might have about

the juvenile share of homicide arrests into estimates of juvenile rates. But the clear departure from historic patterns in 1984 onward puts forecasters on notice of important implications in assumptions they make about future trends. Take Fox's high projection for 2005 from the perspective of 1994. To maintain straight-line continuity from 1994, the historical pattern tells us that the proportion of total arrests attributable to juveniles would have to keep diverging from its historical levels. But we are also on notice that what had already diverged from a historic mean might also return to it. The perspective of a longer-term history should thus provide a caution against future assumptions radically different from historic relationships.

Paying close attention to historic relationships can also provide important information about the substantive implications of later changes. The pattern revealed in figure 10 speaks directly to the substantive argument made by Donohue and Levitt in their now-famous conclusion that about one-half the 1990s crime decline in the United States should be attributable to the changes in the quality of those born generated by the US Supreme Court abortion *Roe v. Wade* (410 U.S. 113 [1973]) decision (Donohue and Levitt 2001). I have extensively analyzed this study elsewhere (Zimring 2006, pp. 88–103) and do not here revisit most of the wide range of issues that analysis covered. But one argument made by Donohue and Levitt seems to me a textbook case in the substantive implications of regression. The clinching argument for these authors that crime declines in the 1990s were the result of 1973 changes in abortion rules was that arrest data showing crime declines in the 1990s were concentrated in younger age groups: “virtually all of the abortion-related crime decrease can be attributed to reductions in crime among the cohorts born after the abortion legalization. There is little change among older cohorts” (Donohue and Levitt 2001, p. 382).

But recall that Donohue and Levitt are examining the period after the early 1990s in figure 10, when the proportion of arrests for homicide attributable to youths is dropping, and they are noticing the same pattern for young adults. What they argue is that this “youth-only” pattern of decline shows that the lower rate of unwanted births produced a lower rate of crime and violence among teens and young adults in the 1990s.

But figure 10's data provide a new perspective for evaluating this claim: lower than what? If the arrest share of youths had declined to

levels in the late 1990s that were much lower than in earlier eras, that would be evidence that crime tendencies of the young had shifted from normal expectations. But what figure 10 actually shows for juveniles is a return to normal patterns of juvenile homicide market share—7.3 percent in 1983 versus 9.7 percent in 2009—after peaking in the intervening years. The problem is that there was no *Roe v. Wade* to hold the 1983 levels down, so why should we conclude that it was a *Roe v. Wade* effect that pushed the youth share back to near its 1983 level in the late 1990s?

Figure 11 shows trends over time in the percentage of total arrests attributable to suspects under 18 for violent index offenses. The first lesson from figure 11 is that homicide and robbery have much larger increases and subsequent drops. The second pattern is that any increase in the juvenile share for violent crimes, much more modest than homicides, also falls back in the late 1990s, but the level of violence arrests for juveniles does not return to its 1983 level for violence—not good news for the Donohue and Levitt expectation of a uniquely large drop for the young. For property crime, by contrast, the concentration of arrests under age 18 declines in the 1990s to levels below the 1983 starting rates—better news for an argument that expects lower-than-historical concentrations for the post-*Roe* cohorts.

### C. *Gun and Nongun Juvenile Trends*

One important disaggregation of trends in youth homicide provides important information on the source of the sharp increase in total youth homicide. Figure 12 separately shows trends over time in firearm and nonfirearm killings involving at least one offender under age 18.

All of the growth of homicide cases involving youths after 1980 was for firearm homicide. The three decades of nongun killings show no pronounced increases ever and a downward tendency throughout. Gun homicides first drop in the early 1980s and then triple during the decade after 1984, before dropping below the 1990 rate for every year after 1998. That the entirety of the increase occurs in gun cases suggests that the increase after 1984 is not due to a change in the character of the youth population but rather to the interaction of kids and guns. And the sharp and restricted nature of this increase is also a further suggestion that a regression, in this case a gun-specific regression, might be on the horizon. Figure 12 is pretty convincing evidence that

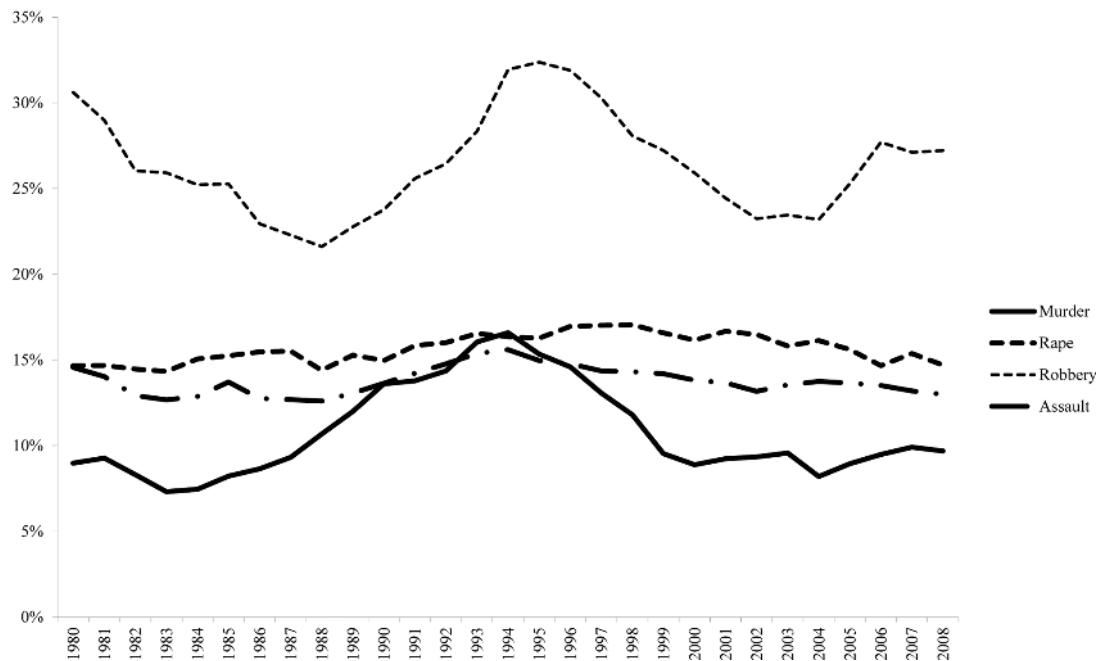


FIG. 11.—Juveniles as a percentage of total arrests for violent crimes. Source: FBI Uniform Crime Reports, Supplementary Homicide Reports.

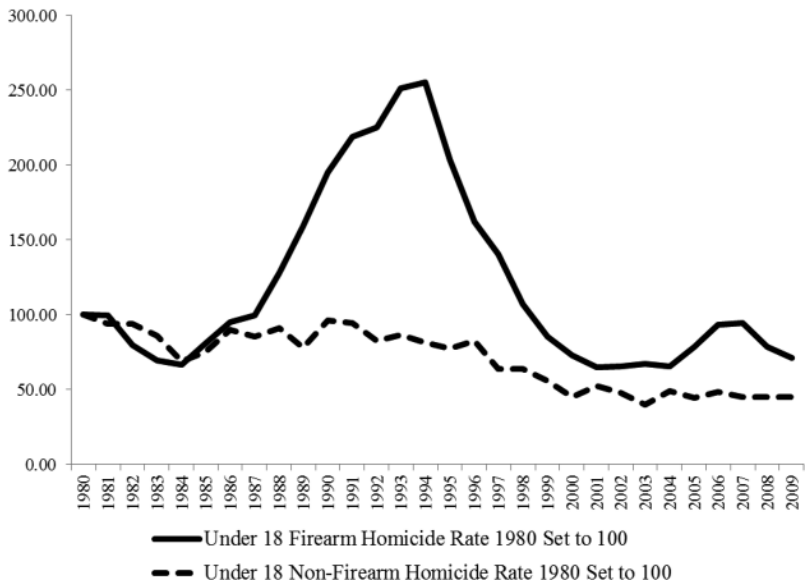


FIG. 12.—Trends in juvenile firearm and nonfirearm homicide rates, 1980 set to 100. Source: FBI Uniform Crime Reports, Supplementary Homicide Reports.

the character of the juvenile population did not change in the 1990s, only the character of instruments used in many violent assaults.

As a precautionary principle, for any projections based on historically atypical periods, regression toward more normal statistical values must be regarded as a plausible rival hypothesis to consider. The possibility of a return to historically normal patterns is so obvious that any set of projections that do not provide this alternative is presumptively deficient. Only convincing evidence of irreversible structural change should rebut the presumption that regression cannot be ignored. There were no such indications in the 1990s, only anecdotes and adjectives to the effect that this generation was very dangerous and the next one would be even worse.

#### *D. The Folly of Demographic Determinism*

This is not an appropriate venue for a comprehensive discussion of the relationship between population fluctuations and rates of youth crime in the United States. But one aspect of the moral panic of the

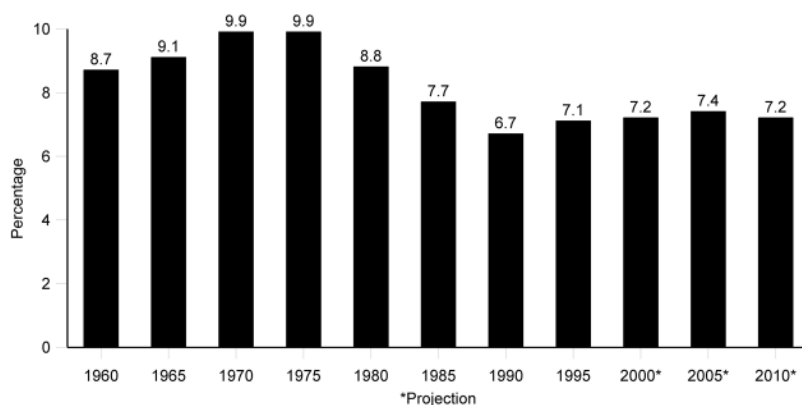


FIG. 13.—Proportion of US population, aged 13–17, 1960–2010. Source: Zimring (2005, fig. 8.2), based on 1960–95 census data.

1990s makes a brief excursion into demography necessary. The academic and political vendors of “the coming storm of juvenile violence” all argued that a major expansion of adolescents was on the American horizon. Wilson opened the bidding with a million more teenagers in the short term; DiIulio upped the ante to 4.5 million extra young people to derive his 270,000 juvenile superpredators and characterized the population developments on top as “a demographic time bomb.” McCollum prophesied that “today’s enormous cohort of 5-year-olds will be tomorrow’s teenagers” (1996, p. 2) and places the major emphasis for his “coming storm” prediction on the expansion of the youth population.

There are two empirical puzzles that stand out when looking back at this particular American moral panic. The first puzzle is that the population trends that were on the horizon for the 20 years after 1990 were really quite modest. Figure 13 reproduces a figure from an earlier analysis of the 1990s panic, based on 1960–95 census data, that shows the share of total population aged 13–17 at 5-year intervals.

The proportion of the US population aged 13–17 varies over the 50 years after 1960 from a low of 6.7 percent of the population to a high of 9.9 percent. The demographic projections viewed with alarm in the 1990s were a very modest increase in the youth share: from the 6.7 percent low point in 1990 to 7.2 percent in 2010. The post-“demographic time bomb” youth cohort would be a much smaller share of



the total population than 13–17-year-olds had been in the low-crime era of 1960 (7.2 percent vs. 8.7 percent). There were only two reasons why the numerical count of teens would go up at all by 2010: that total population was expanding and the significant fact that 1990 was the very lowest youth share of the time series. The 7.2 percent concentration projected for 2010 would be the third-lowest in the half century after 1960. By post-World War II American standards, the concentration of youths expected for 2010 was below average. And that should have been easy to determine in 1995.

The second reason that worry about the size of the youth population was an odd concern for 1995 was the lack of any indication in the years after 1975 that the size of the youth cohort was a major determinant of the youth violence problem. Recall that 1990 was the post-1960 low point in the youth share of total population. It was also the middle of the youth violence epidemic that launched the moral panic. A corollary to the fact discussed earlier that more than 100 percent of the rise in youth homicide was caused by changes in rates per 100,000 kids is that the size of the youth population played no role in the process. It turns out that the post-1990 modest expansion that McCollum worried about also played no role in the decline of youth violence, but the worry merchants of 1996 had no reason to know this. They did know, however, that crime rates had been the only problematic moving part in producing the epidemic of the late 1980s. Why didn't the lack of any demographic impact on the crime upswing deter them from assuming the negative impact of any future population growth? Some speculation is required to answer this question, and that brings me to the final element of this methodological autopsy.

#### *E. The Case of the Counterfeit Crime Cohort*

The American birth cohort that was the subject of the projections by Fox, Wilson, DiIulio, and McCollum was too young to have any track record of criminal behavior in 1996. McCollum was predicting violence for 5-year-olds. Fox was projecting the number of apprehended killers in a group of children between 3 and 7 years old for the period a decade in the future, and he asserted that the lowest volume this new group would generate would be at the highest rate that age group had experienced in the 15 years in his chart. Why? He was projecting this 1994 rate (at minimum) on a 2005 set of 13–17-year-olds because he must have been assuming that the forces that pushed

up the rates of adolescents in the 1980s and 1990s were structural shifts in urban settings or populations that would not be reversed in the proximate future. But what were those changes? The report complains about the lack of public support for child development in general terms but presents no model. The only data to inform the future in Fox's calculations were previous years' rates. Why shouldn't the average rate from 1980 to 1994 be his middle-range forward estimate? Because Fox assumed that things had been changing, but the evidence for this is missing from the analysis and it was literally off his chart.

DiIulio and associates had a verbal description for what they thought had driven up the homicide rate—"moral poverty"—and they argued that these social and demographic features are the cause of the sharp increases in the rate. But this is an assumption made by DiIulio, and there is no discussion of one-off environmental and situation features of the 1980s that might not have a similar impact in future years. Two examples of potentially nonpermanent impacts of the era mentioned by others were crack cocaine (Blumstein 2000) and sharp fluctuation in gun use (Cook and Laub 1998). For the cohort of kids born after 1985, the assumption in the "coming storm" warnings was that permanent social or demographic changes made a peak rate in an older generation the minimum legacy for the new generation.

Because the evidence for the permanent impact of the 1980s and 1990s changes was so weak, the out-of-hand rejection of regression or return to normal ratios is unjustified. But this must have been why intelligent people made simple mistakes.

The supreme irony is that this same generation of kids, "the enormous cohort of 5-year-olds" that scared McCollum and presidential nominee Robert Dole, became a blessed low-crime population group of wanted children 5 years later when economists Donohue and Levitt published their statistical argument that legal changes creating abortion on demand for pregnant women had reduced the probable crime rates of the post-*Roe v. Wade* birth cohorts by reducing the number and proportion of unwanted births. What had changed between 1995 and 2001 was first that a national crime drop of approximately 40 percent that started in the early 1990s generated attention by the late 1990s, so that many of the same social scientists who had been trying to explain unexpected bad news in the early 1990s were now trying to explain unexpected good crime news in 2001. As I showed earlier, Donohue and Levitt noticed that the arrest rates of younger segments of

the population had dropped more than among older age groups. And this was taken as the distinctive fingerprint of the *Roe v. Wade* effect.

In less than a decade, future superpredators had become pioneer leaders in the great American crime decline. All during this transition the kids born around 1985 were too young to have been a major feature in the crime rates projected for their futures during either the *Roe v. Wade* or superpredator fads. To be fair, Donohue and Levitt did have older cohorts of post-*Roe* kids to assess effects on arrest rates. But assuming these 1990s arrest rate declines were *Roe* effects and therefore were also the legacy for the children born in 1990 was then and still is open to serious question.

But historians of science should take note of this episode. The criminological career of this cohort of US kids born in 1990 seems worthy of the *Guinness Book of World Records*. Before these kids turned 7, they were blamed for being a “demographic time bomb” certain to trouble our cities and fill our prisons. Yet before they turned 12, they were credited with leading a substantial reduction in American crime. The path from fatherless moral poverty to mother-loved wanted children was paved with crime statistics involving other age groups manipulated by creative theorists. Has there ever been a reversal of criminological fortune of this extremity?

#### IV. Youth Violence in 2025

To have read this far is to know that projecting rates and trends in life-threatening youth violence has been a hazardous occupation for more than a quarter century. As I write in 2012, is there any more concrete wisdom available about what will happen in the next 13 years than Norval Morris’s refrain from the mid-1990s, “I don’t know and you don’t know and neither does DiIulio”? Nothing is certain, but I argue here that three elements of the American near future will produce much less variation in rates of youth homicide and life-threatening assaults than occurred in the roller-coaster years after 1985. This is good news for analysts—because less variation reduces the margin of error—and very good news for the citizenry because the 2011 base rate from which I predict only modest variability is as low as youth homicide has been in a generation.

The three features I expect to observe over the period 2012–25 are as follows:

1. diminished volatility in the proportion of total homicide attributable to juvenile offenders;
2. minimal impact of demographic changes on youth homicide volume from either the number of youths or the population composition by race and ethnicity;
3. a pronounced tendency for the modest changes to come in juvenile homicide to show the same direction and approximate magnitude as the trends for homicide by offenders in their 20s and 30s.

Two of the three features for the near future (numbers 1 and 3) were not in evidence during the period from 1985 to 1994. Why, then, do I now suspect that the wild swings of the 1980s and 1990s are over?

My first prediction is that the wide variations observed in the proportion of all homicides that were committed by juveniles are not likely to happen again soon. The pattern shown in figure 10 of juvenile homicide arrests accounting for less than 8 percent of total homicides in 1983, more than 20 percent in 1994, and then less than 10 percent in 2008 and 2009 is a major reason why juvenile killings rose so swiftly and then dropped so substantially. But the shape of figure 10 is also why I expect much less volatility from now on. The story that figure 10 tells us is of a one-of-a-kind expansion of juvenile homicide involvement in the late 1980s and early 1990s that was followed by a major drop back into the more normal level of close to 10 percent. Having quickly returned to near-normal levels, it will take another Black Swan dislocation to launch more volatile swings of the type we experienced in the twentieth century's last 15 years. Without that sort of dislocation, we can expect the juvenile share of total homicide to stay close to its current levels.

And the impact of population trends on youth violence rates will be modest for two reasons. First, the projected shifts in the age structure of the population will be rather modest in the period 2012–15. Youths aged 13–17 will expand 6.6 percent from 2010 to 2025, but that is about half the rate of total population expansion (13 percent), so the share of the population in the age bracket will drop slightly. (Detailed youth population estimates are presented in App. fig. B1.) This is hardly “a demographic time bomb” (but then neither was the 16 percent expansion between 1995 and 2010 that provoked the figure of speech). Second, changes in youth population levels have not played a significant role in crime trends since 1975. Why should the ripples

projected for youth population in the near future break the pattern of lack of influence over the last generation?

So what might change levels of youth violence and in what direction? The most likely influence on future trends in youth violence is whether and to what extent there are changes in the homicide rates of persons over 18 in the coming years. When examining the proportion of total homicide arrests attributable to offenders under 18, Jeff Fagan and I found relatively similar percentages of total homicide rates for juveniles in the United States, Canada, New South Wales, Australia, and the United Kingdom. This did not mean that youth homicide rates were the same across these nations; they varied widely, but the variance in youth homicide was well predicted by the general homicide rate in each country (Zimring and Fagan 2005). We call this phenomenon “general rate dependence” and do not believe that it means that adult violence directly conditions the rate of youth violence. Instead, it seems likely that the same environmental factors that influence general homicide rates—culture, handgun availability, access to emergency medicine, law enforcement—influence juvenile rates as well. It seems likely that fluctuations in environmental conditions over time should have simultaneous and similar impacts on juvenile and older age group violence over time. This did not happen for population groups 25 and older in the decade after 1984, but that may have been the exception that proves the rule; witness the restoration of the previous pattern by 2000.

So I expect that juvenile homicide rates will move in the same direction as adult homicide rates. Both juvenile and adult rates were close to 45-year low points in 2011, but the widespread emulation of drops of the magnitude experienced by New York and more recently Los Angeles could produce even lower general (and juvenile) levels. There is no iron law that juvenile rates must conform to general patterns, but that is the most plausible default expectation for the near future. Perhaps American youth violence has arrived at a “new normal” after an exciting and peculiar 25-year interlude.

#### APPENDIX A

##### Articles Concerning Juvenile Crime and Justice in *Crime and Justice* by Year

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APPENDIX B

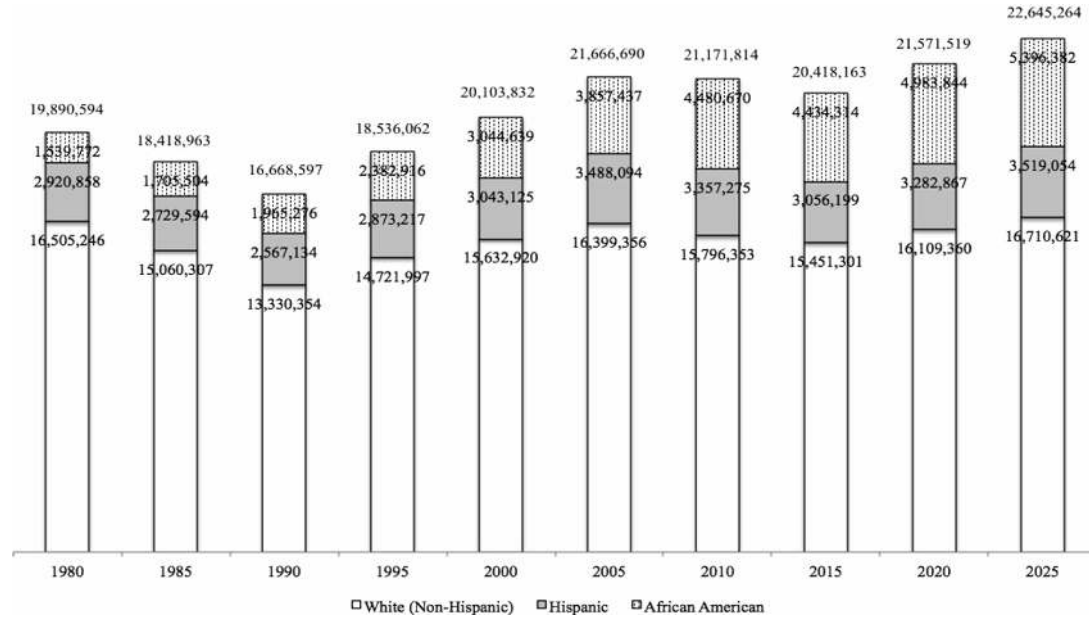


FIG. B1.—Youths aged 13–17: populations and projections, 1980–2025. Source: US Census (various years) and projections.

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