

Berkeley Law

From the SelectedWorks of Franklin E. Zimring

January 2012

American Youth Violence--A Cautionary Tale

Contact
Author

Start Your Own
SelectedWorks

Notify Me
of New Work



Available at: http://works.bepress.com/franklin_zimring/6

American Youth Violence—A Cautionary Tale

Franklin E. Zimring

May 21, 2012

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; 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 scholarly concern in the pages of *Crime and Justice* on a consistent basis throughout 35 years of publication.

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 20th century was a “baby boom” which 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 eight years after 1984. Ironically, 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.

And this explosive increase in youth homicide touched off predictions of continuing growth in American violence on the horizon, a moral panic in the media and government

inspired by Ph.D.s warning that “a bloodbath” was on the horizon that would be the result of an emerging generation of “juvenile super-predators.” 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” (1996, p. 3) but then concluded “we will likely have many more than 5,000 teen killers” (ibid). Yet the actual number of arrests in that age group in 2005 was 1,073.

This essay will focus 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 of the essay provides a profile of statistical sources on youth violence with emphasis on the distinctive features of violent crime during adolescence. The second section 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 was the reverse of that predicted. A brief concluding section applies the lessons learned since 1995 to a risk-averse discussion of future trends in youth homicide.

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 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 where 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 only be taken from cases where a particular suspect has been arrested or otherwise identified, and we will see later in this section that estimating the true prevalence of criminal offense responsibility from arrest or suspect counts is often problematic.

Official Statistics

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

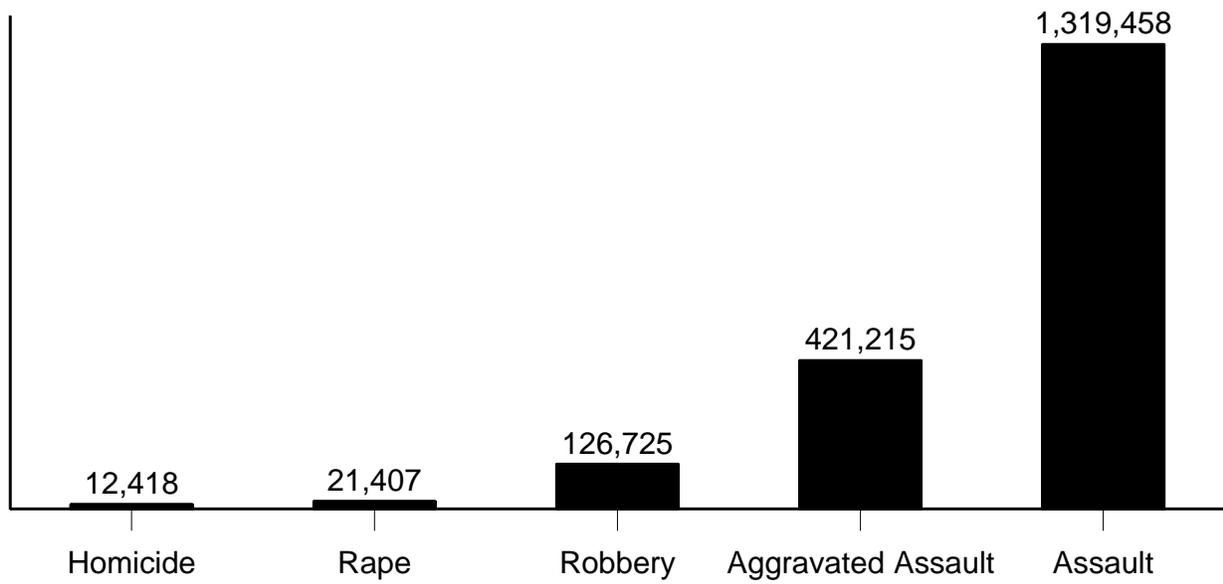


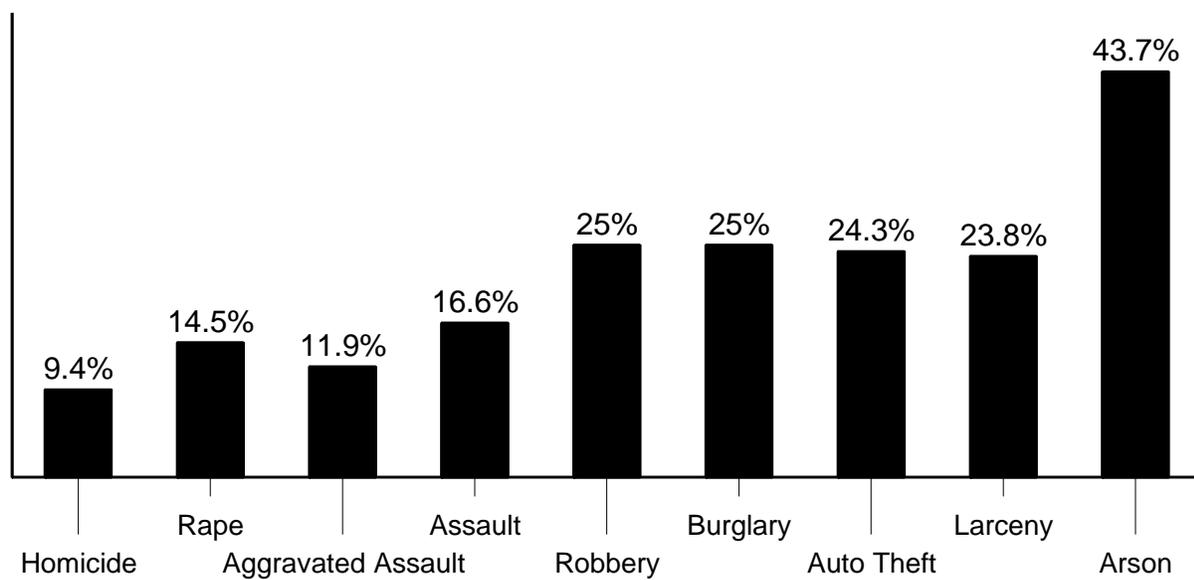
Figure 1. Police-Defined Crimes of Violence in the United States, 2009.

Source:

Using arrests as one measure of crime (because age specific detail can be added to it), homicides produce 2% of all index violent crime arrests in 2009. When arrests for the less serious assault category are added into the mix, homicide arrest are just over six-tenths of one 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 non-index assault in 2009.

Figure 2. Under 18 Share of Arrests, Nine Offenses, United States, 2009



Source: Uniform Crime Reports

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%, 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 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 at Ch. 2). Teen males often don’t 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 will return to later in this section (see Figure 4).

Is Youth Violence Different?

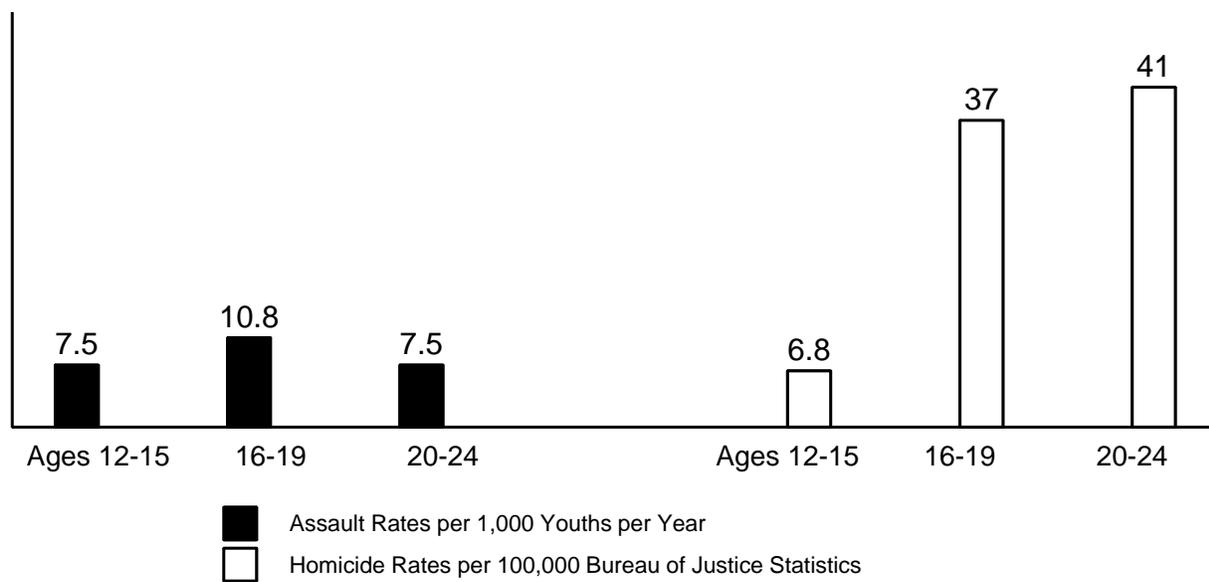
For the most part, patterns of youth violence resemble patterns of violence by older persons—concentrated in the same genders (males), the same kinds of conflicts, and the same disadvantaged minority segments of the community (Zimring 1998 at pp. 20-30).

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 at Ch. 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 rates for three age groups. I use 1991 data which was close to the high point for youth homicide discussed in the next section.

Figure 3. Male Homicide and Assault Rates by Age, 1991.

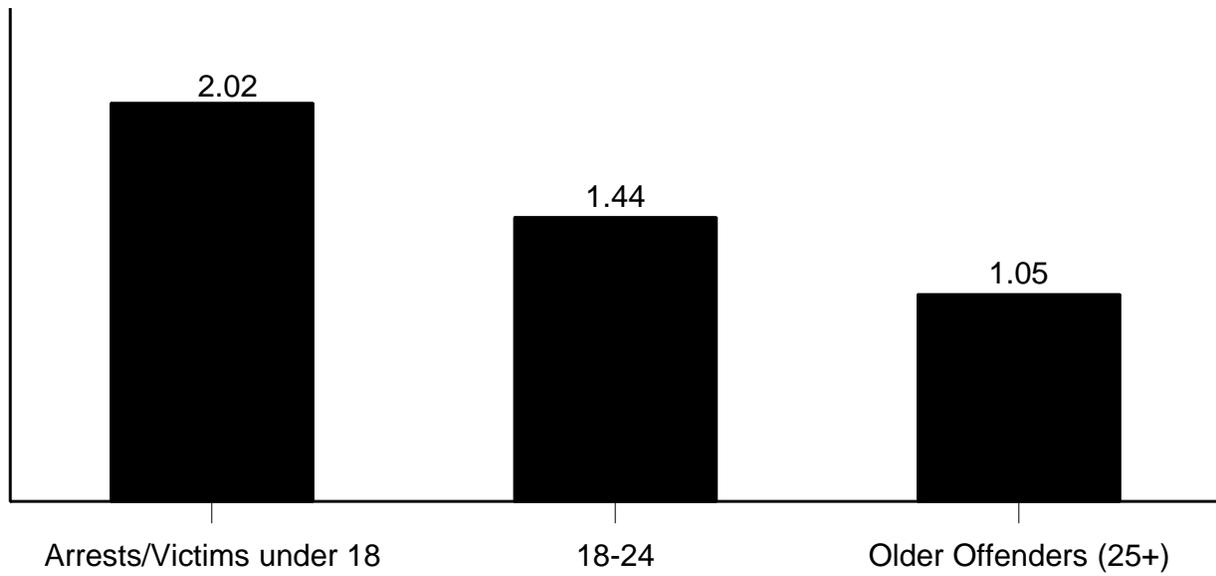


Sources: National Center for Health Statistics (1991, p. 36); U.S. Department of Justice, Bureau of Justice Statistics (1991, p. 24, Table 5).

The best evidence that youth assaults are less serious is that the youngest group in the figure has the same reported incidence of assault (7.5%) as 20- to 24-year-olds but a much lower homicide victimization rate (6.8 versus 41 per hundred thousand).

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 2007-2009.

Figure 4. Ratio of Arrests for Homicide to Homicide Victims, United States, 2008-2009.



Source: FBI Uniform Crime Reports: Supplemental Homicide Reports.

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.

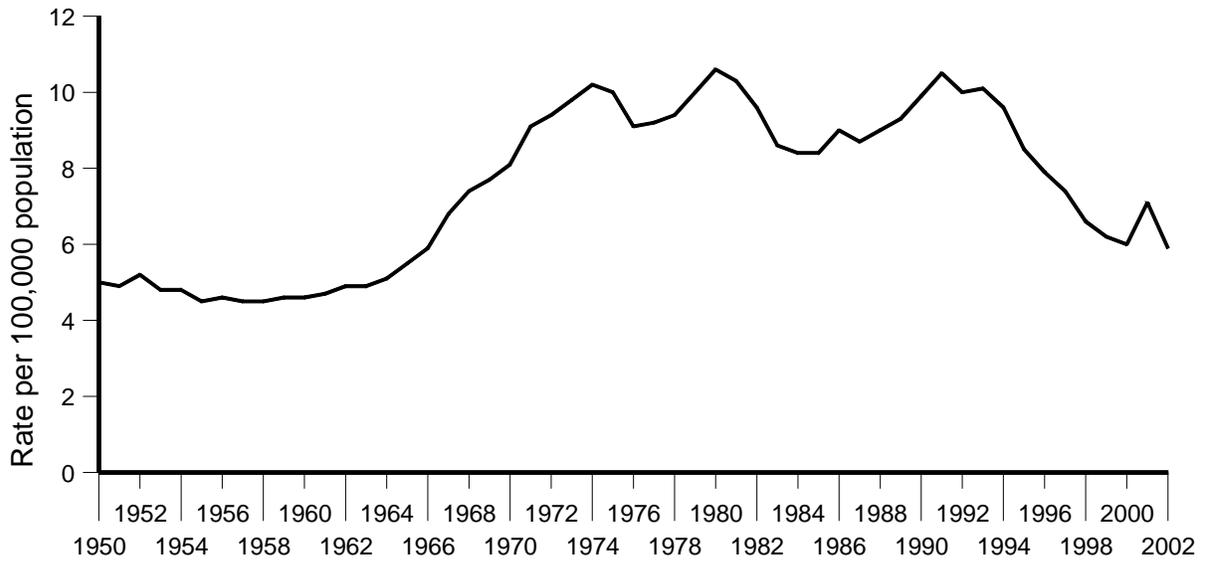
For most non-serious assaults, the net effect of undercounting offenses and multiple arrests is almost certainly to undercount total juvenile assaults and to underestimate the proportionate share of assaults committed by youth. For homicides, however, there is no undercount and the much larger role of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

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 will be 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 20th century breaks into three distinct sub-eras, as shown in Figure 5.

Figure 5. Homicide Rates by Year in the United States, 1960-2002.



Source: National Center for Health Statistics, 2005.

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, 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.

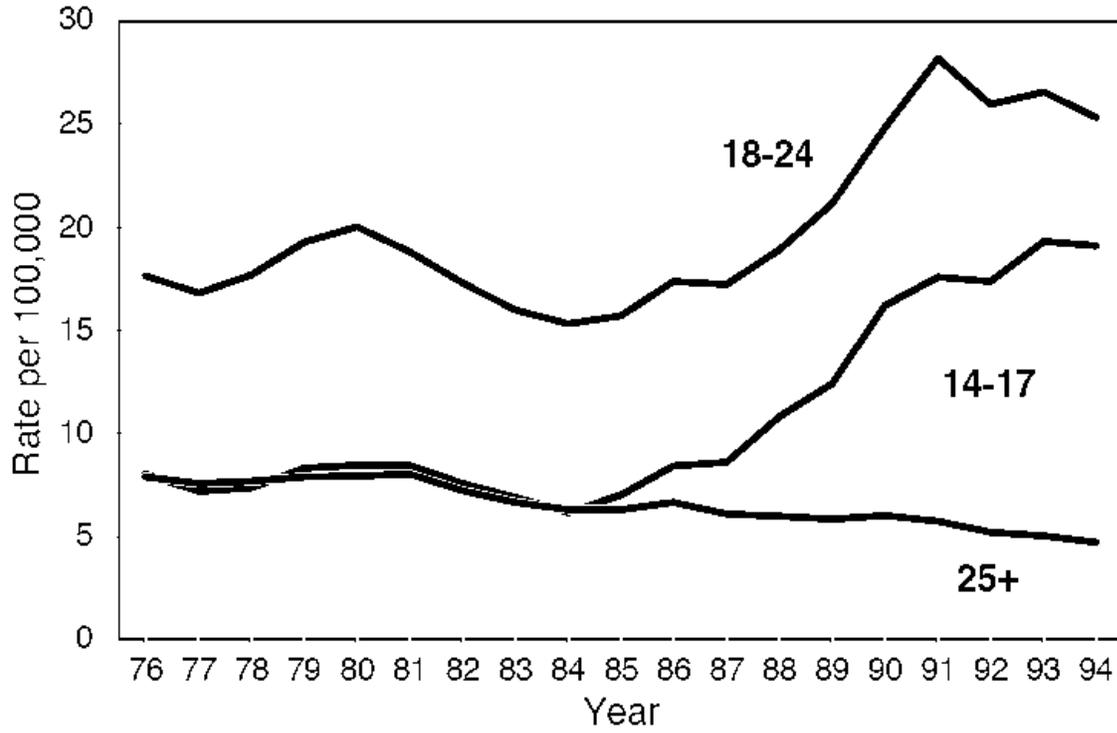
The last half of the 1980s was a particularly sharp disappointment in the United States when homicide rates increased. Rates of imprisonment had expanded as never before and were expected to reduce crime through substantial incapacitation (Zimring and Hawkins 1995) and the aging of baby boomers also 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 where municipal police identify the suspect as under 18 when the crime was committed. The sharpest increases were noted in the monthly supplemental homicide reports which were the basis for James Alan Fox's 1996 analysis:

“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 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% 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..." (Fox 1996 at p. 2).

Professor Fox's 1996 report created a figure from SHR data adjusted to cover missing reporting sites, reproduced here as Figure 6.

Figure 6. Homicide Offending Rate by Age.



Source: Fox, 1996. [FBI, Supplemental Homicide Reports and Census Bureau, Current Population Survey]

The data in Fox's table was 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 as well. In this analysis, the rates of homicide offending were the highest for the young adult group but the sharpest increase after 1985 was the 14- to 17-year-old group with a peak rate 172% 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 youth 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 population 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). The second projection (Fox labels this one "high") assumes 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 Professor Fox 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 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 James 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 U.S. population.

Reviewing the SHR numbers in the Fox analysis, DiIulio concluded that “the youth crime wave has reached horrific proportions” but says, “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 to 17] will have risen about 25% overall and 50% for blacks...Americans are sitting atop a demographic time bomb” (DiIulio 1995 at pp. 23-24).

Professor 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% of Philadelphia boys born in 1945 who had five or more police contacts prior to age 18 were a fixed proportion of serious offenders. Wilson then argued that an expansion in the youth population of 1,000,000 produces 500,000 extra adolescent males. Extrapolating from the 6% chronic finding, Wilson tells us to expect “30,000 more muggers, killers and thieves than we have now” (Wilson 1995).

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, a total of 4.5 million prior to 2010. Using the Philadelphia cohort 6% 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.” The nine-fold increase between the Wilson and DiIulio totals happens because the time period and number of extra youth are expanded, but also and more importantly because Wilson confines his analysis to adolescents while DiIulio assumes that 6%

of all children alive in 2010 will be super-predators. The logic is still a fixed proportion of a variable population. That slightly more of these super-predators would be under age 4 in 2010 than over age 14 I had reason to point out (Zimring 1997).

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]” (DiIulio 1995 at pp. 23-24). 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 varies over time, why should we assume that the 6% 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, William Bennett, John DiIulio and John Walters argue that the concentrated social disadvantages of fatherless families has created a high incidence of what they call “moral poverty” which all but guarantees violent criminal careers:

“Four of ten 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” (p. 196).

The impact of predictions based on projections of increasing youth violence on the political process was not small. In 1996, Rep. Bob McCollum of Florida, the chairman of the House Subcommittee on Crime, testified at a Senate hearing:

“Today’s enormous cohort of five-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, 2-3).

I do not mean to suggest that projections of increasing juvenile homicides let alone nightmare predictions of coming generations of juvenile super-predators 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; Cook and Laub 2002; see also 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 (James Fox complaining about inadequate support for youth services) as well as Bennett and DiIulio’s rightwing 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 phenomenon.

What Happened Next?

But what happened next was the most sustained and substantial decline in youth homicide in modern U.S. 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% higher than the actual FBI number. By 2005 the total volume of SHR homicide arrests and suspects under 18 had dropped by two-thirds instead of increasing by almost 40%, 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% increase into a 67% 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.

Figure 7. Rate of Juvenile Homicide Arrest Rates.

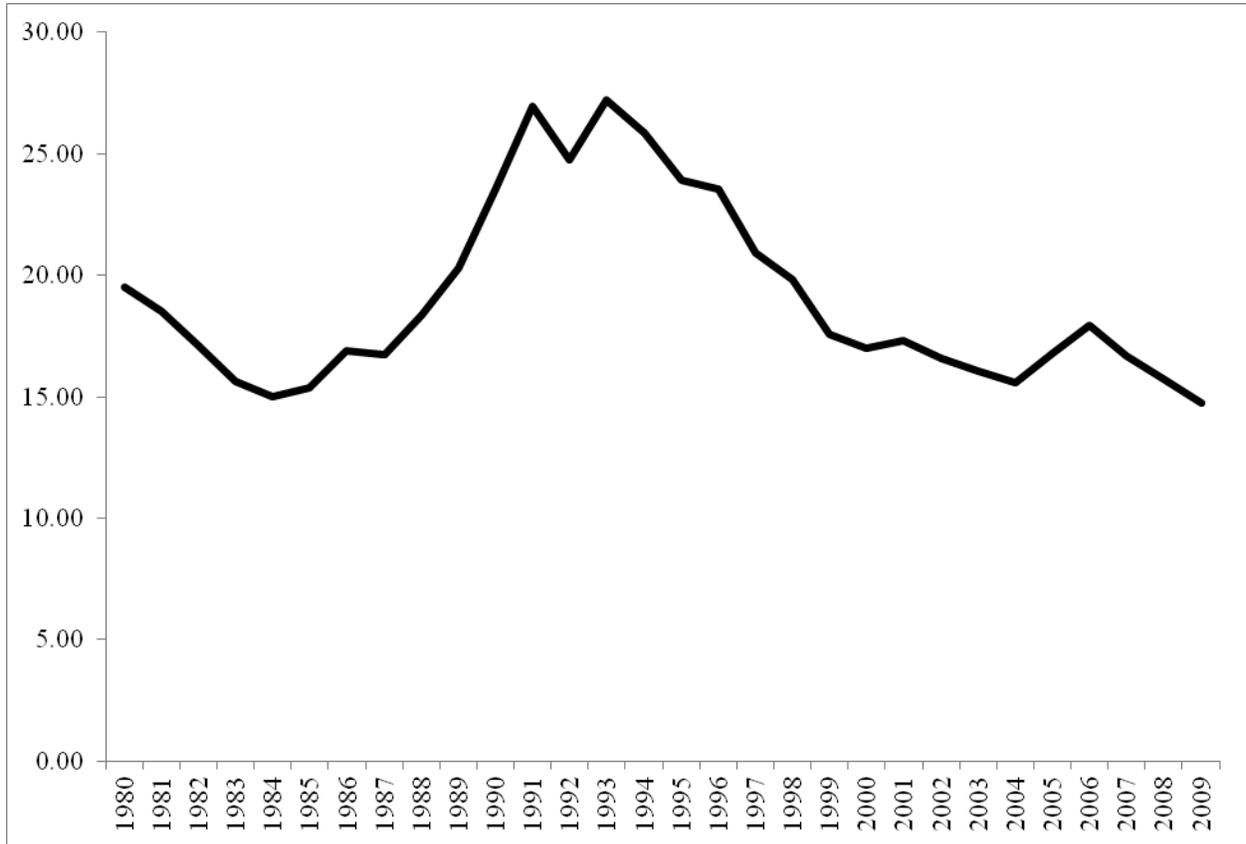


Source: Uniform Crime Reports.

After rising in the late 1970s, the youth homicide rate turns down sharply through the early 1980s before beginning to assent that was the centerpiece of the Fox and DiIulio concerns. Even as the alarms of the mid-1990s were being sounded, the rates 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 rollercoaster ride of age specific homicide rates as shown in Figure 8.

Figure 8. Young Adult Homicide Arrest Rates.



Source: Uniform Crime Reports.

The timing of the ups and downs for the two groups is very close, with a correlation over time of .95 (see Zimring and Rushin 2012 at 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 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 the James Fox projections differed from those by James Q. Wilson and John 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:

- (1) The failure to recognize the plenary power of rate fluctuations in determining homicide trends;
- (2) The failure to account for regression to historically typical levels as a probable future outcome;

- (3) Assuming that fluctuations in the number and demographic character of future population as a major influence on crime volume;
- (4) 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.

1. 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 seven years after 1984 when killings committed by juveniles increased. All of the extra killings come from higher rates of killings attributed to juveniles. As a matter of strict arithmetic, more than 100% 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% 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% or 20% variations in total population will probably play a minor part in the total volume of serious youth violence. So that

which can be precisely estimated ten and 15 years in the future—the population of youth and young adults—won't make much difference and what will be the largest determinant of youth homicide—trends in rates—can't be predicted with any confidence.

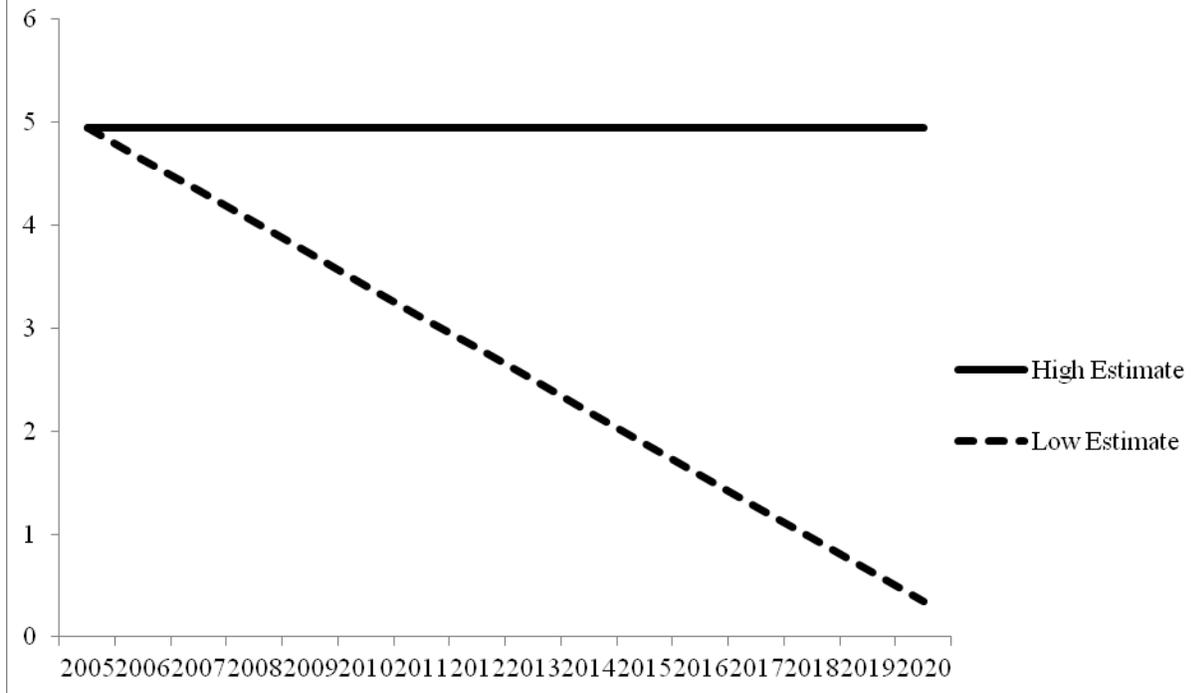
The extreme variability in homicide rates that produced the Fox and DiIulio projections also should have worried Professors Wilson and DiIulio away from expecting a fixed 6% of a youth population as violent. The variability of homicide rates from 1980 to 1994 undercut Professor Fox's assumptions in a 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 Fox cannot explain the extreme fluctuations that he documents. But how can he predict future variations if he can't 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 the rate per 100,000 of juvenile homicide 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 rate 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 cohort (1957-1963) and the juvenile years of the 1958 cohort (1970-1976) 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” parallel to that of Fox in 1996 would take the 2006 rate of SHR juvenile homicides and assume it will continue with adjustments only for anticipated changes in the population ages 13-17. The “low” estimate would project continued downward rate levels.

Figure 9, High and Low Volumes of Juvenile Homicide Offending, 2005-2020



Source: Author's projections.

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

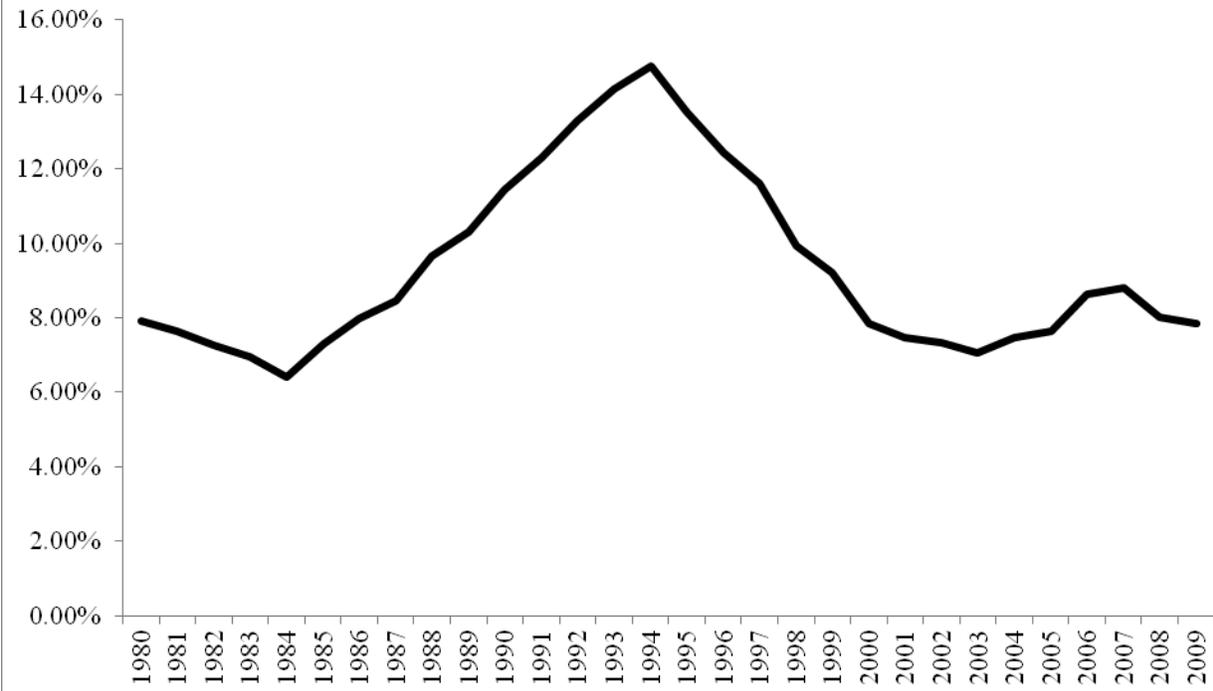
For DiIulio, the 1995 assumption that crime trends would continue to get worse has been falsified. Will he still believe that a fixed percentage of the youth population will be “juvenile super-predators”?

So one important vice of all the 1995 and 1996 predictions was that they didn’t 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.

2. 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 Figure 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 very common pattern of statistical accounts of crime over time—regression toward long-term mean patterns. With respect to youth homicide, a very good illustration of this 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 to 2008.

Figure 10, Juveniles as Percentage of Total Homicide Arrests



Source: Uniform Crime Reports.

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 returns back 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 Professor 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 an 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 relationship 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 argument that about half the 1990s crime decline in the United States should be attributable to the changes in the quality of the birthrate generated by the U.S. Supreme Court abortion decision in 1973 (Donohue and Levitt 2001). I have an extensive analysis of this study in other writing (Zimring 2007 at pp. 88-103) and do not propose to revisit most of the wide range of issues that analysis discussed. But one argument made by Donohue and Levitt seems to me a textbook case in the

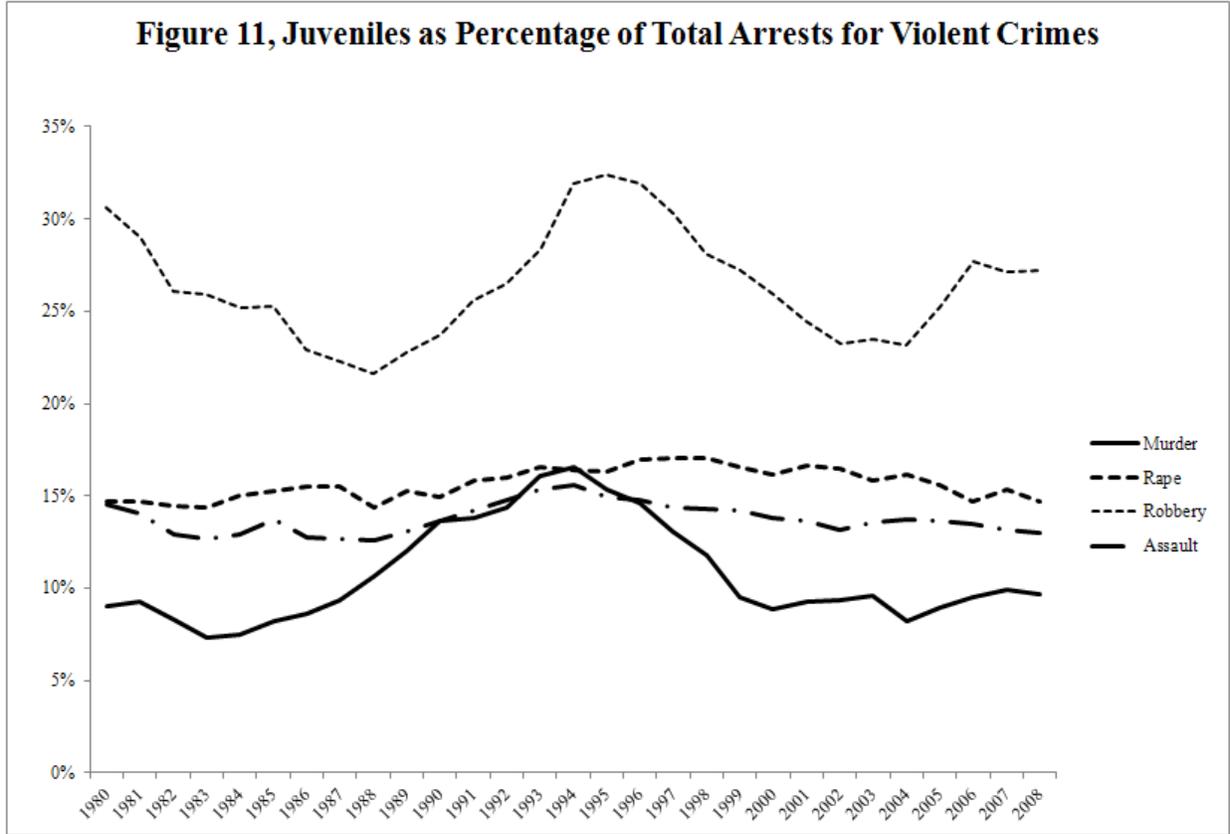
substantive implications of regression. The clinching argument for these authors that crime declines in the 1990s were the result of 1973 changes in abortion rules was the fact that arrest data showing crime declines in the 1990s were concentrated in younger age groups: “[V]irtually all of the abortion-related 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 youth 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 provides a new perspective for evaluating this claim: lower than what? If the arrest share of youth 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 9 actually shows for juveniles is a return to normal patterns of juvenile homicide market share 7.3% in 1983 versus 9.7% 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 *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.

Figure 11, Juveniles as Percentage of Total Arrests for Violent Crimes



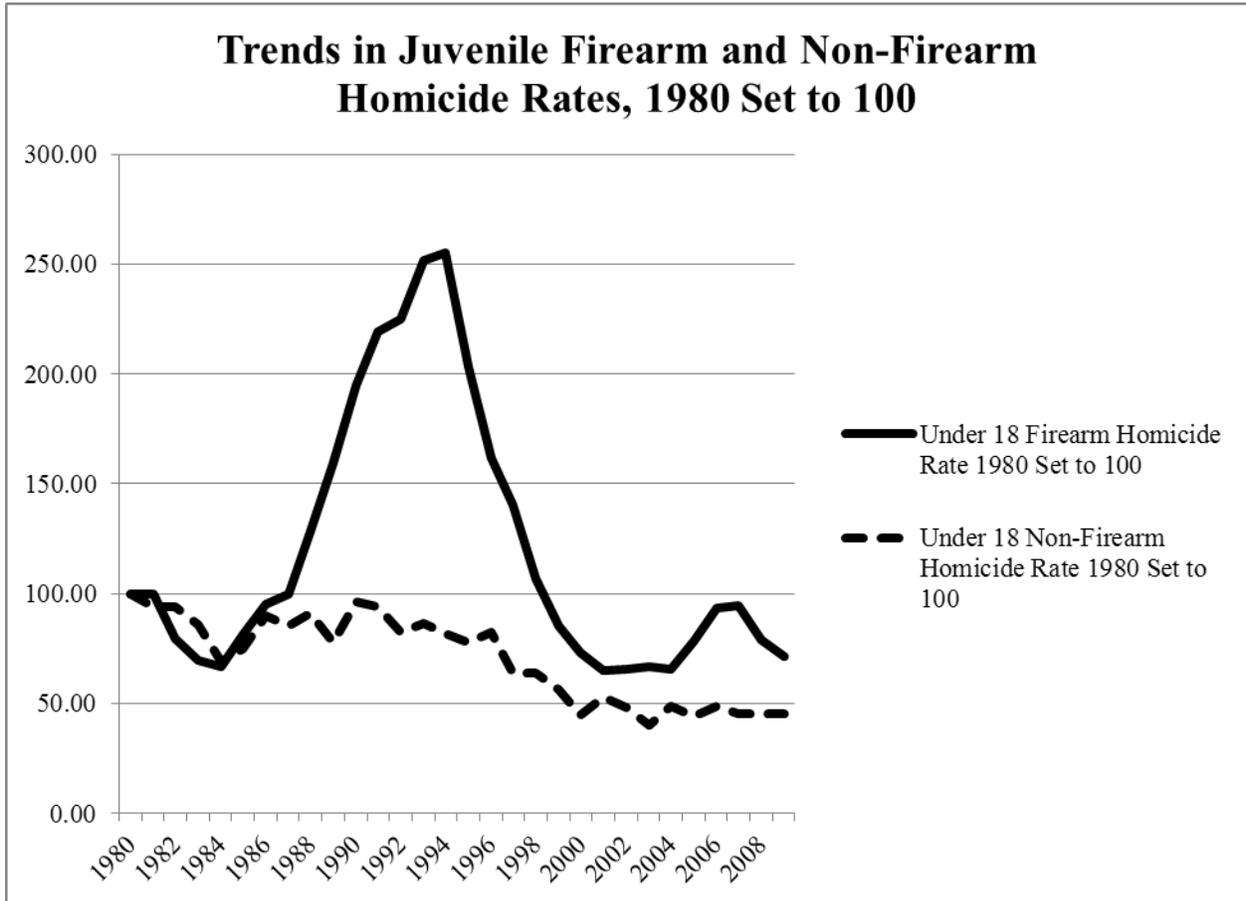
Source: Uniform Crime Reports.

The first lesson from Figure 11 is that homicide is unique in the size of its expansion and in its subsequent drop. All the more reason to suspect an unusual pattern leading to the peak and to expect regression toward prior levels later. 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 doesn't 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 (see Appendix C).

Gun and Non-Gun 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 firearms and non-firearms killings involving at least one offender under age 18.

Figure 12.



Source:

All of the growth of homicide cases involving youth after 1980 was firearms homicide. The three decades of non-gun killings show no pronounced increases ever and a downward tendency throughout. Gun homicides first drop in the early 1980s then triple during the decade after 1984, before dropping below the 1990 rate for every year after 1998. That the entirety of the increase is 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 the character of the juvenile population didn't 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 historical 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.

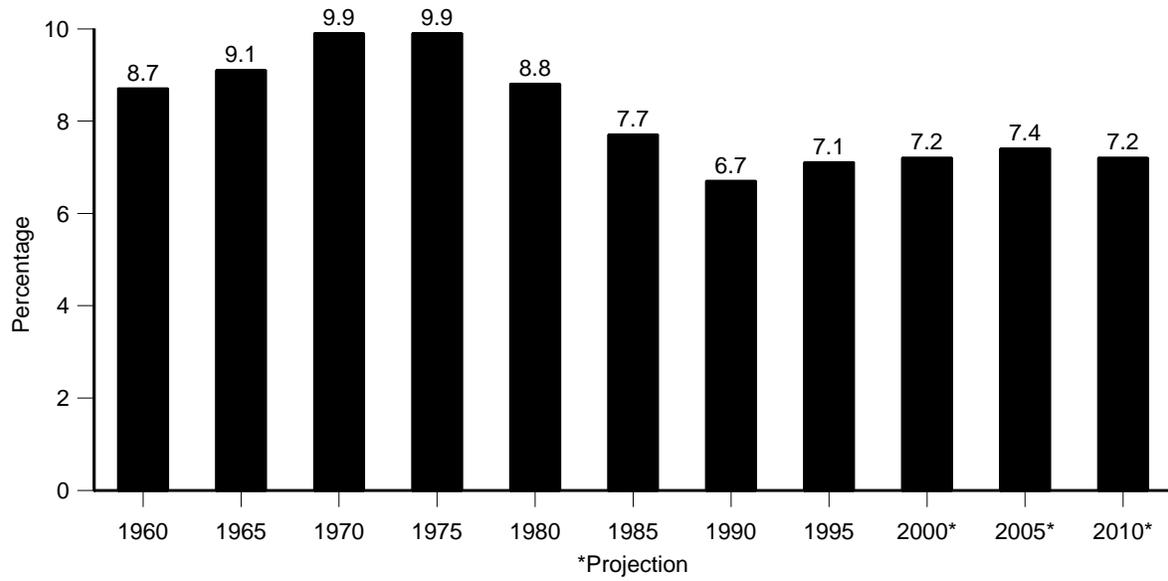
3. The Folly of Demographic Determinism

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 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. James Q. Wilson opened the bidding with a million more teenagers in the short term; Professor DiIulio upped the ante to 4.5 million extra young people to derive his 270,000 juvenile super-predators and characterized the population developments on top as “a demographic time bomb.” Congressman McCollum prophesized that “today’s enormous cohort of five-year-olds will be tomorrow’s teenagers” 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 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 which shows the share of total population ages 13-17 at five-year intervals.

Figure 13. Proportion of U.S. Population, Ages 13-17, 1960-2010.



Source: Zimring 2005, Figure 8.2 [U.S. Department of Commerce, Bureau of the Census, 1960-1994, 1995a.]

The proportion of the U.S. population in the 13-17 years varies over the 50 years after 1960 from a low of 6.7% of the population to a high of 9.9%. The demographic projections viewed with alarm in the 1990s were a very modest increase in the youth share—from the 6.7% low point in 1990 to 7.2% in 2010. The post-“demographic time bomb” youth cohort would be a much smaller share of the total population than 13- to 17-year-olds had been in the low crime era of 1960 (7.2% versus 8.7%). There were only two reasons why the numerical count of teens would go up at all by 2010—the fact that total population was expanding and the significant fact that 1990 was the very lowest youth share of the time series. The 7.2% concentration projected for 2010 would be the third lowest in the half-century after 1960. By post-WWII American standards, the concentration of youth expected for 2010 was *below average*. And that should have been easy to determine in 1995.

The second reason worry about the size of a 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% 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 Bill 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 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 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.

4. 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. Rep. McCollum was predicting violence for five-year-olds. Professor Fox was projecting the number of apprehended killers in a group of children between three and seven 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- to 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 these 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 things had changing but the evidence for this is missing from the analysis and it was literally off his chart.

Professor DiIulio and associates had a verbal description for what they thought driven up the homicide rate—"moral poverty"—and they argued that these social and demographic features are the cause of the sharp increases in rate. But this is an assumption in DiIulio and there

is no discussion of one-off environmental and situation features of the 1980s that might not have similar impact in future years. Two examples of potentially non-permanent impacts of the era mentioned by others were crack cocaine (see 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 of 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 the reasons why intelligent people made simple mistakes.

The supreme irony is that this same generation of kids, “the enormous cohort of five-year-olds” that scared Congressman McCollum and Presidential nominee Robert Dole became a blessed low crime population group of wanted children five years later when economists John Donohue and Stephen 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% 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 *Roe v. Wade* effect.

In less than a decade, future super-predators 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 super-predator 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 U.S. kids born in 1990 seems worthy of the *Guinness Book of World Records*. Before these kids turned seven, 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. Writing in 2012, is there any more concrete wisdom available about what will happen in the next 13 years than Norval Morris' refrain from the mid-1990s, “I don't know and you don't know and neither does

DiIulio”? Nothing is certain, but this section will argue 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 rollercoaster 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 2012-2025 are:

- (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 youth 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 (nos. 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% of total homicides in 1983, more than 20% in 1994 then less than 10% 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%. 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 20th century's last 15 years. Absent 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 2012-2015. Youth 13-17 will expand 6.6% from 2010 to 2025 but that is about half the rate of total population expansion (13%), so the share of the population in the age bracket will drop slightly. (Detailed youth population estimates are presented in Appendix A.) This is hardly "a demographic time bomb" (but then neither was the 16% 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. 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 (Zimring and Fagan in Zimring 2005 at Chapter 7). 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 didn’t 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 are 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

Zimring, Franklin E. 1979. "American Youth Violence: Issues and Trends." *Crime and Justice: A Review of Research*. 1: 67-108.

Klein, Malcolm W. 1979. "Deinstitutionalization and Diversion of Juvenile Offenders: A Litany of Impediments." *Crime and Justice: A Review of Research*. 1: 145-202.

Mennel, Robert M. 1983. "Attitudes and Policies Toward Juvenile Delinquency in the United States: A Historiographical Review." *Crime and Justice: A Review of Research*. 4: 191-224.

Loeber, Rolf, and Magda Stouthamer-Loeber. 1986. "Family Factors as Correlates and Predictors of Juvenile Conduct Problems and Delinquency." *Crime and Justice: A Review of Research*. 7: 29-150.

Greenwood, Peter W. 1986. "Differences in Criminal Behavior and Court Responses Among Juveniles and Young Adult Defendants." *Crime and Justice: A Review of Research*. 7: 151-188.

Moffitt, Terrie E. 1990. "The Neuropsychology of Juvenile Delinquency: A Critical Review." *Crime and Justice: A Review of Research*. 12: 99-170.

Spiegel, Irving A. 1990. "Youth Gangs: Continuity and Change." *Crime and Justice: A Review of Research*. 12: 171-276.

Feld, Barry C., 1993. "Criminalizing the American Juvenile Court." *Crime and Justice: A Review of Research*. 17: 197-280.

Moore, Mark H., and Stewart Wakeling. 1997. "Juvenile Justice: Shoring Up the Foundations." *Crime and Justice: A Review of Research*. 22: 253-302.

Pfeiffer, Christian. 1998. "Juvenile Crime and Violence in Europe." *Crime and Justice: A Review of Research*. 23: 255-328.

Moore, Mark H., and Michael Tonry. 1998. "Youth Violence in America." *Crime and Justice: A Review of Research*. 24: 1-26.

Cook, Philip J., and John H. Laub. 1998. "The Unprecedented Epidemic in Youth Violence." *Crime and Justice: A Review of Research*. 24: 27-64.

Anderson, Elijah. 1998. "Social Ecology of Youth Violence." *Crime and Justice: A Review of Research*. 24: 65-104.

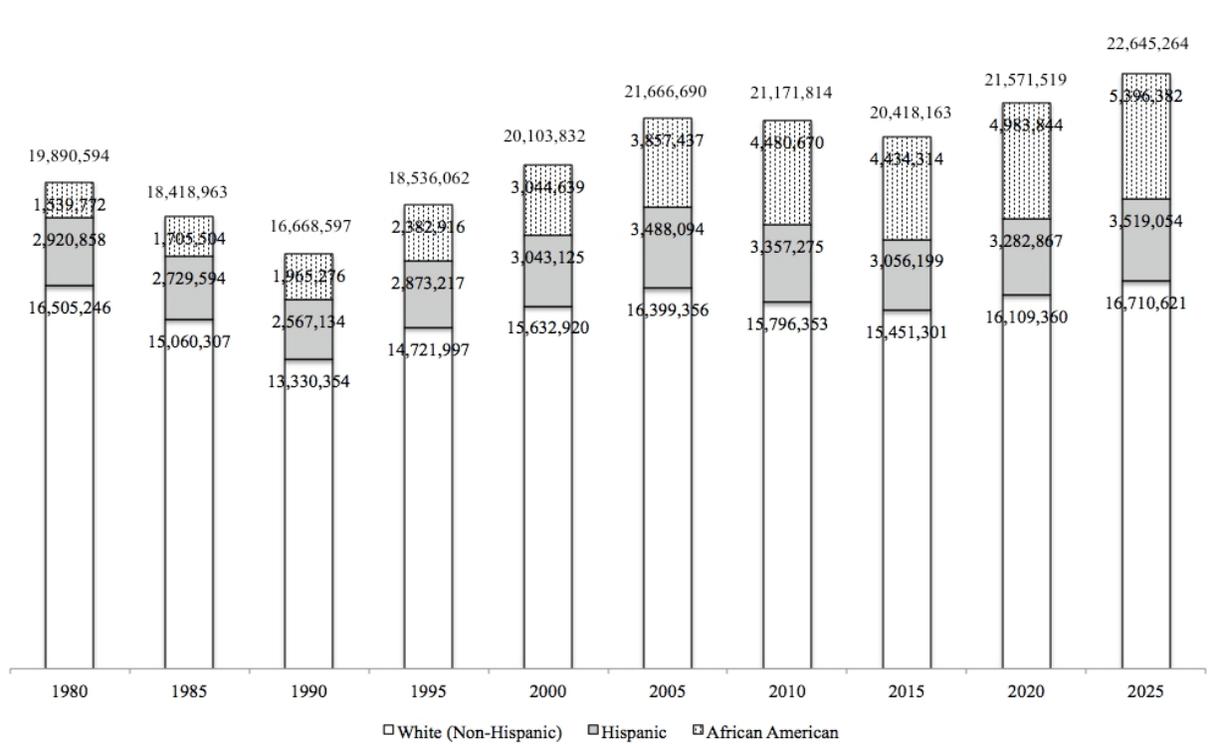
- Fagan, Jeffrey, and Deanna L. Wilkinson. 1998. "Guns, Youth Violence, and Social Identity in Inner Cities." *Crime and Justice: A Review of Research*. 24: 105-188.
- Feld, Barry C. 1988. "Juvenile and Criminal Systems' Response to Youth Violence." *Crime and Justice: A Review of Research*. 24: 189-262.
- Farrington, David P. 1998. "Predictors, Causes, and Correlates of Male Youth Violence." *Crime and Justice: A Review of Research*. 24: 421-276.
- Zimring, Franklin E. 1998. "Towards a Jurisprudence of Youth Violence." *Crime and Justice: A Review of Research*. 24: 477-502.
- Howell, James C., and David J. Hawkins. 1998. "Prevention of Youth Violence." *Crime and Justice: A Review of Research*. 24: 263-316.
- Bishop, Donna M. 2000. "Juvenile Offenders in the Adult Criminal System." *Crime and Justice: A Review of Research*. 27: 81-168.
- Cook, Philip J., and John H. Laub. 2002. "After the Epidemic: Recent Trends in Youth Violence in the United States." *Crime and Justice: A Review of Research*. 29: 1-38.
- Bottoms, Anthony, and James Dignan. "Youth Justice in Great Britain." *Crime and Justice: A Review of Research*. 31: 21-184.
- Doob, Anthony N., and Jane B. Sprott. 2004. "Youth Justice in Canada." *Crime and Justice: A Review of Research*. 31: 185-242.
- Morris, Allison. 2004. "Youth Justice in New Zealand." *Crime and Justice: A Review of Research*. 31: 243-292.
- Junger-Tas, Josine. 2004. "Youth Justice in the Neatherlands." *Crime and Justice: A Review of Research*. 31: 293-348.
- Kyvsgaard, Britta. 2004. "Youth Justice in Denmark." *Crime and Justice: A Review of Research*. 31: 349-390.
- Janson, Carl-Gunnar. 2004. "Youth Justice in Sweden." *Crime and Justice: A Review of Research*. 31: 391-442.
- Albrecht, Hans-Jorg. 2004. "Youth Justice in Germany." *Crime and Justice: A Review of Research*. 31: 443-494.
- Roberts, Julian V. "Public Opinion and Youth Justice." *Crime and Justice: A Review of Research*. 31: 495-542

Walgrave, Lode. 2004. "Restoration in Youth Justice." *Crime and Justice: A Review of Research*. 31: 543-598.

Weerman, Frank M. 2007. "Juvenile Offending." *Crime and Justice: A Review of Research*. 35: 261-318.

Loeber, Rolf and Wim Slot. 2007. "Serious and Violent Juvenile Delinquency: An Update." *Crime and Justice: A Review of Research*. 35: 503-592.

Appendix B. Youth Age 13-17 Populations and Projections, 1980-2025.



Source:

References

Bennett, William J., John J. DiIulio, and John P. Walters. 1996. *Body Count: Moral Poverty...And How to Win America's War Against Crime and Drugs*. New York: Simon and Schuster.

Blumstein, Alfred, and Joel Wallman, eds. 2000. *The Crime Drop in America*. Cambridge: Cambridge University Press.

Cook, Philip J., and John H. Laub. 1998. "The Unprecedented Epidemic in Youth Violence." *Crime and Justice: A Review of Research* 24: 27-64.

Cook, Philip J., and John H. Laub. 2002. "After the Epidemic: Recent Trends in Youth Violence in the United States." *Crime and Justice: A Review of Research* 29: 1-38.

DiIulio, John. "The Coming of the Super-Predators." *Weekly Standard*, November 27. (p. 1).

Donohue, John, and Steven Levitt. 2001. "The Impact of Legalized Abortion on Crime." *Quarterly Journal of Economics*. 116(2): 379-420.

Fox, James Alan. 1996. *Trends in Juvenile Violence: A Report to the United States Attorney General on Current and Future Rates of Juvenile Offending*. Washington, D.C.: U.S. Bureau of Justice Statistics.

McCollum, Bill. 1996. *Testimony Before the House Subcommittee on Early Childhood, Youth and Families*. April 30. (104th Con., 2d Sess.).

National Center for Health Statistics. 1991. *Vital Statistics of the United States*. Washington, D.C.: U.S. Government Printing Office.

U.S. National Center for Health Statistics. 2005. *Health, United States, 2005*. Hyattsville, MD: U.S. National Center for Health Statistics.

U.S. Department of Justice, Bureau of Justice Statistics. 1991. *Criminal Victimization in the United States*. Washington, D.C.: U.S. Government Printing Office.

U.S. Department of Justice, Federal Bureau of Investigation. 1980-2010. *FBI Uniform Crime Reports: Supplemental Homicide Reports*

Wilson, James Q. 1995. "Crime and Public Policy." In James Q. Wilson and Joan Petersilia, eds., *Crime: Public Policies for Crime Control*. San Francisco, CA: Institute for Contemporary Studies.

Zimring, Franklin E. "Desperadoes in Diapers." *Los Angeles Times*. August 19.

Zimring, Franklin E. 1998. *American Youth Violence*. New York: Oxford University Press.

Zimring, Franklin E. 2005. *American Juvenile Justice*. New York: Oxford University Press.

[Figure 8.2, now Figure 12; U.S. Department of Commerce, Bureau of the Census, 1960-1994, 1995a.]

Zimring, Franklin E., and Jeffrey Fagan. "Two Patterns of Age Progression in Adolescent Crime." In Zimring, Franklin E. 2005. *American Juvenile Justice*. New York: Oxford University Press. Chap. 7

Zimring, Franklin E. and Gordon Hawkins. 1995. *Incapacitation: Penal Confinement and the Restraint of Crime*. New York: Oxford University Press.

Zimring, Franklin E. and Stephen Rushin. 2012. *Did Changes in Juvenile Sanctions Reduce Juvenile Crime Rates? A Natural Experiment*.