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## Comments

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## The "Great American Crime Decline": Possible Explanations

Maria Tcherni-Buzzeo

**Abstract:** *This chapter examines the most important features of the crime decline in the United States during the 1990s-2010s but also takes a broader look at the violence declines of the last three centuries. The author argues that violent and property crime trends might have diverged in the 1990s, with property crimes increasingly happening in the online sphere and thus traditional property crime statistics not being reflective of the full picture. An important distinction is made between ‘contact crimes’ and crimes that do not require a victim and offender to be present in the same physical space. Contrary to the uncertainties engendered by property crime, the declines in violent (‘contact’) crime are rather general, and have been happening not only across all demographic and geographic categories within the United States but also throughout the developed world. An analysis of research literature on crime trends has identified twenty-four different explanations for the crime drop. Each one of them is briefly outlined and examined in terms of conceptual clarity and empirical support. Nine crime decline explanations are highlighted as the most promising ones. The majority of these promising explanations, being relative newcomers in the crime trends literature, have not been subjected to sufficient empirical scrutiny yet, and thus require further research. One potentially fruitful avenue for future studies is to examine the association of the most promising crime decline explanations with improvements in self-control.*

**Key words:** *crime trends; violence trends; crime decline; contact crime; online property crime; crime explanations; self-control*

A lot has been written about the (unexpected and extraordinary) crime declines happening in the United States since at least the early 1990s (for recent comprehensive reviews, see Eisner et al. 2016; Baumer et al. 2018). A catchy phrase “the great American crime decline” appears as a title of Zimring’s (2006) iconic book on the topic, and has been picked up by multiple researchers thereafter (which is why it is used in the title of this chapter).

Most accounts puzzle over the possible reasons for the unexpected crime drop, calling them “something of a mystery” (Cook and Laub 2002, p. 3), a “compound mystery” (Zimring 2006, p. 132), and a “crime trends puzzle” (Baumer 2008, p. 127). At the same time, plenty of possible explanations have been offered for the crime drop – from changes in policing strategies and punishment practices to changes in population structure to the proliferation of cell phone use to the expansion of psychotropic medication prescribing (each one of these and other explanations will be examined in this chapter). In fact, a thorough search of research literature has helped identify 24 different explanatory factors for the crime declines, though regrettably, not many of these explanations are convincing when subjected to empirical testing.

Eric Baumer and his colleagues (2018) lament that most of the explanations include single

variables rather than complete theories, and that previous research devoted to summarizing the likely explanations for the crime declines, did so by simply enumerating such explanations in no specific order and mostly without any organizing structure (see Levitt 2004; Zimring 2006; Baumer 2008; Farrell et al. 2014). To answer this call for a structure, the current chapter attempts to offer a tentative way to organize the 24 identified explanations into a somewhat coherent scheme (for a summary, see Table 2 below).

In addition to organizing the possible explanations for the crime drop within a tentative framework and holding them up to scrutiny, this chapter devotes special attention to discussing why violent and property crimes may follow different trends (and thus may have different underlying factors driving their respective trends). An argument is made, with support from empirical research (Aebi and Linde 2012; Farrell et al. 2014; Tcherni et al. 2016; Caneppele and Aebi 2017), that property crime trends based on traditional, “street” property crimes like larceny/theft, burglary, and motor vehicle theft, may not correctly reflect the trends of the last two decades, when the majority of property crime is likely perpetrated in the online sphere.

A notion of ‘contact crimes’ is introduced, to separate the types of crime that require a victim and offender to be present within the same physical space from other crimes, especially the ones that are perpetrated online. Among the crimes traditionally reported and reflected in official and victimization-based trends, every type of violent crimes (rape, robbery, aggravated assault, and homicide) and the most common property crime (larceny/theft) belong in the contact crime category. The chapter focuses mainly on trends in violent crimes as the most reliably reported crime category. To examine violent crime trends, in addition to reviewing data for the last few decades from various sources of official crime statistics and self-reported victimization, the chapter expands the discussion by taking a birds-eye view on the violence decline and examining evidence of a centuries-long downward trend (Gurr 1981; Eisner 2003, 2008; Roth et al. 2008; Fischer 2010; Pinker 2011a), as well as discussing possible reasons for it.

The current chapter will proceed as follows: Section 1 (Description of Crime Trends) will review some important facts and discuss the features of the crime decline in the United States and, where appropriate, compare US crime trends with those in other countries. Section 2 (Possible Explanations) will summarize the hypotheses for the crime drop offered by criminologists and other scientists studying the topic. Stemming from the routine activities theory (Cohen and Felson 1979) framework, various explanations are organized into those referring to guardianship/target-hardening and those affecting offender motivation, with a further breakdown into changes of specific opportunity structures versus changes broadly affecting the way of life. Several additional subcategories are identified, with the largest one encompassing factors affecting criminal propensity (within a broad category of offender motivation determinants). All explanations are briefly described and examined in terms of their conceptual clarity (how reasonable the theoretical argument is) and in terms of support from empirical research, to determine which ones are most plausible. Finally, Section 3 (Discussion and Conclusion) highlights the most promising explanations, summarizes the key takeaways, and makes suggestions for future research. One intriguing and important observation meriting further research is that the most promising crime decline explanations are associated with improvements in self-control (Gottfredson & Hirschi,

1990).

## 1. Description of Crime Trends

Most explanations for the crime declines assume that both property and violent crime trends move in tandem, and thus share the underlying factors driving the trends (see Farrell et al 2014). It is certainly a reasonable assumption since the two trends do look remarkably similar, especially in the 1960s, when both rise at a similar pace, and since the early 1990s when both violent and property crime rates share a decades-long decline in the United States (official statistics based on Uniform Crime Reports (UCR) are displayed in Figure 1). However, it is also possible that traditional property crime rates, as evident from official statistics and victimization surveys, mainly reflect the trends in 'contact crimes', that is, crimes where an offender and victim must be present within the same physical space.

On the other hand, evidence from a growing research literature on cyber crimes suggests that, for the United States, as well as for other developed countries, property crime is getting increasingly perpetrated online (Aebi and Linde 2012; Farrell et al. 2014; Tcherni et al. 2016; Caneppele and Aebi 2017), which likely more than offsets the decreases in traditional, "street" property crimes happening since the 1990s.

There are additional good reasons to suspect that violent and property crime trends for the recent two-three decades only look similar but likely follow different trajectories (and thus may have different mechanisms behind the trends):

- There is evidence that violent and property crimes in Western Europe follow different trends – with traditional property crimes and homicide decreasing since the late 1990s, and other violent crimes, as well as drug crimes increasing during the same time period (Aebi and Linde 2010; Gruszczynska and Heiskanen 2018). An alternative interpretation of these trends is offered by Tonry (2014) who contends that the increases in non-lethal violence in some European countries are misleading because they mainly reflect the changes in police recording practices (when a switch to recording all crime reports from victims has taken place) and a general sensitization of the public to violence (where relatively minor acts of violence are now perceived as worth reporting to the police and reflected in victimization surveys).<sup>1</sup>
- Most importantly, there is evidence of substantial specialization in violence (Osgood and Schreck 2007; DeLisi et al. 2011), spatial clustering of violence (Messner et al. 1999; Baller et al. 2001; Morenoff et al. 2001; Braga et al. 2010; though also see Weisburd 2015

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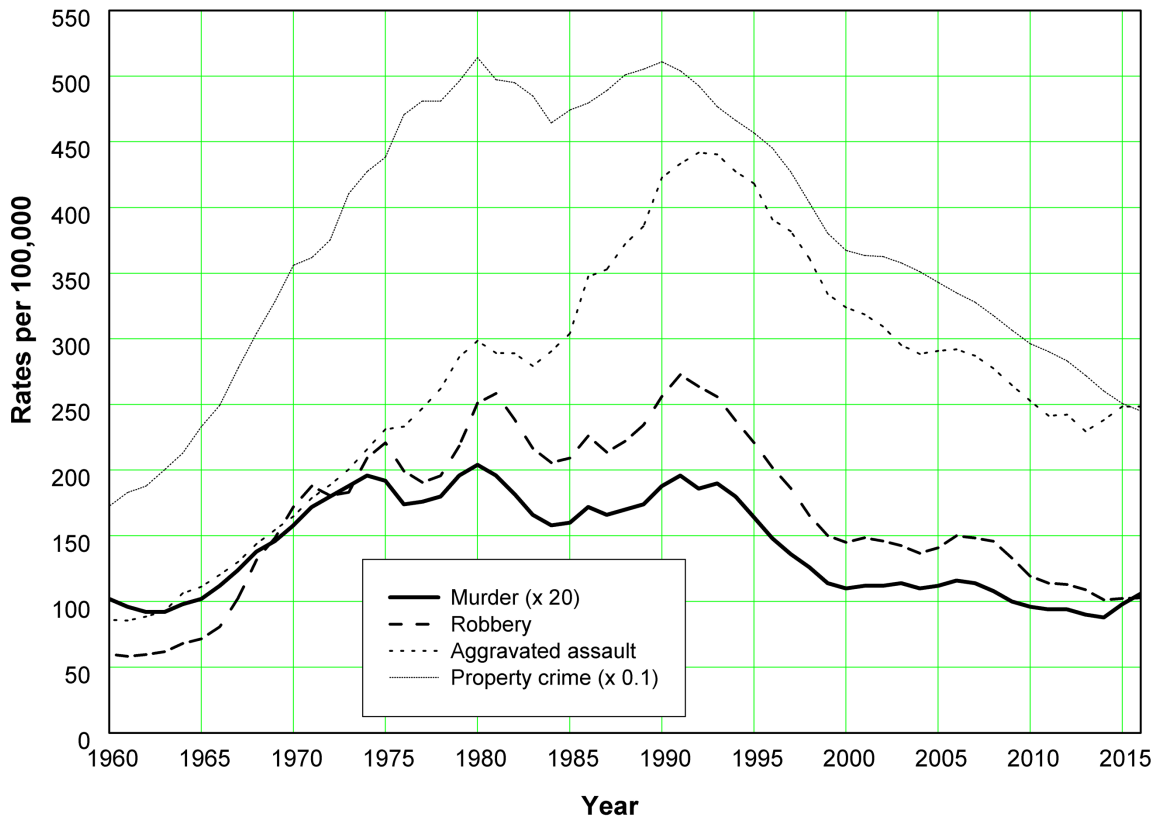
<sup>1</sup> This possibility has been corroborated for the United States by Lauritsen and her colleagues (2016) who show that, during the 1970s-1980s, rape and assault rates based on official police statistics do not correctly reflect the trends in these crimes evident from victimization data. Thus, the authors conclude that homicide and robbery rates are the only reliable official violence indicators over the longer time period. At the same time, other authors doubt the 'changes in reporting practices' explanation based on victimization survey data that showed no changes in the percentage of crimes reported to police (for example, see Aebi & Linde, 2010, p. 272). Regardless, the 'sensitization' and 'recording' arguments still stand.

for evidence of overall crime clustering), as well as differential etiology of violent and non-violent crime (see a comprehensive review in Savage and Wozniak 2016).

Thus, if we accept the evidence outlined above, it is likely that property crime trends based on traditional, “street” property crimes are not reflective of the true changes in property crime since the 1990s because they are missing a substantial and growing portion of online property crimes. Considering this extremely likely possibility, the rest of the section will focus primarily on violence (‘contact crime’) trends as they engender much less uncertainty about missing data.<sup>2</sup>

Comparing crime trends in the United States with those in other countries is also much more reasonable when the most robust, similarly-recorded and similarly-reported crime types are used (homicide is almost universally used in empirical research as a measure of violence for cross-national comparisons and over time as the most reliable indicator).

**Fig. 1** Crime trends in the United States (UCR data), 1960–2016



*Note:* Murder/non-negligent manslaughter rates are multiplied by 20 and property crime rates are divided by 10, to show all the trends on the same scale. 3-year average smoothing is applied to all crime rates.

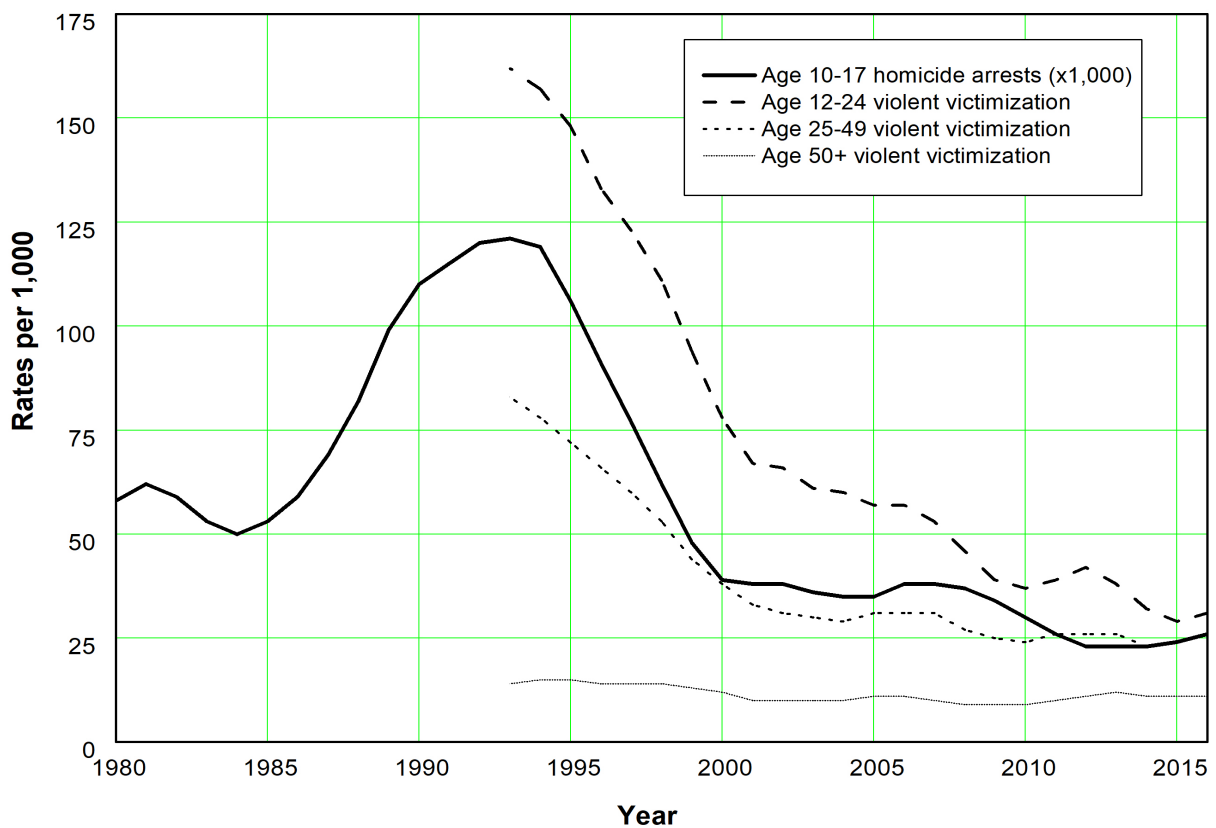
*Source:* Crime in the United States, 1960–2016. FBI: *Uniform Crime Reports (UCR)*.

<sup>2</sup> Even though data on violence are not completely free of the missing data problems, the convergence of the data from different sources outlined in this section, reflecting different modes of data gathering and different types of violence, confers a degree of certainty about the violence trends in the United States for the past several decades.

To visualize violence trends in the United States, several sources of longitudinal data are helpful:

- 1) The Uniform Crime Reporting (UCR) system maintained by the FBI<sup>3</sup> compiles data on crimes reported to police, as well as data on arrests made. Data are generally available from 1960 through 2016 (as of the time this chapter was written in May 2018), though data on property crimes are somewhat spotty between 1960 and 1990. UCR data on murder and non-negligent manslaughter, robbery, and aggravated assault rates (as well as property crime rates for comparison) are presented above, in Figure 1<sup>4</sup>.
- 2) The National Crime Victimization Survey (NCVS)<sup>5</sup> provides self-reported data on victimizations among U.S. residents 12 years of age and older, available for reliable year-

**Fig. 2** Juvenile homicide arrest rates (UCR data) and violent victimization rates by age (NCVS data), 1980–2016



Note: All rates are calculated per 1,000 age-matched population. Juvenile homicide arrest rates (for those age 10-17) are multiplied by 1,000. 3-year average smoothing is applied.

Sources: Crime in the United States, 1980-2016. FBI: *Uniform Crime Reports (UCR)*.

National Crime Victimization Survey (NCVS), 1993–2016.

<sup>3</sup> <https://ucr.fbi.gov/crime-in-the-u.s>

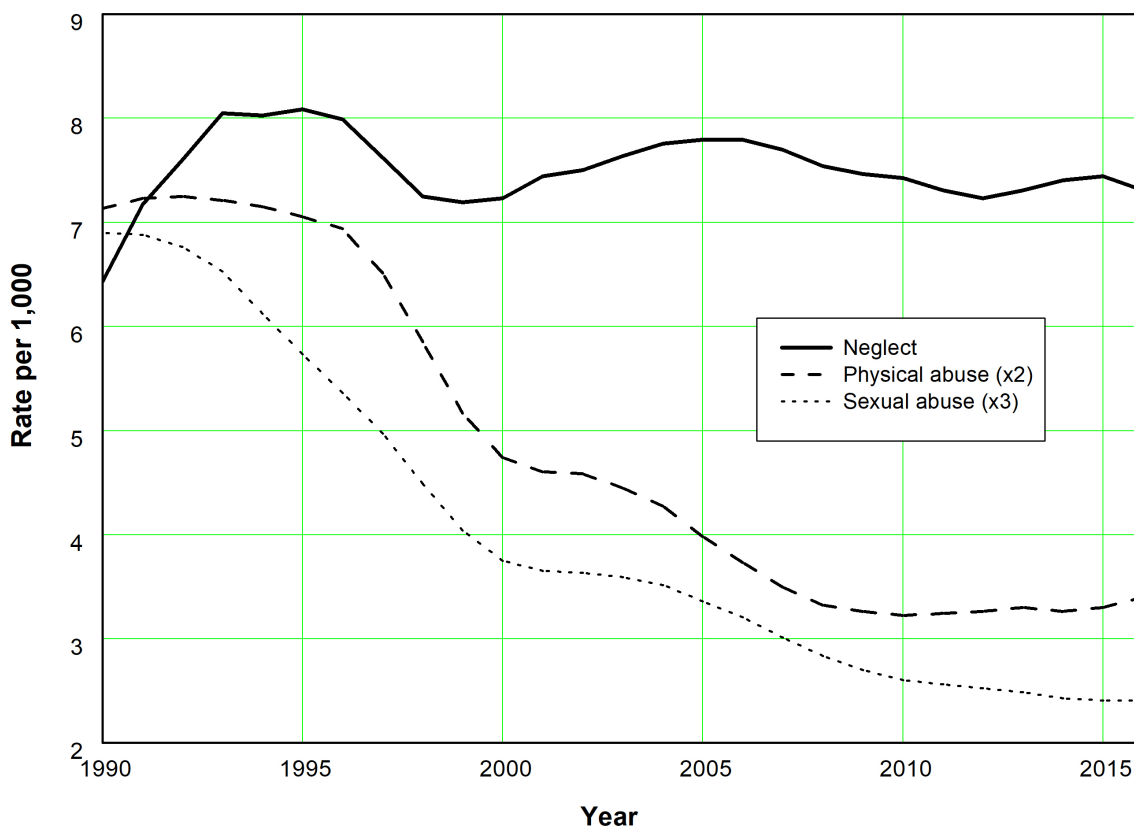
<sup>4</sup> Notice that murder rates have been multiplied by 20, and property crime rates divided by 10 to allow including all the trends on the same scale. In addition, 3-year average smoothing is applied to all crime rates, to compensate for the uncertainty inherent in the data: crime rate data are inexact due to differences in victim reporting and police recording practices, as well as due to uneven patterns of participation of police departments in the UCR program.

<sup>5</sup> <https://www.bjs.gov/index.cfm?ty=navat>

to-year comparisons from 1993 through 2016. Age-specific rates of violent victimization are plotted in Figure 2 above for three age groups, along with UCR-based juvenile arrest rates (age 10-17) for homicide in 1980–2016 for comparison.<sup>6</sup>

- 3) The National Child Abuse and Neglect Data System (NCANDS)<sup>7</sup> helps supplement adult victimization data with information on child maltreatment by caregivers reported to and investigated by child protection services in the United States (substantiated cases only). The rates of neglect, physical abuse, and sexual abuse per 1,000 children under 18 for years 1990–2016 are presented in Figure 3.

**Fig. 3** Rates of child maltreatment in the United States (NCANDS data), 1990–2016



*Note:* All rates are calculated per 1,000 age-matched population. The rates of physical abuse are multiplied by 2, and rates of sexual abuse are multiplied by 3, to show all trends on the same scale. 3-year average smoothing is applied.

*Source:* National Child Abuse and Neglect Data System (NCANDS), 1990–2016.

Data are compiled by Finkelhor et al. (2018).

- 4) The National Vital Statistics system, which compiles coroners' reports and provides demographic and geographic information along with the underlying cause of death, is

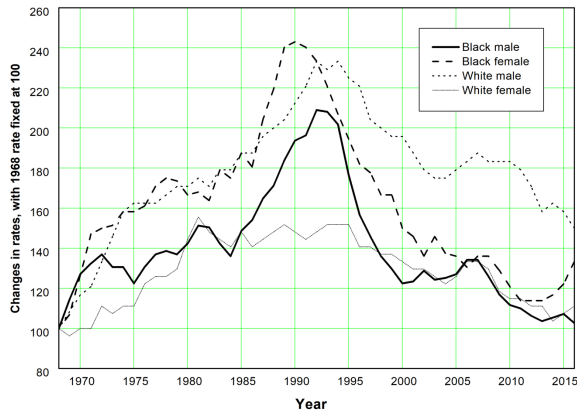
<sup>6</sup> Notice that homicide arrest rates are multiplied by 1,000 to bring them to scale.

<sup>7</sup> <https://www.acf.hhs.gov/cb/research-data-technology/reporting-systems/ncands>

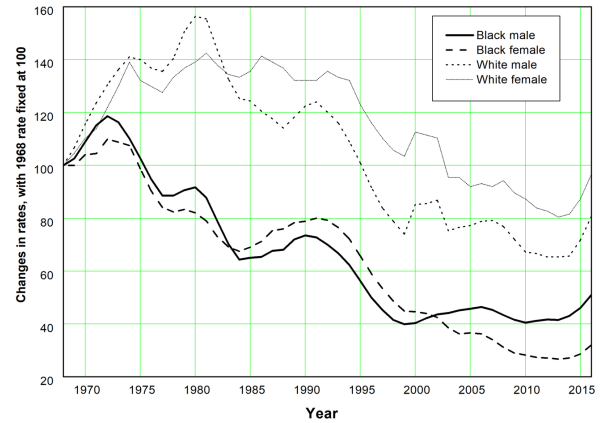
maintained by the Center for Disease Control and Prevention (CDC)<sup>8</sup> and serves as an alternative source of homicide victimization data that are available from 1968 through 2016. In Figure 4 (a) through (d), the data are broken down by gender, race, and age to help visualize differential trends in group-specific homicide trends.

**Fig. 4** Trends in age-specific homicide victimization rates in the United States (CDC data), 1968-2016

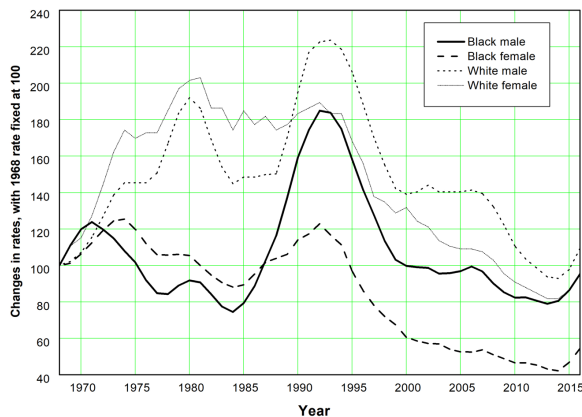
(a) Age 0-14



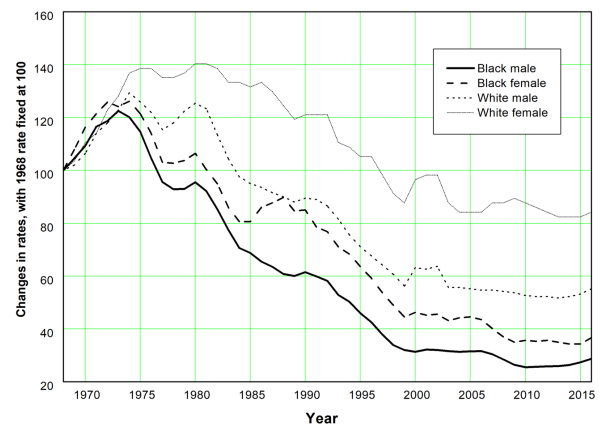
(c) Age 25-44



(b) Age 15-24



(d) Age 45+



*Note:* 1968 rates for each demographic group are fixed at 100 to show year-to-year changes. All original rates are calculated per 100,000 age-, gender-, and race-matched population (shown in Table 1). 3-year average smoothing is applied.

*Source:* National Vital Statistics mortality data. Centers for Disease Control and Prevention (CDC), 1968-2016.

Table 1 provides the actual rates of homicide victimization, calculated per 100,000 age-, gender-, and race-matched population (with 3-year smoothing applied to compensate for the uncertainty inherent in the data: coroners determine the cause of death recorded into

<sup>8</sup> <https://wonder.cdc.gov/mortSQL.html>



the system, and deaths from homicide may sometimes be misclassified as suicides or accidental deaths, or cause of death undetermined).

**Table 1** Rates of age-, gender-, and race-disaggregated homicide victimization in the United States for the start, peak, and end year in the 1968–2016 series (CDC data)

Year	Black male	Black female	White male	White female
Age 0-14				
<b>1968</b>	3.7	2.4	0.8	0.9
<b>Peak year (varies)</b>	8.4 (in 1993)	6.1 (in 1990)	1.9 (in 1991, 1993, 1995)	1.5 (in 1981)
<b>2016</b>	3.8	3.2	1.2	1.0
Age 15-24				
<b>1968</b>	85.4	16.9	7.5	2.2
<b>Peak year (varies)</b>	157.5 (in 1991)	22.2 (in 1974)	16.8 (in 1994)	4.7 (in 1980)
<b>2016</b>	81.4	9.2	8.2	2.1
Age 25-44				
<b>1968</b>	138.0	26.2	10.4	2.9
<b>Peak year (varies)</b>	169.2 (in 1972)	29.7 (in 1973)	17.2 (in 1980)	4.2 (in 1980, 1982, 1987)
<b>2016</b>	70.4	8.4	8.4	2.8
Age 45+				
<b>1968</b>	60.9	9.8	6.7	1.9
<b>Peak year (varies)</b>	74.2 (in 1972)	12.8 (in 1973)	9.1 (in 1975)	2.7 (in 1975, 1980, 1981)
<b>2016</b>	17.5	3.6	3.7	1.6

*Note:* All rates are calculated per 100,000 age-, gender-, and race-matched population.

*Source:* National Vital Statistics mortality data. Centers for Disease Control and Prevention (CDC), 1968-2016.

Several things are noteworthy in the violent victimization patterns. First, it is important to notice that victimization rates, like the rates of offending, are highest among adolescents and young adults (Figure 2 and Table 1), and are drastically and consistently higher for black males compared with other demographic categories (Table 1).

Second, both self-reported violent victimization (Figure 2) and homicide victimization (Figure 4) have decreased among all demographic groups, despite the significant differences in levels (Table 1). For example, one can see from NCVS violent victimization trends in Figure 2 that, even though

the most drastic declines are evident for the 12-24 age group (more than an 80% decrease in violent victimization rates between 1993 and 2016), and slightly less drastic declines for the 25-49 age group (a decrease by more than two thirds, or over 68% to be exact, during the same period), the oldest age group of those over 50 has experienced declines in violent victimization as well (a 20% decrease between 1993 and 2016, with the most pronounced, 40% decrease happening between 1995 and 2010).

It is important to notice that the crime declines have been happening not only among “young men fighting each other” as suggested by Eisner (2008, p. 303) but also within the broader contexts, including, for example, the dwindling violent behavior of parents (the largest category of caregivers) towards their children, as demonstrated by child maltreatment trends in Figure 3. In terms of trends in lethal violence (as the most robust violence indicator), Figure 4 demonstrates rather comparable (though not uniform) patterns of declines in homicide victimization rates for each race-gender-age group included<sup>9</sup>. Every group has experienced declines in homicide victimization rates since at least the early 1990s, and the trends for the older age groups (25-44 and 45+) exhibit rather pronounced declines since the mid-1970s or early 1980s. These patterns seem to reflect a possibility highlighted by Baumer and Wolff (2014a, pp. 7-8): “perhaps the “real” contemporary crime drop in America began in the early 1980s and was merely interrupted by a relatively short-lived youth violence binge.”

Third, the decreases in violence have been not only all-encompassing in terms of demographics but also happening in various geographies across the United States (Cook and Laub 2002). In fact, McDowall and Loftin (2009) have specifically investigated whether the crime drop is general across US cities, and they conclude that a clear nationwide trend of crime declines does exist. LaFree, Curtis, and McDowall (2015) have expanded this analysis to compare homicide trends across 55 countries, and they conclude that the downward trend in violence is shared by (and limited to) wealthy, western-style democracies.

Finally, it is useful to take an even more ‘zoomed out’ look at the violence trends in the United States and other developed countries, and consider how they have changed over the last few centuries. The existence of the long-term violence declines has been first documented and summarized by Norbert Elias (1978), subsequently corroborated by both historians (Elias 1978; Gurr 1981; Roth et al. 2008; Fischer 2010) and criminologists (Eisner 2003, 2008; LaFree et al. 2015), and thoroughly explored and popularized by Steven Pinker (2011a) in his widely popular and essentially encyclopedic book on the topic. Long-term violence trend in the United States is plotted in Figure 5, using homicide rate estimates for a period from the 1700s through the 2010s provided by Claude Fischer (2010)<sup>10</sup>. This graph indeed shows a rather clear general downward trend in violence in the US, with a few upticks and bumps along the way. The latest ‘bump’ is the

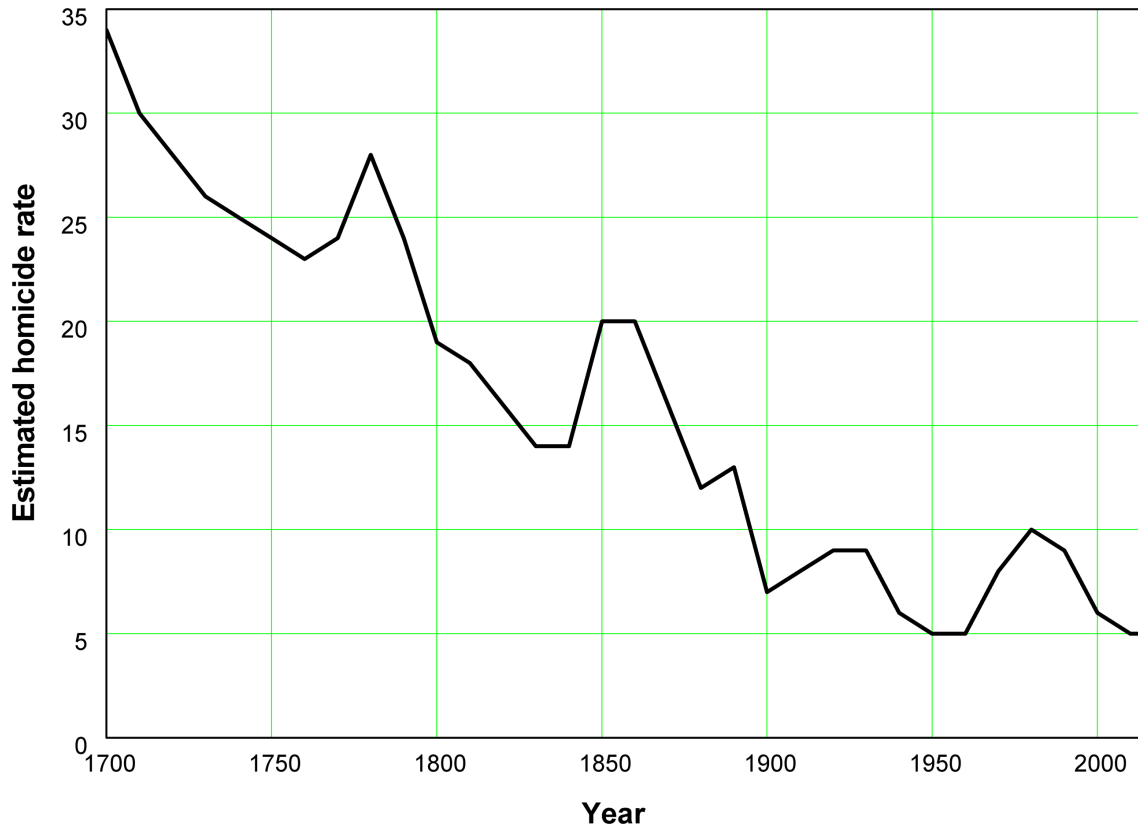
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<sup>9</sup> Homicide rates for other racial categories besides Black and White are not available for the entire time period and, even when available, are often deemed ‘unreliable’ by the CDC for many of the years (if based on too few cases).

<sup>10</sup> The data for years 1700-2015 were provided by Claude Fischer in personal email communication in May 2018.

homicide rise of the 1960s–1970s and its fall in the 1990s–2010s<sup>11</sup>.

**Fig. 5** Estimates of homicide rates in the United States, 1700–2015



*Note:* All rates are calculated per 100,000 population.

*Source:* Data estimates are derived from multiple sources by Dr. Claude Fischer (University of California, Berkeley)

Thus, we can summarize the evidence about crime trends in the United States this way:

- There has been a pronounced drop in serious violent crime since at least the early 1990s (and for some demographic categories, it has started even sooner), on the heels of a precipitous increase of the 1960s–1970s. Both the increase and the decline have been all-encompassing in terms of their demographic and geographic reach, and mirrored by homicide trends in other developed countries (wealthy, western-style democracies).
- There is evidence of a long-term downward trend in violence throughout at least three centuries (though it is based on estimates rather than on a uniform data source).
- Property crime may be following a different trajectory than violence if online-perpetrated

<sup>11</sup> At the same time, Baumer and Wolff (2014a) have found that there is more heterogeneity in trends for the 2000s compared to the 1990s. The same conclusion is reached by Karen Parker and her colleagues (2017) who have used data on homicide rates in large U.S. cities and found evidence of two separate crime drops: 1994-2002 and 2007-2011.

crimes for financial gain are taken into account (though there are currently no reliable longitudinal data sources to track such a trajectory). At the same time, 'contact crimes'<sup>12</sup> that require a victim and offender to be present in the same physical space are declining along with violent crimes.

In the next section, we will review some possible explanations for the 'great American crime decline', examining them against the known facts and empirical research findings based on data from the United States and other countries. As Farrell and his colleagues (2014, p. 436) so aptly put it, "the likelihood that crime drops in different countries are a coincidence is vanishingly small, which implies a causal link".

## 2. Possible Explanations

The previous section has provided a 'zoomed out' view of the long-term declines in violence. In this section, we will start with 'zooming in' to examine the micro-patterns of violence and crime in general. It is mentioned above that violence (and likely other crime as well) is clustered spatially (Weisburd 2015). The effect of spatial clustering on crime trends is explained well by Baumer and his colleagues (2018, p. 45): "a relatively small proportion of microspatial areas experience very high levels of crime, and the available evidence suggests that [...] changes in these areas were critical to the observed city-wide changes".

Following Wolfgang's famous finding that 6% of a birth cohort accounted for over 50% of all offenses (Wolfgang et al. 1972), it is now common knowledge in criminology that a relatively small percentage of individuals within each demographic group is responsible for a disproportionate share of all crime. When speaking of most serious, violent offending, a rather small percentage of youth engages in violence – generally around 5% though the exact percentage varies by time period, country, demographic group, and the way violence is measured (for example, see recent country-specific data based on self-reports in Junger-Tas 2012).

It is also interesting to note that crime declines have most likely happened because of a shrinking percentage of those who engage in crime (prevalence) rather than because the "5%" committed fewer offenses (frequency) (see Berg et al. 2016 for evidence based on US data<sup>13</sup>; see Andersen et al. 2016 for evidence from Denmark). Similar to the way that Donald Trump won US presidency in 2016 by winning just a handful of key "swing states" that tipped the scale of electoral college votes in his favor, the crime drop becomes pronounced when relatively small proportions of (mostly young) people who otherwise would be at risk for committing crime do not commit it. At the same time, most of the explanations presented in this section would apply similarly to the

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<sup>12</sup> Besides violent crimes like robbery, rape, aggravated assault, and homicide, a property crime of larceny/theft (the most numerous category among 'traditional' property crimes) can also be considered a contact crime.

<sup>13</sup> Though Berg and his colleagues (2016) have also found the evidence of reductions in both prevalence and frequency of serious violence among black youth in their sample (based on the Pittsburgh Youth Study data).

reductions in both prevalence and frequency of offending.

Borrowing the 'target/guardian/motivated offender' scheme from the routine activities theory of Cohen and Felson (1979), we can identify two broad categories of reasons for why fewer people commit crimes (or why those who commit crimes do so less frequently):

- “restraints” come from external circumstances related to how much more difficult it is to commit crimes due to increased guardianship or target hardening, and
- offender motivation is diminished either through external factors (diversion of attention/activities, deterrence, economic/financial reasons) or through factors affecting criminal propensity.

Within each of these two broad categories, the 24 possible explanations for the 'great American crime decline' can be sorted into those related to changes in specific opportunity structures and those associated with changes broadly affecting the way of life (see Table 2 below). Next, we will briefly examine the basic arguments and empirical evidence for each of the 24 candidate factors potentially explaining the 'great American crime decline'.

## **Explanations related to guardianship/target-hardening**

### **Technology-induced routine activities (*changes in specific opportunity structures*)**

1. *Effective security devices ('security hypothesis'/'debut hypothesis')*. This explanation is advanced by Graham Farrell and his colleagues (2010, 2014, 2018) which they succinctly state like this: “changes in the level and quality of security may have been a key driving force behind the crime drop” (Farrell et al. 2010, p. 24). The security hypothesis certainly has merits in explaining declines in traditional, on-the-ground property crimes like motor vehicle thefts and burglaries across developed nations but the authors concede that “homicide appears to represent a challenge” (Farrell et al. 2014, p. 474). Moreover, the authors of this theory must contend with some disappointing contrary evidence that burglar alarms have recently been found to *increase* burglary risk (Tilley et al. 2015). Farrell and his co-authors (2018) have also tried to make an argument that property crime is a 'gateway' for more serious, violent offenses, which they termed a “debut hypothesis” but this type of 'leap' seems unlikely in light of important differences between property and violent crimes discussed earlier in the chapter (especially their differential etiology and, likely, substantial differences in offender motivation).

### **Technology-induced routine activities (*changes broadly affecting the way of life*)**

2. *Proliferation of cell phones*. This technology-aided broad change has been credited with enhancing personal guardianship (Farrell et al., 2010; Klick et al., 2012). The idea of mobile phone adoption being responsible for the crime declines appeals to

**Table 2** Possible explanations for the 'great American crime decline'

EXPLANATIONS RELATED TO GUARDIANSHIP/TARGET-HARDENING		
	Changes in specific opportunity structures	Changes broadly affecting the way of life
<b>Technology-induced routine activities</b>	1. Effective security devices ('security hypothesis'/ 'debut hypothesis')	2*. Proliferation of cell phones
<b>Deterrence strategies/policies</b>	3. Changes in policing (including policing strategies and numbers of police officers) 4. Tighter gun control laws	
EXPLANATIONS RELATED TO OFFENDER MOTIVATION		
	Changes in specific opportunity structures	Changes broadly affecting the way of life
<b>Technology-induced routine activities</b>		5*. Internet/media home entertainment
<b>Deterrence strategies/policies</b>	6. Increases in punishment and incarceration (including capital punishment and mandatory sentencing laws)	7. Expansion of concealed weapons laws
<b>Economy/financial factors</b>	8*. Offender reentry programs 9. Fading crack cocaine markets 10*. Falling drug prices for heroin, crack, and cocaine 11. Relaxed drug prohibition enforcement	12*. Reductions in poverty/income inequality 13. Improving labor market factors (unemployment, wages, etc.) 14. Immigration (economic revitalization of communities)
<b>Factors affecting criminal propensity</b>		15. Aging population 16. Legalization of abortion (fewer unwanted, at-risk children) 17*. Decline in alcohol/drug consumption 18*. Reductions in lead exposure 19*. Expansion of psychotropic medication prescribing 20*. Better education
<b>Perception-based indicators</b>		21. Consumer sentiment/confidence 22. Institutional trust 23. Cultural shifts (ethics of self-control, declining tolerance for violence) 24. Long-term 'civilizing process'

Note: \* indicates the most promising explanations.

the common sense and seems especially reasonable in the international perspective. However, it has not found much support in empirical research (Klick et al. 2012; Orrick and Piquero 2015) and thus looks more like a correlation rather than a causal relationship at this point. More research about this factor is definitely needed.

### **Deterrence strategies/policies (*changes in specific opportunity structures*)**

3. *Changes in policing (including policing strategies and numbers of police officers).* These factors have been extensively discussed by Zimring (2006) who concludes that large increases in police forces and multiple smarter police strategies must have had an impact on crime due to a sheer volume of efforts. At the same time, detailed analyses by Eck and Maguire (2006) fail to find any solid confirmation that changes in policing have contributed to the crime declines. Another important caveat for this explanation is the issue of reverse causality where larger policing forces and new policing strategies are more likely to be employed in response to rising crime, which creates a reciprocal feedback loop. Recently, this explanation has essentially fallen out of favor, probably due to its localized nature in the face of the global crime drop.
4. *Tighter gun control laws.* The argument is that, as it becomes more difficult to obtain guns, crimes perpetrated with guns are bound to decline (the topic is covered thoroughly in one of the chapters in Blumstein and Wallman 2006). The same problem as with policing-related factors, arises with the gun control arguments – there have been no global changes in gun control, only local ones, and even then, research findings are inconsistent in terms of whether the tighter gun control laws reduce crime (see discussion in Levitt 2004, though also see contrary evidence in Ludwig 2005). Moreover, the biggest caveats of applying this factor towards explaining the crime trends in the United States is that there have been no uniform changes in the gun control laws neatly coinciding with the crime declines and, in any case, gun control is unlikely to affect a wide range of crimes beyond homicide and robbery. Finally, debates about whether gun control is associated with crime declines seem to be a quintessentially American issue, and thus international evidence does not comport with this factor as there have been no uniform changes in gun control in other developed countries (most of which have very few guns in private hands).

## **Explanations related to offender motivation**

### **Technology-induced routine activities (*changes broadly affecting the way of life*)**

5. *Internet/media home entertainment.* This argument revolves around the multitude of options for entertaining oneself at home that have been evolving since the 1980s through the present times: from cable television to video game consoles to social media platforms, greatly aided by the expansion of the internet (Farrell et al. 2014; Green 2016). David Green (2016, p. 371) explains the implications of this process for crime involvement: “the convenience offered by an ever-expanding array of at-home media content offered more people, especially crime-prone young people, more reasons to stay home more often, altering lifestyle patterns in ways that reduced crime by reducing

the opportunities to perpetrate it.” Even if it is unlikely that the internet is behind the start of the crime drop, it definitely could have contributed to the unusually long, sustained periods of declines in violent and traditional property crimes continuing into the 2000s-2010s, especially considering the global nature of its reach. At the same time, the expansion of the internet is likely fueling online property crimes (Farell et al. 2014; Tcherni et al. 2016; Caneppele and Aebi 2017). The ‘internet makes people stay home’ explanation definitely merits further research, especially in terms of the effects of this profound change in routine activities on violence declines.

### **Deterrence strategies/policies (*changes in specific opportunity structures*)**

6. *Increases in punishment and incarceration (including capital punishment and mandatory sentencing laws)*. The ideas that a) capital punishment deters would-be offenders (general deterrence), b) a threat of increased punishment deters former offenders (specific deterrence), and c) longer sentences incapacitate those who otherwise would be committing crimes outside of prison, are based on classical rational-choice/deterrence theory. They are explored in detail in Steven Levitt’s (2004) article and Blumstein and Wallman’s (2006) and Zimring’s (2006) books, as well as empirically tested by Baumer (2008). There is no clear consensus, with Levitt (2004) and Baumer (2008) suggesting that mass imprisonment in the US can explain up to a third of the 1990s’ crime declines, and other criminologists disagreeing that it played a large role (Zimring 2006; Blumstein 2010; Roeder et al 2015).<sup>14</sup> It is hard to avoid concerns about reverse causation and reciprocity for this factor as well, since harsher punishments are usually a consequence of increasing crime rates. Another strong source of skepticism is the weak empirical status of deterrence theory: the attributes of punishment have been consistently found to exert almost no impact on crime involvement beyond white-collar crime (Pratt et al 2006; Paternoster 2010). Moreover, cross-national comparisons make this discussion essentially moot since other countries did not have similar policies of capital punishment or mass imprisonment to account for their crime declines.

### **Deterrence strategies/policies (*changes broadly affecting the way of life*)**

7. *Expansion of concealed weapons laws*. This is essentially a counter-argument to the one about gun control: when people are widely allowed to carry concealed weapons (thanks to the right-to-carry (RTC) laws), the knowledge about such possibility serves as a deterrent to would-be offenders. This argument is thoroughly explored by Angela Dills and her colleagues (2010) who find it implausible based on the timing of the laws and cross-national comparisons. Moreover, there is rather convincing evidence that RTC laws actually increase violent crime (see Donohue et al. 2017). But even if the evidence is ignored, this factor runs into the same problem as many other localized explanations: what is applicable to the United States only is unlikely to play a large role given the global nature of crime declines.

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<sup>14</sup> Many other researchers also convincingly challenge the notion that longer sentences reduce recidivism by demonstrating the criminogenic effects of imprisonment (for example, see Vieraitis et al. 2007).



### **Economy/financial factors (*changes in specific opportunity structures*)**

8. *Offender reentry programs.* The hypothesized impact of offender reentry programs is that they are supposed to lessen the likelihood of recidivism by providing ex-offenders returning from prisons with skills and opportunities they need to succeed in the society. Rosenfeld and his colleagues (2005) have convincingly demonstrated that former prisoners who return to their communities are at a much higher risk of recidivism than the general population. Reentry programs are supposed to mitigate these risks. At the same time, these programs vary widely in the type of services they provide and the evidence of their effectiveness (see a recent comprehensive review by Ndrecka et al. 2017). Because of this variability, it is difficult to evaluate the argument about their impact on the crime declines, and it is even harder to draw any international comparisons. Offender reentry programs are not a factor behind the initial crime declines because the 1980s-1990s were characterized by a conservative “lock ‘em up” approach and the reentry initiatives have not appeared on the stage until the early 2000s. However, it is possible that these programs have eased the transition of prisoners returning to their communities in large numbers in the late 2000s and 2010s. Mirlinda Ndrecka and her colleagues (2017, p. 212) estimate that reentry programs reduce recidivism by about 10% on average. The contribution of offender reentry programs to crime declines through their impact on recidivism rates definitely warrants further investigation.
  
9. *Fading crack cocaine markets.* The crack cocaine ‘epidemic’ in US cities, with its violent turf wars among rival gangs for the control of the drug markets, has been widely credited for the crime increases of the 1980s, as well as for the subsequent crime declines of the 1990s (Baumer 1994; Blumstein 1995; Cork 1999; Blumstein and Wallman 2006). However, Rosenfeld (2004) and Zimring (2006) caution against treating this explanation as the most important factor since its relevance has faded at the end of the 1990s, even though the crime declines have continued for the next 20 years or so. In addition, this explanation is not easily applicable to explain the generality of crime declines across demographic categories (see Figure 4 above) and in other developed nations. Even when a narrow band of crimes that this explanation should work for is considered, there is plenty of contrary evidence (Fagan et al. 2007; Strom and MacDonald 2007; Berg et al. 2016)<sup>15</sup>.
  
10. *Falling drug prices for heroin, crack, and cocaine.* Wendel and his colleagues (2016a, 2016b) advance an argument that the global decreases in drug prices lead to crime reductions in two ways: a) the economic reasons for drug turf wars become less

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<sup>15</sup> For example, Strom and MacDonald (2007, p. 62) conclude: “We find only partial support for the role of drug market activity [measured by drug arrests] on the increase in youth homicide”. Fagan and his colleagues (2007, p. 700), using different methods and measures, reach a similar conclusion: “neither drug selling activity nor increases in problematic drug consumption adequately explain the run-up and decline in gun homicides”. Berg and his colleagues (2016, p. 377) find no evidence either (based on the analysis of individual-level data from the Pittsburgh Youth Study): “We did not detect a significant difference in illegal drug sales during the period [of crime declines in the 1990s].”

relevant, which leads to fewer competition-fueled crimes, and b) for a drug user, the need to commit other crimes to finance his or her drug habit diminishes, which also contributes to the crime declines. Thus, their argument is summarized well in the catchy title of their article (2016b): "Cheaper drugs, and thus less crime". This is a provocative and interesting hypothesis but there is currently not enough data or research to evaluate it.<sup>16</sup> On the face of it, the "cheaper drugs, less crime" explanation seems unlikely to be applicable across various crime types and demographic groups without additional qualifying factors, even if it operates similarly across countries. It definitely merits further research.

11. *Relaxed drug prohibition enforcement.* This is another interesting drug-market-related hypothesis that connects violent crimes with the fact that economic reasons force people to resolve their disputes using violent means when legal options for dispute resolution are not available (Dills et al. 2010). Thus, drug prohibition enforcement is hypothesized to be the reason for crime increases: "enforcement of drug prohibition encourages violent dispute resolution" (p. 297). On the other hand, when such prohibition enforcement is relaxed, violence declines would follow. Angela Dills and her colleagues (2010) insist that their hypothesis is consistent with the long-term trends in the US, as well as with patterns in other countries. At the same time, just like with the previous explanation, there is not enough research yet testing the hypothesis. The argument also suffers from the lack of conceptual clarity: ostensibly, when drug prohibition is not actively enforced, it does not necessarily make legal means of dispute resolution available for illegal industries, just helps them operate within their niche, without being disturbed by law enforcement authorities.

### **Economy/financial factors (*changes broadly affecting the way of life*)**

12. *Poverty alleviation (and related improvements in quality of life).* Economic factors like poverty, socioeconomic status (SES), structural disadvantage, income inequality, and other indicators of the quality of life, have often been invoked to explain variations in crime rates, and poverty exhibits especially prominent associations with increases in serious violent crime<sup>17</sup> (Land et al. 1990; Pridemore 2002; McCall et al. 2008; Tcherni 2011; Stansfield and Parker 2013; Kaylen et al. 2017). Poverty also emerges as one of the most important factors in empirical studies of violent crime in other countries and cross-national comparisons (Pridemore 2008, 2011; Baumer and Wolff 2014b; Nilsson et al. 2017). At the same time, the evidence of contemporaneous improvements in quality of life and their impact on crime trends is much less clear: marked improvements in the economic well-being during the 1960s have coincided with the start of the largest crime increases in recent history, while the 'great recession of 2008'

<sup>16</sup> Green (2016) and Greenberg (2016) mount some thoughtful critiques of the hypothesis and of its preliminary test by Wendel et al. (2016a). Also, see the previous footnote for disconcerting evidence on a closely related issue.

<sup>17</sup> In fact, contrary to the common-sense expectation that 'poor people steal to feed their families', poverty and related economic factors do not seem to be associated with property crime (Tittle & Villemez 1977; Elliott et al. 1985; Kposowa et al. 1995; Krivo and Peterson 1996). The lack of relationship between poverty and property crime in developed nations is likely due to the protections of the welfare safety net (Hannon and DeFronzo 1998; Pratt and Godsey 2003; Rogers and Pridemore 2017; Tuttle et al. 2018). There is also evidence that austerity measures (and thus reductions in welfare protections) increase serious violent crime cross-nationally (Tuttle 2018).

has barely affected the declining crime trends (see Uggen 2012). Moreover, income inequality has been increasing in the United States since the 1970s (Piketty and Saez 2014) and thus cannot explain the dramatic variations in crime rates. An important alternative to consider is the effect of lagged childhood poverty (rather than contemporaneous poverty) on crime rates (see Messner et al. 2001) since there is ample evidence that growing up in poverty, especially persistent child poverty (rather than falling on hard times in adulthood) leads to later serious delinquency and violence (Jarjoura et al. 2002; Zilanawala and Pilkauskas 2012; MacDonald and Gover 2005; Mazza et al. 2017; Comeau and Boyle 2018). Further research on the effects of child poverty (likely in combination with other factors) on crime rates is needed.

13. *Improving labor market factors (unemployment, wages, etc.)*. An alternative set of economic indicators is based on the specific performance of labor market rather than measures of poverty: as unemployment decreases and other labor market factors improve, crime rates are supposed to follow, though the relationship is decidedly non-straightforward since increasing unemployment can also improve the guardianship of homes by unemployed persons. The complex effects of unemployment, through the countervailing forces of motivation and opportunity, on different crime types have been formulated and thoroughly explored by Cantor and Land (1985). The unemployment-crime link has also been studied by Baumer and his colleagues (2012) with regard to its impact on crime trends. They conclude that the effects of increased unemployment rates and depressed wages are often mitigated by welfare assistance and, ironically, by mass imprisonment.<sup>18</sup> Thus, the effects of unemployment and other macro-economic factors on crime trends are not straightforward and seem to be highly dependent on other factors.<sup>19</sup>
14. *Immigration (economic revitalization of communities)*. The idea is that immigrants who arrive to the United States as a land of opportunities are likely to work hard, study, start businesses, and improve communities. A veritable bounty of recent research examines the effects of immigration on crime (see a recent comprehensive review and meta-analysis by Ousey and Kubrin 2018). In contrast to the findings of the early-20th-century researchers who witnessed positive correlations between concentrations of immigrants and crime rates in Chicago neighborhoods (Park and Burgess 1921), the researchers of the 2000s-2010s find that recent immigration is associated with decreases in crime (Stowell et al. 2009; Ousey and Kubrin 2009, 2014, 2018; Martinez et al. 2016; Adelman et al. 2017). However, the causal link is not easy to establish, and the effects of immigration seem to differ depending on the type and generation of immigrants and the type of areas they move into. This factor is also unlikely to operate in uniform ways throughout other developed countries. Overall, even if immigration has contributed to the crime declines in the United States, its effects are weak,

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<sup>18</sup> In an analysis of racially disaggregated youth violence trends, Lauritsen et al. (2013) also find nuances and complexities that imply differential impacts of economic factors on minority youth compared to White youth (also see Blumstein's (2010) summary of research findings about minorities' greater vulnerability to economic conditions).

<sup>19</sup> For additional evidence about the effects of macro-economic indicators in other countries, see Hooghe et al. (2011) and Andresen and Linning (2016).

according to the results of Ousey and Kubrin's (2018) meta-analysis.

**Factors affecting criminal propensity (*changes broadly affecting the way of life*)**

15. *Aging population.* The effects of population structure on crime and violence have been one of the most common variables controlled for in the analyses of crime rates. According to the well-established age-crime curve effects, young people (specifically young males) are much more likely to commit serious and violent crimes than other demographic groups. However, tests of the impact of aging population (and thus a smaller percentage of young males in the population) on crime declines have not produced uniform findings: Levitt (2004) and Zimring (2006, 2013) conclude that the changes in youth cohorts do not line up with the timing of the crime declines (the 'great American crime decline' has happened against the backdrop of an increasing share of young males and at-risk minorities in the population) while Baumer and Wolff (2014b), based on their cross-national analyses, conclude that reductions in poverty and diminishing proportions of youth in the population are the strongest factors behind the homicide declines internationally. Kaylen and her colleagues (2017) have carefully analyzed NCVS-based aggravated assault victimization trends across several types of geographic areas in the US for associations with various types of demographics, and have found no significant links besides poverty/income variables. Thus, the jury is still out on whether the aging of the population produces any discernible impact on crime trends.
16. *Legalization of abortion (fewer unwanted, at-risk children<sup>20</sup>).* This highly original explanation of the crime decline was proposed by Donohue and Levitt (2001, 2004). Their basic argument is this: as abortion became legal in the United States in the early 1970s, fewer unwanted, at-risk children were being born and thus fewer delinquent adolescents were in the population 15-19 years later. At first glance, the argument seems plausible and rather provocative. After a more thorough examination though, the abortion-crime link has been thoroughly debunked by empirical research (Sorenson et al. 2002; Joyce 2004, 2009; Foote and Goetz 2008; Anderson and Wells 2008; Shoemith 2017).
17. *Decline in alcohol/drug consumption.* The association of alcohol consumption with subsequent aggression and violence has been tentatively established in research literature (Nielsen and Martinez 2003; Parker et al. 2011; Topalli et al. 2014; Snowden 2015). The same can be said about the drugs-crime connection (Goldstein 1985, 1997; Harrison et al. 2001; Weiner et al. 2005). A national longitudinal survey Monitoring the Future (MTF) employing a representative sample of school students in grades 8-12 across the United States finds that alcohol use in this population has been steadily declining since 1975 (Patrick and Schulenberg 2014). At the same time, Baumer's (2008) analysis of whether changes in alcohol consumption (measured through traffic fatalities) have contributed to the crime declines does not produce any significant

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<sup>20</sup> A variation of this argument has also been developed by Baumer (2008) who has determined that the lagged percentage of births to teenage mothers (and thus children growing up in high-risk family environments) is significantly associated with crime trends 15-19 years later.

- findings. Similarly, no evidence has been found by other researchers that drug consumption patterns are associated with crime trends (Strom and MacDonald 2007; Fagan et al. 2007; Berg et al. 2016). In terms of international evidence, there is paucity of research on the issue beyond a few single-country analyses (for example, see Pridemore and Champlin 2006; Savolainen et al. 2008).<sup>21</sup> One exception is Aebi and Linde's (2010) analysis of crime trends in Western Europe: the authors establish a connection between the increases in binge drinking among European youth in the 1990s and 2000s and increases in non-lethal violent crimes. Overall, there is not enough evidence to draw firm conclusions. Further research about the effects of drug/alcohol consumption patterns on crime rates is warranted.
18. *Reductions in lead exposure.* The argument that gasoline (and other environmental) lead exposure has long-term detrimental effects on children in terms of lowering their IQ and increasing their impulsivity (and thus leading to their delinquency and violence later in life), has been advanced by Nevin (2000, 2007) and Reyes (2007) using analyses of both domestic and international data on crime trends. Several cross-sectional and case-control studies on US data also find support for this hypothesis (Stretesky and Lynch 2001; Needleman et al. 2002; Boutwell et al. 2017). At the same time, other studies that specifically analyze the contribution of lead exposure reductions to US crime trends over several decades, while controlling for other relevant factors, find no support for the lead-crime link (McCall and Land 2004; Lauritsen et al. 2016)<sup>22</sup>. Thus, the evidence is somewhat inconsistent and currently insufficient for drawing firm conclusions, though the lead-crime link seems to be a very promising explanation in other regards. More research on the lead-crime link is needed.
19. *Expansion of psychotropic medication prescribing.* How increases in psychotropic medication prescribing to both children and adults can lower their likelihood of aggression/violence and other impulsive behaviors is discussed by Finkelhor and Jones (2006) and tested in a meta-analysis by Pappadopulos and her colleagues (2006) on data for children. The meta-analysis has found strong support for the aggression-reducing effects of psychotropic medications in children. Since then, several empirical studies have been conducted examining this hypothesis, most notably a study by Marcotte and Markowitz (2011), which has assessed the contribution of psychiatric drugs towards crime declines in the United States. The authors have found that the effects of psychiatric drugs are substantively small and rather inconsistent across crime types. A recent comprehensive review of empirical literature on the topic by Finkelhor and Johnson (2017) concludes that this potential explanation for crime declines is very promising given its global reach and targeted action confirmed in multiple studies, but

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<sup>21</sup> Pridemore and Champlin's (2006) interesting study has found significant contributions of alcohol consumption towards homicide and suicide rates in Russia over a 50-year period. Savolainen and his colleagues' (2008) intriguing analysis of Finnish homicide trends for the past two and a half centuries finds that heavy alcohol consumption patterns are a likely reason for the outlier status of Finland as a nation with the highest homicide rates among other developed European democracies. The authors show that a typical Finnish homicide stems from an alcohol-fueled argument between middle-aged unemployed men who are either family members or acquaintances/friends.

<sup>22</sup> Though also see O'Brien (2011) for a critique of methodological issues with the age-period-cohort effect confounding in McCall and Land's (2004) analyses.

that additional research is sorely needed.

20. *Better education*. This factor is based on Steven Pinker's (2011a, 2011b) argument that *reason* is one of the most likely explanations for the long-term global violence decline: "Perhaps humans have been getting nicer because they have been getting smarter" (Pinker 2011b, p. 311). The author notes that this one of our 'better angels' is also the most likely explanation of the 'Flynn effect' of increasing average IQ throughout the 20th century (not because of general intelligence increasing but because of improvements in abstract reasoning). As far as why we, the humankind, are experiencing such marked improvements in our reasoning, "the most likely causes are increases in the duration and quality of schooling" (p. 311). This factor also bodes well with the fact that one of the most consistent determinants of serious violent crime in the United States and across the world – poverty – is inevitably and inextricably linked with education (see Tcherni 2011). There are definitely some problems with accounting for the crime increases of the 1960s and 1970s across the developed world in the face of steady gains in educational outcomes, but empirical literature finding that better education leads to significant crime reductions is quite encouraging (Lochner and Moretti 2004; Deming 2011; Lochner 2011; Machin et al. 2011; Anderson 2014), and studies evaluating the effects of truancy prevention programs on delinquency reductions add support for this argument as well (Rocque et al. 2017; Bennett et al. 2018). This factor certainly merits further research and consideration.

#### **Perception-based indicators (*changes broadly affecting the way of life*)**

21. *Consumer sentiment/confidence*. The idea that consumer sentiment, or consumer confidence, as a subjective reflection of economic realities that is often uncoupled from objective economic indicators, affects robbery and property crime has been developed and tested by Rosenfeld and Fornango (2007). They have found supporting evidence of the relationship using the Granger causality test, which has a well-known problem of finding 'causality' where only correlation exists. In addition, subsequent research has not found any effects of this indicator on either violent or property crime (Baumer et al. 2012).
22. *Institutional trust*. Gary LaFree's (1998) theory, subsequently expanded and popularized by Randolph Roth (2012), is that the public's perception of governmental legitimacy and, essentially, people's trust in the political system and socioeconomic order (institutional trust) makes people either more or less likely to get along peacefully (that is, without killing one another). Dykstra (2010) provides an excellent analysis of the 'institutional trust' hypothesis, and his most powerful argument is to side with Richard Rosenfeld's assessment in pointing out the issue of reverse causality: that the faith in governmental institutions is likely to be the outcome, rather than the cause, of both crime fluctuations and political upheavals.
23. *Cultural shifts (ethics of self-control, declining tolerance for violence)*. The declining tolerance for violence and the rise of ethics of civilized behavior among young males in public places is seen by Manuel Eisner (2008) as the cause of crime declines. Though

this hypothesis can definitely be criticized on conceptual grounds (Why would these cultural shifts in what Eisner calls “conduct of life” fluctuate with the rise and fall of crime in the 20th century? What are the underlying reasons for these cultural shifts?), the analysis of 1960-2010 European homicide data by Aebi and Linde (2014, p. 553) refutes the theory empirically, by showing that the trends are not driven “by the evolution of victimization of young men in public space”.

24. *Long-term ‘civilizing process’*. The idea of a ‘civilizing process’ driving down the long-term trends in violence has been developed by Norbert Elias (1978), and popularized (while also being criticized for its vagueness) by Eisner (2003, 2008). It is hard not to agree with Eisner in this criticism because the ‘civilizing process’ is the type of cultural explanation that is essentially impossible to test since Elias (1978) has not specified its mechanisms or causes. Another popularizer of Elias’s ideas, Steven Pinker (2011a) has at least provided some specific ways by which the process could have worked. Pinker’s main idea about reason being one of the most important ‘better angels of our nature’ serves as a basis for *Explanation 20* above.

### 3. Discussion and Conclusion

The first section of the paper has presented the key facts and visualizations about the ‘great American crime decline’ and associated declines in other wealthy democracies. It also explained some important differences between the recent violent and property crime trends, and gave information about the long-term violence decline in the United States (and likely, in the developed world overall). The second section has examined 24 different explanations for the violence/crime declines identified in the research literature, organized into a tentative scheme based on whether they refer to guardianship/target-hardening or offender motivation, and sorting them into factors related to specific opportunity structures versus broadly affecting the way of life.

Among the 24 crime decline explanations examined above, quite a few are promising, and will be summarized below (they are also marked with an asterisk in Table 2). Most of them are relative newcomers in the research literature on crime trends and thus have not been subjected to extensive empirical evaluation yet. On the other hand, many of the ‘traditional’ explanations, which have been previously examined and tested for their impact on crime trends, have not fared well when subjected to empirical and/or conceptual scrutiny. One of the most common problems is that these traditional explanations only apply within US contexts and thus “look rather parochial” (Eisner 2008, p. 311). Another common problem is reverse causality, when some of the offered explanations might as well be consequences rather than causes of the changes in crime rates and patterns. Finally, some of the factors offered as explanations seem to be merely correlated with crime trends and fall apart when subjected to more thorough empirical evaluations.

Several promising explanations, such as (#2) proliferation of cell phones and (#5) internet/media home entertainment, imply the importance of opportunity. Some theorists, most notably Gottfredson and Hirschi (1990), subscribe to the idea that opportunities for crime are generally plentiful (kind of “where there’s a will, there’s a way” type of thinking). Contrary to this notion,

there are apparently many ways, besides the physical protection of vulnerable targets and offender incapacitation behind bars, in which opportunities for contact crimes (violent and traditional property crimes) can be restricted or altered. Fewer interactions of people within the same physical space, introduced by the proliferation of cell phones, social media platforms, online shopping, and other online activities substituting physical ones, means that there are fewer opportunities for contact crimes to occur, from larceny/theft to homicide.<sup>23</sup> Important evidence of how this process has affected the behavior of youth in inner-city areas is provided by Richard Curtis (1998) based on his ten years of ethnographic field work (from 1987 to 1997). The author describes some important changes in the way urban youths would spend their time – *retreating away from public places* and selling drugs indoors to known customers (or getting out of the drug trade all together to obtain conventional jobs).

Another set of promising explanations (in fact, most of them) belong in the broad category of factors related to offender motivation. Some of them, such as (#8) offender reentry programs, (#10) falling drug prices, and (#12) poverty alleviation (and improvements in related quality-of-life factors), are nested within the economy/financial factors subcategory. Obviously, this is a tentative way to classify offender reentry programs since they run a gamut from halfway houses to job assistance to mental health/substance abuse treatments. But most of them still provide some economic relief and poverty relief for former offenders. The falling drug prices may be just an indicator associated with the falling prices of typical consumer products (due to increased efficiencies in the global economy). Thus, reduced prices on consumer goods may help alleviate poverty and improve the quality of life. They are also likely to make it less profitable to steal and sell stolen goods, thus directly impacting offender motivation through changing opportunity structures.

It is also important to note that the reductions in poverty seem to be an especially promising explanatory factor when applied to persistent child poverty and its associated ills (rather than referring to temporary bouts of poverty in adulthood). Child poverty reduction also seems to be inextricably related to the next (and largest) set of promising explanations – factors affecting criminal propensity: (#17) decline in alcohol/drug consumption, (#18) reductions in lead exposure, (#19) expansion of psychotropic medication prescribing, and especially (#20) better education. Though there is not enough empirical research evaluating these factors' impact on crime declines, some preliminary evaluation can be done on conceptual grounds. In fact, one inescapable conclusion is that all promising explanations affecting criminal propensity seem to be conceptually related to improving individual self-control.

In fact, the vast majority of all promising crime decline explanations examined above seem to be associated with improvements in self-control (tentatively adding offender reentry programs and poverty alleviation to the previous four factors gives us six out of nine explanations likely related

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<sup>23</sup> For example, the most basic requirement for a violent act to occur is the presence of a victim and offender within the same physical space. Thus, if a potential offender is, say, interacting with a potential victim over Skype (or SnapChat, or Google Hangouts, or Facebook Chat, etc.), an act of violence is highly unlikely to happen, even if one person gets really, really mad at the other one. In such circumstances, a potential violent act is likely to stay within the "potential" realm and not materialize due to the inevitable cooling-off period introduced by the distance.



to self-control). The general theory of crime developed by Gottfredson and Hirschi (1990) and further refined by Hirschi (2004) and Pratt (2016), puts self-control at the center of its explanatory paradigm. It is one of the most consistently empirically supported theories of crime causation: low self-control is connected with a wide range of criminal behaviors, among various ages and populations, and essentially independent of how it is measured (see Pratt and Cullen 2000; DeLisi et al. 2018).

Examining variations in crime rates over time, McDowall and Loftin (2005, p. 378) have referred to a single mechanism generating such variations: “The falling rates of the 1990s are then due to the same forces that produced the rising rates of the 1970s, but now operating in reverse.” By tying together disparate factors and variables associated with crime declines into a coherent theory, self-control just might be a unifying force that underlies the crime-generating process.<sup>24</sup> Future research can help determine if that is the case.

In terms of specific suggestions for future research, we can also echo an important insight and call to action from Baumer and his colleagues (2018, p. 49): “[D]espite the accumulation of a voluminous literature on self-control over the past few decades, to our knowledge no research has examined whether aggregate levels of self-control have changed over time, whether shifts in other relevant factors (e.g., modifications to child-rearing) have occurred that could explain such changes, or whether any of this has a bearing on crime trends.” Finally, it is also worth exploring how self-control is related to the important violence-generating process of contagion (Loftin 1986; Topalli et al. 2002; Papachristos 2009; Papachristos et al 2015; Green et al. 2017), and whether contagion mechanisms apply to other, nonviolent crimes as well.

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<sup>24</sup> Also see McDowall’s (2014) insightful short piece on the properties of a crime-rate-generating process through the lens of a time-series analysis.

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