

PUBLIC HEALTH

JOURNEY TO



GUNLAND



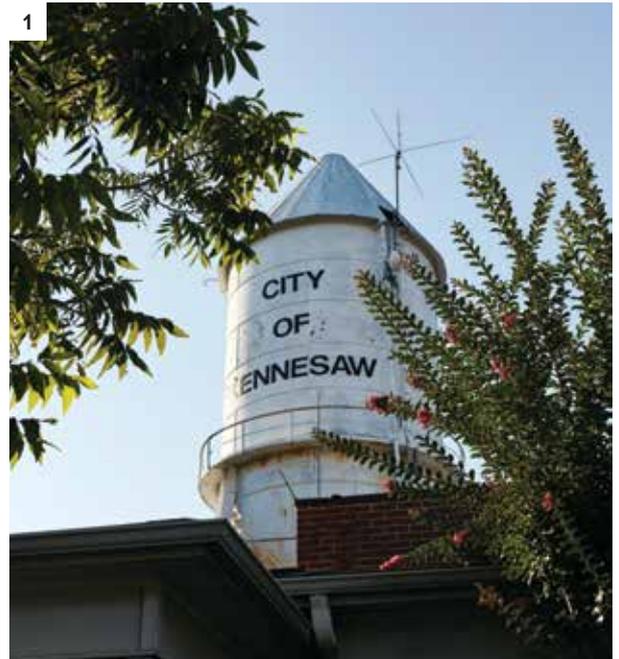
More firearms do not keep people safe, hard numbers show. Why do so many Americans believe the opposite?

By Melinda Wenner Moyer

Photographs by Ben Rollins

AFTER I PULLED THE TRIGGER AND RECOVERED FROM THE RECOIL, I SLOWLY REFOCUSED MY EYES ON THE TARGET. THERE IT WAS—A TINY BUT DISTINCT CIRCLE NEXT TO THE ZOMBIE’S EYE, THE FIRST BULLET HOLE I’D EVER MADE. I LOOKED DOWN AT THE SHAKING GLOCK 19 IN MY HANDS. A SWIFT AND STRONG EMOTIONAL TRANSFORMATION SWEEPED OVER ME. **IN SECONDS, I WENT FROM FEELING NERVOUS, EVEN TERRIFIED, TO EXHILARATED AND UNASSAILABLE—AND RIGHT THEN I UNDERSTOOD WHY MILLIONS OF AMERICANS BELIEVE GUNS KEEP THEM SAFE.**

Writer **Melinda Wenner Moyer** won an Award for Excellence in Health Care Journalism for her December 2016 *Scientific American* article “The Looming Threat of Factory-Farm Superbugs.”



GUN CITY: Kennesaw, Ga., near Atlanta, has a law requiring citizens to own firearms (1). At the Governors Gun Club outside town, people practice shooting targets (2).

I was standing in a shooting range 15 miles south of Kennesaw, Ga., a place known as “America’s Gun City” because of a law requiring residents to own firearms. It was day two of a four-day road trip I’d embarked on to investigate a controversial and popular claim made by the gun lobby: that more guns protect more people from crime.

Guns took more than 36,000 U.S. lives in 2015, and this and other alarming statistics have led many to ask whether our nation would be better off with firearms in fewer hands. Yet gun advocates argue exactly the opposite: that murders, crimes and mass shootings happen because there aren’t enough guns in enough places. Arming more people will make our country safer and more peaceful, they say, because criminals won’t cause trouble if they know they are surrounded by gun-toting good guys.

After all, since 1991, Americans have acquired 170 million new guns while murder rates have plummeted, according to the National Rifle Association of America (NRA). Donald Trump, when

running for president, said of the 2015 shooting massacre in San Bernardino, Calif., that “if we had guns in California on the other side, where the bullets went in the different direction, you wouldn’t have 14 or 15 people dead right now.” Mike Watkins, a cop-turned-firearm instructor at the Kennesaw range, put it this way: “If I’m a bad guy, and I know this place has guns, it’s not a place I’m obviously going to want to go and do something bad.”

Is there truth to this claim? An ideal experiment would be an interventional study in which scientists would track what happened for several years after guns were given to gun-free communities and everything else was kept the same. But alas, there are no gun-free U.S. communities, and the ethics of doing such a study are dubious. So instead scientists compare what happens to gun-toting people, in gun-dense regions, with what happens to people and places with few firearms. They also study whether crime victims are more or less likely to own guns than others, and they track what transpires when laws make

IN BRIEF

The claim that gun ownership stops crime is common in the U.S., and that belief drives laws that make it easy to own and keep firearms.

But about 30 careful studies show more guns are linked to more crimes: murders, rapes, and others. Far less research shows that guns help.

Interviews with people in heavily gun-owning towns show they are not as wedded to the crime defense idea as the gun lobby claims.



it easier for people to carry guns or use them for self-defense.

Most of this research—and there have been several dozen peer-reviewed studies—punctures the idea that guns stop violence. In a 2015 study using data from the FBI and the Centers for Disease Control and Prevention, for example, researchers at Boston Children’s Hospital and Harvard University reported that firearm assaults were 6.8 times more common in the states with the most guns versus those with the least. Also in 2015 a combined analysis of 15 different studies found that people who had access to firearms at home were nearly twice as likely to be murdered as people who did not.

This evidence has been slow to accumulate because of restrictions placed by Congress on one of the country’s biggest injury research funders, the CDC. Since the mid-1990s the agency has been effectively blocked from supporting gun violence research. And the NRA and many gun owners have emphasized a small handful of studies that point the other way.

I grew up in Georgia, so I decided to travel around that state and in Alabama, where the belief that guns save good people is sewn into the fabric of everyday life. I wanted to get a read on the science and listen to people with relevant experience: cops, elected officials, gun owners, injury researchers and firearm experts such as Watkins, who stood by my side as I pulled the Glock’s trigger.

FOR CLUES ON HOW GUNS AFFECT VIOLENCE, Kennesaw is an obvious place to start. On March 15, 1982, this city 24 miles north of

Atlanta passed a controversial law: to “provide for and protect the safety, security and general welfare of the city and its inhabitants,” Kennesaw would require that every head of a household own a firearm and ammunition.

Nearly 35 years to the day after the law passed, I drove down Cherokee Street in Kennesaw until I reached the Bobby Grant Center police annex, a small brick building perched in front of a large water tower. The annex houses the city’s detectives; the main police department is a quarter of a mile down the street. I picked up the entry phone next to the locked door and buzzed. One second later a big man with a moustache and goatee, who was clearly waiting for me, let me in. He introduced himself as Lieutenant Craig Graydon, the man I was there to meet.

Graydon heads up Kennesaw’s Criminal Investigations Division and keeps track of all the city’s crime statistics. He led me back to his dark office, where a computer glowed with a screen saver of the cast of the old *Untouchables* TV show, starring Robert Stack as federal agent Eliot Ness. Graydon’s great-grandfather and father were both in law enforcement. “I’ve been around weapons of all kinds for as long as I can remember,” he said.

Kennesaw is proud of its gun law. “Inmates have been picked up on other charges around the area, and they’ve said, ‘No, I would never break in a house in Kennesaw,’” Graydon said. City officials tout that a year after the law was implemented, burglaries in Kennesaw dropped by more than half; by 1985 they were down by 80 percent. “It was a selling point for the town,” according to David McDowall, a criminologist at the University

at Albany, S.U.N.Y. The lavish media attention that the law received probably helps: it's not just that Kennesaw residents have guns; it's that everyone *knows* Kennesaw residents have guns. (That said, the rule has never been enforced, and Graydon estimates that only about half of Kennesaw's residents actually own firearms.)

But while burglary numbers did drastically decline in Kennesaw after 1981, those statistics can be misleading. McDowall took a closer look at the numbers and noticed that 1981 was an anomaly—there were 75 percent more burglaries that year than there were, on average, in the previous five years. It is no surprise that the subsequent years looked great by comparison. McDowall studied before-and-after burglary numbers using 1978, 1979 or 1980 as starting points instead of 1981 and, as he reported in a 1989 paper, the purported crime drop disappeared. Kennesaw has always had pretty minimal crime, which may have more to do with the residents and location than how many guns it has.

But the sense I got in Kennesaw—which feels like a typical small city, not some gun-frenzied town—is that data don't matter to a lot of people. It was similar in other places I visited. What matters more is apparent logic: guns stop criminals, so they keep people safer. The night before I met Graydon, I attended a lecture by a Second Amendment lawyer in Stone Mountain, Ga., 30 miles southeast of Kennesaw. At one point, the lawyer mentioned Samuel Colt, who popularized the revolver in the mid-19th century. "I haven't seen the statistics, but I've got to assume that the instances of rape and strong-arm robberies plummeted when those became widespread," he said. Numbers and statistics, in other words, were almost unnecessary—everyone just *knows* that where there are more guns, there is less crime.

But what does the research say? By far the most famous series of studies on this issue were conducted in the late 1980s and 1990s by Arthur Kellermann, now dean of the F. Edward Hébert School of Medicine at the Uniformed Services University of the Health Sciences, and his colleagues. In one, published in 1993 in the *New England Journal of Medicine* and funded by the CDC, he and his colleagues identified 444 people who had been killed between 1987 and 1992 at home in three U.S. regions—Shelby County, Tennessee, King County, Washington State, and Cuyahoga County, Ohio—and then collected details about them and their deaths from local police, medical examiners and people who had been close to the victims. They found that a gun in the home was associated with a nearly threefold increase in the odds that someone would be killed at home by a family member or intimate acquaintance.

These findings directly contradict the rationale I kept hearing in Georgia, and that could be because human behavior is a lot messier than simple logic predicts. Researchers posit that even if keeping a gun at home does thwart the odd break-in, it may also change the gun owner's behavior in ways that put that person and his or her family more at risk. "The fact that you have a gun may mean that you do things you shouldn't be doing; you take chances you shouldn't otherwise take; you go to places where it's really not safe but you feel safe," says David Hemenway, director of the Harvard Injury Control Research Center. This added risk may overpower any protective effects.

There's also the fact that where there are more guns, more opportunities exist for people to steal them and use them nefari-

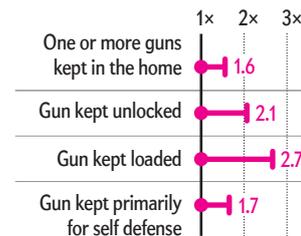
An Armed Home Is Not a Safer Home

A common belief is that guns in the house protect those who live there from crime. Not so, according to several studies dating back to the 1980s and 1990s that are supported by more recent work. Guns in the home have been repeatedly linked to an increased risk for homicide and suicide.

High-Impact Studies

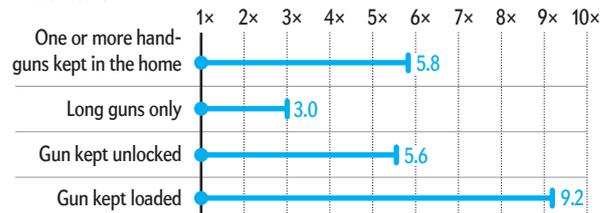
In the late 1980s and early 1990s, Arthur Kellermann, now at the Uniformed Services University of the Health Sciences, and his colleagues published a number of studies suggesting that murder and suicide were more common among people who kept guns in their homes. The risks were indicated by "odds ratios": ratios greater than 1 meant more people with guns in their homes would be victims than would people in gun-free homes. The figures they reported reflected increased odds. For instance, in homes that owned guns for self-defense, the odds ratio of 1.7 referred to a 70 percent increased odds of being murdered at home.

Crude Odds Ratio for Homicide in the Home



Because the researchers could not gather enough details about each homicide to control for all confounding variables, they had to use "crude odds" to estimate results. That weakness opened the study up to criticism. The "adjusted odds" for suicide, which did control for confounders, meant more exact comparisons and stronger conclusions.

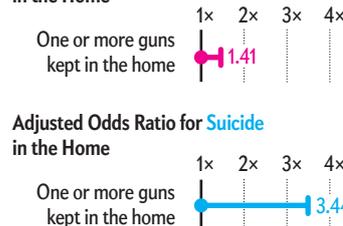
Adjusted Odds Ratio for Suicide in the Home



Supporting Work

In 2003 Douglas Wiebe, now at the University of Pennsylvania, and his colleagues conducted a similar study comparing gun ownership levels among 3,679 murder and suicide victims and 21,619 similar nonvictims. The researchers were able to gather more information about each subject, allowing them to adjust their odds ratios to account for variables with precision.

Adjusted Odds Ratio for Homicide in the Home



Adjusted Odds Ratio for Suicide in the Home



The results confirmed Kellermann's conclusion that guns in the home are linked with a higher odds of homicide—a 41 percent odds increase compared with people in homes with no guns—and a 244 percent increase in odds for suicide.



BELIEF VS. NUMBERS: Craig Graydon of the Kennesaw police says criminals may be afraid to break into houses in his city, but an analysis of crime rates does not link a decrease to the firearms law.

ously. Indeed, one of Kennesaw's crime problems, Graydon told me, is gun theft, so the Kennesaw Police Department encourages residents to lock their guns up. The NRA, on the other hand, opposes legislation that requires secure gun storage.

The initial work by Kellermann and his colleagues was criticized for not using enough statistical controls. So they went on to publish other studies confirming the link between guns and more violence. In one, they found that a gun in the home was tied to a nearly fivefold increase in the odds of suicide. (More Americans die from gun suicides every year than gun homicides.) In another, published in 1998, they reported that guns at home were four times more likely to cause an accidental shooting, seven times more likely to be used in assault or homicide, and 11 times more likely to be used in a suicide than they were to be used for self-defense.

The research made headlines in the *New York Times* and the *Washington Post*. It also infuriated the gun lobby, which launched a war against gun research that persists today.

ONE VETERAN OF THAT WAR is injury researcher Mark Rosenberg. I drove to Rosenberg's Atlanta-area home—only 15 miles from where I lived as a child—after leaving the Kennesaw Police De-

partment, and we sat down in his living room. In the late 1990s Rosenberg was the director of the CDC's National Center for Injury Prevention and Control, which then funded and studied gun violence. He said he was fired from the agency in 1999 for pushing ahead with this research despite political opposition, although his boss at the time, whom I contacted, disagreed that Rosenberg's actions on gun research caused his dismissal.

I asked Rosenberg what happened after the Kellermann studies came out. "The NRA started a multipronged attack on us," he recounted. "They called the CDC a cesspool of junk science." Indeed, soon after Kellermann's early studies were published, the NRA ran an article in its official journal, the *American Rifleman*, encouraging readers to protest the CDC's use of tax dollars to "conduct anti-gun pseudo-scientific studies disguised as research." The association also asked the National Institute of Health's Office of Scientific Integrity to investigate Kellermann and his colleagues, but it declined. Todd Adkins, current director of research and information at the NRA's Institute for Legislative Action, told me via e-mail that the association was reacting because CDC scientists had started a campaign to persuade Americans that firearms are a menace to public health and ignored data that did not support this idea.

As the dispute continued, Representative Jay Dickey of Arkansas introduced a rider into the CDC's 1996 spending bill mandating that none of its funding be used to advocate or promote gun control. Congress also cut out \$2.6 million of the CDC's budget, the exact amount that had been allocated for firearm research the previous year. (Later, that funding was restored but was earmarked for traumatic brain injury.) Harvard's Hemenway says that the move "was a shot across the bow: 'We're watching you.'" He adds that "the CDC recognized that they better be really, really, really, really careful about guns if they wanted to have an Injury Center."

Dickey's addition to the CDC's funding bill has been renewed every year since. In fact, in 2011 the language was extended to cover all Department of Health and Human Services agencies, including the NIH. But Dickey later said that he did not intend to put a stop to all gun research—and he wished that he hadn't. He died this past April.

The CDC's hands are still tied. After the 2012 school shooting that took the lives of 20 children and six adults in Newtown, Conn., President Barack Obama signed an executive order requesting that the CDC spend \$10 million on gun violence research. But Congress did not appropriate the funds. In fact, according to Linda DeGutis, who directed the CDC's Injury Center from 2010 to 2014, agency employees weren't even allowed to discuss Newtown. "We couldn't talk to the media except on background. We couldn't be quoted on anything," she recalls. "There were CDC staff members who wouldn't even mention the word 'gun.'" (Current staffers declined to be interviewed for this article.)

Garen Wintemute, a physician and noted gun violence researcher at the University of California, Davis, is not terribly surprised that everything went down the way it did. "It's like doing work in any other controversial field that threatens established interests. Those interests respond in a way to minimize the threat," he says. Rosenberg, after leaving the CDC, became CEO of a nonprofit that works to improve health in developing countries (he retired from that role last year). But Wintemute and others have continued with gun research, procuring grants from private foun-

SOURCES: "GUN OWNERSHIP AS A RISK FACTOR FOR HOMICIDE IN THE HOME," BY ARTHUR L. KELLERMANN ET AL., IN *NEW ENGLAND JOURNAL OF MEDICINE*, VOL. 329, NO. 15, OCTOBER 7, 1993; "SUICIDE IN THE HOME IN RELATION TO GUN OWNERSHIP," BY ARTHUR L. KELLERMANN ET AL., IN *NEW ENGLAND JOURNAL OF MEDICINE*, VOL. 327, NO. 7, AUGUST 13, 1992; "HOMICIDE AND SUICIDE RISKS ASSOCIATED WITH FIREARMS IN THE HOME: A NATIONAL CASE-CONTROL STUDY," BY DOUGLAS J. WIEBE, IN *ANNALS OF EMERGENCY MEDICINE*, VOL. 41, NO. 6, JUNE 2003

dations and government agencies such as the National Institute of Justice. In 2005 Wintemute started using his own private money to fund his research and has spent about \$1.7 million so far.

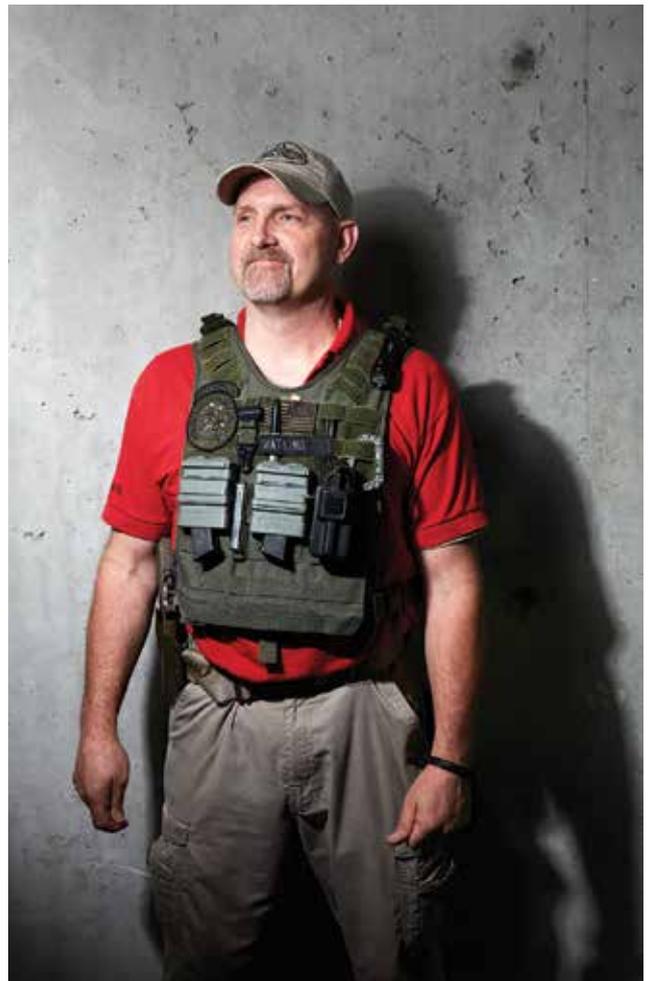
More than 30 peer-reviewed studies, focusing on individuals as well as populations, have been published that confirm what Kellermann's studies suggested: that guns are associated with an increased risk for violence and homicide. "There is really uniform data to support the statement that access to firearms is associated with an increased risk of firearm-related death and injury," Wintemute concludes. Gun advocates argue the causes are reversed: surges in violent crime lead people to buy guns, and weapons do not create the surge. But if that were true, gun purchases would increase in tandem with all kinds of violence. In reality, they do not.

When I asked people I met on my trip to Georgia for their thoughts on how guns influence violence, many said they couldn't believe that guns were a root cause. "It's easier to go after the object than it is to go after the motive," Graydon told me. He does have a point: A growing body of research suggests that violence is a contagious behavior that exists independent of weapon or means. In this framework, guns are accessories to infectious violence rather than fountainheads. But this does not mean guns don't matter. Guns intensify violent encounters, upping the stakes and worsening the outcomes—which explains why there are more deaths and life-threatening injuries where firearms are common. Violence may be primarily triggered by other violence, but these deadly weapons make all this violence worse.

MY NEXT STOP, SCOTTSBORO, ALABAMA, is within a county where nearly one in every five people has a permit to carry a concealed weapon. Overall in Alabama, an estimated 12 percent of residents have permission to carry concealed firearms, possibly the highest such rate in the country. Jackson County, home to Scottsboro, ranks close to the top of the state with that nearly one-in-five figure. I wanted to know if people in this sleepy town just north of the Tennessee River commonly used these hidden guns to thwart crime.

I left Rosenberg's home and drove 120 miles northwest. I drove past an Econo Lodge, a No. 1 China Buffet and a CashMart and then parked at the Jackson County courthouse, an impressive Neoclassical brick building with a clock tower. Scottsboro gained notoriety in 1931, when eight black youths were sentenced to death in its courthouse by an all-white jury after being falsely accused of raping two white women, a decision that was appealed up to the U.S. Supreme Court. After passing through the metal detectors, I meandered around in search of the sheriff's office, which I eventually found at the back of the ground floor. A receptionist walked me in to meet Sheriff Chuck Phillips, who was sitting at his desk with his chief deputy, Rocky Harnen. A sheet entitled "Handgun Fundamentals" hung on the wall behind the desk.

"I promise you, everybody here that wants a gun has got one or 100," Phillips told me, drawling out the number so it sounded like "hunnerd." I asked how many times Scottsboro residents had used their guns to protect themselves. "I've been doing this for 35 years, and I just can't recall one," the sheriff answered. Harnen, though, suddenly remembered something. "We did have a lady that was in one of our firearms classes. She had a guy try to break into her house," he recalled. "She yelled



CRIME STOPPERS? Mike Watkins, a firearms instructor in Georgia, argues that "if I'm a bad guy, and I know that this place has guns, it's not a place I'm obviously going to want to go."

and said, 'I've got a gun,' and she opened the door, and he was running away—she fired at him."

But they could not think of any other examples. Graydon, back in Kennesaw, also could not remember a time when a resident used a gun in self-defense, and he has been working for the police department for 31 years.

The frequency of self-defense gun use rests at the heart of the controversy over how guns affect our country. Progun enthusiasts argue that it happens all the time. In 1995 Gary Kleck, a criminologist at Florida State University, and his colleague Marc Gertz published a study that elicited what has become one of the gun lobby's favorite numbers. They randomly surveyed 5,000 Americans and asked if they, or another member of the household, had used a gun for self-protection in the past year. A little more than 1 percent of the participants answered yes, and when Kleck and Gertz extrapolated their results, they concluded that Americans use guns for self-defense as many as 2.5 million times a year.

This estimate is, however, vastly higher than numbers from government surveys, such as the National Crime Victimization Survey (NCVS), which is conducted in tens of thousands of households. It suggests that victims use guns for self-defense only

The Rarity of Self-Defense

Claims that people frequently need guns to defend themselves from criminals usually rely on one 1995 survey. That survey concluded that Americans used guns to ward off crime up to 2.5 million times in a year. But subsequent research, involving much larger samples, has come up with much smaller numbers, indicating that defensive gun use is unusual.

High-Impact Study

The 1995 work, published by Gary Kleck of Florida State University and his colleague Marc Gertz, randomly asked 5,000 Americans if they, or another member of the household, had used a gun for self-protection in the past year. Just over 1 percent said yes, and the researchers extrapolated this percentage to the entire U.S. population, giving them up to 2.5 million annual instances of defensive gun use.

The numbers in this survey are much higher than in other research. The National Crime Victimization Survey, which questions tens of thousands of households, suggests that annually Americans use guns 65,000 times in self-defense. The NCVS questions first establish that people are actual attack victims, whereas the Kleck questions do not. Some worry that Kleck's findings include spurious reports of self-defense use by people who were not actually victimized.

Percent Surveyed Who Said They Had Used a Gun in Self-Defense in the Previous Year



Contradictory Work

In 2015 researcher David Hemenway of Harvard University and his colleagues combed through NCVS data and found there were far fewer uses than Kleck and Gertz reported. The 2015 research involved about 14,000 people who were confirmed victims of crime, unlike the Kleck work. The conclusions indicate gun use for self-defense is quite rare.

This percentage is telling because not only is it lower than the Kleck data, but it also comes from people who were in real crime situations, not a random sample of the general population. Other data from this study indicate that strategies such as calling for help were about as effective as gun use at preventing injury.

Crime Victims Who Used a Gun in Self-Defense during the Incident (percent, 2007-2011)



In 1998 Kellermann analyzed 626 shootings that occurred around homes in three cities. He found that accidental shootings, homicides, assaults and suicides were much more common than gun use for self-defense:

“Every time a gun in the home was used in a self-defense or legally justifiable shooting, there were four unintentional shootings, seven criminal assaults or homicides, and 11 attempted or completed suicides.”



HOME ON THE RANGE near Kennesaw. In a recent survey of American gun owners, 88 percent said they bought handguns for self-defense, and many thought they could be targets of violent crime.

65,000 times a year. In 2015 Hemenway and his colleagues studied five years' worth of NCVS data and concluded that guns are used for self-defense in less than 1 percent of all crimes that occur in the presence of a victim. They also found that self-defense gun use is about as effective as other defensive maneuvers, such as calling for help. “It’s not as if you look at the data, and it says people who defend themselves with a gun are much less likely to be injured,” says Philip Cook, an economist at Duke University, who has been studying guns since the 1970s.

Kleck and Getz’s survey and the NCVS differ in important ways that could help explain the discrepancy between them. The NCVS first establishes that someone has been the victim of an attack before asking about self-defense gun use, which weeds out yes answers from people who might, say, wave their gun around during a bar fight and call it self-defense. Kleck and Getz’s survey could overestimate self-defense use by including such ambiguous uses. Kleck counters that the NCVS might underestimate self-defense because people who do not trust government surveyors will be afraid to admit that they used their gun. Yet people who participate in the NCVS are told at the start that they are protected under federal law and that their responses will remain anonymous.

A closer look at the who, what, where and why of gun violence also sheds some light on the self-defense claim. Most Americans with concealed carry permits are white men living in rural areas, yet it is young black men in urban areas who disproportionately encounter violence. Violent crimes are also geographically concentrated: Between 1980 and 2008, half of all of Boston’s gun violence occurred on only 3 percent of the city’s streets and intersections. And in Seattle, over a 14-year-period, every single juvenile crime incident took place on less than 5 percent of street segments. In other words, most people carrying guns have only a small chance of encountering situations in which they could use them for self-defense.

YET THESE NUMBERS DON’T RESONATE with many gun owners. “Absolutely, owning a firearm makes you safer,” Phillips told me. Watkins opined that “by having a gun, it gives you the opportunity to refuse to be a victim.” (Watkins, who used to be a cop in upstate New York, did later concede that guns are rarely shot in

SOURCES: “ARMED RESISTANCE TO CRIME: THE PREVALENCE AND NATURE OF SELF-DEFENSE WITH A GUN,” BY GARY KLECK AND MARC GERTZ, IN *JOURNAL OF CRIMINAL LAW AND CRIMINOLOGY*, VOL. 86, NO. 1, FALL 1995; “THE EPIDEMIOLOGY OF SELF-DEFENSE GUN USE: EVIDENCE FROM THE NATIONAL CRIME VICTIMIZATION SURVEY’S 2007-2011,” BY DAVID HEMENWAY AND SARAJI SOLNICK, IN *PREVENTIVE MEDICINE*, VOL. 79, OCTOBER 2015; “INJURIES AND DEATHS DUE TO FIREARMS IN THE HOME,” BY ARTHUR L. KELLERMANN ET AL., IN *JOURNAL OF TRAUMA: INJURY, INFECTION, AND CRITICAL CARE*, VOL. 45, NO. 2, AUGUST 1998

self-defense, even by law enforcement.) In a June 2017 study, researchers surveyed American gun owners about why they owned handguns, reporting that 88 percent bought them for self-defense; many felt they were likely to become targets of violent crime at some point. This belief is so pervasive that companies have even started selling self-defense insurance. At the lecture I attended in Stone Mountain, a representative of Texas Law Shield, a firearms legal defense program, tried to get me to sign up for a service that would provide free legal representation in the event that I ever shot someone to protect myself. “You don’t need it till you need it, but when you need it, you daggone sure glad you got it,” he said.

But even as the belief that we are all future crime targets has taken hold, violent crime rates have actually dropped in the U.S. in recent decades. According to the FBI, rates were a whopping 41 percent lower in 2015 than they were in 1996. The NRA attributes this decrease to the acquisition of more guns. But that is misleading. What has increased is the number of people who own multiple guns—the actual number of people and households who own them has substantially dropped.

Recently researchers have tried to assess the value of self-defense gun use by studying “stand your ground” laws, which gained notoriety after teenager Trayvon Martin was killed by George Zimmerman in Florida in 2012. These laws allow people to kill in self-defense when they feel they are in danger. Progun groups argue that they should deter crime because criminals will know that victims have no reason not to fight back. But a January 2017 study reported that when “stand your ground” was passed in Florida, the monthly homicide rate went up by nearly a quarter. And a 2012 study found that states that adopted these laws experienced an abrupt and sustained 8 percent increase in homicides relative to other states. Mark Hoekstra, a co-author of the 2012 paper and an economist at Texas A&M University, put it this way: “We found that making it easier to kill people resulted in more dead people.”

But some argue that even an unused gun can thwart crime. The logic here is that in areas with high rates of concealed carrying, criminals don’t want to victimize people who might have guns, so they don’t commit violent crimes. The most famous study, published in 1997 by John R. Lott, Jr., then a research fellow at the University of Chicago, and David B. Mustard, an economist now at the University of Georgia, looked at county crime rates in several states that had passed laws making it easy to get gun permits at various times prior to 1992. They compared such rates to crime levels in places that did not have easy access to guns during that period. Their hypothesis: when areas make it easier for people to get permits, more people will get guns and start carrying—and then violence will drop. Lott and Mustard developed a model, based on this comparison, that indicated that when it was easier to get permits, assaults fell by 5 percent, rapes by 7 percent and murders by 7.65 percent. Lott went on to publish a book in 1998 called *More Guns, Less Crime*, which tracked concealed carry laws and crime in more than 3,000 counties and reported similar findings.

Many other researchers have come to opposite conclusions. John Donohue, an economist at Stanford University, reported in a working paper in June 2017 that when states ease permit requirements, most violent crime rates increase and keep getting worse. A decade after laws relax, violent crime rates are 13

Gun Access Does Not Reduce Crime

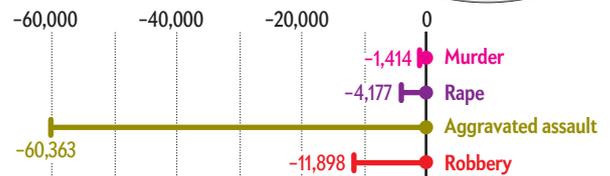
Gun advocates have argued that allowing more citizens to carry more guns—streamlining concealed carry permits—will deter crime. The idea rests largely on a controversial 1997 study that analyzed crime rates and concluded that criminal activity dropped when areas eased permit rules. But the study has been widely criticized and contradicted by other research.

High-Impact Study

The 1997 work by John R. Lott, Jr., now at the Crime Prevention Research Center, and David B. Mustard analyzed U.S. county crime data between 1977 and 1992. It found that murder rates dropped by 7.65 percent in 10 states after they made it easier to carry concealed weapons. The research calculated other crime rates decreased as well.

These figures are projections of the number of crimes that would have been avoided if all states had eased their permit laws in 1992, according to Lott and Mustard’s model. Reviewers at the National Research Council concluded, however, that very tiny changes to the model created large variations in outcomes—either weakening or strengthening the link between permit laws and crime—so it was impossible to say with their model how permit law changes affect crime.

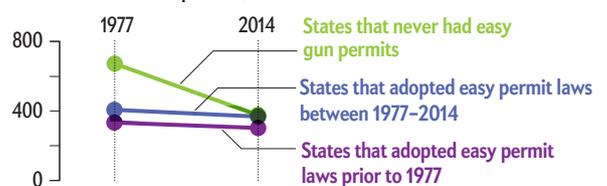
Projected Change in Number of Crimes If States without Easier Permit Laws in 1992 Had Adopted Such Laws (Estimates Using County-Level Data)



Contradictory Work

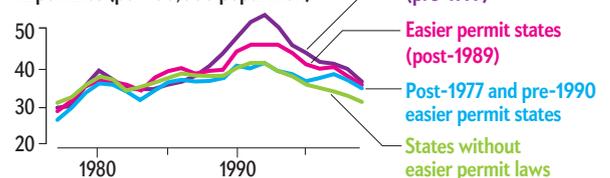
Research published this year explicitly gainsays Lott and Mustard’s model. Economist John Donohue of Stanford University found that violent crime rates dropped dramatically in states that did not have easy-to-obtain gun permits but decreased just a little in states that allowed such permits.

Violent Crime Rates (per 100,000 residents)



Focusing on rape in a 2003 study, Donohue and his colleagues found no protective effect in states that made it easier to carry guns. Over a decade such states had similar or higher rape rates than did states that never eased gun permit laws. Laws that made it easier to carry guns did not protect people from this crime.

Rape Rates (per 100,000 population)



to 15 percent higher than they were before. And in 2004 the National Research Council, which provides independent advice on scientific issues, turned its attention to firearm research, including Lott's findings. It asked 15 scholars to reanalyze Lott's data because "there was such a conflict in the field about the findings," recalls panel chair and criminologist Charles Wellford, now a professor emeritus at the University of Maryland. Lott's models, they found, could be tweaked in tiny ways to produce big changes in results. "The analyses that we did, and that others have done, show that these estimates are very fragile," Wellford explains. "The committee, with one exception, concluded that you could not accept his conclusion that more guns meant less crime." Wintemute summarized it this way: "There are a few studies that suggest that liberalizing access to concealed firearms has, on balance, beneficial effects. There are a far larger number of studies that suggest that it has, on balance, detrimental effects."

Lott, who now runs the non-profit Crime Prevention Research Center, says the panel was biased and "set up to try to go against my work." The NRA takes a related tack: it says research highlighting the danger of weapons is part of a gun-control agenda to confiscate firearms.

It is crucial, though, to distinguish the leadership of progun organizations from their constituents, who often have more nuanced opinions. "I do own a firearm, I'm licensed, I'm actually able to train others in using a firearm—and my goal in life is to never, ever, ever have to use it," says Tina Monaghan, a city clerk in Nelson, Ga. (In 2013 Nelson, like Kennesaw, passed a law mandating that residents own guns, but the ordinance was relaxed later that year in response to a lawsuit.) According to a 2015 survey published by Johns Hopkins University researchers, 85 percent of gun owners support background checks for all gun sales, including sales through unlicensed dealers—even though the NRA strongly opposes them.

I HEARD A LOT MORE about divergence from NRA positions on my last stop in Alabama: Scottsboro Gun and Pawn, a shop perched at the end of Broad Street, one of the town's main drags. The co-owner, Robert Shook, told me about the ongoing push in the Alabama State Senate to eliminate concealed carry permits altogether, a move that would make it legal for anyone older than 18 to carry a hidden gun. (The bill passed in the Alabama Senate in April of this year but did not come up for a vote in the state's House of Representatives during the 2017 session.) "There's a lot of stuff that the NRA does that I don't agree with," he said, standing behind a glass case filled with handguns. "They've gone farther right than the other side left. They're throwing common sense out the window." Indeed, the NRA of today is actually more extreme than the organization used to be. In the 1930s NRA president Karl Frederick testified in Congress in support of the National Fire-

arms Act, which restricted concealed carrying. "I do not believe in the general promiscuous toting of guns," Frederick said.

The belief that more guns lead to fewer crimes is founded on the idea that guns are dangerous when bad guys have them, so we should get more guns into the hands of good guys. Yet Cook, the Duke economist, says this good guy/bad guy dichotomy is a false and dangerous one. Even upstanding American citizens are only human—they can "lose their temper, or exercise poor judgment, or misinterpret a situation, or have a few drinks," he explains, and if they're carrying guns when they do, bad things can ensue. In 2013 in Ionia, Mich., a road rage incident led two drivers—both concealed carry permit holders—to get out of their cars, take out their guns and kill each other.

As I drove from Scottsboro to Atlanta to catch my flight home, I kept turning over what I had seen and learned. Although we do not yet know *exactly* how guns affect us, the notion that more guns lead to less crime is almost certainly incorrect. The research on guns is not uniform, and we could certainly use more of it. But when all but a few studies point in the same direction, we can feel confident that the arrow is aiming at the truth—which is, in this case, that guns do not inhibit crime and violence but instead make it worse.

The popular gun-advocacy bumper sticker says that "guns don't kill people, people kill people"—and it is, in fact, true. People, all of us, lead complicated lives, misinterpret situations, get angry, make mistakes. And when a mistake involves pulling a trigger, the damage can't be undone. Unlike my Glock-aided attack on the zombie at the gun range, life is not target practice. **SA**



OFF TARGET: This progun shirt, along with bumper stickers advocating that guns protect good people from crime, reflect a sentiment undercut by dozens of studies showing firearms are poor deterrents.

MORE TO EXPLORE

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Firearms and Violence: A Critical Review. National Research Council. National Academies Press, 2004.

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FROM OUR ARCHIVES

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