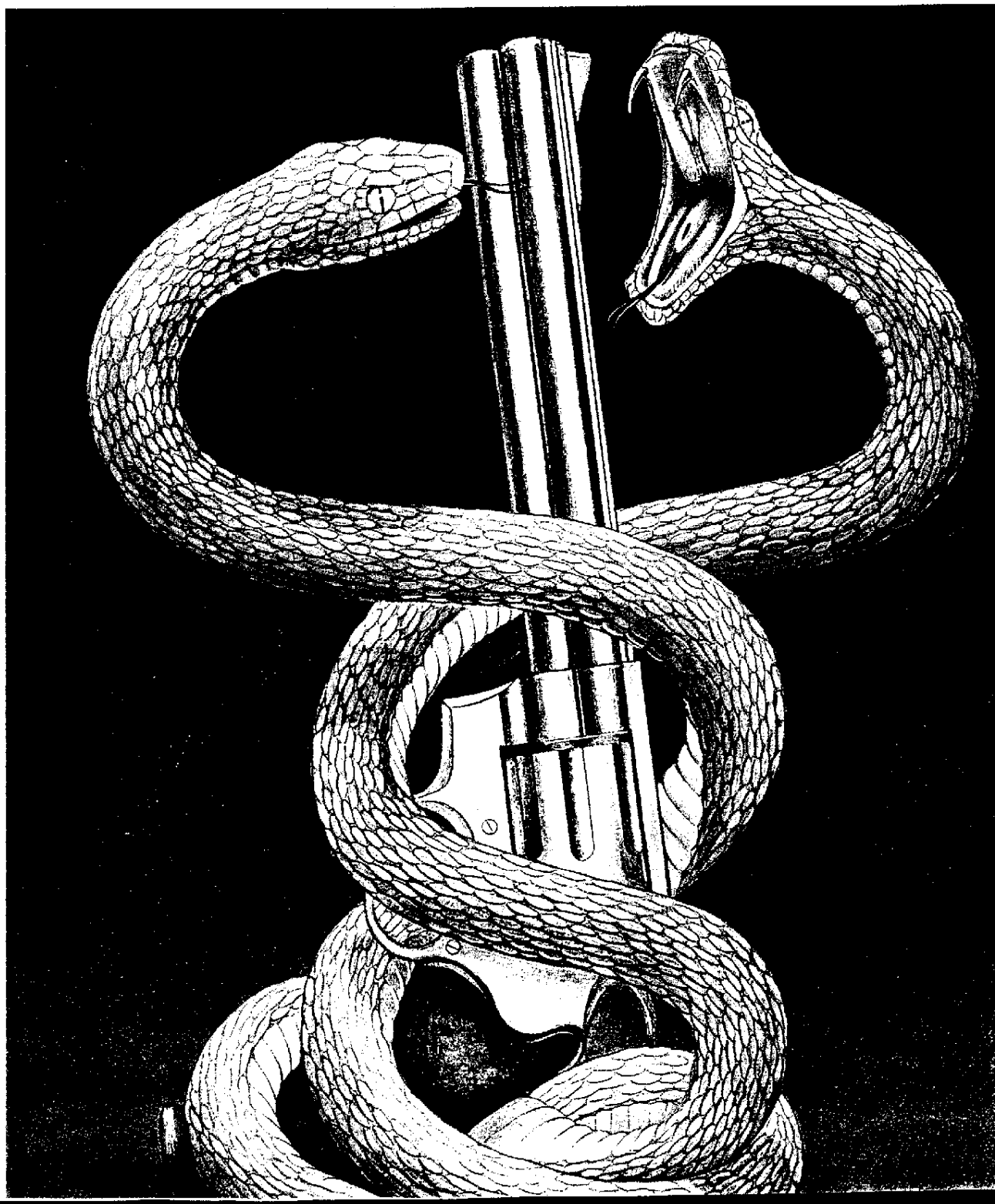


PUBLIC HEALTH



SHOT SHOTS

HOW THE CDC SUCCUMBED TO THE GUN "EPIDEMIC"

Last year Congress tried to take away \$2.6 million from the U.S. Centers for Disease Control and Prevention. In budgetary terms, it was a pittance: 0.1 percent of the CDC's \$2.2 billion allocation. Symbolically, however, it was important: \$2.6 million was the amount the CDC's National Center for Injury Prevention and Control had spent in 1995 on studies of firearm injuries. Congressional critics, who charged that the center's research program was driven by an anti-gun prejudice, had previously sought to eliminate the NCIPC completely. "This research is designed to, and is used to, promote a campaign to reduce lawful firearms ownership in America," wrote 10 senators, including then-Majority Leader Bob Dole and current Majority Leader Trent Lott. "Funding redundant research initiatives, particularly those which are driven by a social-policy agenda, simply does not make sense."

After the NCIPC survived the 1995 budget process, opponents narrowed their focus, seeking to pull the plug on the gun research specifically, or at least to punish the CDC for continuing to fund it. At a May 1996 hearing, Rep. Jay Dickey (R-Ark.), co-sponsor of the amendment cutting the CDC's budget, chastised NCIPC Director Mark Rosenberg for treating guns as a "public health menace," suggesting that he was "working toward changing society's attitudes so that it becomes socially unacceptable to own handguns." In June the House Appropriations Committee adopted Dickey's amendment, which included a prohibition on the use of CDC funds "to advocate or promote gun control," and in July the full House rejected an attempt to restore the money.

Although the CDC ultimately got the \$2.6 million back as part of a budget deal with the White House, the persistent assault on the agency's gun research created quite a stir. *New England Journal of Medicine* Editor Jerome Kassirer, who

has published several of the CDC-funded gun studies, called it "an attack that strikes at the very heart of scientific research." Writing in *The Washington Post*, CDC Director David Satcher said criticism of the firearm research did not bode well for the country's future: "If we question the honesty of scientists who give every evidence of long deliberation on the issues before them, what are our expectations of anyone else? What hope is there for us as a society?" Frederick P. Rivara, a pediatrician who has received CDC money to do gun research, told *The Chronicle of Higher Education* that critics of the program were trying "to block scientific discovery because they don't like the results. This is a frightening trend for academic researchers. It's the equivalent of book burning."

That view was echoed by columnists and editorial writers throughout the country. In a *New York Times* column entitled "More N.R.A. Mischief," Bob Herbert defended the CDC's "rigorous, unbiased, scientific studies," suggesting that critics could not refute the results of the research and therefore had decided "to pull the plug on the funding and stop the effort altogether." Editorials offering the same interpretation appeared in *The Washington Post* ("NRA: Afraid of Facts"), *USA Today* ("Gun Lobby Keeps Rolling"), the *Los Angeles Times* ("NRA Aims at the Messenger"), *The Atlanta Journal* ("GOP Tries to Shoot the Messenger"), the *Sacramento Bee* ("Shooting the Messenger"), and the *Pittsburgh Post-Gazette* ("The Gun Epidemic").

Contrary to this picture of dispassionate scientists under assault by the Neanderthal NRA and its know-nothing allies in Congress, serious scholars have been criticizing the CDC's "public health" approach to gun research for years. In a presentation at the American Society of Criminology's 1994 meeting, for example, University of Illinois sociologist David Bordua and epidemiologist David Cowan called the public health literature on guns "advocacy based on political beliefs rather than scientific fact." Bordua and Cowan noted that *The New England Journal of Medicine* and

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the *Journal of the American Medical Association*, the main outlets for CDC-funded studies of firearms, are consistent supporters of strict gun control. They found that "reports with findings not supporting the position of the journal are rarely cited," "little is cited from the criminological or sociological field," and the articles that are cited "are almost always by medical or public health researchers."

Further, Bordua and Cowan said, "assumptions are presented as fact: that there is a causal association between gun ownership and the risk of violence, that this association is

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consistent across all demographic categories, and that additional legislation will reduce the prevalence of firearms and consequently reduce the incidence of violence." They concluded that "[i]ncentuous and selective literature citations may be acceptable for political tracts, but they introduce an artificial bias into scientific publications. Stating as fact associations which may be demonstrably false is not just unscientific, it is unprincipled." In a 1994 presentation to the Western Economics Association, State University of New York at Buffalo criminologist Lawrence Southwick compared public health firearm studies to popular articles produced by the gun lobby: "Generally the level of analysis done on each side is of a low quality.... The papers published in the medical literature (which are uniformly anti-gun) are particularly poor science."

As Bordua, Cowan, and Southwick observed, a prejudice against gun ownership pervades the public health field. Deborah Prothrow-Stith, dean of the Harvard School of Public Health, nicely summarizes the typical attitude of her colleagues in a recent book. "My own view on gun control is simple," she writes. "I hate guns and cannot imagine why anybody would want to own one. If I had my way, guns for sport would be registered, and all other guns would be banned." Opposition to gun ownership is also the official position of the U.S. Public Health Service, the CDC's parent agency. Since 1979, its goal has been "to reduce the number of handguns in private ownership," starting with a 25 percent reduction by the turn of the century.

Since 1985 the CDC has funded scores of firearm studies, all reaching conclusions that favor stricter gun control. But CDC officials insist they are not pursuing an anti-gun agenda. In a 1996 interview with the *Times-Picayune*, CDC spokeswoman Mary Fenley adamantly denied that the agency is "trying to eliminate guns." In a 1991 letter to CDC critic Dr. David Stolinsky, the NCIPC's Mark Rosenberg said "our scientific understanding of the role that firearms play in violent events is rudimentary." He added in a subsequent letter, "There is a strong need for further scientific investigations of the relationships among firearms ownership, firearms regulations and the risk of firearm-related injury. This is an area that has not been given adequate scrutiny. Hopefully, by addressing these important and appropriate scientific issues we will eventually arrive at conclusions which support effective, preventive actions."

Yet four years earlier, in a 1987 CDC report, Rosenberg thought the area adequately scrutinized, and his understanding sufficient, to urge confiscation of all firearms from "the general population," claiming "8,600 homicides and 5,370 suicides could be avoided" each year. In 1993 *Rolling Stone* reported that Rosenberg "envisions a long term campaign, similar to [those concerning] tobacco use and auto safety, to convince Americans that guns are, first and foremost, a public health menace." In 1994 he told *The Washington Post*, "We need to revolutionize the way we look at guns, like what we did with cigarettes. Now it [sic] is dirty, deadly, and banned."

As Bordua and Cowan noted, one hallmark of the public health literature on guns is a tendency to ignore contrary scholarship. Among criminologists, Gary Kleck's encyclopedic *Point Blank: Guns and Violence in America* (1991) is universally recognized as the starting point for further research. Kleck, a professor of criminology at Florida State University, was initially a strong believer that gun ownership increased the incidence of homicide, but his research made him a skeptic. His book assembles strong evidence against the notion that reducing gun ownership is a good way to reduce violence. That may be why *Point Blank* is never cited in the CDC's own firearm publications or in articles reporting the results of CDC-funded gun studies.

Three Kleck studies, the first published in 1987, have found that guns are used in self-defense up to three times as often as they are used to commit crimes. These studies are so convincing that the doyen of American criminologists, Marvin Wolfgang, conceded in the Fall 1995 issue of *The Journal of Criminal Law and Criminology* that they pose a serious challenge to his own anti-gun views. "I am as strong a gun-control advocate as can be found among the criminologists in this country. ... What troubles me is the article by Gary Kleck and Mark Gertz. The reason I am troubled is that they have provided an almost clear-cut case of methodologically sound research in support of something I have theoretically opposed for years, namely, the use of a gun against a criminal perpetrator."

Yet Rosenberg and his CDC colleague James Mercy, writing in *Health Affairs* in 1993, present the question "How frequently are guns used to successfully ward off potentially violent attacks?" as not just open but completely unresearched. They cite neither Kleck nor the various works on which he drew.

When CDC sources do cite adverse studies, they often get them wrong. In 1987 the National Institute of Justice hired two sociologists, James D. Wright and Peter H. Rossi, to assess the scholarly literature and produce an agenda for gun control. Wright and Rossi found the literature so biased and shoddy that it provided no basis for concluding anything positive about gun laws. Like Kleck, they were forced to give up their own prior faith in gun control as they researched the issue.

But that's not the story told by Dr. Arthur Kellermann, director of Emory University's Center for Injury Control and the CDC's favorite gun researcher. In a 1988 *New England Journal of Medicine* article, Kellermann and his co-authors cite Wright and Rossi's book *Under the Gun* to support the notion that "restricting access to handguns could substantially reduce our annual rate of homicide." What they actually said was: "There is no persuasive evidence that supports this view." In a 1992 *New England Journal of Medicine* article, Kellermann cites an *American Journal of Psychiatry* study to back up the claim "that limiting access to firearms could prevent many suicides." But the study actually found just the opposite—i.e., that people who don't have guns find other ways to kill themselves.

At the same time that he misuses other people's work, Kellermann refuses to provide the full data for any of his studies so that scholars can evaluate his findings. His critics therefore can judge his results only from the partial data he chooses to publish. Consider a 1993 *New England Journal of Medicine* study that, according to press reports, "showed that keeping a gun in the

home nearly triples the likelihood that someone in the household will be slain there.” This claim cannot be verified because Kellerman will not release the data. Relying on independent sources to fill gaps in the published data, SUNY-Buffalo’s Lawrence Southwick has speculated that Kellermann’s full data set would actually vindicate defensive gun ownership. Such issues cannot be resolved without Kellermann’s cooperation, but the CDC has refused to require its researchers to part with their data as a condition for taxpayer funding.

Even without access to secret data, it’s clear that many of Kellermann’s inferences are not justified. In a 1995 *JAMA* study that was funded by the CDC, he and his colleagues examined 198 incidents in which burglars entered occupied homes in Atlanta. They found that “only three individuals (1.5%) employed a firearm in self-defense”—from which they concluded that guns are rarely used for self-defense. On closer examination, however, Kellermann et al.’s data do not support that conclusion. In 42 percent of the incidents, there was no confrontation between victim and offender because “the offender(s) either left silently or fled when detected.” When the burglar left silently, the victim was not even aware of the crime, so he did not have the opportunity to use a gun in self-defense (or to call the police, for that matter). The intruders who “fled when detected” show how defensive gun ownership can protect all victims, armed and unarmed alike, since the possibility of confronting an armed resident encourages burglars to flee.

These 83 no-confrontation incidents should be dropped from Kellermann et al.’s original list of 198 burglaries. Similarly, about 50 percent of U.S. homes do not contain guns, and in 70 percent of the homes that do, the guns are kept unloaded. After eliminating the burglaries where armed self-defense was simply not feasible, Kellermann’s 198 incidents shrink to 17, and his 1.5 percent figure for defensive use rises to 17 percent. More important, this study covers only burglaries reported to the police. Since police catch only about 10 percent of home burglars, the only *good* reason to report a burglary is that police documentation is required to file an insurance claim. But if no property was lost because the burglar fled when the householder brandished a gun, why report the incident? And, aside from the inconvenience, there are strong reasons *not* to report: The gun may not be registered, or the householder may not be certain that guns can legally be used to repel unarmed burglars. Thus, for all Kellermann knows, successful gun use far exceeds the three incidents reported to police in his Atlanta study.

Similar sins of omission invalidate the conclusion of a 1986 *New England Journal of Medicine* study that Kellermann co-authored with University of Washington pathologist Donald T. Reay, another gun researcher who has enjoyed the CDC’s support. (This particular study was funded by the Robert Wood Johnson Foundation.) Examining gunshot deaths in King

County, Washington, from 1978 to 1983, Kellermann and Reay found that, of 398 people killed in a home where a gun was kept, only two were intruders shot while trying to get in. “We noted 43 suicides, criminal homicides, or accidental gunshot deaths involving a gun kept in the home for every case of homicide for self-protection,” they wrote, concluding that “the advisability of keeping firearms in the home for protection must be questioned.”

But since Kellermann and Reay considered only cases resulting in death, which Gary Kleck’s research indicates are a tiny percentage of defensive gun uses, this conclusion does not follow. As the researchers themselves conceded, “Mortality studies such as ours do not include cases in which burglars or intruders are wounded or frightened away by the use or display of a firearm. Cases in which would-be intruders may have purposely avoided a house known to be armed are also not identified.” By leaving out such cases, Kellermann and Reay excluded almost all of the lives saved, injuries avoided, and property protected by keeping a gun in the home. Yet advocates of gun control continue to use this study as the basis for claims such as, “A gun in the home is 43 times as likely to kill a family member as to be used in self-defense.”

Another popular factoid—“having a gun in the home increases the risk of suicide by almost five times”—is also based on a Kellermann study, this one funded by the CDC and published by *The New England Journal of Medicine* in 1992. Kellermann and his colleagues matched each of 438 suicides to a “con-

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trol” of the same race, sex, approximate age, and neighborhood. After controlling for arrests, drug abuse, living alone, and use of psychotropic medication (all of which were more common among the suicides), they found that a household with one or more guns was 4.8 times as likely to be the site of a suicide.

Although press reports about gun research commonly treat correlation and causation as one and the same, this association does not prove that having a gun in the house raises the risk of suicide. We can imagine alternative explanations: Perhaps gun ownership in this sample was associated with personality traits that were, in turn, related to suicide, or perhaps people who had contemplated suicide bought a gun for that reason. To put the

association in perspective, it's worth noting that living alone and using illicit drugs were both better predictors of suicide than gun ownership was. That does not necessarily mean that living alone or using illegal drugs leads to suicide.

Furthermore, Kellermann and his colleagues selected their sample with an eye toward increasing the apparent role of gun ownership in suicide. They started by looking at all suicides that occurred during a 32-month period in King County, Washington, and Shelby County, Tennessee, but they excluded cases that occurred outside the home—nearly a third of the original sample. "Our study was restricted to suicides occurring in the victim's home," they explained with admirable frankness, "because a previous study has indicated that most suicides committed with guns occur there."

Kellermann also participated in CDC-funded research that simplistically compared homicide rates in Seattle and Vancouver, attributing the difference to Canada's stricter gun laws. This study, published in *The New England Journal of Medicine* in 1988, ignored important demographic differences between the two cities that help explain the much higher incidence of violence in Seattle. Furthermore, the researchers were aware of nationwide research that came to strikingly different conclusions about Canadian gun control, but they failed to inform their readers about that evidence.

Two years later in the same journal, the same research team compared suicide rates in Seattle and Vancouver. Unfazed by the fact that Seattle had a lower suicide rate, they emphasized that the rate was higher for one subgroup, adolescents and young men—a difference they attributed to lax American gun laws. Gary Mauser, a criminologist at Simon Fraser University, called the Seattle/Vancouver comparisons "a particularly egregious example" of "an abuse of scholarship, inventing, selecting, or misinterpreting data in order to validate *a priori* conclusions."

These and other studies funded by the CDC focus on the presence or absence of guns, rather than the characteristics of the people who use them. Indeed, the CDC's Rosenberg claims in the journal *Educational Horizons* that murderers are "ourselves—ordinary citizens, professionals, even health care workers": people who kill only because a gun happens to be available. Yet if there is one fact that has been incontestably established by homicide studies, it's that murderers are not ordinary gun owners but extreme aberrants whose life histories include drug abuse, serious accidents, felonies, and irrational violence. Unlike "ourselves," roughly 90 percent of adult murderers have significant criminal records, averaging an adult criminal career of six or more years with four major felonies.

Access to juvenile records would almost certainly show that the criminal careers of murderers stretch back into their adolescence. In *Murder in America* (1994), the criminologists Ronald W. Holmes and Stephen T. Holmes report that murderers generally "have histories of committing personal violence in childhood, against other children, siblings, and small animals." Murderers who don't have criminal records usually have his-

stories of psychiatric treatment or domestic violence that did not lead to arrest.

Contrary to the impression fostered by Rosenberg and other opponents of gun ownership, the term "acquaintance homicide" does not mean killings that stem from ordinary family or neighborhood arguments. Typical acquaintance homicides include: an abusive man eventually killing a woman he has repeatedly assaulted; a drug user killing a dealer (or vice versa) in a robbery attempt; and gang members, drug dealers, and other criminals killing each other for reasons of economic rivalry or personal pique. According to a 1993 article in the *Journal of Trauma*, 80 percent of murders in Washington, D.C., are related to the drug trade, while "84% of [Philadelphia murder] victims in 1990 had antemortem drug use or criminal history." A 1994 article in *The New England Journal of Medicine* reported that 71 percent of Los Angeles children and adolescents injured in drive-by shootings "were documented members of violent street gangs." And University of North Carolina-Charlotte criminal justice scholars Richard Lumb and Paul C. Friday report that 71 percent of adult gunshot wound victims in Charlotte have criminal records.

As the English gun control analyst Colin Greenwood has noted, in any society there are always enough guns available, legally or illegally, to arm the violent. The true determinant of violence is the number of violent people, not the availability of a particular weapon. Guns contribute to murder in the trivial sense that they help violent people kill. But owning guns does not turn responsible, law-abiding people into killers. If the general availability of guns were as important a factor in violence as the CDC implies, the vast increase in firearm ownership during the past two decades should have led to a vast increase in homicide. The CDC suggested just that in a 1989 report to Congress, where it asserted that "[s]ince the early 1970s the year-to-year fluctuations in firearm availability has [*sic*] paralleled the numbers of homicides."

But this correlation was a fabrication: While the number of handguns rose 69 percent from 1974 to 1988, handgun murders actually dropped by 27 percent. Moreover, as U.S. handgun ownership more than doubled from the early 1970s through the 1990s, homicides held constant or declined for every major population group except young urban black men. The CDC can blame the homicide surge in this group on guns only by ignoring a crucial point: Gun ownership is far less common among urban blacks than among whites or rural blacks.

The CDC's reports and studies never give long-term trend data linking gun sales to murder rates, citing only carefully selected partial or short-term correlations. If murder went down in the first and second years, then back up in the third and fourth years, only the rise is mentioned. CDC publications focus on fluctuations and other unrepresentative phenomena to exaggerate the incidence of gun deaths and to conceal declines. Thus, in its *Advance Data from Vital and Health Statistics* (1994), the CDC melodramatically announces that gun deaths now "rival" driving fatalities, as if gun murders were increasing. But this trend simply reflects the fact that driving fatalities are declining more rapidly than murders.

While the CDC shows a selective interest in homicide trends,

it tends to ignore trends in accidental gun deaths—with good reason. In the 25 years from 1968 to 1992, American gun ownership increased almost 135 percent (from 97 million to 222 million), with handgun ownership rising more than 300 percent. These huge increases coincided with a two-thirds decline in accidental gun fatalities. The CDC and the researchers it funds do not like to talk about this dramatic development, since it flies in the face of the assumption that more guns mean more deaths. They are especially reluctant to acknowledge the drop in accidental gun deaths because of the two most plausible explanations for it: the replacement of rifles and shotguns with the much safer handgun as the main weapon kept loaded for self-defense, and the NRA's impressive efforts in gun safety training.

The question is, why hasn't it been studied? The answer illustrates how the CDC's political agenda undermines its professed concern for saving lives. In the absence of an anti-gun animus, a two-thirds decrease in accidental gun deaths would surely have been a magnet for studies, especially since it coincided with a big increase in handgun ownership. But the CDC wants to reduce gun deaths only by banning guns, not by promoting solutions that are consistent with more guns. So the absence of studies is an excuse to dismiss gun safety training rather than an incentive for research.

Taken by itself, any one of these flaws—omission of relevant evidence, misrepresentation of studies, questionable methodology, overreaching conclusions—could be addressed by a determination to do better in the future. But the consistent tendency to twist research in favor of an anti-gun agenda suggests that there is something inherently wrong with the CDC's approach in this area. Implicit in the decision to treat gun deaths as a "public health" problem is the notion that violence is a communicable disease that can be controlled by attacking the relevant pathogen.

Dr. Katherine Christoffel, head of the Handgun Epidemic Lowering Plan, a group that has received CDC support, stated this assumption plainly in a 1994 interview with *American Medical News*: "Guns are a virus that must be eradicated.... They are causing an epidemic of death by gunshot, which should be treated like any epidemic—you get rid of the virus.... Get rid of the guns, get rid of the bullets, and you get rid of the deaths."

In the same article, the CDC's Rosenberg said approvingly, "Kathy Christoffel is saying about firearms injuries what has been said for years about AIDS: that we can no longer be silent. That silence equals death and she's not willing to be silent anymore. She's asking for help." Similarly, in a 1993 *Atlanta Medicine*

article on the public health approach to violence, Arthur Kellermann subtitled part of his discussion "The Bullet as Pathogen."

It is hardly surprising that research based on this paradigm would tend to indict gun ownership as a cause of death. The inadequacy of the disease metaphor, which some public health specialists seem to take quite literally, is readily apparent when we consider Koch's postulates, the criteria by which suspected pathogens are supposed to be judged: 1) The microorganism must be observed in all cases of the disease; 2) the microorganism must be isolated and grown in a pure culture medium; 3) microorganisms from the pure culture must reproduce the disease when inoculated in a test animal; and 4) the same kind of microorganism must be recovered from the experimentally diseased animal. A strict application of these criteria is clearly impossible in this case. But applying the postulates as an analogy, we can ask about the consistency of the relationship between guns and violence. Gun ownership usually does not result in violence, and violence frequently occurs in the absence of guns. Given these basic facts, depicting violence as a disease caused by the gun virus can only cloud our thinking.

It may also discredit the legitimate functions of public health. "The CDC has got to be careful that we don't get into social issues," Dr. C. J. Peters, head of the CDC's Special Pathogens Branch, told the *Pittsburgh Post-Gazette* last year, in the midst of the controversy over taxpayer-funded gun research. "If we're going to do that, we ought to start a center for social change. We should stay with medical issues."

If treating gun violence as a public health issue invites confusion and controversy, why is this approach so popular? The

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main function of the disease metaphor is to lend a patina of scientific credibility to the belief that guns cause violence—a belief that is hard to justify on empirical grounds. "We're trying to depoliticize the subject," Rosenberg told *USA Today* in 1995. "We're trying to transform it from politics to science." What they are actually trying to do is disguise politics as science. ♦

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