

Controlling Guns

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Wheeler, Stark, and Stell have raised many interesting points concerning gun control that merit extended treatment. Here, however, I will focus only on two. I will then

briefly expand on the proposal I offered in the original paper.¹

Stopping Aggressive Governments

In earlier papers and also in this symposium, Wheeler argues that owning arms is defensible as a means of resisting governmental assaults against individuals. If only governments have guns, he argues, then a government gone bad can easily oppress its citizens. An armed citizenry, however, might be able to deflect a governmental assault. Because "governments are among the more serious threats to one's rights, . . . there is at least a prima facie right to whatever means are necessary to deflect threats to rights."² Not only is this a prima facie right, he argues, but given the history of governmental oppression, it is an actual right—indeed a right that should be recognized by any legitimate government.

There is no doubt that governments can be oppressive and, when they are excessively so, we can well understand the appeal of having an armed citizenry (consider, for example, the Jews in the Warsaw Ghetto). If, however, we take this threat seriously, it appears that his argument justifies considerably more than a simple right to bear arms. His reasoning would seem to justify private citizens' owning not only handguns and long guns, but mortars, howitzers, machine guns, and perhaps even biological and tactical nuclear weapons. For in a modern state with a modern army, a determined dictator is unlikely to be stopped by the odd citizen sniping from a

nearby tower (as the Jews in the Warsaw Ghetto learned). The citizens will need heavier weapons. But most people, I think, would rather take their chances against government oppression than give every yahoo in the country the right to have a howitzer or tactical nuclear weapons.

On the other hand, it is true that an armed citizenry can make the oppressor (or more precisely, the oppressor's army) pay for its oppression. This could discourage some potential oppressors who would be unwilling to pay that cost. However, if the main benefit of an armed citizenry is not to stop governmental threats, but merely to raise the cost of oppression and genocide, then that goal is compatible with strict gun control—far more strict than that I have advocated. First, it would be compatible with the complete abolition of all handguns since handguns would be the least successful defense against governmental aggression. Second, it would be compatible with stringent restrictions on long guns. For instance, we might require that all long guns be stored in locked cabinets, with criminal penalties for those who do not comply. I am not advocating this system, merely pointing out that it is compatible with Wheeler's argument about the value of guns as a means of deflecting governmental threats against its citizens. His argument, although plausible, shows either too much or too little.

The Empirical Evidence

Stell objects to my claim that the empirical evidence shows that the widespread availability of guns increases homicides, suicides, and accidental deaths. As he puts it:

The data sets enable construction of graphs whose slopes allow us directly to evaluate the causal relation between guns/100,000 and gun homicide/gun-prevalence. I will use public domain data only.

No data or studies from suspect lobbying organizations of whatever stripe. My test: if one can't get it online, from a public source, it's questionable. Selected years, from selected jurisdictions will be regarded as tendentious until proved otherwise. Two, more data are better when it comes to assessing "social causation." 100 years of national data beat 5, 10 or 50 years of data from 3 cities, 6 counties or etc.³

On the surface this approach seems highly plausible. Unfortunately, the relevant evidence is not available in the way this claim suggests, and even were it to be so, we could not so easily discern social causation. Stating exactly why, though, requires a brief discussion of statistical methods and then a closer examination of the empirical data. Because, on my view, the defensibility of gun control depends largely on the empirical evidence, this objection demands extended treatment.

Statistical Methods

Stell claims that the best way to show that the availability of guns does not increase the homicide rate is to plot the homicide rate against the handgun ownership rate for the last half century. According to Stell,⁴ the resulting chart shows that although handgun ownership increases after 1974, homicide rates slightly decline overall, having gone through small perturbations:

These data show long-term *non-association* between America's homicide rate and America's concomitant, steady increase in guns per 100,000 population over the century. Non-association between variation in the homicide rate and variation (always increasing) in society's gun aggregate rules out social causation.⁵

I beg to disagree. This chart does not—indeed could not—permit us "directly to evaluate the causal relation between guns per 100,000 and gun homicide/gun-prevalence."⁶

(i) *Determining gun ownership* Among other things, Stell's proposal for determining the effects of allowing the private ownership of handguns overlooks the difficulty of determining the availability of guns. We have no publicly available source of information. The information used by Stell is not from a governmental agency, but, as Stell's footnote 17 makes clear, derives from a single researcher's (Gary Kleck's) estimates. Kleck derives his numbers alternately from gun production information and elsewhere in his work, from the results of several national surveys.⁷ He uses these numbers as a proxy for gun availability. His estimates are sensible, although they do clash with the best recent data from the National Institute of Justice, which claims that "the proportion of American households that keep firearms appears to be declining."⁸

The issue, though, is exceedingly complex. The best

research I have seen seeks to validate proposed proxies by comparing them with results of (a) the Behavioral Risk Factor Surveys (BRFS) conducted by 21 states; (b) the General Social Surveys (GSS), which are nationwide (but divided into nine regions rather than individual states); (c) the National Survey of Private Ownership of Guns;⁹ and (d) even results of various small cohort studies. To date the best proxy appears to be Cook's Index.¹⁰ Although its estimates of gun availability do vary slightly from BRFS or GSS data for some states, Cook's Index is, within regions, highly correlated with both. For instance, the four states identified as having the highest—and for the four identified as having the lowest—incidence of guns are highly correlated on all three measures.

(ii) *Social Causation* For the moment, though, let us set aside uncertainty about the number of guns, and accept Stell's chart comparing the number of guns with the number of homicides. Does this help us to determine whether gun availability causes (or does not cause) homicides—let alone, suicides and accidents? No. For this long term, aggregate, time series data makes no adjustments whatsoever for crime waves, and is wholly incapable of accounting for well-known confounding factors for homicides, suicides, or accidents—factors such as rates of urbanization, age of the population, poverty rates, number of police, and so forth.¹¹ In short, using long-term aggregate data ignores highly relevant factors. And, unless one has controlled for relevant variables, the result "can be explained by variables other than those stated in the hypothesis."¹²

There are some fairly sophisticated methods for determining causation using time-series data, but only if we have some clear "activation of an independent variable" and use some statistical procedures—for example, factorial analysis—that make the assessment of causation more plausible.¹³ Even then, there are problems with trying to determine social causation using such data. But without these measures, the attempt is futile.

Here is a simple example that shows why Stell's charts do not show what he claims they show. During the same fifty-year period that he chronicles, both smoking and life span increased. By Stell's reasoning we could then see directly that smoking prolongs life. But, of course, we know that smoking has exactly the opposite effect. Moreover, we can easily explain why life span would increase during those years, even knowing full well that smoking causes cancer. These same factors will also undergird an explanation for why we had some (slight) declines in homicides and suicides during the same period. Consider the following table.

Injury Death Rates
(per 100,000 population)

Year	Total Unintentional	Motor Vehicle	Falls	Suicide	Homicide
1980	80	27	15	16	9
1940	73	26	18	14	6
1960	60	23	14	11	5
1960	52	21	11	11	5
1970	56	27	8	12	8
1980	46	23	6	12	11
1990	37	19	5	12	10
1997	35	16	4	11	7

From National Safety Council

Table 1

Death rates from a variety of causes have declined substantially over the past seventy years. The declines are plausibly explained by three factors: (a) improved medical care, especially emergency care, (b) improved communications, and (c) improved transportation. Those with life-threatening injuries are now more likely to contact a medical facility, to which they are more speedily transported and at which they receive life-saving care. Given these improvements, it is not surprising that many injuries that once killed people no longer do so, whether the injuries are caused by motor vehicle accidents, falls, or guns. It is interesting, however, that although homicides and suicides did decrease, their rate of decrease is smaller than the decline in the rates for deaths by the other means. This is not surprising given the lethality of guns. Indeed, their lethality is one strong reason why we would think that homicides, "successful" suicides, and accidental death rates would be higher in areas with more readily available guns.

According to most statisticians, the best way to discover whether guns cause increases in homicides, suicides, and accidental deaths is not via simple time-series data such as those used by Stell. There are, not surprisingly, disagreements about exactly which design is best: some extol the virtues of cross-sectional studies, which compare different groups at the same time. Others advocate small case-control studies.¹⁴ Still others use mixed

approaches, for instance, a time series of cross-sectional studies.¹⁵ Studies using these more sophisticated methods do not support Stell's claims.

(iii) *The empirical data* Stell's objections, however, make it clear that I failed to include sufficient references to studies relating gun availability to homicides, suicides, and accidental deaths. I wish to remedy that failure. First, the evidence of the connection between gun availability and homicide rates is not limited to the United States. A study that compared the 26 most developed nations of the world "shows a highly significant correlation between total homicide rates and both proxies for gun availability."¹⁶ There are, of course, always worries about comparisons across countries since countries may collect and categorize the data in different ways. Nonetheless, this comparison is plausible since, by comparing developed countries with each other, we lessen the chance that differential economic and social conditions caused the different death rates. Moreover, this data squares with the Carter data given in my initial paper and with other studies I have read, some of which are mentioned in what follows.¹⁷

My initial paper did fail in one important respect: it significantly understates the grounds for concern about the connection between gun availability with both suicides and accidents. While writing the essay I was thinking primarily about adults and assumed that adults arguably have a right (a) to take their own lives and (b) to engage in actions that are dangerous to them. But this consideration is, I now think, largely irrelevant since children account for a disproportionate number of these deaths. Consider first the rates of homicides, suicides, and accidental deaths among five to fourteen year olds (Table 2). Like the previous study mentioned, this one compares deaths among U.S. children to those of children in the other 25 most prosperous countries in the world. Again, as with all these studies, there may be confounding factors, and there are always questions, mentioned above, about determining gun availability. Nonetheless, the relative findings are compelling. U.S. children in that age range are seventeen times more likely than their counterparts in other developed countries to be killed by a gun (and six times more likely to be killed by any means); they are twice as likely to commit suicide (and ten times more likely to do so with a gun); and they are nine times more likely to die of an accidental gunshot wound.¹⁸

Homicide, Suicide, and Deaths among 5-14 year olds
 US versus 25 other richest nations with populations above 100,000
 (early 1990s)

Homicide			
	gun homicide	non-gun homicide	total
US	1.22	53	1.75
non-US	.07	23	3
ratio	17:1	2:1	6:1
Suicide			
	gun suicide	non-gun suicide	total
US	.49	.35	.84
non-US	.05	.35	4
ratio	10:1	1:1	2:1
Unintentional gun deaths			
US	.46		
non-US	.05		
ratio	9:1		

(from Hemenway and Miller 2000)

Table 2

But this evidence does not stand alone. Not only do we have widely touted small studies showing a strong correlation between gun availability and suicides.¹⁹ Researchers at Harvard recently performed a meta-analysis of all available studies: "All case control studies indicate that a gun in the home is significantly associated with a higher risk of suicide, especially among youth."²⁰ Although they acknowledge that some forms of studies—forms they find questionable—do not show that correlation, they conclude that "[t]he preponderance of current evidence indicates that gun availability is a risk factor for youth suicide in the United States."²¹

Finally, let us look again at the link between gun availability and accidental deaths cited in the previous table. Stell claims, using the same reasoning discussed above, that since accidental gunshot deaths have declined, we can just see that guns play no causal role in accidental deaths.²² But the reasoning here faces the same problem as his claims about the homicide data. A simple decline does not show that guns play no causal role, especially because (1) we have a better explanation for the decline, in terms of better emergency care, better communication, and better transportation, and (2) there is such a wide disparity in accidental deaths between nations with many guns and those with few guns.

The same disparity is clearly repeated between states. Compare the accidental death rates in the four states with the highest gun availability to the states with the lowest gun availability (Table 3). Overall, rates of accidental gun

deaths in the high states were more than seven times those in the lowest (even adjusting for known confounding factors). But, as before, what is perhaps most compelling is that the comparative rates are especially high for those aged 0-4 (17.3:1) and 5-14 (13.5:1).²³

Accidental Gun Deaths in the 4 States
with the Most and Fewest Guns
 1979-97, by age group

Age Group	# in four highest (LA, AL, AK, MS)	# in four lowest (HI, MA, RI, NJ)	Ratio of rates
0-4	104	6	17.3
5-14	565	42	13.5
15-19	706	110	6.7
19-24	560	111	5.8
25-34	736	142	6.6
35-44	515	79	8.2
45-54	305	57	6.6
55-64	260	39	8.5
65+	357	39	11.5
All ages	4,108	625	7.6

(from Miller and Hemenway 2001)

Table 3

When taken together, we have strong evidence of the risks of widespread gun ownership, especially for those under fourteen years of age.

Furthermore, this entire discussion has ignored the enormous personal and financial costs of *non-fatal* gunshot injuries. According to the most recent study, the costs of "treating all gunshot injuries in 1994 was \$2.3 billion. Of these costs, we estimate that \$1.1 billion was paid by government."²⁴

Taken together, such evidence gives us good reason to tackle this problem. For we have now reached a situation in which the number of people killed by firearms (homicides, suicides, and accidental gunshot deaths) in this country virtually equals the number of people killed in motor-vehicle accidents.²⁵ Once we became vividly aware of the personal costs of motor vehicle accidents, we made serious efforts to limit deaths, for example, by lowering speed limits, requiring drivers and passengers to wear seat belts, and taking other safety measures. The results have been impressive. Is it not time to make similar efforts to control gun deaths?

Strict Liability

In more than a year since writing "Gun Control," I have become increasingly convinced that using strict liability would be a valiant effort—and probably an effective strat-

egy—for eliminating some of the detrimental effects of private ownership of guns, without having to resort to more intrusive governmental methods. Some states have already established laws moving in this direction, and we have (admittedly preliminary) evidence that these laws have the desired effect. There are now twelve states with laws requiring gun owners to store their guns in a place reasonably thought to be inaccessible to young children. The most important effect of these laws is in lowering the number of accidental deaths among children. The study in question found that “unintentional firearm deaths among children under fifteen were 23 percent lower (95 percent CI, 6 percent - 37 percent) than expected” in states with these laws.²⁶

Since in most of these states violation of the law was only a misdemeanor, arm-chair considerations suggest the effect of such laws would be small. Moreover, this study explores only the use of the law to punish the negligent storing of guns. Hence, it is plausible to infer that a more robust policy of strict liability would have more significant effects across a broader population. It is a strategy well-worth trying, especially since it only holds people responsible for knowingly engaging in risky actions (owning a gun)—much in the way most jurisdictions treat ownership of dynamite.

I am worried, though, that by emphasizing this pro-

posal, readers might infer that this is the only step I think we need take. If so, then I wish to clarify my position. First, I think we could explore whether waiting periods and detailed background checks really do lessen the detrimental effects of private gun ownership. The evidence of such methods is thin; more needs to be done. Perhaps most importantly, though, we should take steps to lessen the social conditions that prompt crime. After all, we know the correlations between crime and poverty are compellingly high. The problem, of course, is not bare poverty per se, but all that normally accompanies poverty: poor nutrition, poor medical care, and poor education. Conversely, we know that a flourishing economy is often followed by declines in the crime rate, and especially the violent crime rate. Witness the dramatic changes between 1993-98, when we have had the longest sustained economic growth in the country's history. During this period the violent victimization rates fell a full 34 percent.²⁷ Doubtless, not all the change can be explained by a change in overall economic welfare; but it is implausible to think that it is not an important element. Thus, although working to lessen poverty will not eliminate violence, in conjunction with other efforts—including the strict liability for private handgun possession—it may make a serious dent in the number of people killed and injured by gunshot.

NOTES

1 LaFollette, *Gun Control* 110 ETHICS 283 (2000).

2 Wheeler, *Arms as Insurance* 13 PUB. AFF. Q. 111 (1999).

3 Stell, *Comments on LaFollette's "Gun Control,"* Dec. 29 2000.

4 Stell, *Gun Control and the Regulation of Fundamental Rights*, in this volume, at 32, note 18.

5 *Id.* at 30.

6 Stell, *Comments, supra* note 3.

7 G. KLECK, TARGETING GUNS: FIREARMS AND THEIR CONTROL 27, 65-66 (1997).

8 Cook & Ludwig, *Guns in America: National Survey on Private Ownership and Use of Firearms*, NATIONAL INSTITUTE OF JUSTICE: RESEARCH IN BRIEF 1 (1997).

9 P.J. COOK & J. LUDWIG, GUNS IN AMERICA: NATIONAL SURVEY ON PRIVATE OWNERSHIP AND USE OF FIREARMS (1997).

10 Cook, *The Effect of Gun Availability on Robbery and Robber Murder: A Cross Sectional Study of 50 Cities*, 3 POL'Y STUD. REV. ANN. 743 (1979).

11 In other contexts, for instance, in the capital punishment debate, everyone understands that such factors are crucial. Both sides, for example, recognize the need to consider these factors in evaluating claims about the deterrent effect of capital punishment. See L. POJMAN & J. REIMAN, *THE DEATH PENALTY: FOR AND AGAINST* (1998).

12 C. FRANKFORT-NACHMIAS & D. NACHMIAS, *RESEARCH METHODS IN THE SOCIAL SCIENCES* 50 (2000).

13 *Id.* at 124, 108 et seq.

14 Cummings & Koepsell, *Does Owning a Firearm Increase or Decrease the Risk of Death?* 280 (5) JAMA 461 (1998).

15 Miller & Hemenway, *Firearm Availability and Unintentional Firearm Deaths*, ACCIDENT ANALYSIS & PREVENTION (forthcoming 2001).

16 Hemenway & Miller, *Firearm Availability and Homicide Rates across 26 High-Income Countries*, 49 (6) J. TRAUMA 3 (2000).

17 G.L. CARTER, *THE GUN CONTROL MOVEMENT* (1997). Other relevant studies include: Baker, *Without Guns, Do People Kill People?* 75 AM. J. PUB. HEALTH 587 (1985); Blumstein & Rosenfeld, *Explaining Some Recent Trends in U.S. Homicide Rates*, 88 J.L. & CRIMINOL.

1175 (1998); Krug, Mercy, Dahlberg & Powell, *Firearm and Non-Firearm-Related Homicide among Children*, 2 HOMICIDE STUD. 83 (1998); A. REISS & J. ROTH, (ED.), UNDERSTANDING AND PREVENTING VIOLENCE (6th. ed. 1996); Hastings & Hamberger, *Personality Characteristic of Spouse Abusers: A Controlled Comparison*, 3 *Violence and Victims* 31 (1988); S. BRILL, FIREARM ABUSE: A RESEARCH AND POLICY REPORT (1977); Loftin, McDowall, Wiersema, & Cottey, *Effects of Restrictive Licensing of Handguns on Homicide and Suicide in District of Columbia* 329 NEW ENG. J. MED. 1084 (1993). See also the following analysis of Kleck's results: Alba & Messner, "Point Blank" Against Itself: Evidence and Inference about Guns, Crime, and Gun Control, 11 *Journal of Quantitative Criminology* 391 (1995).

18 Centers for Disease Control, *Rates of Homicide, Suicide, and Firearm-Related Death among Children—26 Industrialized Countries*, 46 (5) MMWR WEEKLY 101-05 (1997); see Table 2.

19 Kellerman, Rivara, Sommes, Reay, Francisco, Banton, Prodzinski, Fligner, & Hackman *Suicide in the Home in Relation to Gun Ownership*, 327 N.E. J. MED. 467 (1992).

20 Hemenway & Miller, *The Relationship between Firearms and Suicide: A Review of the Literature*, 4 AGGRESSION & VIOLENT BEHAVIOR 59, at 73 (1999).

21 *Id.*

22 Stell, *supra* note 4, at 31.

23 Miller & Hemenway, *supra* note 10; see Table 3.

24 Cook, Lawrence, Ludwig, & Miller, *The Medical Costs of Gunshot Injuries in the United States*, 282 (5) JAMA 447 (1999).

25 Centers for Disease Control, *Deaths Resulting from Firearm- and Motor-Vehicle-Related Injuries—United States 1968–1991*, 43 (3) MMWR WEEKLY 37 (1994).

26 Cummings, Grossman, Rivara, & Koepsell, *State Gun Safe Storage Laws and Child Mortality Due to Firearms* 278 (13) JAMA 1084, at 1085 (1997).

27 U.S. DEPT. OF JUSTICE, NATIONAL CRIME VICTIMIZATION SURVEY 1 (2000).