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Gun Control after *Heller*: Litigating against Regulation

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A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed. (Second Amendment to the U.S. Constitution)

And whatever else [the Amendment] leaves to future evaluation, it surely elevates above all other interests the right of law-abiding, responsible citizens to use arms in defense of hearth and home" (District of Columbia v. Heller, 2008).

1. Introduction

The economic justification for regulating firearms design, ownership or use is the existence of negative externalities. For many individuals, the freedom to "keep and bear arms" brings private benefit in the form of the enjoyment of the sporting uses of guns, as well as a heightened sense of security against intruders and other assailants; there may also be a public benefit if criminals are deterred by the risk that a victim will defend himself with lethal force. However, the widespread private ownership of guns comes at the price of increased availability of guns for criminal use, with a resulting intensification of criminal violence. The balance between benefit and cost differs widely across states, and in fact federal firearm regulations explicitly allow for and support such heterogeneity: The Gun Control Act of 1968 establishes a minimum standard for firearm regulation, and provides a framework to insulate the states from each other, so that it is feasible for some to choose a higher standard than the federal minimum. It is also true that much of the differentiation in the cost-benefit balance occurs *within* states, where residents of large cities tend to suffer relatively high rates of violent crime and have little interest in gun sports, while the reverse is true in rural areas and small towns. As a result, some of the most extreme regulations have been adopted by cities rather than states. Approximately 40 states, out of concern for just that outcome of the local political process, have adopted preemption laws that reserve at least some gun regulation for the state legislature.

In the 1990s this regulatory system was challenged in court by a number of cities where gun crime was imposing great costs. Frustrated by their inability to change gun regulations through the legislative process, they initiated mass tort actions that were intended to impose higher standards through the "end around" of expanded liability. The theories in these suits asserted unsafe and hence defective design, or that the industry was creating a public nuisance through failure to police the supply chain by which guns were marketed (and often found their way into dangerous hands). As it turned out, this effort never got much traction in the courts and has been almost entirely unsuccessful. As the *coup de grace*, Congress enacted legislation in 2005 that provides immunity to the firearms industry in both state and federal courts for damages resulting from criminal misuse of guns (The Protection of Lawful Commerce in Arms Act).

The American system of firearm regulation is again threatened by litigation, but now the threat comes from the opposite direction. In June 2008 the U.S. Supreme Court struck down the District of Columbia's handgun ban (*D.C. v. Heller*, 118 S.Ct. 2783), recognizing for the first time an individual constitutional right to own a gun. While the

immediate effect of this opinion is only to invalidate an unusually stringent regulation in a city that is also an enclave of the federal government, the domain of this new right has not yet been clearly defined. It will be subject to numerous tests in litigation during the years to come. Existing regulations governing firearms commerce and possession will be challenged by affected parties claiming they violate the new right that the majority of the Supreme Court has discovered in the Second Amendment. Litigation will seek to curtail, rather than extend, restrictions on the gun commerce, but this new scenario is once again an end-around the political process.

The "core right" established by the *Heller* decision is the right to keep an operable handgun in the home for self-defense purposes. If the Supreme Court extends this right to cover state and local jurisdictions through the Fourteenth Amendment, the result of this new litigation against regulation is likely to include the elimination of the most stringent existing regulations – such as Chicago's handgun ban – and could also possibly ban regulations that place substantial restrictions or costs on handgun ownership.

Our analysis is necessarily speculative, but we find evidence in support of four conclusions:

- The effect of *Heller* may be to increase the prevalence of handgun ownership in jurisdictions that currently have restrictive laws;
- Given the best evidence on the consequences of increased prevalence of gun ownership, we predict that these jurisdictions will experience a greater burden of crime due to more lethal violence and an increased burglary rate;
- Nonetheless, a regime with greater scope for gun rights is not necessarily inferior – whether the restrictive regulations in places like Chicago, San Francisco, and New York City would pass a cost benefit test may depend on whether we accept the *Heller* viewpoint that there is a legal entitlement to possess a handgun;
- In any event, the core right defined by *Heller* leaves room for some regulation that would reduce the negative externalities of gun ownership.

The remainder of the paper is organized as follows. In the next section we characterize private gun ownership and uses, together with the existing system of firearm regulations in the U.S. Section 3 discusses the initial wave of tort litigation against the gun industry that arose during the 1990s, while Section 4 discusses the recent *Heller* decision and what it may, or may not, imply for existing firearm regulations at the federal, state, and local levels. Section 5 reviews what is at stake in the litigation against regulation, and provides an analysis from the welfare-economics perspective. Section 6 concludes.

2. Guns, gun violence, and gun regulation in America[1]

Litigation in this area is motivated by concerns that existing regulations either go too far or do not go far enough. Assessing these claims requires some understanding of

[1] This section draws in part on material from Cook and Ludwig (2006).

the existing regulatory system. In what follows we first review what is known about guns and gun violence in America as a backdrop to discussing existing gun regulations.

A. Gun ownership and transactions

America has 200–300 million firearms in private circulation.[2] While there are enough guns for every adult to have one, in fact, gun ownership is concentrated in a minority of households. Survey data suggests that about 40% of males, 10% of females, and one-third of all households have one or more guns. Most people who own one gun own many. The most detailed national survey on the subject (the National Firearms Survey) found that gun-owning households average 5.2 guns in 2004, up substantially from the 1970s (Hepburn et al. 2007). The alternative to survey data are the administrative data on manufacturing and net imports, but these provide no guidance as to the rate of disposal of existing guns through breakage, confiscation, and off-the-books imports and exports.

One addition for many gun-owning households has been a handgun. The significance of this trend toward increased handgun ownership lies in the fact that while rifles and shotguns are acquired primarily for sporting purposes, handguns are primarily intended for use against people, either in crime or self-defense. The increase in handgun prevalence corresponds to a large increase in the relative importance of handguns in retail sales: In 2007, ATF reported that handguns represented nearly 42 percent of new firearms manufactured in the United States.[3] (Just 23 percent of manufactures were handguns during the first half of the Twentieth Century (ATF 2000a).

The prevalence of gun ownership differs widely across regions, states, and localities, and across different demographic groups. For example, while 10% of Boston households own a gun, 50% of Phoenix households own one. Residents of rural areas and small towns are far more likely to own a gun than residents of large cities, in part because of the importance of hunting and sport shooting. For the same reason gun

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[2] This number can be estimated through two sources of data, from federal tax records on sales and from a survey. First, the number of new guns added each year is known from data kept by the federal government on manufactures, imports, and exports. The annual count of net additions can be cumulated over, say, the last century, with some assumption about the rate of removal through such mechanisms as off-the-books exports, breakage, and police confiscation (Cook, 1991; Kleck, 1997). The alternative basis for estimating the stock is the one-time National Survey of the Personal Ownership of Firearms (NSPOF), conducted in 1994; this is the only survey that attempted to determine the number of guns in private hands. (A number of surveys, including the General Social Survey, provide an estimate of the prevalence of gun ownership among individuals and households without attempting to determine the average number of guns per gun owner.) The NSPOF estimate for the number of guns in 1994 was 192 million, a number that is compatible with the "sales accumulation" method, assuming that just 15 percent of the new guns sold since 1899 had been thrown out or destroyed (Cook & Ludwig, 1996). Since the survey, the annual rate of net additions to the gun stock has been about 4–5 million per year (ATF 2001, 2002), or 50–60 million by 2006. Given a continued removal rate of just one percent, the stock as of 2006 would be around 220 million. Hepburn et al. (2007) offer a wide range of estimates for the number of guns in circulation based on their 2004 survey – the answer is substantially higher if based on responses about individual ownership than household ownership.

[3] http://www.atf.gov/firearms/stats/afmer/afmer2007.pdf.

ownership also tends to be concentrated among middle-aged, middle-income households (Cook & Ludwig, 1996). These attributes are associated with relatively low involvement in criminal violence, and it is reasonable to suppose that most guns are in the hands of people who are unlikely to misuse them. On the other hand, gun owners are more likely than other adults to have a criminal record (Cook & Ludwig, 1996).

The majority of guns in circulation were obtained by their owners directly from a federally licensed firearm dealer (FFL). However, the 30 to 40 percent of all gun transfers that do not involve licensed dealers, the so-called "secondary market" (Cook, Molliconi, & Cole, 1995), accounts for most guns used in crime (see Wright & Rossi, 1994; Sheley & Wright, 1995; Cook & Braga, 2001). Despite the prominence of gun shows in current policy debates, the best available evidence suggests that such shows account for only a small share of all secondary market sales (Cook & Ludwig, 1996). Another important source of crime guns is theft — over 500,000 guns are stolen each year (Cook & Ludwig, 1996; Kleck 1997).

The volume of gun transactions is impressively large, as indicated by the number of background checks submitted by licensed gun dealers. In 2008 there were 9.9 million checks, and since 1994 (when they were first required nationwide) there have been 97 million (http://www.ojp.usdoj.gov/bjs/pub/html/bcft/2008/bcft08st.htm). Note that there is not a one-to-one correspondence between checks and sales, since a single transaction can involve several guns. (It is also true that about 1.5 % of background checks are denied.) Further, a large percentage of transactions do not involve a licensed dealer, as noted above, and hence are not subjected to a background check or included in the above statistics.

The relatively active and open firearms market in the United States provides a source of arms to criminals.[4] and also to traffickers who supply weapons to gangs in Canada and Mexico, where gun transactions and possess are more tightly regulated (Cook, Cukier and Krause 2009).

B. Gun Violence

A great many Americans die by gunfire. The gun-death counts from suicide, homicide, and accident have totaled over 28,000 for every year from 1972 to 2006. In 2006, there were approximately 30,900 firearms deaths, a rate of 10.2 per 100,000 U.S. residents. All but 862 were either suicides or homicides. While homicides make the headlines, there were actually 4,100 more gun suicides than homicides. The remainder were classified as accidents, legal interventions, or unknown (http://webappa.cdc.gov/sasweb/ncipc/mortrate.html). Various points of reference help calibrate these numbers. In terms of Americans killed, a year of gun deaths in the United States is the equivalent of U.S. casualties during the entire Korean War. Another familiar

[4] The open market also is exploited by traffickers who supply gangs and violent individuals in Canada and Mexico (Cook, Cukier, and Krause 2009). These international spillovers have negative consequences for American interests, both directly and indirectly through our negotiating position with these countries.

reference is the highway fatality rate, which is about 50 percent higher nationwide that the firearms death rate.

It is criminal homicide and other criminal uses of guns that cause the greatest public concern. There are relatively few fatal gun accidents, and suicide seems more a private concern than a public risk. Fortunately the homicide rate (both gun and non-gun) has been dropping rapidly in recent years, but from twentieth century highs in 1980 and 1991 of over 10 per 100,000. The rate was just 6.2 in 2006. Nearly70 percent of homicides are committed with guns, mostly (80 percent) handguns.

Homicide is not a democratic crime. Both victims and perpetrators are vastly disproportionately male, black or Hispanic, and quite young. With respect to the victims, homicide is the leading cause of death for minority youths. The gun homicide rate in2006 for Hispanic men ages 18 to 29 was five times the rate for non-Hispanic white men of the same age; the gun homicide rate for black men 18 to 29 was 109 per 100,000, 18 times the rate for white males in that age group . (Most male victims in the high-risk category are killed by people of the same race, sex, and age group (Cook and Laub 1998).) About 85 percent of the homicide victims in this group were killed with firearms. The disparity between the demography of gun sports and of gun crime is telling: sportsmen are disproportionately older white males from small towns and rural areas, while the criminal misuse of guns is concentrated among young urban males, especially minorities.

The costs of gun violence to society are more evenly distributed across the population than victimization statistics would suggest. The threat of being shot causes private citizens and public institutions to undertake a variety of costly measures to reduce this risk, and all of us must live with the anxiety caused by the lingering chance that we or a loved one could become a victim. As a result, the threat of gun violence is in some neighborhoods an important disamenity that depresses property values and puts a drag on economic development. Gun violence, then, is a multifaceted problem that has notable effects on public health, crime, and living standards.

While quantifying the magnitude of these social costs is difficult, one contingent-valuation (CV) survey estimate found that the costs of gun violence were on the order of $100 billion in 1995 (Cook & Ludwig, 2000). Most ($80 billion) of these costs come from crime-related gun violence. Dividing by the annual number of crime-related gunshot wounds, including homicides, implies a social cost per crime-related gun injury of around $1 million (Ludwig & Cook, 2001).[5]

[5] Note that this estimate is intended to capture the costs of gun misuse and so ignores the benefits to society from widespread gun ownership, in the same way that studies of the social costs of automobile accidents ignore the benefits from driving. The figure comes, in part, from CV responses about what people say they would pay to reduce crime-related gun violence by 30%. One potential concern is that these estimates assume that societal willingness to pay to reduce gun violence is linear with the proportion of gun violence eliminated, which may not be the case. And in practice there remains some uncertainty about the reliability of the CV measurement technology. In any case, most of the estimated costs of gun violence to the U.S. appear to come from crime, since suicide seems more like a private concern, and the estimated costs of gun crime by Cook and Ludwig (2000) fits comfortably next to more recent CV estimates for the social costs of crime more generally (Cohen, Rust, Steen, & Tidd, 2004).

C. Self-Defense uses

The same features of guns that make them valuable to criminals may also make guns useful in self-defense. Just how often guns are used in defense against criminal attack has been hotly debated, and remains unclear. Estimates from the National Crime Victimization Survey (NCVS), a large government-sponsored in-person survey that is generally considered the most reliable source of information on predatory crime, suggest that guns are used in defense against criminal predation around 100,000 times per year (Cook 1991). In contrast are the results of several smaller one-time telephone surveys, which provide a basis for asserting that there are millions of defensive gun uses per year (Kleck & Gertz, 1995).

Why do these estimates for the number of defensive gun uses each year differ by more than an order of magnitude? One explanation is that the NCVS only asks questions about defensive gun use to those who report a victimization attempt, while the phone surveys ask such questions of every respondent. As a result the scope for "false positives" will be much greater with the phone surveys compared to the NCVS (Cook, Ludwig, & Hemenway, 1997; Hemenway, 1997a,b). Moreover, as an expert panel of the National Academy of Sciences concluded, "fundamental problems in defining what is meant by defensive gun use may be a primary impediment to accurate measurement" (Wellford, Pepper, & Petrie, 2005, p. 103; see also McDowall, Loftin, & Presser, 2000). When respondents who report a defensive gun use are asked to describe the sequence of events, many of the cases turn out to have involved something far less threatening than one might suppose (Hemenway, 2004).

Whatever the actual number of defensive gun uses, the mere threat of encountering an armed victim may exert a deterrent effect on the behavior of criminals. A growing body of research within criminology and economics supports the notion that some criminals are sensitive to the threat of punishment (Cook, 1980; Nagin, 1998; Levitt, 2001). It is therefore not surprising that the threat of armed victim response may also figure in criminal decisions: Around 40 percent of prisoners in one survey indicated that they had decided against committing a crime at least once because they feared that the potential victim was carrying a gun (Wright & Rossi, 1994). Whether that type of consideration actually affects crime rates is another matter, to which we return below.

Whether or not it enhance objective security, millions of households choose to keep a gun for self-defense. Many more keep guns for sporting purposes—hunting, target shooting, and collecting. The goal of gun policy in the U.S. has been to preserve these traditional uses of guns for most of the adult population, while reducing access and use by the highest-risk groups. Whether the current system achieves the proper balance between preserving access and preventing misuse remains, of course, the subject of considerable debate.

D. Gun regulations

To see what may be at risk with the new interpretation of the Second Amendment, it is useful to review current regulations. While far less stringent that those in other wealthy nations (Hemenway 2004), most aspects of firearms commerce and possession are subject to federal and state regulations.

The primary objective of federal law in regulating guns is to insulate the states from one another, so that the stringent regulations on firearms commerce adopted in some states are not undercut by the relatively lax regulation in other states (Zimring, 1975). The citizens of rural Montana understandably favor a more permissive system than those living in Chicago, and both can be accommodated if transfers between them are effectively limited. The Gun Control Act of 1968 established the framework for the current system of controls on gun transfers. All shipments of firearms (including mail-order sales) are limited to federally licensed dealers who are required to obey applicable state and local ordinances, and to observe certain restrictions on sales of guns to out-of-state residents.[6]

Federal law also seeks to establish a minimum set of restrictions on acquisition and possession of guns. The Gun Control Act specifies several categories of people who are denied the right to receive or possess a gun, including illegal aliens, convicted felons and those under indictment, people ever convicted of an act of domestic violence, users of illicit drugs, and those who have at some time been involuntarily committed to a mental institution. Federally licensed dealers may not sell handguns to people younger than twenty-one, or long guns to those younger than eighteen. And dealers are required to ask for identification from all would-be buyers, have them sign a form indicating that they do not have any of the characteristics (such as a felony conviction) that would place them in the "proscribed" category, and initiate a criminal-history check. Finally, dealers are required to keep a record of each completed sale and cooperate with authorities when they need to access those records for gun-tracing purposes (Vernick and Teret, 2000; LCAV 2009). On the other hand, sales of guns by people not in the business are not subject to federal regulation; the seller, whether at a gun show or elsewhere, may transfer a gun without keeping a record of sale or doing any sort of background check on the buyer. This "private sale" loophole is more like a gaping barn door for the used-gun market.

In addition to these federal requirements, states have adopted significant restrictions on commerce, possession, and use of firearms. Eleven states require that handgun buyers obtain a permit or license before taking possession of a handgun, a process that typically entails payment of a fee and some waiting period (LCAV 2009). All but a few such transfer-control systems are "permissive," in the sense that most people are legally entitled to obtain a gun. In those few jurisdictions, including Massachusetts and New York City, it is very difficult to obtain a handgun legally, while

[6] The McClure-Volkmer Amendment of 1986 eased the restriction on out-of-state purchases of rifles and shotguns. Such purchases are now legal as long as they comply with the regulations of both the buyer's state of residence and the state in which the sale occurs.

Chicago and Washington, D.C. have prohibited handgun acquisition since 1982 and 1976 respectively. A variety of more modest restrictions on commerce have been enacted as well: for example, Virginia, Maryland, California and New Jersey have limited dealers to selling no more than one handgun a month to any one buyer.

Gun design

Federal law also imposes some restrictions on gun design, and in fact some types of firearms are effectively prohibited. The National Firearms Act of 1934 (NFA) was intended to eliminate gangster-era firearms, including sawed-off shotguns, hand grenades, and automatic weapons that are capable of continuous rapid fire with a single pull of the trigger. The legal device for accomplishing that purpose was a requirement that all such weapons be registered with the federal government and that transfers be subject to a tax of $200, which at the time of enactment was confiscatory. While some of these weapons have remained in legal circulation, the NFA (now amended to ban the introduction of new weapons of this sort into circulation) appears to have been quite effective at reducing the use of automatic weapons in crime (Kleck, 1991).

The Gun Control Act of 1968 included a ban on the import of small, cheap handguns,[7] sometimes known as "Saturday Night Specials." This ban was made operational through the development of the factoring criteria that assigned points to a gun model depending on its size and other qualities (Zimring, 1975, Karlson and Hargarten, 1997). Handguns that fail to achieve a minimum score on the factoring criteria, or do not meet size and safety criteria, cannot be imported. However, it is legal for domestic manufacturers to assemble guns, often from imported parts, that fail the factoring criteria, and that market "niche" has been well supplied. One study found that one-third of new domestically manufactured handgun models did not meet the size or quality requirements that are applied to imports through the factoring criteria (Hargarten, 2001; see also Wintemute, 1994).

In 1994 Congress banned the importation and manufacture of certain "assault" weapons, which is to say military-style semi-automatic firearms. The Crime Control Act banned 19 such weapons by name, and others were outlawed if they possess some combination of design features such as a detachable magazine, barrel shroud, or bayonet mount (Vernick and Teret, 2000, p. 1197). The Act also banned manufacture and import of magazines that hold more than 10 rounds. Existing assault weapons and large-capacity magazines were "grandfathered" (Roth and Koper, 1999). In 2004, this assault weapons ban was allowed to expire.

Federal law leaves unregulated those types of firearms that are not specifically banned. Firearms and ammunition are excluded from the purview of the Consumer Product Safety Commission (Vernick and Teret, 2000). There is no federal agency that has responsibility for reviewing the design of firearms, and no mechanism in place for

[7] An important loophole allowed the import of parts of handguns that could not meet the "sporting purposes" test of the Gun Control Act. This loophole was closed by the McClure-Volkmer Amendment of 1986.

identifying unsafe models that could lead to a recall and correction (Bonnie, Fulco and Liverman, 1999). Some states have acted independently on this matter. For example in 2000 the attorney general of Massachusetts announced that firearms would henceforth be regulated by the same authority available to his department for other consumer products, and those deemed unacceptable would be taken off the market.[8]

Massachusetts is unique in asserting broad state authority to regulate gun design and gun safety. There are a handful of states in which the legislatures have acted to restrict the permissible design of new guns in a more limited way. The first important instance of this sort occurred in Maryland, with its ban on Saturday Night Specials. The Maryland legislature acted in response to a successful law suit against a manufacturer. In exchange for relieving manufacturers of small, cheap handguns from liability, the legislature created a process for reviewing handgun designs and specifying which models would be ruled out due to size and safety concerns. As of 2008 a total of eight states have some version of a Saturday Night Special ban in place (LCAV 2009). California has also been active in recent years, instituting among other measures its own ban on assault weapons and a number of safety requirements for handguns.

Gun possession and use

States and some localities also specify the rules under which guns may be carried in public. Every state except Vermont and Alaska places some restriction on carrying a concealed firearm. The trend over the past several decades has been to ease restrictions on concealed carry, replacing prohibition with a permit system, and easing the requirements to obtain a permit. Currently, adults who are entitled to possess a handgun can obtain a permit to carry after paying a fee in most states (LCAV 2009; Lott, 2000).

There has also been some effort to regulate storage. Federal law beginning in 2005 requires that all handguns sold by licensed dealers come equipped with a secure storage device. Eleven states and DC have laws concerning firearm locking devices. The Maryland legislature adopted a pioneering requirement, namely that all handguns manufactured after 2003 and sold in that state be "personalized" in the sense of having a built-in locking device that requires a key or combination to release. Massachusetts and the District of Columbia require that all firearms be stored with a lock in place.

Record keeping

The primary purpose of some gun regulations is to assist law enforcement in solving crimes. In particular, federal law requires that all licensees in the chain of commerce (manufacturers, distributors, retail dealers) keep records of transfers and make them available to law enforcement for tracing purposes. For example, if a police department has confiscated a firearm that may have been used in a crime, they can submit

[8] The effect has been to ban "Saturday night specials" and require that handguns sold in Massachusetts include childproof locks, tamper-proof serial numbers and safety warnings. The gun-safety regulations affect manufacturers as well as retailers.

a trace request through the National Tracing Center of the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF), which will attempt to trace the chain of commerce using the serial number and other characteristics of the gun. If all goes well, the retail dealer that first sold the gun will be identified, and will supply information from the form that the buyer filled out. This system is inefficient and error prone, and even if successful usually leaves the investigators far short of the information they really want, which is the identity of the most recent owner of the firearm (Cook and Braga 2001). A more direct system of national registration has been politically impossible to implement except in the case of weapons of mass destruction (National Firearms Act).

A few states have registration requirements. Notably, California requires registration of handgun transactions, even if they occur between private parties. That requirement complements a new regulation that all semiautomatic pistols sold in the state after 2010 be designed with a microstamp capability that will print the serial number, make and model of the gun on the shell casing when the gun is fired. Shell casings are ejected from pistols and often left at the scene by the shooter, where they can be collected by investigators and, under the new law, used to initiate a trace even when the gun itself is not in custody.

Rulemaking vs. legislation

It should be noted that the regulations on gun commerce and possession are almost entirely the result of legislation rather than a regulatory rulemaking process. The latter places greater requirements on the decision makers to solicit alternative viewpoints and consider costs and benefits. Whether the federal courts will consider social costs and benefits in reviewing Second Amendment cases remains to be seen.

3. Tort litigation against the gun industry

The wave of mass tort litigation against the gun industry that occurred in the 1990s is now largely of historical interest, since it has accomplished very little except to confirm the political power of pro-gun groups. However, the academic debate over these lawsuits may usefully inform our evaluation of the new wave of litigation inspired by the *Heller* decision.[9]

The suits against the firearms industry were inspired by and had strong parallels with the lawsuits so successfully brought by the state attorneys general against the tobacco industry. The cigarette manufacturers ultimately settled those suits, agreeing to some restrictions on their marketing practices and to pay the states over $240 billion in damages over the course of 25 years. One difference is that most of the plaintiffs in the case of the gun industry were cities rather than states. Another difference is that the firearms industry is much smaller and more diffuse than the tobacco industry, so that the financial stakes were much smaller. Indeed, the primary motivation for the plaintiffs was not to recover financial damages, but rather to force the industry to take greater responsibility for reducing the amount of damage done by its products.

[9] For a more sanguine perspective of what this litigation accomplished, see Rostron (2006).

The first of the local-government lawsuits against the gun industry was filed by the city of New Orleans on October 30, 1998 (*Morial v. Smith and Wesson Corp*.), which asserted, among other things, that the manufacturers have neglected their duty to incorporate available safety features into the design of their products. The second lawsuit was filed by Chicago on November 12, 1998 (*City of Chicago and Cook County v. Beretta U.S.A., Corp*). Chicago's case focused on marketing practices, asserting that the industry had created a "public nuisance" by neglecting to take feasible measures that would help prevent the illegal sale of its products to Chicago residents or to traffickers who supply residents (Siebel, 1999, p. 248-9, Vernick and Teret, 1999). Following these actions by New Orleans and Chicago, thirty other cities and counties filed against the gun industry, claiming negligence in either its marketing practices or in the design of its products or both.[10]

Various theories of negligence were tried (Lytton, 2005a). Some plaintiffs argued that the gun industry was responsible for negligent marketing practices, which did not do enough to keep guns out of the hands of prohibited users, or more failures to adequately supervise retail gun dealers. The gun industry was also charged with "oversupplying" gun dealers in states with relatively lax gun laws, with the claim that the industry knew the "extra" guns would wind up in jurisdictions with more restrictive regulations, or "overpromoting" weapons that only had legitimate military or law enforcement use. Chicago's case claimed that the unregulated secondary gun market is a "public nuisance" for which the gun industry has responsibility, while Cincinnati argued that the gun industry engaged in deceptive advertising – keeping a gun in the home was argued to increase the risk of injury to residents, rather than improve safety as the industry claimed.

Most of these arguments did not fare well in court. The New Orleans case was dismissed by the Louisiana Supreme Court after the state enacted a law barring such suits. Chicago's case was dismissed and then appealed.[11] As Lytton (2005a, p. 5) notes, of the city lawsuits the "great majority have been dismissed or abandoned prior to trial, and of the few favorable jury verdicts obtained by the plaintiffs, all but one have been overturned on appeal. A handful of claims have been settled prior to trial."

Then on October 26, 2005, President Bush signed the Protection of Lawful Commerce in Arms Act (PLCAA), which to a remarkable degree provided immunity to the firearms industry. This law did preserve the possibility of traditional tort actions against the industry – for example, injuries that result from defects in design or manufacture – but the industry is explicitly exempted from liability for injuries resulting from criminal misuse of its product. While Lytton (2005b) notes that the PLCAA might itself be subject to a variety of constitutional challenges, efforts to enhance gun regulation through litigation have failed for the most part. The *Heller* decision may add an additional legal barrier to this type of suit (Denning 2006; Kopel and Gardiner 1995).

[10] See www.vpc.org/litigate.htm
[11] See www.vpc.org/litigate.htm

4. The *Heller* decision[12]

For most of our country's history, the Second Amendment was absent from the Supreme Court's agenda. When the Amendment came up, it was ineffectual. In the late 1800s, the Court confirmed that the Amendment could not be used against state regulation (Presser v. Illinois, 116 U.S. 252, 264-66). And in 1937, *United States v. Miller* concluded that the federal government was free to restrict possession of sawed off shotguns (U.S. v. Miller, 307 U.S. 174, 178). This opinion seemed to connect Second Amendment rights to state-organized militias, rather than to individual preferences about gun ownership. The Court sought evidence that a short-barreled shotgun "has some reasonable relationship to the preservation or efficiency of a well regulated militia." Lower federal courts followed this notion and the Amendment was essentially a dead letter in litigation. Results involving state constitutions were not dramatically different. State supreme courts invoked state gun rights to invalidate only a few state regulations after World War II (Winkler 2007, pp. 716-26).

The Second Amendment gained force in other locations, however. The gun rights movement made the Amendment a central rhetorical element in its organizing efforts. Many lawmakers were sympathetic. And by the late twentieth century, scholarship on the Amendment was booming. Some legal academics supported an understanding of federal gun rights beyond anachronistic state militias (e.g., Levinson 1989; Cottrol & Diamond 1991; Barnett & Kates 1996; Volokh 1998; see also Tushnet 2007). There were also judicial rumblings. In 1997, Justice Thomas suggested in a concurrence that the Amendment might have provided another basis for invalidating the Brady Act's mandate that local officials conduct background checks on handgun purchasers (Printz v. U.S., 521 U.S. 898, 938-39). In 2001, the Fifth Circuit declared that the Second Amendment included a personal right to keep and bear arms unrelated to militia service, although the court upheld the regulation at issue (U.S. v. Emerson, 270 F.3d 203, 260-61). The Department of Justice then amended its litigation position and endorsed the Fifth Circuit's logic (Memorandum from the Attorney General 2001).[13]

In 2008, the Supreme Court changed its message, too. *District of Columbia v. Heller* became the first successful Second Amendment challenge in the Court's history. The case involved a police officer who wanted to keep an operable handgun in his home and to "carry it about his home in that condition only when necessary for self-defense" (p. 2788 & n.2). But the District is an urban jurisdiction where the gun rights movement has little traction. One local law prohibited possession of handguns by private citizens with only narrow exceptions. A second regulation required firearms to be either unloaded and disassembled or trigger-locked at all times. Exceptions were made for law enforcement officers, places of business, and otherwise lawful recreational activities, but the regulation reached people's homes. A third regulation involved firearms licensing by

[12] This section draws from Cook, Ludwig & Samaha (2009).

[13] When Emerson sought review by the Supreme Court, the Solicitor General abandoned the militia-related view of the Amendment. Brief for the United States (2002), n.3 (accepting, however, "reasonable restrictions designed to prevent possession by unfit persons or to restrict the possession of types of firearms that are particularly suited to criminal misuse").

the chief of police. The *Heller* majority left unaddressed the issue of firearms licensing (p. 2819), but it concluded that the first two regulations infringed this plaintiff's right to have a handgun in his home for self-defense.[14]

It is quite possible to read the majority opinion for very little. The justices did not commit themselves to restraining state or local firearms laws under the Fourteenth Amendment (pp. 2812-13 & n.23). That is where much of the regulatory action takes place. Furthermore, the plaintiff's position in *Heller* was relatively strong. The regulations under attack were fairly broad, the argument came down to a qualified right to handgun possession in the home, and the dissenting justices thought the Amendment not even implicated without a militia connection (pp. 2823, 2847). Even under these circumstances, the gun rights position narrowly prevailed on a 5-4 vote. Perhaps a slightly different case would fracture the majority coalition. After all, it does not take special courage to oppose handgun bans. Opinion polls show large national majorities opposing such bans. Equally telling, a majority of Senators and House members signed an amicus brief arguing that the District's regulations were unconstitutional (Saad 2007 (reporting on Gallup polls); Brief for Amici Curiae 2008).[15] One can imagine the 5-4 vote going the other way had the District permitted a law-abiding citizen to store one handgun in the home, but required handgun training, registration, and a trigger lock at all times—except when and if self-defense became necessary.

Nevertheless, more significant lessons might be drawn from the decision. Its first notable feature is the virtual irrelevance of organized militias to the majority's view of gun rights. The text of the Second Amendment begins with the preface, "A well regulated Militia, being necessary to the security of a free State, ..." Whether or not this assertion is factually accurate, it could be made important to understanding the words that follow: "the right of the people to keep and bear Arms, shall not be infringed." But for the majority, the Amendment's preface cannot be used to limit or expand the meaning of the subsequent words (pp. 2792-97 & nn. 3-4). Instead, the militia reference is taken to indicate the purpose for codifying a pre-existing right of "the people" to keep and bear arms (pp. 2800-02). Although the Amendment followed a debate over standing armies and state militias checking centralized tyranny, the majority contended that the codified right also was valued for self-defense. This self-defense function, not the prerequisites of a robust citizen militia, defines the scope of the right recognized in *Heller*.

[14] Justice Scalia wrote the majority opinion, which was joined by Chief Justice Roberts and Justices Kennedy, Thomas, and Alito. The four dissenters joined two opinions: Justice Stevens' dissent focused on *Miller* and the history surrounding the Second Amendment's adoption (pp. 2823-46), while Justice Breyer's dissent rejected the plaintiff's claims even on the assumption that the Amendment includes a self-defense purpose (pp. 2847-48). Added together, the three opinions total approximately 50,000 words. Our discussion simplifies many nuances of the legal arguments.

[15] There is a large literature on judicial behavior (Friedman 2005). Some scholars emphasize the role of formal law and institutional norms, but empirical studies often suggest other factors. For the argument that justices vote their ideology, see Segal & Spaeth (2002). For an inquiry into strategic behavior, see Epstein & Knight (1998). The classic view of the Court as sticking close to national governing coalitions is Dahl (1957).

Fencing off the Amendment's enforceable right from its militia-oriented preface is revealing. Some of the implications point toward judicial intervention. Private parties are now allowed to raise Second Amendment arguments in court without any relationship to a militia, state-run or otherwise. The content of the right is personal and nonmilitary. As well, incorporation into the Fourteenth Amendment might seem easier once the right is separated from any arguable connection to state militias. If the right is not about federal-state relations, it fits better with the individual rights the Court has been willing to enforce against state and local governments.[16] But another implication involves restraint. The Court's majority is not about to enforce a citizen's right to frighten the United States Armed Forces with overwhelming firepower. The majority's portrayal of the Second Amendment right seems, at most, tangentially related to people protecting themselves from the risks of centralized tyranny (p. 2817). Instead the majority's conception of the right is demilitarized and mainstreamed.

What, then, is the right recognized in *Heller*? Countless observers are struggling with this question. To make progress here, however, we can describe *Heller*'s minimum plausible content—the core right to which a majority of justices seem committed.

Whenever else it might include, this core right involves self-defense with a typical handgun in one's own home. The majority was not interested in a right to carry arms "for *any sort* of confrontation" (p. 2799), and declared that "self-defense . . . was the *central component* of the right" codified in the Amendment (p. 2801). In attempting to explain why the District's handgun ban was defective, the majority asserted that an inherent right of self-defense has been central to the understanding of the Second Amendment in American history, that handguns are now commonly chosen by Americans to provide lawful self-defense, and that "the need for defense of self, family, and property is most acute" in the home (p. 2817). For similar reasons, the majority immunized the plaintiff's handgun from the District's requirement that firearms in the home be kept inoperable at all times. If the plaintiff's handgun could never be made operable in his home, he would not be able to use it there for "the core lawful purpose" of self-defense (p. 2818). Hence the majority's core conception of the right is a law-abiding citizen with a functioning handgun in his own home for the purpose of defending it—perhaps only at the time of attack (pp. 2788, 2822). This conception matches the situation of the actual plaintiff in *Heller*.

In fact, limits were an important theme in the decision. The justices in the majority went out of their way to insulate certain forms of gun control not at issue in the case. They conceded that the Second Amendment right is "not unlimited" (p. 2816), and offered a list of "presumptively lawful regulatory measures" (p. 2817 & n. 26). To put it crudely, this non-exhaustive list includes regulation aimed at:

(1) atypical weapons,
(2) abnormal people,
(3) sensitive locations,
(4) sales conditions,

[16] On the Court's selective incorporation of the Bill of Rights, see Chemerinsky (2006), pp. 499-507.

(5) safe storage, and, perhaps,
(6) concealed carry.

Thus the majority sought to protect weapons "typically possessed by law-abiding citizens" for self-defense in the home (pp. 2815-18), asserting that a limitation to weapons in common use is consistent with a tradition of restricting "dangerous and unusual weapons" (p. 2817). Handguns are thereby covered in view of their current popularity in the market (p. 2818), while the majority strongly suggested that machine guns, M-16s, and sawed off shotguns are not (pp. 2815, 2817). We do not know the extent to which regulation may validly influence which weapons become common. But this kind of limit fits with the majority's demilitarized vision of the Amendment.

The discussion of other regulation was even more brief: "nothing in our opinion should be taken to cast doubt on longstanding prohibitions on the possession of firearms by felons and the mentally ill, or laws forbidding the carrying of firearms in sensitive places such as schools and government buildings, or laws imposing conditions and qualifications on the commercial sale of arms" (pp. 2816-17). Later, in distinguishing founding era regulation of gun powder storage, the majority said that its logic does not suggest problems with "laws regulating the storage of firearms to prevent accidents" (p. 2820). Finally, the majority observed that most nineteenth-century cases had upheld prohibitions on concealed weapons (p. 2816).

Nevertheless, *Heller* has generated much litigation. So far, the lower federal courts have declined to strike down state or local gun laws based on *Heller* (Winkler 2009, pp. 1565-66), in part because the Supreme Court has not yet ruled on the incorporation issue. Among the cases that may find their way to Supreme Court are challenges to Chicago's handgun ban and to New York City's stringent handgun permit system (Wise 2008). Some defendants are making long-shot objections to the federal machine gun ban and felon in possession convictions (e.g., U.S. v. Whisnant, No. 3:07-CR-32, E.D. Tenn. Sept. 30, 2008). And some jurisdictions are avoiding the costs and risks of litigation – which include paying the attorneys fees of prevailing plaintiffs (Lewis & Norman 2001, pp. 442-64) – by repealing firearms regulation without a fight over incorporation. Chicago suburbs have repealed handgun bans after *Heller* (Horan 2008). In early 2009, San Francisco followed this course. It settled a gun rights lawsuit by agreeing to eliminate a lease provision for public housing tenants that prohibited storage of firearms and ammunition (Stipulation 2009). The question is how the legal uncertainty will shake out.

One potentially important issue involves incorporation. If Second Amendment norms restrain only the federal government and not state or local regulation, the policy space will be far less influenced by judicial review. The federal government has not been the principal source of the most stringent gun control measures, and state courts have not been especially aggressive in state constitutional challenges to such regulation. On the other hand, if the Supreme Court interprets the Fourteenth Amendment to include a Second Amendment right, the litigation threat becomes more important.

A fair guess is that the *Heller* majority is poised to incorporate.[17] The majority reserved the issue while noting that its nineteenth century precedents had not employed the Court's more recent approach to incorporation (p. 2813 n.23). In addition, the majority's understanding of the right is emphatically personal. This makes it difficult to resist application against the states with an argument that the Second Amendment was written to protect the militias of those same states. Moreover, the majority's discussion of Reconstruction Era sources indicates concern during that time for gun rights of freed slaves (pp. 2809-11). And if the question is whether the right is sufficiently "fundamental" to warrant enforcement against all levels of government, the *Heller* opinion intimates an affirmative answer (p. 2798). Finally, the Court would not have to totally repudiate a key precedent here, *Presser v. Illinois*. That case involved state restrictions on unauthorized military organizations parading as such, which is far from the demilitarized vision of gun rights endorsed in *Heller*. Still, it has been years since the Supreme Court seriously confronted an incorporation issue. The question involves high stakes and deep jurisprudential controversies, it is being litigated now, and the Court is likely to address it within the next few years.

5. What's at stake

The immediate effect of *Heller* is to ensure that most residents of the District of Columbia will have the legal right to keep a handgun in their home and have it ready to defend against intruders – a right that they have not had since 1976. Assuming that the courts extend this new "core" Second Amendment right to state and local jurisdictions, then handgun bans in Chicago and elsewhere will almost certainly be swept away, quite possibly along with other highly restrictive policies that stop just short of a ban, such as handgun regulation in Massachusetts and New York City. The elimination of legal barriers invites an increase in the prevalence of handgun ownership. Furthermore, it is possible that regulations that have the effect, if not the intent, of making handguns more expensive to acquire and possess will be subject to constitutional challenge. Included here could be such measures as the long-standing federal excise tax on firearms, federal and state design requirements intended to improve safety, licensing and registration fees required in some states, and a potential requirement that owners carry liability insurance. A constitutional limit on such regulations would reduce the effective price of guns in affected jurisdictions and thus provide a further impetus to handgun ownership.

There has been considerable research on the effects of gun prevalence on crime and public health. To understand the potential social costs of the *Heller* decision, we begin with a review of that evidence, and then discuss its application in the framework of welfare economics.

A. Effect of gun prevalence on crime and public health

For some people, the ready availability of a firearm provides a sense of security against intruders, including the nightmare scenario of home invasion by violent criminals.

[17] This is written in October. 2009, just as the U.S. Supreme Court agreed to hear the suit against Chicago's handgun ban, *McDonald vs. Chicago*.

That sense of security may be worth a great deal, whether or not it is based on a rational assessment of the chances that a handgun will be needed for this purpose, or if needed will actually be successfully deployed. One analysis of National Crime Victimization Survey data found that guns are sometimes used to defend against home invasions, but rarely: in only 3% of home invasions was a gun used in self-defense (32,000 instances per year during the period 1979-1987), despite the fact that about 20% of homes possessed a handgun (Cook 1991). It is also true that handguns kept in the home are sometimes used to threaten other family members or to act on a suicidal impulse. Further, other family members, including adolescents and children, may misappropriate them and do great harm. Someone deciding whether to keep a handgun in the home thus faces a situation of competing risks (Graham and Wiener 1995) – without a gun, there is a risk of being unable to defend against a criminal intrusion, while with a gun, there are multiple risks of accident and misuse. The magnitudes of these competing risks will differ widely depending on how the handgun is stored, as well as other factors – such as the crime rate in the community and household characteristics such as the presence of children in the home, and whether household members abuse alcohol and drugs, are inclined to violence, or suffer from depression or other mental illness.

Keeping guns in the home may also generate externalities for the community. Whether such externalities tend to be positive or negative is not clear *a priori*. There are several reasonable mechanisms, which depend in part on how would-be intruders evaluate potential targets. A burglar who knows that a particular residence has guns in it may avoid that residence for fear of encountering armed resistance. (Householders who post signs with a message like "this home is protected by Smith and Wesson" are counting on that mechanism.) If the burglars target nearby residences instead, then gun ownership displaces rather than prevents burglary, a negative externality of keeping a gun in the home. On the other hand, since guns are profitable loot, the incentive to burglars may go in the other direction; if the gun-owning household is specifically targeted, the displacement may be a positive externality to gun-less neighbors. In the more likely case that the burglar does not know which households possess guns, but has an impression of the likelihood that residents in the neighborhood are armed, then these same two mechanisms may operate at the neighborhood level rather than the level of the individual residence. In that case, the decision to keep a gun in the home, if it contributes to perceived gun prevalence in the neighborhood, will have a positive externality within the neighborhood (if guns deter burglary) or a negative externality (if guns induce burglary).

Burglars decide not only which neighborhoods and which homes in those neighborhoods to target, but also how careful to be in avoiding locations where someone is in the house. Burglaries of occupied dwellings may be safer if there are few guns, other things (such as alarms, dogs, and the vigilance of neighbors) held equal.

A variety of evidence has been cited in discussions of how gun prevalence affects residential burglary rates. Interviews with burglars or former burglars provide direct evidence on the deterrent effect, and also on the inducement to burglary of guns in the home. International comparisons are offered, usually comparing the percentage of residential burglaries that are "hot" in the United States with one or more other countries

that have lower gun prevalence. And there have been several econometric studies of these relationships.

Interviews with Burglars Evidence directly relevant for judging the "deterrence" and "inducement" hypotheses comes from surveys of felons. For example, in one 1982 convenience sample of 1,823 state prisoners, 35 percent of respondents "strongly agreed" and 39 percent "agreed" that "one reason burglars avoid houses when people are at home is that they fear being shot." The fear of meeting armed householders also induced some burglars to carry a gun themselves: Of the respondents who used a gun to commit the crime for which they were incarcerated, 50 percent reported that the possibility of encountering an armed victim was "very important" in their decision to employ a gun, while another 12 percent reported that this motivation was "somewhat important (Wright and Rossi 1994)."

At the same time guns are of considerable value to burglars, who typically prefer items that are easy to carry, easily concealed, and have high "pound for pound value (Shover 1991)." As one St. Louis burglar reported, "A gun is money with a trigger (Wright and Decker 1994)." Another respondent in the same study expressed a preference for working in neighborhoods with high proportions of white residents since households in these areas are likely to have "the basics," include guns: "White people hunt a lot more so than blacks."[18]

Nearly half of the respondents to the prison survey mentioned above report that they have stolen a gun during their lifetimes; of this group, seventy percent usually steal guns to sell or trade rather than to keep for themselves.[19]

International Comparisons Since the prevalence of household gun possession is substantially higher in the United States than Canada, Britain, and other wealthy nations, it seems reasonable to test the "deterrence" hypothesis by comparing residential burglary rates and patterns across these nations. As it turns out, relevant data are hard to come by. The Uniform Crime Reports do not provide a basis for estimating the number of "hot" burglaries, nor do the police-recorded data systems of other countries. Relevant survey-based estimates can be generated for the U.S. from the NCVS, but no other country has

[18] See Wright and Decker, (1994), p. 90. On the other hand, a burglar interviewed by Rengert and Wasilchick (1985) said that he shunned burglaries in neighborhoods in which the residents were of a different race because "You'll get shot if you're caught there (p. 62)."

[19] See Wright and Rossi (1994). The prevalence of gun theft in the Wright and Rossi convenience sample of prisoners is higher than in the nationally representative sample of prisoners interviewed as part of the 1991 Survey of Inmates of State Correctional Facilities, in which only 10 percent of respondents report ever having stolen a gun.

an annual crime survey of comparable quality.[20] There have been occasional crime surveys in other nations, which suggest that some other countries may have a higher percentage of residential burglaries involving occupied dwellings than for the United States. But there are severe comparability problems in the data, such as differences between the NCVS and the British Crime Survey in how burglaries are coded when it is not clear whether someone was home at the time of the breakin – that is, the respondent was not aware of the burglary, but believed in retrospect that he or she had been home at the time (Cook and Ludwig 2003).

More importantly, even if we had comparable data there would remain the fact that a variety of potential explanations are plausible for an observed difference in the percentage of residential burglaries that involve occupied dwellings. For example, when burglars are arrested the punishment is more certain and severe in the U.S. than in England and Wales. The difference in penalties provides an alternative explanation for why American burglars take extra care to avoid contact with victims. American and British households differ in a variety of other ways as well that are likely to affect the cost-benefit calculus facing burglars, including substantial differences in the proportion of households that have dogs or lack men. Without controlling for the other differences that may be important, attributing the disparity in hot burglary rates to one particular difference – gun prevalence – is entirely unpersuasive.

Econometric evidence. Cook and Ludwig (2003) analyzed two sorts of data, in both cases finding strong evidence that gun prevalence tended to induce burglary (on balance) rather than deter it. While the prevalence of gun ownership cannot be measured from administrative datasets, and surveys of gun ownership are unusual for subnational units, it turns out that there is an excellent well-validated proxy for prevalence – the percentage of suicides involving guns (Azrael, Cook and Miller 2004; Kleck 2004). Burglary rates can be obtained from the Uniform Crime Reports (UCR) or from the National Crime Victimization Survey. We analyzed both types of data.

We first utilized a 22-year panel of state-level UCR burglary data, finding that changes in burglary rates were positively related to lagged changes in the prevalence of gun ownership (confirming the results of a similar analysis by Duggan, 2001). The gun-prevalence elasticity of burglary rates is about 0.4 or 0.5. The lag was introduced in part to avoid problems of reverse causation. The positive association survived a number of specification checks. Our second analysis, of NCVS data, is unique in that we had access to the geo-coded micro-data and could analyze the effect of county-level gun prevalence on the probability that a household would be burglarized, controlling for its socioeconomic characteristics and features of its location. Our analysis of data from 330,000 individual household interviews found that an increase in gun prevalence

[20]One attempt to generate internationally comparable survey-based results is the United Nations-sponsored International Crime Survey. This survey includes the United States, but is far smaller and in other ways inferior to the NCVS. More to the point, it does not include items that would permit the estimate of a hot burglary rate. For more details see ict-law.leidenuniv.nl/group/jfcr/www/icvs/Index.htm.

resulted in an increase in the probability of victimization (other things equal) and an increase in the chance that the respondent reported that guns were stolen as part of the burglary. (The basic result held up well through a variety of specification checks, including an instrumental variables analysis.) The likelihood that the home was occupied at the time of the burglary was not affected by the prevalence of guns.

Violent crime

Firearms are the most lethal of the widely available weapons that are deployed in assaults, robberies, and self-defense. They are the great equalizer – with a gun, most anyone can threaten or actually inflict grave injury on another, even someone with greater skill, strength and determination. With a gun, unlike a knife or club, one individual can kill another quickly, at a distance, on impulse. The logical and well documented result is that when a gun is present in an assault or robbery, it is more likely that the victim will die. In other words, it is not just the intent of the assailant that determines the outcome, but also the means of attack. That conclusion about "instrumentality" has been demonstrated in a variety of ways, and is no longer controversial (Zimring 1972, 1968; Cook 1991; Wells and Horney 2002). Thus widespread gun use in violent crime *intensifies* violence, increasing the case-fatality rate. American "exceptionalism" in violent crime is not that we have so much of it, but that, because of widespread gun availability and use, it is so much more deadly than in other Western nations (Zimring and Hawkins 1997).

The likelihood that a gun will be used in crime is closely linked to the general availability of guns, and especially handguns. In jurisdictions where handgun ownership is common, the various types of transactions by which youths and criminals become armed are facilitated. The list of transactions includes thefts from homes and vehicles, loans to family members and friends, and off-the-books sales. In a high-prevalence area, then, transactions in the secondary market are subject to less friction and may well be cheaper than in markets where gun ownership is rare (Cook et al. 2008).

Cook and Ludwig (2006) analyzed the association between gun prevalence and homicide rates, both for a panel of the 200 largest counties, and a panel of the states. Our approach was similar to the analysis of UCR burglary rates described above, and found strong evidence that an increase in gun prevalence has a positive effect on the homicide rate. A conservative estimate of the prevalence elasticity of homicide is 0.1. A back-of-the envelop calculation suggests that the annual external cost of keeping a gun in the home amounts to at least $100 (differing widely according to the amount of violence in the community). We found that assault and rape were not affected by gun prevalence, confirming other evidence that gun prevalence has little or no effect on the *volume* of violence, but a considerable effect on the *intensity* of violence, and in particular the death rate in assault and robbery.

B. Drawing the line in gun rights

In our view, the best evidence, reviewed above, indicates that private ownership of firearms creates negative externalities, in the form of increased residential burglary and homicide rates, with no discernible effect on other types of crime.[21] On the other hand, the private benefits of gun ownership, revealed by the choice of a large minority of people (mostly men) to possess a gun, indicate that the perceived private benefits may outweigh any private risks and other costs. The exercise of that preference is protected by *Heller*, at least to an extent. In future Second Amendment decisions, the Court will begin to resolve the current uncertainty about what regulations of private ownership and transactions are acceptable. The *Heller* opinion states a presumption that a variety of common regulations are acceptable, but does not establish any principle for evaluating specific cases.

It is reasonable to suppose that regulations targeted on the negative externalities of handgun ownership shall be allowed if they do not impose too much of a burden on the core right of home defense.

The federal regulatory system is intended to limit gun sales by licensed dealers to adults who are legal residents and who are not disqualified by fact of a felony conviction, mental illness, conviction for domestic violence, and so forth. If the system were more successful in limiting access to this group, the problem of gun violence would be greatly reduced. For example, one study found that 43% of adults arrested for homicide in Illinois during the 1990s had at least one prior felony conviction, compared with just 4% of the general public (Cook, Ludwig and Braga 2005). In fact there is a great deal of leakage of guns from the entitled sector of the population, to the proscribed sector. That leakage is the result of a variety of transactions, some legal under current laws, some not – private sales and loans, theft, straw purchases from dealers by qualified people under contract with a disqualified person, and so forth. An underground market for redistributing guns exists in some cities (Cook et al. 2008), and gun shows are ubiquitous.

Additional regulations that may help curtail this diversion of guns to the proscribed sector include those that would place limits on how owners could dispose of their guns, and create a record of transfers that did occur. For example, all licit transfers could be channeled through licensed dealers, with the usual requirement that the dealer conduct a background check of the intended recipient and keep a record of the transaction. Safe storage requirements could reduce theft (as well as creating a safer home for children), and owners could be required to report thefts. Straw purchases could be discouraged by limiting sales to one per month (as three states have done for handguns). The principle of holding the owner responsible for his gun could be furthered by requiring liability insurance, and by instituting some version of registration. (Note that there would be some utility in tracking gun transactions by requiring that dealers report all sales to a central location, even if the identity of the buyer were not reported but

[21] Just to be clear, we are referring here to the externalities associated with prevalence of gun ownership, rather than the much-debated topic of the consequences of liberal permit laws for gun carrying (Lott 2000; Donohue 2003).

kept, as it currently is, in the dealer's records.) Gun shows could be regulated to limit illicit transactions, as they are in California.

Given that some diversion of guns will occur regardless of the regulations in place, there are additional measures that could limit criminal misuse by making guns a liability to criminals. The notion here is that if there were programs in place that had the effect of ensuring that gun use in robbery or assault increased the chance of arrest or the severity of punishment, then some violent criminals would substitute other weapons for guns or desist entirely – with the result that fewer victims would be killed, and fewer neighborhoods terrorized by gunfire. A case in point is a California requirement, scheduled for implementation in 2010. The law requires that new pistols be designed to micro-stamp a serial number on shell casings. Any casings left at the scene of a crime could then be traced to a specific gun, facilitating the identification of the shooter. Cash award programs for providing authorities with information on proscribed people who are involved with guns may also make guns a greater liability.

We do not necessarily endorse any of these regulations, but simply point them out as among the plausible possibilities for reducing the diversion of guns and of the incentive to misuse guns, and thereby reduce the negative externality of private ownership. None of these place much burden on the individual who wishes to keep a handgun for defense of the home, and hence all are in the spirit of the *Heller*-defined core right. Note that if the Court had chosen to develop the Second Amendment right as defense against government tyranny, rather than against crime, then regulations of this sort might be challenged as providing government authorities the means to confiscate guns. But the concern for tyranny, which many commentators have found reflected in the Second Amendment's text, did not figure in the decision of the *Heller* majority.

C. *Heller* meets Coase

Despite the increase in social cost of gun violence that we anticipate may follow from *Heller* litigation, this new regime is not necessarily inferior to the *status quo*. The freedom to keep a handgun has value. In fact, this value might be greater if the premise of *Heller* is accepted – namely, that individuals have a legal entitlement to possess a handgun. Given *Heller*, that entitlement is not transferrable at a wholesale level through ordinary democratic politics, but it is interesting to speculate about the "bargain" that would result if exchange were allowed.

Imagine that the population consists of two groups, "gun lovers" and "safety lovers." The two groups bargain in a Coasian fashion, free of the usual impediments of scarce information and transactions costs. It is possible that the gun lovers would relinquish their *Heller* right – that is, that their willingness to accept payment would in total be less than the willingness of the safety lovers to pay for a handgun-free community. We have no basis for predicting without having detailed information about preferences. What we can say with confidence is that the gun-free bargain is less likely if there is a legal entitlement to keep a gun, than if the property rights are shifted to potential victims.

Indeed, one could imagine a quite different legal entitlement, awarded to those who wished to be free of the threat of gun violence -- as suggested by the first right of the trilogy "life, liberty, and the pursuit of happiness." Under this alternative assignment of rights, the Coasian bargaining would be reversed, and a gun ban would prevail unless the gun lovers' willingness to pay for a gun exceeded other residents' willingness to accept payment for giving up a gun-free environment.

While the famous Coase "invariance" result suggests that the equilibrium allocation following costless bargaining will be unaffected by the initial assignment of property rights, that is not the case here (Hovenkamp 1990). The valuations are subjective and likely to vary with wealth. In particular, for a gun lover, the willingness to pay for the right to possess a gun is likely to be a good deal less than the willingness to accept payment for relinquishing a gun. The same can be said for the valuation of a gun-free community by the safety lovers. Thus the initial entitlement matters, and the safety-rights regime is more likely to produce a ban than a gun-rights regime.

There is some evidence available on the individual valuation of gun violence. Ludwig and Cook (2001) inserted referendum-type questions on gun violence into a national survey conducted by NORC, finding that two-thirds of respondents were willing to pay at least $200 for a 30% reduction in gun violence in their community. Most interesting for the current purpose is that estimated willingness to pay increased with household income, despite the fact that those with higher incomes typically face a lower objective risk of victimization. Based on that and a vast array of related evidence (Viscusi and Aldy 2003), we believe that safety from gun violence is a normal commodity, implying that the willingness to accept compensation for a unit increase in risk will exceed willingness to pay for avoiding a unit increase (Cook and Graham 1977). We know of no direct evidence on the valuation of the right to possess a handgun, but casual observation suggests that there is an intense minority of the population that feel strongly about this right as evidenced by their political behavior – letter writing, attendance a meetings, financial contributions to candidates and advocacy organizations, and single-issue voting patterns (Schuman and Presser 1981; Spitzer 1998). It is plausible that this intensity of preference would be reflected in a very high willingness to accept payment for giving up gun rights – higher than their income-constrained willingness to pay.

A numerical example serves to illustrate the conceptual point. Suppose that the community consists of 20 gun lovers and 80 safety lovers. Under the "gun rights" scenario, gun lovers would voluntarily give up their guns only if their combined willingness to accept (WTA) were less than the combined willingness to pay (WTP) of the safety lovers for a gun-free community. Alternatively, under the "safety rights" scenario, gun lovers would voluntarily give up their guns unless their combined WTP for a gun exceeded the combined WTA by the safety lovers to tolerate guns in the community. As explained about, for gun lovers the WTA to give up the gun (under the gun rights scenario) is far higher than the WTP to acquire a gun (under the "safety rights" scenario). For safety lovers the situation is reversed. If under the gun rights scenario, for

example, the 20 gun lovers' WTA to give up the gun is 1,000, while the 80 safety lovers' WTP is 200, the ban fails a cost-benefit test against free exercise of the right. But a ban prevails under the safety rights scenario if (again for the sake of illustration) the gun lovers'WTP is 300 while the safety lovers' WTA is 400.

	Scenario I Gun rights	Scenario II Safety rights
Gun lovers (n=20)	WTA = 1000	WTP = 300
Safety lovers (n=80)	WTP = 200	WTA = 400
Total surplus for ban over no ban	-4,000	+32,000

In this analysis, then, the *Heller* ruling may be justified (though this is by no means how the majority *did* justify it) on the basis of two linked claims: (1) the Second Amendment provides a legal entitlement for individuals to keep a handgun in their home and (2) given that entitlement, it is most likely the case that a ban would not pass a cost-benefit test – that is, it would not be possible to compensate the losers from the resulting gains. If we accept the first claim, then the second becomes plausible, and suggests that the *Heller* decision is not obviously inefficient.

The *Heller* decision overturns regulations put in place by the democratically elected City Council of the District of Columbia and kept in place for over three decades.[22] While anti-democratic, this decision places the Second Amendment on the same footing with other Constitutional rights which limit the scope for legislative and regulatory action, including the rights spelled out in the First Amendment. These rights are generally not subject to transfer through ordinary politics, which blocks potential bargains at the community-wide level. Indeed, many people believe that the freedom of speech must receive some insulation from government regulation in order for ordinary politics to function well. In the real world, where bargaining in the political or economic arena is vulnerable to various distortions, perhaps the Supreme Court may reasonably impose its judgment about the shape of the equilibrium allocation rather than open the door to a far-from-perfect bargaining process.

While this discussion is entirely speculative, it does suggest an interesting possibility: that the ban on bans in the *Heller* decision would be characteristic of the efficient allocation starting from the award of the entitlement to gun lovers – and quite at odds with the efficient allocation starting from the alternative entitlement to be free of gun violence.

Of course, one might believe that the Supreme Court's interpretation of the Second Amendment was flawed. One might also believe that other institutions are better

[22] For a history of this legislation, see Rostron (2008).

situated to decide which competing group ought to receive legal entitlements regarding firearms. As we have emphasized, the balance of costs and benefits for gun control is different for different communities across the United States. But the politics of gun regulation today is hardly ideal. Many local governments are already unable to regulate as the majority sees fit given preemption by state law; and gun policy is often the product of legislative jousting and not careful analysis by experienced agency officials. Nor are handgun bans obviously efficacious in the large cities where useful data are available. And so the Court's rejection of the District of Columbia's handgun ban might turn out to be sound policy, depending, in part, on which side is entitled to the initial entitlement.

6. Conclusions

The much-discussed conundrum of gun control in America has been the evident disparity between majority opinion (which has had strong majorities in favor of an array of moderate gun control measures) and the actual enactments of Congress and state legislatures (Goss 2006; Teret et al., 1998). Much has been written about the ability of the minority in this arena to dominate policy choice, noting that there is a subset of those who oppose regulations tend to politically mobilized single-issue voters (Schuman and Presser 1981; Spitzer 1998). The mass tort litigation by the cities can then be interpreted as an effort to help redress this apparent failure of the political process to represent the public interest as defined by majority opinion (Lytton 2005a, Cook and Ludwig 2002).

In this essay we consider the reverse possibility, that the *Heller* decision serves to correct the failure of the democratic process to give appropriate weight to the *minority* interest of D.C. residents in keeping handguns.[23] Our argument rests on the reasonable possibility that the public interest is likely to be closely tied to the initial entitlement. If D.C. residents are entitled to keep a handgun in the home, then it is conceivable that even in D.C. the "no ban" allocation would pass a cost-benefit test vis-à-vis the handgun ban adopted in 1976. The argument is simply that the majority of residents who favor this ban would not have been willing to pay enough to fully compensate all those residents who wish to keep a handgun legally. That is, we speculate that there is no potential bargain that makes the ban Pareto-preferred to no ban, if bargaining begins with an entitlement to possess. The same conclusion may apply to Chicago, New York City, and some other jurisdictions where stringent handgun regulations are being litigated.

Note that this conclusion hinges on a particular assignment of rights. An alternative regime, in which residents are entitled to live free of the threat of handgun violence, may lead to quite a different conclusion, since it seems unlikely that in the District of Columbia the gun lovers would be able to compensate those who favored a handgun-free environment. Of course neither of these entitlements characterizes the status quo ante-*Heller*, where the political process sorted things out for better or worse without an explicit cost-benefit test and with no entitlements either way.

[23] Note that while a strong majority of the American public supports moderate gun control, that is not true for a handgun ban, which a majority opposes (Teret et al. 1998). It is only in particular urban jurisdictions that a ban receives majority support.

Our other conclusion is that incorporation through the 14th Amendment would lead to easing of gun restrictions in several jurisdictions in which gun ownership has been low, and the result is quite likely to be an expansion of gun ownership.[24] Based on our assessment of the literature, an intensification of violence with higher homicide and suicide rates will follow. The private decision to keep a handgun, however precious, comes at a cost.

[24] We offer this judgment with some uncertainty, simply because the jurisdictions that have stringent measures tend to have porous borders that make the existing measures hard to enforce. If the Supreme Court went further and broadened the Second Amendment right so as to ban the special federal excise tax, for example, that may make more of a difference.

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