

EXHIBIT 28



The AR for Home Defense: One Expert's Opinion

by American Rifleman Staff - Tuesday, May 26, 2015



One of today's best-known and most respected trainers in the art of gun fighting, retired Sgt./Maj. Kyle E. Lamb, spent more than 21 years with the U.S. Army—more than 15 years of which were in Special Operations. Lamb is one of those who has “been there and done that”—including combat operations such as the infamous “Blackhawk Down” incident in Mogadishu, Somalia, and throughout numerous tours in Iraq and Bosnia. He currently operates Viking Tactics as a military, law enforcement and civilian trainer teaching courses in tactical entry and the use of the carbine, among others.

Lamb is an unassuming individual who has the appearance of an “average Joe,” but when

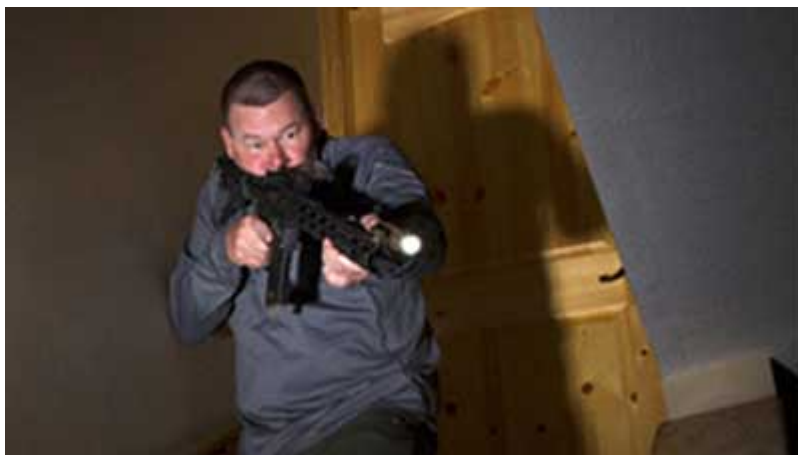
it comes to kitchen-table discussions about the effectiveness of the general-purpose rifle—in today's guise, the AR carbine—for use in a home-defense scenario, he is anything but. That's why we decided to sit down with him for a question-and-answer session on exactly that topic. Here's what he had to say.

AR: Kyle, we know you're passionate about the AR because it's the platform you've relied on for years to see yourself through some desperate situations. What runs through your mind when you hear people with significantly less fighting experience than yourself opine about the AR's unsuitability or deficiencies in the role of home/self-defense?

KL: Several folks have come forward in recent years to spout gallantly the mental deficiencies of those who would choose the “general-purpose rifle” for home defense.

Well, I may have been hit on the head a few too many times, and I have been in very close proximity to large explosions, but I personally stand in support of the AR-15 chambered in 5.56x45 mm NATO/.223 Rem.

The catch with many magazine articles, Internet postings and gun shop discussions is not the fact that folks want to select a different system for the defense of their home—as an unbending supporter of the Second Amendment I am in favor of whatever you prefer, are comfortable with, or can afford. The rub comes when folks tell me that mine is a poor choice and cite reasons that cannot be supported by fact.



In any fight, movement is key. And in a home-defense scenario, the defenders have the advantage of knowing the terrain. Practicing movement throughout the home—clearing corners, climbing stairs, opening doors—can give armed defenders a decisive edge.

AR: So, what is it about the AR that makes it so suitable, in your opinion, for a home-defense scenario?

KL: The AR is very easy to shoot. Head out to the range and test my theory. Ask anyone who wants to join in on the fun to try shooting a scored event, under pressure, with a pistol at home-defense ranges. After you see their performance, try the same with an AR, I will bet money you see much better control of the system. Men and women alike just shoot better with a carbine than with a pistol. As long as the carbine is light enough for the shooter to handle properly, the learning curve will be straight-up.

The AR is unbelievably versatile, from contact shooting distances out to 300 yds., the carbine will outperform the pistol. Most of us don't think of 300-yd. shooting as a likely home-defense scenario, and, in many areas, it wouldn't be. But if given an option of defensive tools, and considering our country's independent heritage and past experiences, why wouldn't you want extended-range capabilities?

AR: What about other choices, such as the shotgun, for home defense?

KL: For self-defense, a reliable semi-automatic is king. That is why I would not pick the shotgun. Rarely can you find a semi-automatic shotgun that is 100-percent reliable with assorted ammunition. Add the fact that you may need to shoot without your shoulder to the buttstock and reliability with the scattergun drops even more. Recoil-operated semi-automatic shotguns are light and handy but unreliable when not held tightly, and gas-operated guns are heavier than I prefer for a home-defense scenario. Once again, if you want to carry a shotgun for home defense, knock yourself out. I choose not to do so. I am sure those who carry pump shotguns will chime in with the absolute final word on the proper pick for the home-defense shotgun—all I ask is that you head to the range and try to operate your pump gun with only one hand. Simulating a disabled arm will make you a believer in the semi-automatic carbine. The shotgun is also extremely deficient in magazine capacity. Once again, the AR shines in this category. Even in 10-round-maximum states, in which long-gun rights have been destroyed, you have more firepower than with most shotguns.

AR: Considering its portability and maneuverability, wouldn't the pistol be the best choice for home defense?

KL: If you are among those who say, “If I can’t fix the problem with my eight rounds of .45 ACP, it can’t be fixed,” I say please grab a big old mug of black coffee and wake up from your dream. No one knows who, what, when, where or why the fight will start—blowhard statements only degrade an intelligent conversation.

Once again, focusing on reality, 5.56x45 mm NATO ammunition just plain works. There are literally thousands upon thousands of terrorists who have met their ends because of it. Apparently, they did not have a chance to read the latest gun blog decrying the lack of stopping power from the 5.56.

“Pistols point faster,” is a common proclamation, and it can be true if you already have your hands on the gun. However, the last part of that statement is often overlooked: “Pistols point faster, and miss more often.” Although we can quickly get the pistol into the fight, the carbine will get there and be more shootable for the average person. With a carbine in the low-ready position, the average shooter can get shots on target in less than one second. Of course, that is the reaction time once you have made the determination that you should, in fact, shoot. It does not take into consideration the fact that you will have to work your way through a decision-making process that includes threat identification.

AR: What else has your experience as a trainer taught you about why the AR seems to be so effective for so many users?

KL: The AR has little to no recoil. Even when fired from a strong- or support-hand-only position, its recoil is negligible. Pistols and shotguns recoil far more than most .223 carbines. Less recoil means more time on target—that is a good thing when the shooting starts. Another concern I hear is the carbine’s noise level. Ok, you got me, and you are correct. Guns are loud, and ARs are really loud. But .40 S&W pistols and shotguns are really loud, too. If you feel this is a serious concern for home defense there are a few ways around the extra sound. For instance, have you considered a suppressor? They are legal to own in many states, and with their threaded muzzles, most ARs are “suppressor ready” as is. Also, suppressors are available from more and more manufacturers in recent years at reasonable prices.



Flash hiders and suppressors are an easy way to upgrade an AR and downgrade its muzzle flash and report.

AR: Isn't sight acquisition slower and more difficult with a carbine than with a handgun?

KL: With a red-dot or low-power scope on your carbine you won't need to align sights as you would need to with your pistol. Simply keep both eyes open, place the red dot on the threat and squeeze the trigger. I am not trying to oversimplify the process, but in reality it will be easier to stay proficient with a red-dot mounted on the carbine than iron sights on a pistol. That's not a guess, it's a fact.

AR: Isn't there a risk of over-penetration with a carbine versus a pistol?

KL: When it comes to over-penetration you will have to determine what is acceptable. You must make the decision, no one will be there to hold your hand and give guidance as to whether or not you should shoot. You will have to make the call. If you are using ammunition that stops in one layer of sheetrock, it will likely have trouble reaching the vitals of an assailant. In all actuality, if you have children in the next room, you'd better not miss. A shot from a pistol, shotgun or the AR will all easily penetrate a conventionally constructed wall consisting of sheetrock, wooden studs and possibly insulation.

Statements are made that the shotgun or pistol should be used because of the over-penetration problem with 5.56 carbine ammunition. This could not be further from the truth. If you conduct a little research you will find that numerous law enforcement departments, to include the FBI, have proven this to be false in most cases. The fact of the matter is that many of these bullets will penetrate numerous walls, but standard 5.56 loadings are the least of your worries when compared to pistol and shotgun fodder, which

AR: Are there other considerations or concerns that people should be aware of when looking at the AR as a primary home-defense tool?

KL: Absolutely. The ease with which you can transport a carbine in and around the battlefield is one of the reasons I immediately gravitate to it for home protection. When the battlefield is your domicile, the only real difference between Iraq and Home Town, USA, is the distances you may need to engage. Most civilians won't have to shoot 400 yds. at enemy insurgents, but it never hurts to be prepared.

Figuring out exactly how to wear a pistol can be problematic. A reasonable setup would be a pistol belt with holster and magazines standing by for you to strap on. This can be easily stashed conveniently beside or under your bed. Pistol, pistol ammunition, rifle magazines, flashlight and basic medical gear intact, this will help with the employment of the carbine, but I digress. With the carbine, though, a simple two-point sling is all you need to have the ability to go hands-free. Grabbing the carbine, if needed, is quick and safe.

Another consideration to keep in mind when you do head to the range with your AR is offset. Offset is the difference between your line of sight and the bore axis, which typically causes you to shoot low at contact, or close-quarter, distances. When I say low, I am talking about 2½" if your carbine is zeroed for 50 or 100 yds., but you are engaging a threat at 3 to 5 yds. As the target moves away, your point of impact will move closer to your point of aim. This may take a little thinking, but as soon as you fire your first few training rounds within room-size distances you will be well aware of the need to hold for offset.

AR: OK, let's say, just for the sake of argument, that you've convinced us the AR is the best tool for home defense. What are a couple of specific things—drills or features—that someone should strive for when setting one up?

KL: Since I did say the semi-automatic is king, I must delve into this a little bit further. No matter the system you choose, you should spend time on the range fighting through the loading, stoppages and shooting positions with the use of only one arm. This isn't easy, but it can be done. Most general purpose rifles will work perfectly when fired with only one hand. While you are at it, try shooting with your support-side eye as well.

When it comes to capacity, I have been in situations where not only did I want an AR, I wanted 30 rounds loaded in my magazines. Not 28, but 30. I know that violates an unwritten code of tactical efficacy, but I can attest to the fact that most U.S. Army elite counter-terrorist commandos load 30 rounds per magazine. Disregard the naysayers and their minimalist-capacity mindset. Live in the real world.

Some who employ the AR for home defense have told me they like to store the carbine with a 20-round magazine in place. I agree this does make the carbine a little easier to store, but make sure you have quick access to a 30-rounder when the shooting starts.



The stopping power of various loadings is itself a lively debate, but there is no doubt that the AR possesses a substantial advantage in on-board ammunition, at least for standard-capacity firearms.

AR: Does the fact that we're now relying on a more powerful arm for home defense mean that we don't have to be as precise in our application of its greater power? And what about ammunition selection?

KL: When it comes to terminal performance, shot placement is key, be it with a shotgun slug, .45 caliber pistol, .50 cal., or 5.56 mm bullet. If you want to be effective, you must hit the central nervous system to get immediate debilitation of your enemy. Much ado has been made of the performance of the .223, and I must say picking the right ammo is key. I prefer the Hornady GMX bullet loaded by Hornady or the Barnes TSX bullet which is available in loaded form from Black Hills Ammunition and Remington. These bullets are solid with an open tip and no lead core. They perform well against barriers as well. If you envision any scenario that involves you shooting through automobile windshield glass I would highly recommend this type of projectile.



Copper-alloy hollow-point bullets, such as Hornady's GMAX or Barnes' TSX, are proven projectiles and effective expanders under most conditions.

With the AR you can also make changes to ammunition selection quickly by changing magazines. This is especially important to military and law enforcement personnel but sometimes affects civilians as well. You can easily keep lighter weight bullets that limit any potential over-penetration with the option to change to heavier barrier-blind bullets if special performance is required.

AR: What kind of training do you recommend that people pursue, and are there any specific tips that you can provide here that would elevate the average person's rifle-handling capabilities?

KL: Since some say the pistol is faster, you will have to head to the range and work a little on your presentation with the rifle. In no time at all you will be making first-round hits in less than a second. It is also important that you think through the decision-making sequence that will lead to your "shoot" or "don't shoot" resolution. More time will be used thinking through options and analyzing those options. Try to go with scenario-based training as often as you can. With a little practice, the rifle becomes extremely easy to point quickly at a target, confirm sights and engage.

AR: We're getting the sense that you see handling a long gun as something that should be entirely integrated with the shooter's physical dynamics and surroundings. Is that right?

KL: Yes. And you'll see that, once you become familiar with the carbine on the range, movement is a must.

When working on your movement techniques in tight quarters, always keep the muzzle of the carbine down as you make your quick turns. Having the muzzle down is much safer and will also be quick since you are pivoting on the rifle and driving the carbine to the target once the turn is complete. Practice every possible turn, especially starting with your back to the target. I always try to step forward into the fight, if I step backwards there is a good chance stumbling will lead to sitting on your butt—not cool in a gunfight. As to retention of your firearms in a conflict, the pistol and rifle are pretty safe in your retention position as long as you use good technique. If you get lazy, the ability of the bad guy to take away or at least deflect your carbine or pistol off target is a real potential threat. When you use the carbine for home defense, keep your support hand forward to help with leverage for driving the muzzle from target to target, this will also give you the needed strength to maintain control in a gun-grab scenario.

AR: What are a few last-minute tips for getting the most out of our time at the range and knowing whether we have the right gun?

KL: When you do get range time, make good use of the time. Don't just stand at the 5-yd. line conducting drills the entire day. Use smaller targets, increase the distance and push yourself to quickly get the rifle on target. Once on the rifle, confirm that the red dot is aligned with your intended hold-off point or offset adjustment point and squeeze the trigger. Repeat as necessary. The end state will be building confidence that you have the ability to use your carbine effectively in a fight if the need should ever arise.

When you leave the range, make sure you have ammunition that not only performs terminally but also operates flawlessly in your carbine. If your carbine is not 100-percent suited for you, it shouldn't be the gun you choose for the fight. Do what is necessary to reconfigure your gun or get one that is perfect and never look back.

AR: What final thoughts would you like to leave us with regarding the AR for home

defense?

KL: When it comes right down to it, this discussion is about using what you are most comfortable and extremely confident with. Once again, for me that happens to be the AR, chambered in 5.56x45 mm NATO/.223 Rem. What's in your closet?

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EXHIBIT 29



AR-15 Rifles For Home Defense? Yes!

by Sheriff Jim Wilson - Tuesday, June 27, 2017



There is not much question that the AR is the most popular rifle in America today. By the way, AR does not stand for *assault rifle*. It stands for Armalite Rifle, the original designers of this concept. However, the gun is manufactured today by many companies and in price ranges that will fit just about any budget. It is used for target shooting, plinking, hunting, personal defense, and, yes, even home defense.

In fact, the AR is a rather good choice for home defense. It is lightweight and the caliber choices are effective against armed criminals. Its profile is one that is readily recognized by most people and the crooks who see it in your hands will get the idea that you mean business and can probably take care of business if forced to. What follows are a few things to consider when choosing the AR for home defense.

While the modern AR is offered in quite a number of calibers, its .223 chambering probably makes the most sense for the home owner. To begin with, .223 ammunition is readily available in just about any store that sells ammo. This caliber is also probably the least expensive of any of the offerings. It can also be found in a number of different bullet weights. However, for in-house use, a 55-grain soft-point load is probably the best choice in order to minimize bullet penetration. If it can be avoided, we don't want our bullet to punch through walls, into other rooms where family members might be located. And we certainly don't want the bullet exiting the house, or apartment, and endangering neighbors.

Another factor favoring the AR as a home-defense gun is that it is relatively short and quite portable. When operating in the close quarters of a home, the armed citizen must be careful that he or she does not let the barrel of the long gun precede them through doorways and around corners, thus alerting the home invaders to their location. The collapsible stock found on many ARs keeps the gun's overall length to a minimum and helps avoid this defensive mistake.

The AR is designed so that many accessories can be easily attached to it. Slings and lights can be easily added, as can additional laser sights and many other shooting aids. However, one of the real assets of the AR is that it is lightweight and portable, so keep in mind that accessories will add weight. For this reason, accessories shouldn't be added because they look cool, but only if they are really needed. In a home defense situation, most shooters can get along just fine with a box-stock AR that has a sling attached for portability.

Another advantage of the AR is that recoil is very light, especially in one chambered for the .223 cartridge. This makes it comfortable for all members of the family to fire. Of course, this also means that everyone in the family who is authorized to use the AR should also be trained in its operation and safe use. This will rarely be a problem because the gun is fun to shoot and its lack of felt recoil is just one of the reasons that this is the case.

In addition to the other advantages of the AR as a home-defense gun, it is also quite accurate, although at the ranges one encounters in home defense, accuracy may not be a serious issue. However, shooting 1-inch, and smaller, groups at 100 yards during practice sessions is a good way to build confidence in one's own ability and equipment.

The smart defensive shooter buys the best quality firearm that he or she can afford and this is true when shopping for ARs. Good quality magazines are also important, and a person should buy several. When buying .223 practice ammo, one can shop around for deals on bulk prices for whatever is least expensive. However, when loaded for defensive use, best quality ammunition is the only way to go.

AR may stand for Armalite Rifle, but it could also easily be used for America's Rifle. Some version of it is carried by most of our military as well as local law enforcement personnel. When considering the purchase of some sort of long gun for home defense, the armed citizen is well advised to spend time with the AR. It is truly America's Rifle.

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EXHIBIT 30




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5 Reasons to Hunt with an AR15

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According to a recent study by the National Shooting Sports Foundation, 27 percent of hunters surveyed have used an AR-15 in pursuit of game. Of those, 48 percent report having used an AR-15 within the past five years, illustrating a growth in the use of the platform among those hunters surveyed. Of those answering yes to the use of an AR-15 for hunting, nearly 60 percent state they have used the platform to hunt large game. (Source: RealTree (<https://www.realtree.com/brow-tines-and-backstrap/why-you-should-use-an-ar-15-as-a-deer-rifle>))

In this article, I give you five reasons and the benefits of hunting with an AR-15—and why you should consider one for your next hunt whether hunting deer, elk, hogs, varmints and beyond.



(<https://www.brentonusa.com/ar-hunting-chambers/>)Popularity

The popularity of the AR-15 style rifle is at an all-time high. More people are owning and shooting AR style rifles than ever before. I believe this is partly due to the semi-auto nature of the rifle and the affordability of plinking ammo. Beginning around 2000-2005, many serious wildcatters started experimenting with cartridges in the AR-15 beyond the standard 5.56/.223 rounds. Soon after—new commercially available cartridges—began to appear including the 450 Bushmaster (<https://www.brentonusa.com/ar-hunting-chambers/#450BM>), 6.5 Grendel (<https://www.brentonusa.com/ar-hunting-chambers/#65Grendel>), and 204 Ruger (<https://www.brentonusa.com/ar-hunting-chambers/#204Ruger>) just to name a few. As a result of these new-found cartridges, we are now seeing the AR-15 rifle used for the hunting of all species of North American game in addition to all types of varmints.

The below video by the NSSF outlines the evolution of the American Hunting Rifle.

Compact

Compact features of the AR-15 make it an excellent hunting rifle (<https://www.brentonusa.com/b-20-stalker-ar-hunting-rifle/>). The vertical grip and magazine make for a much more ergonomic fit of rifle to shooter, especially for younger or smaller hunters. Larger or taller hunters also enjoy the vertical grip as well as the additional advantage of being able to reach further down the free-floating handguard for more comfort if needed. The front carry sling system found on most AR-15's allows the hunter to walk extended distance without any concern for the rifle as it always hangs ready from the shoulders. The front carry makes for a very quick, maneuverable first move when game is spotted. A hunter can be walking hands-free and immediately have rifle in hand and ready for a shot as game comes into view. A small feature but one I really

like is the detachable magazine. The detachable magazine makes loading and unloading safe and simple. Insert the magazine and close the bolt... loaded. Drop the magazine, cycle the bolt... unloaded. It may not sound like such a big deal but where I am from (Michigan) exposure to the cold, rain and snow while fumbling around loading and unloading is something we like to avoid.



Semi-Auto

Semi-auto features of the AR-15 make it extremely attractive to the serious hunter. Semi-auto reloading means the shooter always keeps the hands in a shooting position and ready between shots. Unlike a bolt gun where the shooter must completely release the rifle, find the bolt, cycle it and return to the grip/trigger

job. The gas operating system found on AR-15's makes for a very smooth, low recoil shooting system. Not only does low recoil make for a more pleasurable shooting experience but it also has the advantage of allowing the shooter to stay tight on the scope and keep the target always in view for those quick follow-up shots.

Familiarity

Familiarity and similarity between home defense rifles and hunting rifles make the AR-15 an obvious choice for the family hunting rifle. Many first time AR-15 buyers are purchasing for home defense. They will spend hard earned money on ammo and accessories. They will spend valuable time with family and friends learning and practicing to be proficient with the rifle. Split second home defense decisions are not unlike split second hunting situations. When that split-second decision presents itself, familiarity of the rifle in your hand is always an advantage. It is a natural transition from a defensive AR-15 to a hunting AR-15 and back again. Differences only being color and caliber. The family of AR-15s can be converted from 5.56/.223 over to a larger hunting caliber in a matter of seconds by pushing out two pins, removing the defensive upper and replacing with the hunting caliber upper (<https://www.brentonusa.com/b-16-stalker-black-upper-ar-hunting-rifle/>). For those who own multiple AR's the defensive rifle may stay intact and ready at all times while the hunting rifle may consist of one favorite lower which gets paired with various other upper setups in different calibers ready for different game.

Quick Poll:

Do you Hunt with an AR-15?

☐ Yes

☐ No

Results

Vote

Preference

compound shooters, compound shooters don't like recurve shooters, recurve shooters don't like stick bow shooters... In the handgun community, we have the revolver people, and we have the pistol people, of course, each thinks the other is crazy. In recent years the hunting community has been divided between the bolt gun hunters, lever gun hunters, and muzzleloader hunters. Now we have AR hunters. Preference—you just have to choose which makes you confident and go with it. What a great time to be born and what a great country to be born in. I can choose to hunt with everything from a stick, to smoke poles, to cowboy rifles, to the most modern AR! Personally, I want them all. Each has a place in my gun safe (except the stick), but the majority of space is taken by AR's, they are just plain fun. Nobody shoots an AR for the first time without cracking a smile.

My intent for writing this brief blog is to identify some of the primary reasons why we choose to hunt with an AR-15. Please do not use any of my words to divide shooters and hunters across America as we are all one community. We live in the greatest country at a great time in history.

Awaken Your Hunger... and go hunting. When you return tell others about your incredible experience in the wild!

God Bless the United States of America!



By Bartt Brenton, President of Brenton USA

Bartt is an engineer with thirty-plus years of experience from working at the world's largest superconducting cyclotron laboratory at Michigan State University. He has taken over 200 North American big game animals and as many varmints and predators. [Learn more about his story. \(/about-brenton-usa-our-story/\)](/about-brenton-usa-our-story/)

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EXHIBIT 31

NEWS NAVIGATION ∨

WHY HUNTERS ARE TRADING IN TRADITIONAL HUNTING RIFLES FOR THE AR-15

11/17/17 10:00 AM | by Jacki Billings (<https://www.guns.com/news/author/jackibillings>)

Share 0



A happy hunter downs a buck with an AR-15. (Photo: Wing Tactical)

AR-15s (<https://www.guns.com/firearms/rifles/semi-auto>) have long been a symbol of the tactical world, but black rifles are slowly creeping their way past military and law enforcement applications and into the world of hunting. Touting more caliber options, efficiency and modularity, the versatile platform is transforming the way hunters down prey, but what's causing hunters to ditch traditional rifle set-ups in favor of modern sporting rifles?

The biggest benefit to the AR, or modern sporting rifle (<https://www.nssf.org/msr/>), platform has always been its modularity. Unlike traditional bolt-action setups, gun owners can easily swap between an almost endless sea of uppers and lowers. This ability to trade in and out parts allows hunters to fine-tune their hunting platform to desired specifications.

This modularity is especially useful for hunters who routinely stalk various kinds of prey, utilizing an array of calibers to do it. While the most common chambering on the MSR lineup is undoubtedly .223/5.56, an increase in popular cartridges like .300 Blackout and 6.5 Creedmoor (<http://www.guns.com/2017/02/06/6-5-creedmoor/>) have pushed parts manufacturers to offer more uppers and barrels outside the 5.56 realm. This caliber modularity advantage elevated the AR-15s popularity in the hunting world, making it a viable contender against bolt-action.

Mark Grimsley, a hunter out of Kansas and owner of the Fit'n Fire (<https://www.youtube.com/channel/UCeA9Tup1fVMZ6JrDJwNV6WQ>) YouTube channel told Guns.com in an interview that the AR-15's vast array of caliber options is one of many reasons he chose an AR setup for hunts.

"One rifle can be easily converted in to several different variants that will allow you to choose the right caliber for your hunt," Grimsley said. "Going coyote hunting on Monday, use your .223/5.56 upper. Going whitetail hunting Tuesday, switch to the .300 Blackout. Going Elk hunting on Wednesday, change your upper again to a 6.5 Grendel. All of those upper receivers can be used with the same type of lower which gives greater flexibility for the hunter and the AR platform."

Grimsley, an 11-year U.S. Army veteran (<https://www.instagram.com/fitnfire78/>), also pointed to the AR-15s widespread familiarity as a reason some hunters, especially those coming from military and law enforcement backgrounds, are choosing modular sporting rifles.

"One of the main reasons that I started using an AR style rifle to hunt with was because it was so familiar to me," Grimsley said. "I have been around the AR platform for about two decades now, between my father's influence and my military time, and I have become extremely comfortable with its feedback, loading/unloading, placement of the safety, and remedial actions to clear malfunctions should there ever be any."

Aside from modularity, hunters say the AR-15 offers a level of versatility unparalleled in the bolt-action universe. MSR's easy disassembly and reassembly procedure in addition to the advent of the collapsible stock grants hunters the ability to hike in several miles on foot with the gun carried stealthily and safely in a backpack. Hunters traipsing through fields in unrestricted states are also afforded the luxury of 30 round magazines which increase the number of shots a hunter can fire in a given time period while decreasing follow-up shot time. This can often mean the difference between taking a trophy and going home empty handed.

"I believe in one well-placed shot," coyote hunter Greg Sodergren told Time Magazine (<http://time.com/4390506/gun-control-ar-15-semiautomatic-rifles/>) of the AR-15. "(But) if you've got multiple animals or you miss, you've got a quick follow-up shot."

In addition, the speed in which the AR cycles its bolt as compared to the manual cycling of a bolt-action means more potential shots on target or multiple shots effortlessly carried out on multiple targets.

"A semi-auto changed my life," Eric Mayer, who runs AR15hunter.com, told Time Magazine. "I'm able to make the (shot) because I don't have to run the bolt (and) lose the target in my scope."

Despite its advantages, the AR-15 (<https://www.guns.com/firearms/armalite-rifles>) has had its swath of bad press, earning it a bad boy reputation among its fellow rifle peers.

"I feel that the AR has previously received a bad rap as far as it being used as a hunting rifle (<https://www.guns.com/firearms/rifles/bolt-action>)," Grimsley said. "Because of its military inception, it has been seen as an under powered, military application rifle only. Not until recently, with the popularity of the newer rounds have people started to consider it as a viable option for hunting applications."

Regardless of its reputation, loyalists to the MSR point to its efficiency as the number one reason ARs are enjoying such success on the shoulders of hunters.

"It's the most capable tool for the job at this time," Mayer said. "Bar none. Period. It is."

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EXHIBIT 32



ARs for Deer Hunting: The Modern Answer to an Age Old Tradition

by Richard Mann, OutdoorHub - Thursday, November 17, 2016



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There's no question – the AR-15 doesn't look like your daddy's deer rifle. Of course, the Winchester Model 94 lever-action rifle your granddad used doesn't look anything like his father's Hawken, either.

However, we see progress all around us. The smartphone is nothing like the rotary phones I grew up with, and if my grandpa stepped in my pickup truck, he'd think it was a

spaceship.

The American hunter is experiencing this same thrust into the 21st century. While it might not have the lure, feel and warmth of walnut and blued steel, performance matters over nostalgia. I'm not suggesting you trade in your old .30-30 on an AR, or regulate your bolt rifle to the closet for all eternity. What I hope you will do is consider the many factors that make the AR-15, and its bigger brother the AR-10, ideal for deer hunting.

We're living in a brave new world and the AR is the hunting rifle of the new millennium – and here's why:



The author loves pursuing whitetails with an AR.

Fit

Anyone serious about shooting a rifle realizes that the interface between the rifle and the shooter is paramount. A rifle needs to fit you if you want to shoot it well. Many years ago, when my son was way shorter than me, I was struggling to find a deer rifle compact enough for him. I noticed my AR leaning in the corner and then an idea hit me: with its adjustable stock, the AR would be ideal for him (photo below).

The adjustable stock common on many ARs isn't the only thing that makes an AR ideal for a small-statured shooter. Many modern ARs weigh in at right about 6 pounds. Those hunters with limited arm strength will find them lighter than many bolt action alternatives. Additionally, with the interchangeability option of an endless variety of handguards and accessories, an AR can be tailored to perfectly fit any shooter and any shooting situation.



Like father, like son. ARs with adjustable stocks fit small-framed shooters very well.

Function

When I was a young deer hunter, there was an intense distrust in semi-automatic big-game rifles. Not all that long ago, the AR's reputation for reliability was not all that stellar. Well, things have changed. Modern ARs might be more reliable than many manually operated rifles. Competition in the marketplace and modern manufacturing capabilities have made the AR almost as dependable as the sunrise.

Semi-automatic fire can be of some help to the deer hunter, too. As much as we all like to think we never miss, that's not the case. Follow-up shots after a miss or even a poor hit can be the deciding factor in whether a hunt is a success or failure.

Accuracy

Over the last 10 years, I've tested enough ARs from enough different manufacturers to arm a small country's army. I went back, looked at all the shooting data from these tests, and I was rather astonished to discover the average accuracy delivered by all of these rifles was 1.5 inches for five, five-shot groups at 100 yards.

This is plenty of precision for deer hunting, and way better than most shooters can perform from field positions. In my experience, if an AR has an accuracy problem, it's often the fault of the trigger. Fortunately, the installation of an excellent replacement trigger, such as the one from Timney, is easy.

Power

Many hunters mistakenly believe that the .223 Remington cartridge is not "enough gun" for whitetail deer and a more powerful cartridge is necessary. I've taken many deer with the .223 Remington and have never found it lacking when used with bullets designed for big game.

There does exist more powerful options for those who demand it. Nine of the 41 states permitting centerfire rifles for deer hunting prohibit the use of the .223 Remington. If you hunt in one of those states, the 6.8 SPC or .300 Blackout are an option, as is the new .25-45 Sharps, which duplicates the performance of the old .250 Savage. If you want to stretch

your range or just think you need more power, you can step up to an AR-10 and choose a cartridge like the .243 Winchester, 6.5 Creedmoor, .308 Winchester, and in some cases even magnum cartridges.

Familiarity

Another factor that makes the AR ideal for deer hunters is the same factor that has been influencing hunters since the early 1900s. When veterans return home from war, they do so with a deep trust for the weapons that kept them alive in battle. That's why the bolt action eclipsed the popularity of the lever action after WWI, and it's why rifles like the Browning BAR and Remington 742 became so popular after WWII.

Today's veterans have learned to trust the AR platform because it kept them alive in places like Vietnam and the Middle East. Not only that, but they are intimately familiar with its operation and maintenance, which allows them to be more effective and safer at home, on the range, and in the field.



Hunters of all ages and backgrounds have discovered the many benefits of deer hunting with an AR.

Versatility

Finally, you can't discuss the AR without recognizing its versatility. Though many consider the AR and the accessories for it only tactical tools, you can assemble an AR to complete any hunting adventure. The modularity of the system allows you to configure an AR for deer hunting, and with quick-attach accessories and components, you can easily convert it to a predator rifle or set it up for home defense. This includes the ability to switch between different cartridges in a matter of seconds.

It seems like the entire firearms industry has jumped onboard with AR accessories, and you can find more accessories for an AR than for any other firearm. Maybe just as important, is the fact that you can build your own AR at home. There is no other rifle where something that fulfilling can be accomplished so simply.

America's Rifle

Many people don't realize AR stands for Armalite Rifle, the company that introduced the AR-10 and AR-15 in the mid-1950s. Much of the mainstream media and the anti-gun crowd mistakenly assume AR stands for "assault rifle," a convenient acronym for promoting an anti-gun agenda.

It's time to eliminate the misconception that AR stands for assault rifle, and tell the world what AR really stands for: America's Rifle. After all, it is the most popular rifle in this country, and as more and more hunters become exposed to all it has to offer, it just might one day be the most popular deer rifle in America, too.

Images by Richard Mann

EXHIBIT 33

OFF THE GRID NEWS

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Turning The AR-15 Into A Great Hunting Rifle

Written by: Adam C. Survival Hunting 56 Comments [Print This Article](#)

The AR-15 is a rifle that needs no introduction; it's the penultimate American rifle, recognizable by anti-gunners and shooting enthusiasts alike across the globe. Chambered in 5.56 NATO or .223 Remington (basically interchangeable), the AR-15 is essentially a semiautomatic version of the military's M16 rifle.



image credit NaturalWorldNews.com

While the words "hunting" and "AR-15" don't always get spoken in the same sentence, there is no reason why they shouldn't, as the AR is perfectly capable of legitimately taking game – game such as hogs. The lowly hog, sometimes referred to as boars, wild pigs, feral pigs, and so on, is an excellent choice for hunting in general; the USDA reports that there are more than 1.5 million feral pigs in the United States. Not only are the pigs plentiful – they are a nuisance, with wild pigs blamed for the destruction of many crops. Pigs also make great eating, and pork in general is a familiar staple of the American diet.

When hunting pigs with the AR, and more specifically 50 to 62 grain bullets, shot placement is key, as the little .22 caliber round lacks the punch to take conventional style heart shots on really big game animals. On hogs especially, consideration should be made to going for headshots, which will minimize damage to the meat and will result in a quick kill which the .223 round is more than capable of delivering.

THE PROPER SETUP FOR A HUNTING AR

One of the aspects that makes an AR so versatile is its modularity, and seeing as the upper receiver of an AR is readily interchangeable, there's no reason why you shouldn't build a dedicated hunting upper. Barrel length is definitely a consideration here, and for adequate sight radius, velocity and accuracy, a 20-inch barrel makes lots of sense. Long enough to deliver tack driving accuracy yet still short enough to remain maneuverable, a 20-inch barrel won't add much more weight to your rig.

The ideal optic for a hunting AR is definitely a 10 power fixed scope with a good sized objective to aid in light transmission. Avoid variable power scopes for hog hunting inside of 150 yards, and resist the temptation to increase the magnification above 10x for such short-range shooting, as all it will do is narrow your field of view.

[*How-To Techniques for Making and Enjoying 100 Sausages at Home...*](#)

WHEN CALIBER IS A CONSIDERATION

Some localities will not allow .223 for hunting purposes, the rationale being that the caliber is (in their opinion) too small to do the job, and will cause unnecessary suffering to the animal. Wherever such regulations exist, the AR is still capable of being an excellent hunting rifle primarily by purchasing an upper that is chambered in one of the many available up-sized calibers.

There are a slew of hard-hitting calibers that are available in the AR platform with the simple switch of an upper. These calibers use cartridges that are sized to an overall length which makes them fit inside a conventional .223 Remington magazine well, which is critical if you want to be able to use

further consideration are:

- 6.5 Grendel
- 6.8 Remington SPC
- .300 AAC (Advanced Armament Company) Blackout
- .450 Bushmaster
- .458 SOCOM
- .50 Beowulf

Each of the above calibers represents an amazing pig hunting caliber for various reasons. On the smaller end, both the 6.8 SPC and 6.5 Grendel both dramatically increase the power available to the AR platform while satisfying the minimum game-hunting caliber in most counties of .243" (these are both .277"). The 6.8s increase effective range and punch of the AR series rifle, allowing the hunter to go for conventional body shots on big animals, as well as reach out further than possible with the .223.

.300 AAC Blackout takes the AR platform to a whole new level, and brings .30 caliber performance to the AR while using conventionally sized magazine wells. If you've ever wanted .308 style, short-range performance out of an AR, the .300 AAC Blackout is the round to get.

The .450 Bushmaster, .458 SOCOM, and .50 Beowulf represent the pinnacle of big bore AR shooting, and while these rounds originally developed with a military purpose in mind, they are amazing hog calibers and are able to take the largest tuskers on the planet with ease. Don't think that you need to get a custom built upper receiver to shoot these rounds; they are available off the shelf by established manufacturers.

The AR-15 is such a versatile rifle in part because of its modularity, and there's no secret why it remains popular today as a sporting caliber. It's perception as a hunting rifle is somewhat tarnished by the AR being the target of anti-gun groups and the media, but make no mistake, the AR is just as much a legitimate hunting instrument as it is a defensive instrument.

EXHIBIT 34

**TELEPHONE VERSUS FACE-TO-FACE
INTERVIEWING OF NATIONAL
PROBABILITY SAMPLES WITH LONG
QUESTIONNAIRES**
COMPARISONS OF RESPONDENT SATISFICING
AND SOCIAL DESIRABILITY RESPONSE BIAS

ALLYSON L. HOLBROOK
MELANIE C. GREEN
JON A. KROSNICK

Abstract The last 50 years have seen a gradual replacement of face-to-face interviewing with telephone interviewing as the dominant mode of survey data collection in the United States. But some of the most expensive and large-scale nationally funded, long-term survey research projects involving national area-probability samples and long questionnaires retain face-to-face interviewing as their mode. In this article, we propose two ways in which shifting such surveys to random digit dialing (RDD) telephone interviewing might affect the quality of data acquired, and we test these hypotheses using data from three national mode experiments. Random digit dialing telephone respondents were more likely to satisfice (as evidenced by no-opinion responding, nondifferentiation, and acquiescence), to be less cooperative and engaged in the interview, and were more likely to express dissatisfaction with the length of the interview than were face-to-face respondents, despite the fact that the telephone interviews were completed more quickly than the face-to-face interviews. Telephone respondents were also more suspicious about the interview process and more likely to present themselves in socially desirable ways than were face-to-face respondents. These findings shed light on the nature of the survey response process, on the costs and benefits associated with particular survey modes, and on the nature of social interaction generally.

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Fifty years ago, the vast majority of high-quality surveys in America were conducted via face-to-face interviewing. But following the widespread introduction of the telephone in the United States in the mid-twentieth century, survey researchers began a swift shift to conducting surveys via telephone instead. Today, most local, regional, national, and listed sample surveys are conducted by telephone. When researchers conducting such surveys seek representative general population samples, they most often sample via random digit dialing (RDD).

The appeal of telephone interviewing is multifaceted, because this method has many practical advantages, most notably reduced cost, the possibility of quick turnaround time, and the possibility of closer supervision of interviewers to assure greater standardization of administration. Initially, telephone interviewing had another unique advantage as well: the possibility of computer-driven questionnaire presentation. With the advent of Computer Assisted Personal Interviewing (CAPI), telephone interviewing's edge in this regard is gone, but this mode continues to maintain its other unique advantages and its popularity in practice.

Telephone interviewing has obvious disadvantages, too. For example, show cards, which are often used to present response choices in face-to-face interviews, are more difficult to employ in telephone surveys, requiring advance contact, mailing of cards to respondents, and respondent responsibility for manipulating the cards during the interview. Therefore, telephone surveys routinely forgo the use of show cards (but see Miller [1984] for a discussion of the effects of this omission and Groves and Kahn [1979] for a discussion of possible disadvantages of show cards). As of 1998, about 5 percent of the U.S. population did not have a working telephone in their household, thereby prohibiting these individuals from participating in telephone surveys (Belinfante 1998). And for a variety of reasons, it has always been more difficult to obtain response rates in telephone surveys as high as those obtained in face-to-face surveys (e.g., Groves 1977; Mulry-Liggan 1983; Shanks, Sanchez, and Morton 1983; Weeks et al. 1983). Thus, it is not obvious that data quality in telephone surveys will meet or exceed that obtained from face-to-face surveys.

Kathy Cirkse, James Lepkowski, Robert Belli, Robert Groves, Robert Kahn, John Van Hoyke, Ashley Grosse, Charles Ellis, Paul Biemer, the members of the National Election Study Ad Hoc Committee on Survey Mode (Norman Bradburn, Charles Franklin, Graham Kalton, Merrill Shanks, and Sidney Verba), and the members of the National Election Study Board of Overseers for their help, encouragement, and advice. We are also grateful to Aldena Rogers and Chris Mesmer for their assistance in collecting data for one of the social desirability validation studies. This research was supported by a grant from the National Science Foundation (SBR-9707741). Correspondence should be addressed to Allyson L. Holbrook at Survey Research Laboratory, 412 S. Peoria St., Sixth Floor, Chicago, IL 60607-7069 (e-mail: allyson@uic.edu), Jon A. Krosnick at the Department of Psychology, Ohio State University, 1885 Neil Avenue, Columbus, OH 43210 (e-mail: Krosnick@osu.edu), or Melanie Green at the Department of Psychology, University of Pennsylvania, 3815 Walnut Street, Philadelphia, PA 19104-6196 (e-mail: mcgreen@psych.upenn.edu).

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Perhaps for such reasons, a diverse group of the nation's most expensive, long-term, large-scale, federally funded survey studies of national samples involving long questionnaires have retained the face-to-face method while most other survey research moved to the telephone. For example, the National Election Studies have conducted face-to-face interviews since the 1940s; the General Social Survey has done so since 1972. The National Health Interview Survey (conducted by the U.S. Census Bureau for the Centers for Disease Control and Prevention), the National Crime Victimization Survey (conducted by the U.S. Census Bureau for the Bureau of Justice Statistics), and many other such large survey projects sponsored by government agencies have done so as well.

In this article, we explore whether there are potential benefits of such continued reliance on face-to-face interviewing of national area probability samples for studies with long questionnaires, as compared to the obvious alternative of RDD telephone interviewing.¹ We focus in particular on two possible sources of response error differences. First, we consider the possibility that face-to-face respondents may be more likely to exert the required cognitive effort to answer questions carefully, whereas telephone respondents may be less likely to do so. As a result, the latter individuals may manifest more survey satisficing, thereby compromising response quality. Second, we consider the possibility that face-to-face respondents may differ from telephone respondents in the comfort they have in reporting socially undesirable attitudes, beliefs, or behaviors. As a result, the magnitude of social desirability response bias may differ between the modes.

We begin below by outlining the theoretical rationales underlying these hypotheses. Then, we review the results of many past studies that at first seem to offer evidence regarding these hypotheses. But as we will explain, the designs of these studies render most of them uninformative about the issues of interest here. We therefore proceed to describe the results of new tests of the satisficing and social desirability hypotheses using data from three large-scale experiments that involved long interviews of representative national samples.

Hypotheses

SATISFICING

The last 30 years have seen a blossoming of the literature on response errors in surveys, and many interesting theoretical approaches have been offered and

1. Although it is impossible to specify a precise length to separate short questionnaires from long ones, it is easier to note that in practice most telephone surveys are kept to lengths shorter than 30 minutes on average, whereas many face-to-face surveys involve interviewing that lasts notably longer than that. Our interest in this article is in surveys of this latter type.

developed to characterize and explain such errors. Some work has focused on the impact of misdating or forgetting on reports of behavioral events (e.g., Abelson, Loftus, and Greenwald 1992; Belli et al. 1999; Burton and Blair 1991; Sudman and Bradburn 1974). Other work has examined conversational conventions and norms and the ways in which they govern respondent behavior (e.g., Schwarz 1996; Schwarz et al. 1991). Still other work has focused on how linguistic processing of words in questions is accomplished by respondents (e.g., Tourangeau, Rips, and Rasinski 2000). All of these sorts of perspectives and others as well could be useful in exploring mode effects. In this article, we focus on another one of these theoretical accounts: satisficing theory.

Satisficing theory. Krosnick's (1991, 1999) theory of survey satisficing is based upon the assumption that optimal question answering involves doing a great deal of cognitive work (see also Cannell, Miller, and Oksenberg 1981; Tourangeau 1984). A respondent must interpret the meaning and intent of each question, retrieve all relevant information from memory, integrate that information into a summary judgment, and report that judgment accurately. Many respondents who initially agree to be interviewed are likely to be willing to exert the effort necessary to complete an interview optimally. But many other respondents who agree to be interviewed may become fatigued and may lose their motivation to carry out the required cognitive steps as they progress through a questionnaire, or respondents may be willing to carry out the required cognitive steps but lack the ability to do so. And some respondents who reluctantly agree to be interviewed may do so with no intention of thinking carefully about any of the questions to be asked.

According to the theory, people can shortcut their cognitive processes in one of two ways, via either weak satisficing or strong satisficing. Weak satisficing amounts to a relatively minor cutback in effort: a respondent executes all the cognitive steps involved in optimizing, but less completely and with bias. When a respondent completely loses motivation, he or she is likely to seek to offer responses that will seem reasonable to the interviewer without having to do any memory search or information integration. This is referred to as strong satisficing, which can be done by looking for cues in questions pointing to easy-to-defend answers.

The likelihood that a respondent will satisfice is thought to be a function of three classes of factors: respondent ability, respondent motivation, and task difficulty. People who have more limited abilities to carry out the cognitive processes required for optimizing are more likely to shortcut them. People who have minimal motivation to carry out these processes are likely to shortcut them as well. And people are most likely to shortcut when the cognitive effort required by optimizing is substantial. Respondents' dispositions are thought to interact with situational factors in determining the degree to which any given person will satisfice when answering any given question (see Krosnick 1991, 1999; Krosnick, Narayan, and Smith 1996). That is, satisficing may be most likely when a person is disposed to do so and when circumstances

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encourage it. In light of this theoretical perspective, it seems possible that interview mode might affect response quality to factual and opinion questions for a series of reasons, involving nonverbal communication, pace, and multi-tasking, as we describe next.

Nonverbal communication. When an interviewer conducts a face-to-face conversation with a respondent, the interviewer's nonverbal engagement in the process of exchange is likely to be infectious (e.g., Chartrand and Bargh 1999). A respondent whose motivation is flagging or who questions the value of a survey can observe his or her interviewer obviously engaged and enthusiastic about the data collection process. Some interviewers may not exhibit this sort of commitment and enthusiasm nonverbally, but many are likely to do so, and they may thereby motivate their respondents to devote effort to the cognitive processing required for generating optimal answers.

Respondents interviewed by telephone cannot observe all of these same nonverbal cues of commitment to and enthusiasm for the task from an interviewer. Interviewers can certainly convey such commitment and enthusiasm verbally and paralinguistically (Barath and Cannell 1976; Oksenberg, Coleman, and Cannell 1986), but those same messages can and probably are conveyed to respondents in face-to-face interviews. These latter interviews permit additional, nonverbal messages to be sent, and their absence during telephone interviews may leave those respondents less motivated. Furthermore, face-to-face interviewers are uniquely able to observe nonverbal cues exhibited by respondents indicating confusion, uncertainty, or waning motivation, and interviewers can react to those cues in constructive ways, reducing task difficulty and bolstering enthusiasm. Face-to-face interviewers can also better observe events that might distract the respondent (e.g., the presence of another person) and may be able to react to overcome or avoid that distraction (Shuy 2002).

Research in psychology and communication offers compelling indirect support for this notion. This research has shown that observing nonverbal behavior during dyadic bargaining and negotiation interactions favorably affects the outcomes of those interactions. People are less competitive, less contradicting, more empathetic and interested in their partners' perspectives, and more generous to one another when interactions occur face to face instead of by telephone (Morley and Stephenson 1977; Poole, Shannon, and DeSanctis 1992; Siegal et al. 1986; Turoff and Hiltz 1982; Williams 1977).

Furthermore, Drolet and Morris (2000) showed that face-to-face contact (as compared to aural contact only) improved cooperation on complex tasks, and this effect was mediated by rapport: face-to-face contact led participants to feel more "in synch" with each other, which led to improved collaborative task performance. Indeed, Drolet and Morris (2000) showed that such improved performance is due to nonverbal cue exchange, because dyads conversing with one another while standing side by side (and therefore unable to see one another) performed less effectively than dyads conversing facing

one another. This is not surprising, because rapport between conversational partners has been shown to arise in particular from the convergence or synchrony of their nonverbal behaviors (Bernieri et al. 1994; Tickle-Degnen and Rosenthal 1990). If nonverbal communication optimizes cooperative performance in bargaining and negotiation for this reason, it seems likely to do so in survey interviews as well by enhancing respondent effort and reducing the likelihood of satisficing.

Pace. A second key difference between survey modes probably is the pace at which the questions are asked. All interviewers no doubt hope to complete each interview as quickly as possible, but there may be special pressure to move quickly on the phone. Silences during telephone conversations can feel awkward, whereas a few seconds of silence during a face-to-face interview are not likely to be problematic if a respondent can see the interviewer is busy recording an answer, for example. This may lead both interviewers and respondents to proceed through a telephone interview more quickly than a face-to-face interview. Furthermore, break-offs are more of a risk during telephone interviews, partly because it is easier to end a phone interview (by simply hanging up) and because talking on the telephone may be especially fatiguing for some people. Therefore, interviewers may feel pressure to move telephone interviews along more quickly than they conduct face-to-face interviews.

Even if interviewers speak more quickly on the telephone than they do face to face, respondents could in principle take the same amount of time to generate answers thoughtfully in the two modes. But respondents might instead believe that interviewers communicate their desired pace of the conversation by the speed at which they speak, and respondents may be inclined to match such desired speeds. Respondents may also choose to speak quickly on the telephone because they are anxious to finish the interview. Consequently, people may spend less time formulating answers carefully during telephone conversations. Furthermore, asking questions at fast speeds may make it more difficult for respondents to understand the questions being asked (thereby increasing task difficulty), which may lead to more satisficing as well.

Multitasking. Finally, multitasking is a phenomenon that may characterize telephone interviews to a greater extent than face-to-face interviews. A telephone respondent can easily be cooking dinner or paying bills or even watching television while answering survey questions without the interviewer's being aware of it. Therefore, doing such multitasking may not be inhibited by the norm of being polite to the interviewer. Certainly, interviewers have relayed remarkable stories of respondents multitasking during face-to-face interviews as well (such as an instance in which an interviewer saw only the feet of a respondent as he answered questions while repairing his car from underneath; see Converse and Schuman [1974]), but this seems less likely to occur during face-to-face conversations than during telephone interviews. In addition, face-to-face interviewers are more likely to be aware of such mul-

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titasking and can adapt to it. Because interviewers cannot observe telephone respondents, it is difficult to collect evidence about whether mode is related to multitasking. However, a recent study examining teleconferencing in businesses provides evidence that many people do engage in multitasking during such telephone interactions (Mark, Grudin, and Poltrok 1999). Respondents in telephone interviews may similarly engage in multitasking. The added distraction caused by multitasking enhances task difficulty and therefore may enhance the likelihood of satisficing.

Conclusion. In sum, telephone interviewing may increase the likelihood of respondent satisficing by decreasing the time and effort respondents devote to generating thoughtful and careful answers and increasing the difficulty of the task. Consequently, response quality may decline. It is possible that some measurements may in fact be improved by minimizing the effort people spend generating them, because rumination might cause people to mislead themselves about their own feelings, beliefs, attitudes, or behavior (Wilson and Schooler 1991). So the shortcutting of cognitive processing might actually improve measurement reliability and validity in some cases. But in most surveys, devoting more careful thought is likely to yield more accurate responses. In the most extreme case, respondents who choose to implement strong satisficing are not answering substantively at all. So if telephone interviewing increases strong satisficing, response quality must, by definition, be decreased.

In this article, we investigate the impact of survey mode on three forms of satisficing. Two are forms of strong satisficing: choosing an explicitly offered no-opinion response option and nondifferentiation (see Krosnick 1991, 1999). These are thought to occur when a respondent chooses not to retrieve any information from memory to answer a question and instead seeks an easy-to-select and easy-to-defend answer from among the options offered. If a “don’t know” option is offered, it is particularly appealing in this regard. And if a battery of questions asks for ratings of multiple objects on the same response scale, selecting a reasonable-appearing point and sticking with it across objects (rather than differentiating the objects from one another) is an effective effort-minimizing approach.

The third response strategy we investigated is a form of weak satisficing: acquiescence response bias, which is the tendency to agree with any assertion, regardless of its content. Acquiescence is thought to occur partly because some respondents think only superficially about an offered statement and do so with a confirmatory bias, yielding an inclination toward agreeing (see Krosnick 1999). If respondents interviewed by telephone satisfice more than respondents interviewed face to face, then we should see more no-opinion responding, more nondifferentiation, and more acquiescence among the former than among the latter.

Satisficing theory suggests that the impact of mode might be strongest among respondents who are most disposed to satisfice. An especially powerful

disposition in this regard appears to be the extent of a person's cognitive skills (for a review, see Krosnick 1991), which is very strongly correlated with years of formal education (see Ceci 1991; Nie, Junn, and Stehlik-Barry 1996) and can therefore be effectively measured in that way. We assessed whether the mode effects on satisficing were stronger among less educated respondents.

We also examined the impact of mode on interview length. If telephone interviewing brings with it pressure on both participants to move quickly, this would make respondents' tasks more difficult and would therefore enhance the likelihood of satisficing. We tested whether this speculation about speed is correct.

SOCIAL DESIRABILITY

The second substantive hypothesis we explored involves social desirability response bias, the tendency of some respondents to intentionally lie to interviewers at times. Theoretical accounts from psychology (Schlenker and Wein-gold 1989) and sociology (Goffman 1959) assert that inherent in social interactions are people's attempts to construct favorable images of themselves in the eyes of others, sometimes via deceit. And a great deal of evidence documents systematic and intentional misrepresentation in surveys, showing that people are more willing to report socially embarrassing attitudes, beliefs, and behaviors when the reporting circumstances assure anonymity (Himmel-farb and Lickteig 1982; Paulhus 1984; Warner 1965) or when respondents believe researchers have other access to information revealing the truth of their thoughts and actions (e.g., Evans, Hansen, and Mittlemark 1977; Pavlos 1972; Sigall and Page 1971). Taken together, these studies suggest that some people sometimes distort their answers to survey questions in order to present themselves as having more socially desirable or respectable characteristics or behavioral histories (see DeMaio [1984] for a review).

The notion that social desirability response bias might vary depending upon data collection mode seems quite plausible. All of the above evidence suggests that people are more likely to be honest when there is greater "social distance" between themselves and their interviewers. Social distance seems to be minimized when a respondent is being interviewed orally, face to face in his or her own home by another person.² Under such conditions, a respondent knows that he or she could observe frowns of disapproval or other nonverbal signs of disrespect from an interviewer. In contrast, a more remote telephone interviewer has less ability to convey favorable or unfavorable reactions to the

2. Our use of the term "social distance" is closest to that of Aquilino (1994), who used it to describe the physical and psychological proximity of one conversational partner to another. This use of the term differs from other uses, referring to discrepancies in social status (e.g., Dohren-wend, Colombotos, and Dohrenwend 1968) or in the desired degree of intimacy between people in different social groups (e.g., Bogardus 1933).

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respondent and may therefore be seen as meriting less concern in this regard. Consequently, more social desirability bias might occur in face-to-face interviews than over the phone.

At the same time, the telephone does not permit respondents and interviewers to develop as comfortable a rapport and as much interpersonal trust as emerges in face-to-face interactions (e.g., Drolet and Morris 2000; see also Groves and Kahn 1979, p. 222). Consequently, respondents may not feel as confident that their interviewers will protect their confidentiality as respondents in face-to-face interviews. Furthermore, the reassurance that face-to-face respondents can get from an interviewer's identification materials and other documentation may increase their comfort with discussing sensitive issues, whereas the greater uncertainty about the interviewer's identity and motives likely to typify telephone respondents may make them less willing to reveal potentially embarrassing facts about themselves. And telephone respondents may be less sure of who will have access to their answers and how they might be used, leading these people to be less honest in discussing potentially embarrassing attitudes or behaviors. If this latter process occurs, social desirability response bias might occur more often in telephone interviews than in face-to-face interviews. Of course, both rapport and social distance may influence social desirability response bias simultaneously and cancel each other out, leading to a null effect of mode.

Available Evidence

At first glance, many past studies appear to be useful for testing these hypotheses, because they compared data collected from face-to-face interviews to data collected from telephone interviews (see Shuy [2002] for a review). However, upon close inspection, the designs of most of these studies make it difficult to draw any inferences with confidence about the hypotheses of interest here. Next, we explain the design features that studies must have to be informative for our present purpose. Then, we describe which studies do and do not meet these criteria.

NECESSARY FEATURES OF A STUDY

Over the years, researchers have employed various different sorts of study designs for investigating differences between face-to-face and telephone surveys. And each study design has value for answering a particular question. For example, studies that began with a single sample of respondents and randomly assigned each person to be interviewed either face to face or by telephone provide a solid basis for making inferences about the impact of interview mode per se. But our interest here is not in isolating the impact of one or more aspects in which RDD telephone and area probability face-to-

face surveys differ. Rather, our goal is to identify the full set of differences that emerge when a survey is moved from the area probability face-to-face approach to the RDD telephone approach, a transition that involves many different sorts of changes in procedures.

In order to identify cleanly differences in satisficing and social desirability response bias between these two types of surveys, a study should have the following eight characteristics. First, one group of respondents should be interviewed face to face, and a different group of people should be interviewed by telephone; if the same people are interviewed first in one mode and then in another, this could produce order and practice effects that alter performance (Smith, Branscombe, and Bormann 1988). Second, the telephone respondents and face-to-face respondents should both be representative samples of the same population. Third, respondents assigned to be interviewed in a particular mode should be interviewed in that mode. In other words, respondents who are difficult to contact or who refuse to be interviewed in one mode should not then be interviewed in another mode, because such reassignment would confound any comparison of modes. Fourth, respondents should be interviewed individually in the face-to-face and telephone surveys, rather than interviewing individual respondents by telephone and groups of respondents simultaneously face to face. For example, if face-to-face interviews are conducted with all available members of a household at once in a group and telephone interviews are conducted with just one household member at a time, then observed differences between the modes could be attributable to differences in the group versus individual interview approach.

Fifth, respondents should not be able to choose whether they will be interviewed face to face or by telephone. Such self-selection could lead other factors to be confounded with mode. Sixth, respondents in both modes should not have been interviewed previously about similar issues, because such prior interviewing could also produce practice effects that would distort comparisons. Seventh, the questions used to gauge satisficing and social desirability response bias should be asked identically in the two sets of interviews, and they should be asked in identical contexts; that is, the number, content, and sequence of prior questions should be the same. And finally, comparisons across modes should be subjected to tests of statistical significance.

IDENTIFYING USEFUL STUDIES

After conducting an exhaustive literature search, we uncovered 48 studies that compared data collected in face-to-face and telephone interviews; these studies are listed down the left side of table 1.³ Some of these studies are potentially

3. Table 1 includes published studies and reports available on the world wide web. These studies were located in a search involving two steps. First, on-line databases of publications and reports were searched for relevant keywords in titles and abstracts. And second, the references of studies found in the first step were used to identify additional books, articles, chapters, and reports to obtain.

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useful for our purposes, but many of them are not. The *X*'s in each row of the table indicate features of a study that render it uninformative with regard to the comparison of general population RDD telephone surveying with area probability face-to-face surveying. A study could have *X*'s in multiple columns, indicating multiple such features.

The first column of *X*'s identifies studies in which the same group of respondents was interviewed face to face and over the telephone. Column 2 identifies studies in which face-to-face and telephone respondents were sampled from different populations. Column 3 identifies studies in which some people assigned to one mode were actually interviewed in a different mode. Column 4 identifies studies in which respondents in the face-to-face survey were interviewed in groups and telephone interviews were conducted with individuals one at a time. Column 5 identifies a study in which respondents were given the choice to be interviewed face to face or by telephone (90 percent of people contacted in the study identified in that column chose to be interviewed by telephone). Column 6 identifies studies in which respondents in one or both modes had been interviewed previously. Column 7 identifies studies in which very different questionnaires were used in the face-to-face and telephone surveys. And column 8 identifies studies whose reports did not describe the questionnaires used in sufficient detail to permit adequate evaluation of measurement equivalence across modes.

The 23 studies in the rows in the two lower parts of table 1 were not eliminated by any of the above filters, and these are therefore potentially informative for our present purpose. The seven studies in the bottom third of table 1 compared telephone interviews of national RDD samples to face-to-face interviews of national area probability samples and are therefore of particular interest. However, in order to be useful for addressing the satisficing and social desirability hypotheses of interest in this article, a study must also have assessed the extent of satisficing-related response effects and/or social desirability bias in responding, and many of the 23 studies listed at the bottom of table 1 did not do so.

FINDINGS REGARDING SATISFICING

To gauge satisficing, a questionnaire must include appropriate measures. For example, questions offering explicit no-opinion response options must be asked in order to measure no-opinion responding.⁴ A battery of rating scale questions with identical response options must be asked in order to measure nondifferentiation, and agree/disagree or yes/no opinion questions must be asked in order to measure acquiescence. To gauge social desirability response

4. Volunteering a no-opinion response when it is not explicitly offered does not constitute satisficing, because no cue in the question encourages satisficing in that way. In fact, offering a no-opinion response under these circumstances entails breaking the "rules of the game" (Schuman and Presser 1981) by insisting on going outside the sanctioned set of response options.

Table 1. Summary of Previous Studies Comparing Face-to-Face and Telephone Interviewing

Publication	The Same Respondents Were Interviewed Face-to-Face and by Telephone	Telephone and Face-to-Face Samples Were of Different Populations	Some People Assigned to a Mode Were Not Interviewed in That Mode	Face-to-Face Respondents Interviewed in Groups and Telephone Respondents Interviewed Individually	Respondents Were Given the Choice to Be Interviewed Face-to-Face or by Telephone	Respondents in One or Both Modes Were Interviewed Previously	Very Different Questionnaires	Questionnaire Not Described Adequately	Not an RDD Telephone Survey vs an Area Probability Face-to-Face Survey	Not National Samples
Confounded mode comparisons:										
Henson, Roth, and Cannell 1978	X								X	
Herzog and Rodgers 1988	X								X	
Midanik, Rogers, and Greenfield 2001	X								X	
Rogers 1976	X								X	
Schmiedeskamp 1962	X								X	
Cahalan 1960	X								X	X
Larsen 1952		X							X	X
Siemiatycki 1979			X				X		X	
Mangione, Hingson, and Barrett 1982			X						X	
Hochstim 1962, 1967			X						X	
Herman 1977			X						X	X
Rosenstone, Petrella, and Kinder 1993			X						X	
Thornberry 1987				X						
Cannell, Groves, and Miller 1981				X						
Calsyn, Roades, and Calsyn 1992					X				X	
Yaffe et al 1978						X				
Morchio, Sanchez, and Traugott 1985						X			X	
Esaiasson and Granberg 1993						X			X	
Herzog and Rodgers 1999						X			X	
Woltman, Turner, and Bushery 1980						X			X	
Aquilino 1992							X			

Aquilino and LoSciuto 1989,
1990
Gfroerer and Hughes 1991
Biemer 1997, 2001
Sykes and Collins 1987, 1988

X
X
X

X

X

Unconfounded mode comparisons—not RDD versus area probability national samples:

Aquilino 1994
Aquilino 1998
de Leeuw and Hox 1993
Aneshensel et al 1982
Quinn, Gutek, and Walsh 1980
Hinkle and King 1978
Jordan, Marcus, and Reeder 1980
Kormendi 1988
McQueen 1989
Saris and Kaase 1997
Wiseman 1972
Johnson, Hougland, and Clayton
1989
Colombotos 1965, 1969
Hawkins, Albaum, and Best
1974
Oakes 1954
Locander, Sudman, and Bradburn
1976

X
X
X
X
X
X
X
X
X
X
X

X
X

X
X

X
X

X
X

X

X

Unconfounded mode comparisons—RDD versus area probability national samples:

Greenfield, Midanik, and Rogers
2000
Groves 1977, 1978, 1979;
Groves and Kahn 1979
Herzog, Rodgers, and Kulka
1983
Klecka and Tuchfarber 1978
Mulry-Liggan 1983
Shanks, Sanchez, and Morton
1983
Weeks et al 1983

bias, questions must be asked about attitudes, beliefs, or behaviors that empirical evidence documents are on sensitive topics and therefore subject to such bias.

Many of the 24 studies in the lower two sections of table 1 did not include appropriate measures to yield useful evidence for gauging mode effects on satisficing, and in the few cases where such measures existed, previous researchers did not examine mode effects on satisficing and report their findings in their publications. Specifically, no published report has examined no-opinion responding in questions that explicitly offered “don’t know” response options.⁵ Likewise, none of the reports of these studies examined nondifferentiation in a battery of rating scale questions that was asked identically in the two modes. And none of the relevant publications examined answers to agree/disagree or yes/no questions that were asked identically in the two modes.⁶ In fact, no reports of these past studies compared any indicators of satisficing across modes.

FINDINGS REGARDING SOCIAL DESIRABILITY

Only two of the publications listed in the bottom section of table 1, both reporting analyses of the same data, gauged social desirability response bias in answers to questions with empirically established social desirability connotations.⁷ Colombotos (1965, 1969) asked five social scientists and two physicians to choose the most socially desirable response to a series of questions about the professional conduct of physicians, and some behaviors were thusly identified as respectable or not. New York and New Jersey physicians who were randomly assigned to be interviewed either face to face or via telephone did not give significantly different answers to these questions. However, it is difficult to know whether this result can be generalized to general public samples.

Seven studies of general public samples did not pretest the social desirability connotations of the questions they examined, but some of those questions seem likely to have such connotations. Two of these studies reported a significant mode effect: Weeks et al. (1983) found that telephone respondents were significantly more likely to report that they had visited a dentist during the past

5. A number of past studies examined item nonresponse for questions that did not offer an explicit no-opinion response option (Greenfield, Midanik, and Rogers 2000; Groves and Kahn 1979; Hinkle and King 1978; Jordan, Marcus, and Reeder 1980; Kormendi 1988; Quinn, Gutek, and Walsh 1980; Saris and Kaase 1997). By definition, this behavior is not satisficing, so those studies are not relevant to testing the satisficing hypothesis.

6. Jordan, Marcus, and Reeder (1980) compared agree-disagree questions asked using show cards in face-to-face interviews to comparable items asked without show cards in telephone interviews.

7. Quinn, Gutek, and Walsh (1980) examined questions asking whether or not the respondent or a family member had experienced 28 problems or difficulties, but these questions did not have clear social desirability connotations. Wiseman (1972) and McQueen (1989) examined potentially informative attitudes and behaviors but did not report tests of statistical significance of observed differences between modes.

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12 months than were face-to-face respondents, and Aquilino (1994) found that admission of illegal drug use was more likely in face-to-face interviews than in telephone interviews.⁸ In a study of University of Kentucky students, Johnson, Hougland, and Clayton (1989) found reports of more illegal drug use and alcohol use in face-to-face interviews than in telephone interviews, but the social desirability connotations of these behaviors for college students are not necessarily clear. Four other studies found no significant differences between telephone and face-to-face reports of being registered to vote, turning out to vote, being arrested for drunk driving, declaring bankruptcy, and experiencing symptoms associated with depression (Aneshensel et al. 1982; Aquilino 1998; Groves 1977; Groves and Kahn 1979; Locander, Sudman, and Bradburn 1976).

The Present Investigation

In light of how limited the relevant available evidence is regarding mode differences in satisficing and social desirability response bias, it seemed appropriate to explore these issues further, so we did so using three datasets: (1) the 1982 National Election Study Methods Comparison Project (MCP), an experiment designed to compare face-to-face interviewing of a block-listed national sample with RDD telephone interviewing of a national sample and conducted jointly by the University of Michigan's Survey Research Center (SRC) and the Program in Computer-Assisted Interviewing at the University of California, Berkeley, for the National Election Study (NES), (2) a comparable experiment conducted in 1976 by the University of Michigan's Survey Research Center (SRC) for Groves and Kahn (1979), and (3) a comparable experiment conducted as a part of the 2000 National Election Study.

All of these studies met the necessary criteria we outlined above: they all involved essentially identical questionnaires being administered to separate groups of individuals interviewed either face to face or by telephone who had not been previously interviewed and who were selected from their households by the same method. The telephone interviews were conducted with national RDD samples; the face-to-face interviews were conducted with national area probability samples; and the questionnaires were quite lengthy.

In our investigation, we tested our hypotheses controlling for differences between the face-to-face and telephone samples in terms of an array of demographic characteristics, which none of the 18 studies highlighted in the bottom section of table 1 did. There are several reasons to expect that certain demographic groups may be more frequently represented in a sample interviewed

8. Consistent with the notion that frequency of dental check-ups has social desirability connotations, Gordon (1987) reported evidence that having regular dental checkups is socially desirable. Weeks et al. (1983) examined five other health-related behaviors, but these behaviors do not have clear social desirability connotations. Aquilino (1994) found more reports of alcohol consumption in face-to-face interviews than in telephone interviews, but it is not clear that questions about alcohol use have clear social desirability connotations.

by one method than the other. First, as we mentioned, coverage error occurs in RDD telephone samples because about 5 percent of American households are without working telephones (Belinfante 1998). Members of households with telephones are more likely to be highly educated, to have high incomes, and to be women, older, and white than people living in households without phones (Gfroerer and Hughes 1991; Groves and Kahn 1979; Mulry-Liggan 1983; Wolfle 1979).

Second, the two modes may differ in the nature of unit nonresponse error as well if some sorts of people are willing to participate in surveys in one mode but not the other, which seems likely. Contact by a stranger over the telephone always involves a degree of uncertainty, so people who are most socially vulnerable because of a lack of power or resources may feel they have the most to lose by taking the risk of answering and may therefore be reluctant to participate in telephone interviews. Even if survey interviewers' calls are preceded by advance letters, and even if respondents have called a toll-free telephone number to reassure themselves about the identity of their interviewers, respondents cannot be completely sure their interviewers are the people they claim to be and cannot be sure that the questions being asked are truly for their purported purpose.

The same uncertainties exist when an interviewer knocks on a respondent's door, and the same means of reassurance are available. But the doorstep contact offers more: the nonthreatening and professional physical appearance of most interviewers and their equipment, along with their pleasant, friendly, professional, and nonthreatening nonverbal behaviors. All this may help to reassure respondents. Furthermore, the effort expended by the interviewer to travel to the respondent's home communicates a degree of professionalism that may assuage hesitations from reluctant respondents. Consequently, factors such as having limited income, having limited formal education, being female, elderly, and of a racial minority may all make respondents more reluctant to participate in telephone interviews than in face-to-face interviews.

Of course, doorstep contact entails another consideration as well: the risk that the interviewer might be physically threatening or even motivated to rob or otherwise take advantage of the respondent. This might lead some respondents, especially women and the elderly, to be reluctant to let a stranger into their home. Studies comparing respondents in telephone surveys to those who own telephones in face-to-face surveys (a method to eliminate coverage bias when examining nonresponse) suggest that telephone respondents are more likely to be well educated, to have high incomes, and to be male, older, and white (Gfroerer and Hughes 1991; Groves and Kahn 1979; Thornberry 1987; Weeks et al. 1983). This is further reason to expect that socially vulnerable groups will be less well represented in telephone surveys.

Consistent with this expectation, previous studies combining coverage error and unit nonresponse by comparing data collected by face-to-face interviewing of national area probability samples with data collected by national RDD

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telephone interviews (the seven studies in the bottom section of table 1) have indeed documented reliable demographic differences between the samples. For example, all of the six studies that compared education levels for the two types of surveys found fewer low-education respondents in the telephone samples than in the face-to-face samples (Greenfield, Midanik, and Rogers 2000; Groves 1977; Groves and Kahn 1979; Klecka and Tuchfarber 1978; Mulry-Liggan 1983; Shanks, Sanchez, and Morton 1983; Weeks et al. 1983). All of the five studies that compared income levels found fewer low-income respondents in the telephone samples than in the face-to-face samples (Greenfield, Midanik, and Rogers 2000; Groves 1977; Groves and Kahn 1979; Klecka and Tuchfarber 1978; Shanks, Sanchez, and Morton 1983; Weeks et al. 1983). Of the six studies that examined age, five found fewer older people in the telephone samples than in the face-to-face samples (Groves 1977; Groves and Kahn 1979; Herzog, Rodgers, and Kulka 1983; Klecka and Tuchfarber 1978; Mulry-Liggan 1983; Weeks et al. 1983). Greenfield, Midanik, and Rogers (2000) found no age differences between a face-to-face sample and a telephone sample. And of the six studies that examined race, five found fewer minority respondents and more white respondents in the telephone samples than in the face-to-face samples (Greenfield, Midanik, and Rogers 2000; Klecka and Tuchfarber 1978; Mulry-Liggan 1983; Shanks, Sanchez, and Morton 1983; Weeks et al. 1983). In the remaining study, there were only slightly more whites interviewed in the telephone survey than in the face-to-face survey (Groves 1977; Groves and Kahn 1979).

Demographic characteristics are sometimes related to the likelihood that a respondent will satisfice (e.g., Narayan and Krosnick 1996) and to the likelihood that a respondent will have performed various sensitive behaviors or will hold certain sensitive attitudes. Therefore, it is important to control for demographic differences in order to isolate the effect of mode on no-opinion responding, nondifferentiation, acquiescence, and social desirability response bias, and we have done so.⁹

The 1982 NES Methods Comparison Project

DATA COLLECTION

The 1982 NES Methods Comparison Project (MCP) involved 998 telephone interviews and 1,418 face-to-face interviews with representative national sam-

9. It is probably impossible to measure all possibly relevant demographic variables, and controlling for demographics in this way requires the assumption that sample members from a particular demographic group adequately represent their population (an assumption routinely made when weighting samples). So our approach here will not completely eliminate all threats due to demographic differences between the samples, but it will help to reduce concern about this alternative explanation for our findings.

ples of noninstitutionalized American adults, conducted during November and December 1982 and January 1983. All of the face-to-face interviews were conducted by the University of Michigan's Survey Research Center and involved their conventional approach to area probability sampling via block-listing. The telephone sample was generated via RDD. Half of the telephone respondents (selected randomly) were interviewed by Michigan's SRC, and the other half were interviewed by the Survey Research Center at the University of California, Berkeley. A respondent was randomly chosen to be interviewed from among all eligible household members. The response rate was 72 percent for the face-to-face sample and 62 percent for the telephone sample (Shanks, Sanchez, and Morton 1983).¹⁰

Essentially identical questionnaires were used for all interviews; show cards that accompanied some questions in the face-to-face interviews were not used during the telephone interviews, but we did not analyze those items. The questionnaire was similar in length and character to those of other National Election Study surveys (which typically last over an hour) and asked about respondents' participation in politics, attitudes toward political candidates and public policies, and much more.

MEASURES

This survey's questionnaire permitted assessment of no-opinion responding, nondifferentiation, and social desirability response bias (for details of the measures and coding procedures, see app. A). No-opinion responding was measured by calculating the percent of questions that offered an explicit no-opinion response option to which each respondent answered "no opinion." Nondifferentiation was measured by counting the number of identical or nearly identical responses each respondent gave in answering two batteries of ratings using the same scale. Social desirability response bias was measured by calculating the proportion of questions with social desirability connotations to which a respondent gave the socially desirable response. We identified these items based upon a pretest designed to determine the extent to which items had social desirability connotations (for details on this survey, see app. B).

All variables were coded to range from 0 to 1, with 0 meaning the least possible no-opinion responses, the least possible nondifferentiation, and the least frequent offering of socially desirable answers, and 1 meaning the most

10. These response rates correspond to AAPOR's response rate 1. These response rates are a bit lower than those observed in other high quality surveys conducted at about the same time. For example, the University of Michigan's Monthly Survey of Consumer Attitudes, a telephone survey, had a response rate of 72 percent in 1982 (AAPOR response rate 2; the numerator included completed and partial interviews, and the denominator included all sampled phone numbers except those known to be ineligible; Curtin, Presser, and Singer 2000), and the General Social Survey, done face-to-face by the National Opinion Research Center, had a response rate of 77.5 percent in 1982 (Smith 1995).

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possible no-opinion responses, the most possible nondifferentiation, and the most frequent offering of socially desirable answers.

ASSESSING MODE EFFECTS

We approached the assessment of mode effects in two ways. To gain the maximal statistical power by using the full array of cases, we compared the face-to-face interviews to the full set of telephone interviews. However, this comparison confounds mode with house, because Michigan conducted all the face-to-face interviews, but half the telephone interviews were done by Berkeley. If the standard interviewing practices at these institutions differentially encouraged or discouraged satisficing or socially desirable responses, the confounding of mode with house would yield misleading results regarding mode. To deal with this problem, we also conducted less powerful tests of mode differences comparing only the Michigan telephone respondents to the face-to-face respondents.

All statistical analyses were conducted using Stata, which allowed for proper weighting by the reciprocal of the known probability of selection. In the analyses reported below, the telephone respondents were weighted by the number of adult residents in the household and by the reciprocal of the number of telephone lines in the household, and the face-to-face respondents were weighted by the number of adult residents in the household.¹¹

In order to reduce travel costs for face-to-face interviews, clusters of households were selected for generating the area probability samples. This clustering reduces standard error estimates and makes statistical tests misleadingly liberal. We therefore controlled for clustering at the level of the primary sampling unit in the face-to-face sample.

RESULTS

No-opinion responses. The first two columns of rows 1 and 2 in table 2 display the adjusted mean proportions of no-opinion responses for the face-to-face respondents and the telephone respondents.¹² The first row combines the Michigan and Berkeley telephone respondents, and the second row displays figures using only the Michigan telephone respondents. The remaining columns of the table display the results of ordinary least squares (OLS) regressions predicting the proportion of no-opinion responses using mode (coded

11. The number of telephone lines was not recorded for the Berkeley telephone respondents. Therefore, all Berkeley telephone respondents were assigned a value of 1 for the number of telephone lines.

12. These means were adjusted for demographic differences between the two respondent groups interviewed in the two modes.

Table 2. Regression Coefficients Estimating the Impact of Mode on Satisficing

Response Strategy	House(s)	Adjusted Means		Regression Coefficients										<i>N</i>
		Face-to-		Mode	Education	Income	Race	Gender	Age	Age ²	Married	Employed	<i>R</i> ²	
		Face	Telephone											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
1982 NES MCP:														
No-opinion responding:														
Full sample	Michigan & Berkeley	17	24	07**	− 29**	− 07**	05*	02*	− 08	11 ⁺	00	01	18	2,093
	Michigan	17	26	08**	− 28**	− 08**	04	02	− 06	10 ⁺	01	00	18	1,680
Low education	Michigan & Berkeley	32	46	14**	− 37 ⁺	− 12	01	08*	22	− 17	01	− 02	10	410
	Michigan	32	53	22**	− 43 ⁺	− 15 ⁺	− 02	09**	19	− 16	02	− 03	14	350
High education	Michigan & Berkeley	14	18	05**	− 22**	− 04 ⁺	06*	01	− 17**	17**	01	01	11	1,683
	Michigan	14	19	05**	− 21**	− 05*	05 ⁺	00	− 16*	17**	01	01	10	1,330
Nondifferentiation:														
Full sample	Michigan & Berkeley	37	41	04**	− 02	− 02	− 01	− 01	− 13*	08 ⁺	00	01	02	2,095
	Michigan	37	41	03**	− 01	− 02	− 01	− 01 ⁺	− 13*	08	00	02	02	1,682
Low education	Michigan & Berkeley	38	44	06**	04	05	00	− 02	− 09	09	02	02	05	411
	Michigan	38	41	03	05	04	− 01	− 03	01	01	02	03	04	351
High education	Michigan & Berkeley	37	41	04**	00	− 02	− 01	− 01	− 13*	07	− 01	00	03	1,684
	Michigan	37	40	03**	02	− 03	− 01	− 01	− 14*	07	00	01	03	1,331

1976 SRC datasets:													
No-opinion responding:													
Full sample	62	69	35**	-2 50**	- 75*	27	72**	-1 47	1 35	16	10	1,344	
Low education	80	86	42	-2 48	- 34	- 44	66 ⁺	3 63 ⁺	-4 59 ⁺	- 35	- 22	359	
High education	55	63	34*	-2 46**	- 73 ⁺	57*	74**	-2 84*	3 25*	30 ⁺	16	985	
Nondifferentiation:													
Full sample	62	65	03*	00	16**	- 11**	- 06**	39**	- 18 ⁺	- 03*	- 03	09	2,633
Low education	60	65	05*	10	20**	- 13**	- 06 ⁺	41*	- 11	00	00	13	684
High education	63	65	02	- 07 ⁺	15**	- 09**	- 07**	44**	- 25 ⁺	- 05**	- 04 ⁺	08	1,949
Acquiescence:													
Full sample	33	37	03*	- 05	01	06*	- 02	00	24	01	- 03	02	2,485
Low education	38	43	06	- 18	- 23 ⁺	03	03	- 23	36	08*	01	03	605
High education	32	34	03	- 03	05	07*	- 03	- 02	33	00	- 04	02	1,880
2000 NES:													
No-opinion responding:													
Full sample	11	19	07**	- 14**	- 05**	08**	03**	- 53**	67**	01	03*	17	1,488
Low education	14	22	08**	- 20**	- 06*	09**	04**	- 54**	67**	00	04*	16	1,029
High education	06	12	06**		- 03	05*	01	- 52**	62*	01	01	07	459
Acquiescence:													
Full sample	31	33	02*	10**	00	02	- 02	20**	- 19*	01	- 01	05	1,488
Low education	29	32	03*	14**	01	01	- 01	17 ⁺	- 13	01	- 01	05	1029
High education ^a	34	35	01		- 01	04	- 03*	30 ⁺	- 34 ⁺	01	- 02	03	459
Interview time	70 75	64 96	-5 79**	9 32**	-1 45	59	- 55	40 82**	-16 65	- 03	-1 99	09	1,487

NOTE.—All variables were coded to range from 0 to 1. Mode was coded 0 for face-to-face and 1 for telephone. Gender was coded 0 for males and 1 for females. Race was coded 0 for whites and 1 for nonwhites. All coefficients are from OLS regressions except coefficients for no-opinion responding for the 1976 SRC datasets, which are from logistic regressions.

^a Education has no coefficient in this equation because there was no variance in the coding of education within this group of respondents.

⁺ $p < .10$

* $p < .05$

** $p < .01$

0 for face-to-face respondents and 1 for telephone respondents) and various demographic control variables.¹³

Higher levels of no-opinion responding occurred in the telephone samples (Michigan and Berkeley adjusted mean = 24 percent, Michigan adjusted mean = 26 percent) than in the face-to-face sample (adjusted mean = 17 percent), consistent with the satisficing hypothesis. The difference between the telephone and face-to-face samples was significant regardless of whether we included or dropped the Berkeley data (b 's = .07 and .08, $p < .01$).¹⁴

To test whether the mode effect varied with respondent education, we repeated these analyses separately for respondents who had not graduated from high school and for respondents with more education (for the rationale for this split, see Narayan and Krosnick [1996]). As shown in rows 3–6 of table 2, the mode effect was larger among the least educated respondents than among more educated respondents. When looking only at the Michigan data, the average proportion of no-opinion responses increased from 32 percent in the face-to-face interviews to 53 percent on the telephone ($b = .22$, $p < .01$). The difference was smaller but nonetheless significant when the Berkeley data were folded in ($b = .14$, $p < .01$). The mode effect was smaller in the highly educated subsample, though it was statistically significant there as well ($b = .05$, $p < .01$).

Nondifferentiation. In rows 7–12 of table 2, we see evidence consistent with the satisficing hypotheses regarding nondifferentiation. There was more nondifferentiation in the telephone samples (adjusted mean = .41) than in the face-to-face sample (adjusted mean = .37). This later rate was significantly lower than the telephone rate, whether we excluded the Berkeley data ($b = .03$, $p < .01$) or included it ($b = .04$, $p < .01$).

When only the Michigan data were considered, the mode effect was no stronger in the least educated group ($b = .03$, N.S.) than in the more educated group ($b = .03$, $p < .01$). But when the Berkeley data were included, the mode effect was stronger in the least educated group ($b = .06$, $p < .01$) than in the more educated group ($b = .04$, $p < .01$), as expected.

Social desirability. Respondents interviewed by telephone gave socially desirable responses more often (Michigan and Berkeley adjusted mean = .46; Michigan adjusted mean = .44) than did respondents interviewed face to face (adjusted mean = .41), regardless of whether the Berkeley respondents were included ($b = .05$, $p < .01$; see row 1 of table 3) or excluded ($b = .03$, $p < .10$; see row 2 of table 3).

13. Ordinary least squares regressions were conducted for all dependent variables with three or more possible values. When a dependent variable had only two possible values, logistic regressions were conducted.

14. Throughout this article, significance tests of directional predictions are one-tailed, and tests of differences for which we did not make directional predictions are two-tailed. When a directional prediction was tested but the observed mean difference was in the opposite direction, a two-tailed test is reported.

Table 3. Regression Coefficients Estimating the Impact of Mode on Reporting Socially Desirable Attitudes and Behaviors and Uneasiness Discussing Such Topics

Response Strategy	House(s)	Adjusted Means		OLS Regression Coefficients									R ²	N
		Face-to-Face (1)	Telephone (2)	Mode (3)	Education (4)	Income (5)	Race (6)	Gender (7)	Age (8)	Age ² (9)	Employment			
											Married (10)	Status (11)		
Socially desirable responding:														
1982 NES MCP	Michigan & Berkeley	.41	.46	.05**	.33**	.06*	.13**	−.02 ⁺	.34**	.00	.02	.00	.21	2,095
	Michigan	.41	.44	.03 ⁺	.34**	.05 ⁺	.14**	−.03*	.39**	−.08	.02	.00	.21	1,682
1976 SRC datasets		.76	.81	.05**	.31**	.05 ⁺	−.12**	.01	.76**	−.56**	.04**	.03*	.20	2,627
2000 NES		.41	.44	.03*	.14**	.03	.06**	.00	.48**	−.02	.04**	−.04**	.25	1,488
Unease discussing sensitive topics:														
1976 SRC datasets		.08	.14	.05**	.00	−.00	.01	.01	−.13**	.04	.01	.00	.04	2,630

NOTE.—All variables were coded to range from 0 to 1. Mode was coded 0 for face-to-face and 1 for telephone. Gender was coded 0 for males and 1 for females. Race was coded 0 for whites and 1 for nonwhites.

⁺ $p < .10$

* $p < .05$

** $p < .01$

Summary. In sum, the 1982 NES MCP data showed that respondents manifested indications of greater satisficing over the telephone than face to face, and this effect was larger among the least educated respondents. Furthermore, socially desirable attitudes were reported more often by telephone respondents than by face-to-face respondents.

1976 Survey Research Center Datasets

Next, we explored whether these findings would replicate in a second, comparable experiment conducted only by the University of Michigan's Survey Research Center. This survey also involved a comparison of a block-listed national sample interviewed face to face with a national RDD sample interviewed by telephone. The questionnaire allowed us to examine no-opinion responding, nondifferentiation, acquiescence, and social desirability response bias. The questionnaire also allowed us to explore whether respondents were more likely to express unease about discussing sensitive topics over the phone than face to face, which would be consistent with the social desirability findings from the 1982 NES MCP. And we explored whether respondents expressed impatience with telephone interviews more often than they did with face-to-face interviews, which would be consistent with the logic articulated above to justify our suspicions about the tendency to satisfice in telephone surveys.

These data had been analyzed previously by Groves and Kahn (1979), but those investigators did not test most of the hypotheses we explored. Relevant to the social desirability hypothesis, Groves and Kahn (1979) and Groves (1979) reported that respondents expressed more discomfort about discussing sensitive topics (e.g., racial attitudes, political opinions, and voting) over the telephone than face to face, and their telephone sample claimed to have voted in recent elections at higher rates than did their face-to-face sample. And these investigators reported that most respondents said they would prefer to be interviewed face to face rather than by telephone. But none of these differences was tested controlling for the demographic differences between the two modes' samples, and none of the satisficing-related hypotheses articulated above were tested by Groves and Kahn (1979) at all. It therefore seemed worthwhile to revisit these data to conduct more comprehensive analyses of them.

DATA COLLECTION

The face-to-face interviews were conducted during the spring of 1976, with a multistage stratified area probability sample of the coterminous United States. Households were randomly selected from within 74 primary sampling areas, and respondent selection within households was accomplished by the Kish

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(1949) method of random selection from a complete household listing. The response rate for the face-to-face mode was 74.3 percent.¹⁵

Two RDD samples were generated for the telephone interviews, which were also conducted during the spring of 1976. The first was a stratified RDD sample, in which working combinations of area codes and three-digit central office codes were selected systematically from a stratified list. A second, clustered sample was generated by selecting among area codes and central office codes for working telephone numbers within the 74 primary sampling units of the Survey Research Center's national sample of dwellings. Respondent selection within households was accomplished by the Kish (1949) method, adapted for telephone administration.¹⁶ The response rate for the telephone mode was 70 percent if we assume that all numbers unanswered after 16 attempts were nonworking, and 59 percent if we assume that none of these numbers were nonworking.¹⁷

The questionnaires used in both modes addressed consumer attitudes and behaviors, economic beliefs, life satisfaction and living conditions, political attitudes, and more. The face-to-face questionnaire was a bit longer than the telephone questionnaire, because some sets of questions asked late in the face-to-face interviews were omitted from the telephone questionnaires. In addition, some questions asked with show cards in the face-to-face interviews were asked without any visual displays during the telephone interviews. Our analyses focus on questions that were asked identically in the two modes, that were asked quite early in the interviews, and that had essentially identical questions preceding them in the two modes.

MEASURES

No-opinion responding, nondifferentiation, and social desirability response bias were assessed as in the 1982 NES MCP. Acquiescence was measured by calculating the percent of the agree/disagree and yes/no questions a respondent was asked to which he or she responded "agree" or "yes." Respondent dissatisfaction with the length of the interview was assessed by a question that explicitly asked respondents whether they thought the interview had taken

15. This response rate is similar to those observed in other high quality surveys being conducted at about the same time. For example, the GSS had a response rate of 73.5 percent in 1978 (Smith 1995).

16. The face-to-face data were weighted by the number of eligible adults in the household, and the telephone data were weighted by the number of eligible adults in the household and by the inverse of the number of residential phone lines in the household. Clustering in primary sampling units was controlled for in the face-to-face data. We were not able to control for clustering in the clustered telephone component of the sample because no variable differentiated the two telephone samples from one another.

17. These response rates were calculated by dividing the number of completed interviews by the total number of eligible households. The higher of these response rates is identical to that of the Survey of Consumer Attitudes (approximately 70 percent) in 1979 (Curtin, Presser, and Singer 2000).

too long and by the interviewer's record of whether the respondent ever spontaneously voiced dissatisfaction that the interview was taking a long time. All measures were coded to range from 0 (meaning the least possible no-opinion responding, nondifferentiation, acquiescence, socially desirable responding, and dissatisfaction with interview length) to 1 (meaning the most possible no-opinion responding, nondifferentiation, acquiescence, socially desirable responding, and dissatisfaction with interview length). Full details about the measures and coding procedures are provided in appendix A.

RESULTS

No-opinion responses. The telephone respondents chose an explicitly offered no-opinion response option more often than did the face-to-face respondents (62 percent for face-to-face respondents and 69 percent for telephone respondents; logistic regression coefficient = .35, $p < .01$; see the first row in the middle panel of table 2). This effect was slightly larger among low-education respondents (logistic regression coefficient = .42, N.S.) than among high-education respondents (logistic regression coefficient = .34, $p < .05$), although the former was not significant and the latter was.¹⁸

Nondifferentiation. Nondifferentiation was more prevalent in the telephone sample than in the face-to-face sample ($b = .03$, $p < .05$; see col. 3 in row 4 of the middle panel of table 2). Furthermore, this mode effect was significant among the least-educated respondents ($b = .05$, $p < .05$; see col. 3 of row 5 in the middle panel of table 2), and smaller and not significant in the high-education group ($b = .02$, N.S.; see col. 3 of row 6 in the middle panel of table 2).

Acquiescence. The telephone respondents were more likely to acquiesce than were the face-to-face respondents ($b = .03$, $p < .05$; see row 7 of the middle panel of table 2). The coefficient estimating this effect was slightly larger among low-education respondents ($b = .06$, N.S.) than among high-education respondents ($b = .03$, N.S.), but neither of those coefficients was significant.

Dissatisfaction with interview length. Respondents interviewed by telephone were significantly more likely than the face-to-face respondents to express dissatisfaction with the interview's length ($b = .06$, $p < .01$; see col. 3 of row 2 in table 4) and to ask how much longer the interview would take (logistic regression coefficient = .98, $p < .01$; see col. 3 of row 1 in table 4).

Social desirability. The telephone respondents were more likely to give socially desirable responses than were the face-to-face respondents ($b =$

18. No-opinion responding was unusually common for this question (greater than 60 percent). Unlike questions that tag a no-opinion response option on at the end of a list of substantive answer choices, this item began by saying: "Not everyone has an opinion on this next question. If you do not have an opinion, just say so." This heavy-handed encouragement of no-opinion responses seems likely to explain their popularity.

Table 4. Regression Coefficients Estimating the Impact of Mode on Respondent Dissatisfaction and Engagement

Respondent Reaction	Adjusted Means		Regression Coefficients									R ²	N
	Face-to-Face (1)	Telephone (2)	Mode (3)	Education (4)	Income (5)	Race (6)	Gender (7)	Age (8)	Age ² (9)	Married (10)	Employed (11)		
1976 SRC datasets:													
Asked how much longer the interview would be	.04	.11	.98**	.41	−.69	.52*	.05	2.10 ⁺	−1.27	.08	−.51*		2,625
Expressed dissatisfaction with interview length	.52	.58	.06**	.03**	−.03 ⁺	.02 ⁺	.00	.03	−.01	.02**	.00	.07	2,570
2000 NES:													
Interviewer rating of respondent interest	.73	.69	−.04*	.21**	.03	.00	−.02 ⁺	.36*	−.27	−.01	−.01	.12	1,487
Interviewer rating of respondent cooperation	.91	.88	−.02*	.08**	.02	−.01	−.01	−.02	.04	.01	.00	.05	1,487
Interviewer rating of respondent suspicion	.08	.12	.04**	−.02	−.01	.05*	.00	.15	−.17	.01	−.01	.02	1,487
Said he or she wanted to stop the interview	.01	.02	.98 ⁺	.35	−1.30	1.21 ⁺	.40	12.39 ⁺	−6.53	.01	.43		1,488
Said interview was too long	.01	.09	2.03**	.18	−.32	.03	.41	2.85	−1.99	−.08	.12		1,488

NOTE.—All variables were coded to range from 0 to 1. Mode was coded 0 for face-to-face and 1 for telephone. Gender was coded 0 for males and 1 for females. Race was coded 0 for whites and 1 for nonwhites. OLS regression coefficients are shown for dissatisfaction with interview length, and respondent suspicion, cooperation and interest, and logistic regression coefficients are shown for asking how much longer the interview would be, complaining about the interview length, and wanting to stop at some point during the interview.

⁺ $p < .10$

* $p < .05$

** $p < .01$

.05, $p < .01$; see col. 3 of row 3 of table 3). And respondents interviewed by telephone expressed significantly more unease about discussing sensitive topics than did respondents interviewed face to face ($b = .05$, $p < .01$; see row 5 of table 3).

2000 National Election Study

Finally, we tested the satisficing and social desirability hypotheses using data from a more recent survey conducted by the University of Michigan's Survey Research Center for the 2000 National Election Study. This survey compared an area probability sample of 1,006 people interviewed face to face to an RDD sample of 801 people interviewed by telephone. The questionnaire allowed us to assess the extent of no-opinion responding, acquiescence, social desirability response bias, and respondent dissatisfaction with interview length. We also examined the extent to which respondents expressed suspicion about the trustworthiness of the interview process, which the logic articulated above suggests might be a precursor of social desirability response bias.

In addition, this questionnaire allowed us to examine the effect of mode on interview length. The logic we articulated earlier about the pressure to move quickly through telephone conversations suggests that telephone interviews may be completed more quickly than are face-to-face interviews. And we examined respondents' level of interest in the interview and their cooperativeness, on the assumption that more interest and cooperation were signs of greater engagement in the process and less inclination toward satisficing.

DATA COLLECTION

Face-to-face and telephone interviewing began on September 5, 2000, and ended on November 6, 2000. The population for these surveys was all U.S. citizens of voting age. Within each household, an eligible respondent was randomly chosen to be interviewed.¹⁹ The response rate for the face-to-face interviews was 64.3 percent, and the response rate for the telephone interviews was 56.5 percent.²⁰ The questionnaires addressed political attitudes and behaviors and often focused on the upcoming presidential election.

19. The number of telephone lines in the household was not recorded for the telephone respondents, so the telephone and face-to-face respondents were weighted only by the number of adults in the household. Clustering in primary sampling units was controlled for in the face-to-face data.

20. These response rates were calculated by dividing the number of completed interviews by the total number of potential respondents (and correspond to AAPOR's response rate 1). The response rates for these two surveys were somewhat lower than those observed in other contemporaneous high quality surveys. The Survey of Consumer Attitudes had a response rate of approximately 67 percent in 1996 (Curtin, Presser, and Singer 2000), and a national RDD telephone survey using rigorous methodology conducted in 1997 by the Pew Research Center for the People and the Press had a response rate of 60.6 percent (AAPOR response rate 3; the

MEASURES

No-opinion responding, acquiescence, social desirability response bias, and respondent dissatisfaction with interview length were gauged as in the 1976 SRC datasets. And interviewers recorded spontaneous expressions of respondent suspicion and rated respondent engagement in the interview process. All of these variables were coded to range from 0 (meaning the least possible no-opinion responding, acquiescence, social desirability response bias, respondent dissatisfaction, suspicion, and engagement) to 1 (meaning the most possible no-opinion responding, acquiescence, social desirability response bias, respondent dissatisfaction, suspicion, and engagement). Interview length was recorded in minutes. Details about the measures and coding procedure are provided in appendix A.

RESULTS

No-opinion responses. The telephone respondents were more likely than the face-to-face respondents to choose a no-opinion response option (19 percent for telephone respondents vs. 11 percent for face-to-face respondents; $b = .07, p < .01$; see col. 3, row 1 in the bottom panel of table 2). This effect was slightly stronger among the low-education respondents ($b = .08, p < .01$; see col. 3, row 2 in the bottom panel of table 2) than among the high-education respondents ($b = .06, p < .01$; see col. 3, row 3 in the bottom panel of table 2).

Acquiescence. Respondents interviewed by telephone were significantly more likely to give “agree” and “yes” responses than were respondents interviewed face to face ($b = .02, p < .05$; see col. 3, row 4 in the bottom panel of table 2), and this effect was significant among low-education respondents ($b = .03, p < .05$; see col. 3, row 5 in the bottom panel of table 2), but not among high-education respondents ($b = .01, \text{N.S.}$; see col. 3, row 6 in the bottom panel of table 2).

Dissatisfaction with interview length. Respondents interviewed by telephone were significantly more likely than face-to-face respondents to complain that the interview was too long (9 percent of telephone respondents vs. 1 percent of face-to-face respondents; $b = 2.03, p < .01$; see col. 3 of row 5 in the bottom panel of table 4) and to want to stop at some point during the interview (2 percent of telephone respondents vs. 1 percent of face-to-face respondents; $b = .98, p < .10$; see col. 3 of row 4 in the bottom panel of table 4).

Respondent engagement. Respondents interviewed by telephone were rated as less cooperative ($b = -.02, p < .05$; see row 2 in the bottom panel of table

numerator included only completed interviews, and the denominator included all sample numbers known to be eligible and 20 percent of the sample numbers for which eligibility was not known). The GSS had a response rate of 82 percent in 1998 (Smith 1995).

4) and less interested in the survey ($b = -.04$, $p < .05$; see row 1 in the bottom panel of table 4) than were respondents interviewed face to face.

Interview length. The face-to-face interviews were approximately 6 minutes longer than telephone interviews on average ($b = -5.79$, $p < .01$; see col. 3, row 7 in the bottom panel of table 2).

Social desirability. The telephone respondents were more likely to give socially desirable answers than were the face-to-face respondents ($b = .03$, $p < .05$; see col. 3 of row 4 in table 3). And the telephone respondents were more likely to express suspicion about the interview process than were the face-to-face respondents ($b = .04$, $p < .01$; see col. 3 of row 3 of the bottom panel of table 4).

Meta-analysis of the Education Effect

Satisficing theory anticipates that the mode effect on use of satisficing response strategies may be larger among less-educated respondents. In eight of the nine tests of this hypothesis reported thus far, we saw differences between high- and low-education groups in the expected direction. And in the ninth instance, the mode effect was of equal magnitude in the two education groups. This consistent pattern of differences between the education groups suggests that there may in fact be a meaningful trend here consistent with satisficing theory. However, the difference between the high- and low-education groups was statistically significant only in the case of no-opinion responding in the 1982 NES MCP data and was marginally significant in the case of acquiescence in the 2000 NES (see the last column of table 5).

Meta-analysis was designed precisely to test hypotheses in these sorts of circumstances, where multiple tests point in similar directions (Rosenthal 1984). Therefore, to test whether the moderating effect of education was in fact reliable, we performed a meta-analysis using the data from all three of our studies at once. We compared the difference in the impact of mode between respondents low and high in education across the satisficing indicators using the statistics shown in table 5. At the bottom of table 5 are two meta-analytic test statistics representing the effect of education combined across the 1982 NES MCP, the 1976 Survey Research Center datasets, and the 2000 National Election Study data. One of these tests used the Michigan and Berkeley data from the 1982 NES MCP, in addition to the 1976 and the 2000 data. The other test used only the Michigan data from the 1982 survey, in addition to the 1976 and 2000 data. These statistics were generated by computing a planned contrast between the education groups of the combination of the seven p -values of the mode effect tests within each group.

Both test statistics suggest that the role of education in moderating the effect of mode on satisficing was statistically reliable and in the expected direction (1976 data plus 2000 data plus the 1982 Michigan and Berkeley data: $z =$

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Response Strategy	Low-Education Coefficient	High-Education Coefficient	z-Test of the Education Difference
1982 NES MCP:			
Michigan and Berkeley:			
No-opinion responding	.14** (.03)	.05** (.01)	2.85**
Nondifferentiation	.06** (.02)	.04** (.01)	.89
Michigan:			
No-opinion responding	.22** (.05)	.05** (.01)	3.33**
Nondifferentiation	.03 (.03)	.03** (.01)	.00
1976 SRC datasets:			
No-opinion responding	.42 (.31)	.34** (.15)	.23
Nondifferentiation	.05** (.03)	.02 (.02)	.88
Acquiescence	.06 (.04)	.03 (.02)	.74
2000 NES:			
No-opinion responding	.08** (.02)	.06** (.01)	1.26
Acquiescence	.03** (.01)	.01 (.01)	1.56 ⁺
Combination of significance levels from all three surveys:			
Using the Berkeley and Michigan data from the 1982 NES MCP, the 1976 SRC dataset, and the 2000 NES			3.11**
Using only the Michigan data from the 1982 NES MCP, the 1976 SRC dataset, and the 2000 NES			2.85**

NOTE.—OLS regression coefficients are shown for all effects except no-opinion responding for the 1976 SRC datasets, for which logistic regression coefficients are shown. Standard errors are shown in parentheses.

⁺ $p < .10$.

* $p < .05$.

** $p < .01$.

3.11, $p < .01$; 1976 data plus 2000 data plus the 1982 Michigan data only: $z = 2.85$, $p < .01$).

General Discussion

Taken together, this evidence suggests that interview mode can affect response patterns in long interviews with representative national samples. In particular, answers given during telephone interviews of RDD samples appear to have manifested more satisficing and greater social desirability response bias than

did answers given during face-to-face interviews of area probability samples. Furthermore, respondents interviewed by telephone appear to have been more suspicious and less cooperative and less interested in the survey, suggesting they may have had less motivation to generate optimal answers. These differences are consistent with the notion that the rapport probably developed during the lengthy face-to-face interviews may have inspired respondents to work harder at providing high-quality data, even when doing so meant admitting something that may not have been socially admirable.²¹

The magnitudes of the mode effects documented here might appear to be small enough to justify concluding that there is no reason for concern about the telephone mode. And these mode effects on data quality may appear even smaller in light of the large cost savings associated with telephone interviewing relative to face-to-face interviewing. However, we have seen that telephone interviewing is associated with an increase in systematic bias in response patterns, and these effects were sometimes sizable among respondents who were the least educated. Furthermore, it is well established that telephone samples underrepresent low-education respondents, low-income respondents, and minority respondents. Therefore, if one intends survey research to give equally loud voices to all members of society, the biases apparently associated with telephone interviewing may discriminate against population segments that already have limited impact on collective decision making in democracies.

There is reason for concern here even among researchers who do not view surveys as providing vehicles for public influence on public policy and societal deliberation. For example, our findings suggest that basic researchers interested in comparisons across population subgroups may reach different conclusions depending upon which mode they employ. Specifically, many studies have explored the notion that more socially disadvantaged segments of democratic publics are less likely to have opinions on political issues and therefore have less to offer the collective decision-making process (for a review, see Krosnick and Milburn [1990]). One would reach this conclusion more strongly when analyzing telephone survey data than when analyzing face-to-face data.

This perspective suggests potential costs that may be borne by shifting long-term large-scale survey studies that have been done face to face for many years over to the telephone mode in order to cut costs. Because comparisons over time are the lifeblood of these studies, any shift of mode confounding substantive shifts in the phenomena of interest with methodological perturbations may cloud these studies' abilities to make clean historical comparisons.

21. Our findings regarding reports of behaviors and attitudes with social desirability connotations may seem surprising given evidence that people are more likely to disclose potentially embarrassing behaviors and attitudes when their reports are anonymous (Himmelfarb and Lickteig 1982; Paulhus 1984; Warner 1965). However, our findings suggest that any benefit of increased privacy over the telephone for the accuracy of reports of sensitive behaviors and attitudes is less than the advantage of greater rapport developed in face-to-face interviews.

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III

Our results therefore suggest caution regarding mode shifts, pointing to systematic biases that may emerge in the data.

OTHER STUDIES OF SOCIAL DESIRABILITY RESPONSE BIAS AND MODE

Our evidence that telephone respondents manifested more social desirability response bias than face-to-face respondents might appear to some readers to conflict with the findings of some past investigations sometimes viewed as offering evidence on this point (e.g., Aquilino 1992; Aquilino and LoSciuto 1989, 1990; Hochstim 1962; Sykes and Collins 1987, 1988). However, a close look at those past studies shows that their results do not in fact conflict with ours. For example, in all of Aquilino's studies (Aquilino 1992; Aquilino and LoSciuto 1989, 1990), respondents interviewed in the face-to-face mode actually answered the drug use questions (which were used to assess social desirability bias) on self-administered paper-and-pencil questionnaires, not aloud. Hochstim (1962) did not report tests of the statistical significance of observed differences, and Sykes and Collins (1987, 1988) did not report enough details of their quantitative findings to permit a meaningful assessment of the results. Furthermore, neither of those studies documented that the items they presumed had social desirability implications did indeed do so. Therefore, we do not see a basis for concluding that our social desirability findings are inconsistent with those of these other studies.

TRENDS OVER TIME AND ACROSS HOUSES

We have examined new data, from 2000, and what might be considered fairly old data, collected 21 and 27 years ago. Face-to-face and telephone interviewing have certainly changed over the years, and these procedures are no doubt practiced differently today across different "houses" in the United States. So it is difficult to generalize about these methodologies today or in the past from a single study.

In that light, it is reassuring that we saw similar patterns across a series of three studies spread out in time and across different sorts of measures of response quality included in them. Furthermore, there is no notable trend in tables 2–5 indicating that the mode effects we uncovered were any weaker in the older data or in the newer data. Nonetheless, both face-to-face and telephone interviewing could change in the future in ways that make the patterns we have documented here no longer applicable. Indeed, these findings may not even apply directly today to some houses, because the University of Michigan and the University of California at Berkeley's interviewing facilities are relatively expensive, academic operations, which may differ from other academic and nonacademic survey organizations in their procedures and response quality.

IMPLICATIONS FOR REINTERVIEWING

Some previous research yielded evidence that appears consistent with our findings and therefore reinforces confidence in them. Although demographics were not included as controls, Groves (1979) found that respondents interviewed face to face were very satisfied with the process, a majority (78 percent) of them saying they would rather be interviewed face to face than by telephone. In contrast, only 39 percent of respondents interviewed by telephone indicated satisfaction with that method; the majority of these individuals said they would prefer to provide data through face-to-face interviews or self-administered questionnaires. Not surprisingly, people interviewed by telephone said they preferred another mode of interviewing most often because it would allow them more time to think about the questions. This is consistent with the notion that telephone interviewing encourages satisficing even among people who would otherwise prefer to optimize instead.

If, in fact, there are such dramatic differences between the modes in respondent satisfaction, this has at least two interesting implications. First, being interviewed by telephone may be more frustrating than fulfilling for individuals, and these people may be less willing to participate in other surveys in the future because their initial experience was not comfortable and rewarding. Second, individuals who have been interviewed once by telephone may be especially unwilling to participate in a follow-up interview as a part of the same study by telephone, because they can anticipate what the experience will probably be like. Therefore, panel reinterview rates may be lower for telephone surveys than for face-to-face surveys partly because follow-up refusal rates may be higher in the former than the latter.

OTHER ADVANTAGES AND DISADVANTAGES OF FACE-TO-FACE INTERVIEWING

The response quality advantages associated with face-to-face interviewing apparent here are not the only strengths of this method, of course. A significant additional advantage is response rates, which tend to be at least 10 percentage points higher for face-to-face than telephone surveys (Aneshensel et al. 1982; de Leeuw 1992; Henson, Roth, and Cannell 1977; Hox and de Leeuw 1994; Thornberry 1987), as they were in the experiments we analyzed here. As new technologies such as call-blocking make it increasingly difficult to reach potential respondents by telephone, telephone response rates may continue to drop (holding budget constant), while face-to-face response rates may be less susceptible to such declines in participation (Smith 1995). Furthermore, visual aids (show cards) are more difficult to employ in telephone interviews than in face-to-face interviews. Using show cards without in-person assistance may be especially challenging for respondents with more limited literacy.

Another advantage of face-to-face interviewing is the capacity to employ

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new measurement technologies. For example, assessments of reaction time with millisecond resolution and subliminal presentation of visual stimuli are core parts of social cognition's new generation of tools for assessing attitudinal dispositions such as racism and various other aspects of cognitive structure and processes (see, e.g., Bargh and Chartrand 2000; Fazio et al. 1995). Enriching the study of public opinion with these methodologies is more difficult with telephone interviewing, though it is readily accomplished if face-to-face interviewers turn their laptops around so that respondents can see the screens and complete tasks on their own. Of course, laptops are routinely used in face-to-face interviewing these days to permit Audio Computer Assisted Self-Interviews (ACASI), so respondents can answer sensitive questions privately, without the involvement of the interviewer.²² Therefore, the use of laptops for unobtrusive measurement of information processing would be a natural and potentially very rich expansion of our toolbox for studying public opinion in the general population.

IMPROVING RESPONSE QUALITY IN TELEPHONE INTERVIEWS

Although the findings reported here suggest that face-to-face interviews provide higher response quality than do telephone interviews, our findings do not pinpoint precisely why these differences appear. We have speculated that the differences are a result of greater trust and rapport and more effective nonverbal communication in face-to-face interviews, as well as less multitasking and more comfort moving slowly through the latter. This logic suggests that telephone interviewing might be improved if it were able to emulate these characteristics of face-to-face interviewing.

Reductions in multitasking and improved nonverbal communication during telephone interviews are not likely to occur until videophones become commonplace in American homes. But steps can be taken now to encourage interviewers to slow the pace of telephone interviews, and enhancing interviewer credibility by sending out advance letters may be at least somewhat effective in shrinking the gap between telephone and face-to-face interviewing by reducing suspicion (see Miller and Cannell [1982] for additional techniques to improve telephone data quality).

Conclusion

The book is far from closed on the relation of interview mode to data quality in national probability sample surveys, and this issue will remain an important

22. Although having respondents answer questions privately on a computer is often done as part of face-to-face interviews, new technology such as telephone audio computer assisted self-interviewing (T-ACASI) may soon make it possible to collect data via similar methods in telephone interviews (Turner et al. 1998).

one for survey researchers. The findings reported here indicate that although telephone interviewing may be particularly appealing to researchers doing such studies because of its affordability, there may be costs associated with this method in terms of response quality. Thus, at least to some extent, we may get what we pay for.

But we must guard against overgeneralizing the findings reported here. Most survey studies conducted around the world today do not involve national American samples and such long questionnaires. Therefore, what we have seen here may not generalize to other, more conventional survey settings. Furthermore, we have focused here only on survey satisficing and social desirability bias, and other types of response errors may not show the same mode-related patterns we have documented here. We hope the findings reported here encourage researchers to continue the investigation of mode effects and to do so in ways driven by theories of information processing and social interaction, so in the long run, we gain a fuller understanding of the trade-offs inherent in mode choices and their impact on the findings of past research.

Appendix A

Measures and Codings

1982 NES Methods Comparison Project

No-opinion responses. Seven questions measuring attitudes explicitly offered respondents no-opinion response options. Five involved 7-point scale ratings of attitudes toward public policies (regarding defense spending, government efforts to improve the social and economic position of minorities, government's role in guaranteeing jobs and a good standard of living, women's rights, and government spending vs. services). The other two asked respondents how the defeat of the Equal Rights Amendment made them feel and their opinion about government regulation of business. For each respondent, we calculated the percent of these questions he or she was asked and answered that were answered "don't know" or "haven't thought much about this." This variable ranged from 0 to 1, with higher numbers meaning more no-opinion responding.

Nondifferentiation. Two batteries of questions asked respondents to make a series of judgments on the same rating scale, which allowed us to assess nondifferentiation. The first battery was a set of seven 101-point feeling thermometer ratings of well-known political figures and groups, such as Ted Kennedy and the Republican Party. For computing nondifferentiation, we divided the 0–100 scale into 10 segments (0–10, 11–20, 21–30, 31–40, 41–50, 51–60, 61–70, 71–80, 81–90, 91–100). The second battery asked respondents if each of nine personality trait terms described President Ronald Reagan extremely well, quite well, not too well, or not well at all. For each battery, we counted up the maximum number of identical or quasi-identical ratings made by each respondent. These two scores were rescaled to range from 0 to 1 and were averaged to yield a single index of nondifferentiation.

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Social desirability. Five items in this questionnaire seemed likely to have widely shared social desirability connotations (see app. B for details about the pretest study in which these items were identified), involving interest in politics, voting in previous elections, and support for government aid to blacks (the latter among Caucasians only). Following government and public affairs “most of the time,” being “very much interested” in political campaigns, having voted in previous elections, and supporting government aid to blacks were considered socially desirable responses. An index of socially desirable responding was created by computing the proportion of these items that a respondent answered by giving the socially desirable response (the question about government aid to blacks was included in this index for white respondents only).

Demographics. Demographic measures included education (coded 0 for respondents who completed eighth grade or less, .33 for respondents who completed between ninth and eleventh grades, .67 for respondents with a high school diploma, and 1 for respondents with more than a high school diploma), income (coded 0 for respondents with incomes less than \$5,000, .14 for incomes between \$5,000 and \$9,999, .29 for incomes between \$10,000 and \$14,999, .43 for incomes between \$15,000 and \$19,999, .57 for incomes between \$20,000 and \$24,999, .71 for incomes between \$25,000 and \$34,999, .86 for incomes between \$35,000 and \$49,999, and 1 for incomes of \$50,000 and above), race (coded 0 for Caucasians and 1 for others), gender (coded 0 for males and 1 for females), age (in years, coded to range from 0 to 1, with 0 meaning the youngest observed age in the sample and 1 meaning the oldest observed age in the sample), married (coded 1 if the respondent was married and 0 otherwise), and employment (coded 1 if the respondent was employed and 0 otherwise).

1976 Survey Research Center Datasets

No-opinion responses. In the 1976 SRC Datasets, a random subsample of respondents was told: “Not everyone has an opinion on the next question. If you do not have an opinion, just say so.” Then they were asked if they agreed or disagreed with the statement “The Arab nations are trying to work for a real peace with Israel.” Respondents who said they had no opinion were coded 1, and those who reported a substantive opinion were coded 0.

Nondifferentiation. Nondifferentiation was assessed using a battery of questions asking whether each of five possible problems that respondents might have had with their house or apartment (e.g., not enough heat, not enough living space, insects) was “a big problem, a small problem, or not a problem at all” for them. The maximum number of identical ratings made by each respondent was computed and rescaled to range from 0 to 1 to measure nondifferentiation.

Acquiescence. Acquiescence was measured using responses to three questions. All respondents were asked about the issues of free speech. A random subsample of respondents were also asked questions about peace in the Middle East and women in politics. We calculated the proportion of these agree/disagree questions that each respondent was asked to which he or she responded “agree.”

Social desirability. Based on the first social desirability pretest study described in appendix B, three items in this survey appeared to have social desirability connotations. Two questions asked about whether the respondent had voted in the 1972 U.S. presidential election and planned to vote in the 1976 U.S. presidential election. Our pretest

suggested that saying one would vote or had voted was socially desirable. The third item asked whether white people should have the right to keep black people out of their neighborhoods or whether black people have a right to live wherever they can afford to. The latter of these answers was found in our pretest to be more socially desirable among white respondents. We calculated the proportion of socially desirable answers given by respondents (the last question was used for Caucasian respondents only).

Unease. Near the ends of the interviews, respondents were asked: “Sometimes, even though a person answers a question, he/she may feel uneasy about discussing the particular subject. I’ll mention several types of questions and I would like you to tell me whether or not you felt uneasy about them.” Respondents indicated unease about questions on five potentially sensitive topics: their income, racial attitudes, income tax return, voting behavior, and political opinions. We calculated the proportion of topics each respondent felt uneasy discussing.

Dissatisfaction with interview length. The final question in the questionnaire asked respondents whether they felt the interview had been “much too long, too long, about right, too short, or much too short.” Responses were coded to range from 0 to 1, with higher numbers indicating greater dissatisfaction with being too long. After the interviews, interviewers recorded whether the respondent had at any time asked how much longer the interview would take. Respondents who asked such a question were coded 1, and those who did not were coded 0.

Demographics. The survey included measures of race, gender, age, marital status, and employment that were coded as in the 1982 NES MCP. The survey also included measures of education (coded 0 for respondents who completed eighth grade or less, .2 for respondents who completed between ninth and eleventh grades, .4 for respondents with a high school diploma, .6 for respondents with some college, .8 for respondents with a college degree, and 1 for respondents with an advanced/graduate degree) and income. Income was measured differently for face-to-face and telephone respondents. Face-to-face respondents were given a show card listing 18 dollar ranges and were asked to indicate in which range their total 1975 family income fell. Telephone respondents were asked directly to report their total family incomes in dollars to the interviewer. We recoded these latter responses into the ranges offered to the face-to-face respondents and then coded the ranges to span from 0 (meaning the lowest income range) to 1 (meaning the highest income range).

Telephone respondents who refused to answer the initial income question were asked to place their income in one of three broad categories: less than \$7,500, between \$7,500–\$15,000, and more than \$15,000. Individuals who answered this follow-up question were assigned the midpoint of the range they specified (\$3,750 for the lowest, \$11,250 for the middle, and \$24,525 for the highest; this last value was the median of the amounts above \$15,000 reported by people who answered the open-ended initial income question). We then assigned these respondents scores on the income index accordingly.

2000 NES

No-opinion responses. Five questions measuring attitudes explicitly offered all respondents no-opinion response options. Four of these questions measured attitudes

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toward public policies (regarding government services, government's role in guaranteeing people jobs and a good standard of living, how much the government should help blacks, and environmental protection), and one asked respondents about their political ideology. Four additional questions explicitly offered a random subset of respondents in each mode no-opinion response options. Three of these questions dealt with attitudes toward public policies (placing limits on foreign imports, protecting the environment, support for school voucher programs), and the fourth question dealt with respondents' beliefs about the roles men and women should play in today's society.²³ We calculated the percent of no-opinion responses a respondent gave to the questions he or she was asked.

Acquiescence. Acquiescence was gauged using answers to eight agree/disagree or yes/no questions asked of all respondents. Some of these questions asked about whether George W. Bush and Al Gore had ever made them feel angry, hopeful, proud, and afraid. Respondents interviewed before September 28 were asked whether Pat Buchanan elicited these emotional responses, and a random subset of respondents were asked whether President Bill Clinton elicited these emotional responses. A random subset of respondents was also asked whether they agreed or disagreed with an isolationist foreign policy, and a different subset of respondents was asked whether they thought companies who have a history of discriminating against blacks should be required to have an affirmative action program. We then calculated the percent of these questions each respondent was asked and answered "agree" or "yes."

Social desirability. The first social desirability experiment described in appendix B suggests that three questions asked in this survey had social desirability connotations: reported voter turnout in the 1996 U.S. presidential election, intentions to vote in the 2000 election, and interest in political campaigns. The NES also conducted a pilot study to test whether other typical NES questions had social desirability connotations (see the description of study 2 in app. B). This investigation identified three other questions with social desirability connotations asked in the 2000 NES: frequency of religious services attendance, watching late afternoon/early evening local television news, and watching late evening local television news. Voting in 1996, planning to vote in 2000, being interested in political campaigns, attending religious services every week, watching late afternoon/evening news every day, and watching late evening news every day were considered socially desirable responses. The proportion of socially desirable responses was calculated for each respondent.

Respondent suspicion. After completing an interview, interviewers rated how suspicious the respondent was about the interview. This variable was coded to range from 0 to 1, with higher numbers indicating greater suspicion.

Dissatisfaction with interview length. After each interview, interviewers recorded whether the respondent complained that the interview was too long or said at some point during the interview that he or she wanted to stop (each of these was coded 1 if a respondent did so and 0 if he or she did not).

Respondent engagement. Interviewers rated how cooperative the respondent was and the respondent's interest in the interview. These variables were coded to range from 0 to 1, with higher numbers indicating greater cooperation and interest, respectively.

23. Some of these questions were presented as rating scales in the face-to-face interviews and as branching questions in the telephone interviews. Previous research indicates that this format difference does not affect rates of "don't know" answering (e.g., Krosnick and Berent 1993).

Demographics. The survey included measures of gender, age, race, marital status, and employment coded as in the first two studies. Measures of education (coded into four categories: 0 for people who did not have a high school diploma, .33 for people with a high school diploma, but no further education, .67 for people with more than a high school degree, but less than a 4-year degree, and 1 for people with at least a 4-year degree) and household income (coded into seven categories: 0 for less than \$15,000, .17 for \$15,000–\$24,999, .33 for \$25,000–\$34,999, .5 for \$35,000–\$49,999, .67 for \$50,000–\$64,000, .83 for \$65,000–\$74,999, and 1 for \$75,000) were also included.

Appendix B

Social Desirability Studies

Study 1

In the 1982 NES MCP, only five items seemed to us likely to have widely shared social desirability connotations, involving interest in politics, voting in previous elections, and support for government aid to blacks (the latter among Caucasians only). Interest and participation in politics are presumably civic virtues in this culture, and the entire 1982 NES MCP interview was on the topic of politics, suggesting that the interviewer and researchers valued political interest. Previous research suggests that Caucasian respondents intentionally underreport animosity toward African Americans, presumably because reporting such feeling is not socially respectable (Pavlos 1972; Sigall and Page 1971). So these items seemed to have sufficient social desirability connotations to allow detection of mode differences in social desirability response bias.

To test our suspicion that these items did evoke social desirability concerns, we asked a sample of 112 adults to answer the same questions, interspersed with filler items. Respondents were 48 males, 63 females, and one person who did not report gender, all attending Ohio State University. Half of the sample (selected randomly) was asked to “fake bad”: give socially undesirable answers, described as those that would “create a negative reaction from society . . . the answers you would least respect or admire from another person answering this questionnaire.” The other half of the sample was asked to “fake good”: provide socially desirable answers, responses that were “most likely to create a positive reaction from society.” If these two groups of respondents gave significantly different answers to the key items, this would indicate that there was a generally agreed-upon desirable answer to each one (e.g., Wiggins 1959, 1962; see also DeMaio 1984).

As expected, significant differences appeared between the “fake good” and “fake bad” respondents on reported voter turnout, $F(1, 110) = 58.79, p < .001$, following government and public affairs, $F(1, 110) = 103.35, p < .001$, interest in political campaigns, $F(1, 110) = 39.16, p < .001$, and government aid to blacks (among white respondents only), $F(1, 84) = 22.37, p < .001$. Not surprisingly, people who “faked good” were more likely to report voting (66 percent of respondents faking good reported voting, compared to 8.9 percent of respondents faking bad), following government and public affairs closely (only 1.8 percent of “fake good” respondents said

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that they follow public affairs “hardly at all,” while 73.2 percent of “fake bad” respondents gave this answer), and being interested in political campaigns (only 16.1 percent of “fake good” respondents indicated “not much interest,” while 76.8 percent of “fake bad” respondents selected that choice). Also, “fake good” respondents who were white said that they believed that the government should provide more help to blacks (only 4.7 percent of “fake good” respondents selected “government should not make any special effort to help blacks,” while 46.5 percent of “fake bad” respondents chose that option). These data were collected nearly 20 years after the 1982 NES MCP was conducted, and social desirability connotations of opinions may have shifted during the intervening years. But this evidence is at least reassuring that these items are potentially reasonable diagnostic tools.

Study 2

In order to identify other questions with social desirability connotations, the NES conducted a similar pretest. In that experiment, half of respondents were asked about one set of four questions (attending religious services, following politics, social security spending, and school integration), and the other half of respondents were asked about a different set of four questions (voting, term limits, religion provides guidance, and frequency of watching local television news). Half of the respondents who were asked about each set were asked to say how they would answer questions if they were trying to make the best impression possible on the interviewer (corresponding to the “fake good” condition reported in study 1), and half were asked to say how they would answer the same questions if they were trying to make the worst impression possible on the interviewer (corresponding to the “fake bad” condition in study 1).

Of these eight questions, four were similar to questions asked in the 2000 NES preelection interview, and we focus on those results here. Significant differences appeared between the “fake good” and “fake bad” respondents on all these items (frequency of religious services attendance: $t(211) = 9.09, p < .001$; social security spending: $t(211) = 5.62, p < .001$; reported voter turnout: $t(211) = 9.10, p < .001$; and frequency of watching local television news: $t(211) = 9.09, p < .001$). People who “faked good” were more likely to report attending religious services (42.7 percent of respondents faking good reported attending services every week, and 16.7 percent reported that they never attended services while 9.4 percent of respondents faking bad reported attending services every week, and 76.0 percent reported that they never attended religious services), voting (81.1 percent of “fake good” respondents reported they voted in the 1998 election, and 18.9 percent reported they did not, while 28.0 percent of “fake bad” respondents reported they voted in the 1998 election, and 63.4 percent respondents reported they did not), and watching local television news (58.6 percent of “fake good” respondents said they watched local television news every day, and 5.4 percent reported they never watched local television news; in contrast 27.7 percent of “fake bad” respondents said they watched local television news every day, and 63.4 percent said they never watched local television news). For social security spending, 65.6 percent of “fake good” respondents reported that spending should be increased, and 27 percent reported it should be decreased, but there was little consensus about the socially undesirable response (although 44 percent of “fake bad” respondents

said spending should be decreased, 39 percent said it should be increased). Therefore, we did not analyze the impact of mode on attitudes toward social security spending.

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EXHIBIT 35

Screening Consortium in the design of the mammography use and sociodemographic questions included in the survey instruments.

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The Gender Gap in Reporting Household Gun Ownership

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ABSTRACT

Objectives. This study examined errors in estimating household gun ownership that result from interviewing only 1 adult per household.

Methods. Data from 2 recent telephone surveys and a series of in-person surveys were used to compare reports of household gun ownership by husbands and wives.

Results. In the telephone surveys, the rate of household gun ownership reported by husbands exceeded wives' reports by an average of 12 percentage points; husbands' reports also implied 43.3 million more guns. The median "gender gap" in recent in-person surveys is 7 percentage points.

Conclusions. Future research should focus on respondents' reports about personally owned guns. (*Am J Public Health.* 1998;88:1715-1718)

How many households contain firearms, and how many guns do members of these households own? This question is of considerable importance given evidence that keeping a firearm in the home is associated with elevated rates of homicide, suicide, and fatal gun accidents.¹⁻⁷

In this article, we study measurement errors in survey estimates that result from asking only 1 adult from each selected household to report on household gun ownership, a practice motivated by considerations of surveying costs.⁸ While comparisons between self-reported personal gun ownership and data from administrative records reveal low false-negative rates,^{9,10} little is known about the degree to which respondents may misreport about guns kept by other household members.^{11,12}

Methods

In order to learn more about the accuracy of reports on household gun ownership, we compared the responses of husbands and wives using data from 3 recent surveys. Husbands and wives were reporting on the same

event (gun ownership in households containing a married couple), but wives were more likely to be proxy reporters for someone else's gun in the home, since men are more likely to own firearms.¹³⁻¹⁵ Because of social desirability bias,¹⁶ false positives are expected to be rare relative to false negatives; thus, the larger of the 2 estimates is likely to be more accurate.

We also assessed the relative accuracy of husband and wife reports by comparing the gun stocks implied by the responses of each

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Note. Opinions and mistakes are those of the authors alone.

TABLE 1—Gun Ownership Estimated From Reports of Husbands and Wives

Parameter and Survey	Husbands	Wives	Gap
Personal gun ownership, % (95% CI)			
NSPOF	46.8 (43.1, 50.5)	9.3 (7.2, 11.4)	...
Gallup	49.5 (43.7, 55.3)	14.5 (10.2, 18.8)	...
GSS (1994–1996) ^a	54.1 (50.7, 57.5)	13.0 (10.8, 15.2)	...
Household gun ownership, % (95% CI)			
NSPOF	49.1 (45.3, 52.9)	37.0 (33.5, 40.5)	12.1 (6.9, 17.3)
Gallup	52.3 (46.4, 58.2)	40.5 (34.6, 46.4)	11.8 (3.5, 20.1)
GSS			
1980	61.1 (56.2, 66.1)	58.8 (53.0, 64.6)	2.3 (–5.3, 9.9)
1982	58.3 (53.6, 63.0)	54.1 (49.5, 58.7)	4.2 (–2.4, 10.8)
1984	56.7 (51.2, 62.2)	56.9 (52.1, 61.7)	–0.2 (–7.5, 7.1)
1985	61.0 (56.1, 65.9)	53.7 (48.8, 58.6)	7.3 (0.4, 14.2)
1987	60.2 (55.2, 65.2)	56.4 (51.7, 61.1)	3.8 (–3.0, 10.6)
1988	57.9 (50.9, 64.6)	52.3 (46.1, 58.5)	5.6 (–3.6, 14.8)
1989	62.1 (55.9, 68.3)	54.6 (48.7, 60.5)	7.5 (–1.0, 16.0)
1990	58.6 (52.1, 65.1)	51.6 (44.9, 58.3)	7.0 (–2.4, 16.4)
1991	60.9 (54.4, 67.4)	50.4 (44.0, 56.8)	10.5 (1.3, 19.7)
1993	56.4 (50.1, 62.7)	50.6 (44.4, 56.8)	5.8 (–3.0, 14.6)
1994	57.7 (53.1, 62.3)	50.5 (46.1, 54.9)	7.2 (0.1, 13.6)
1996	53.6 (48.7, 58.5)	52.0 (47.3, 56.7)	1.6 (–5.3, 8.5)
Guns per gun household			
NSPOF			
Mean (95% CI)	4.3 (3.8, 4.8)	3.0 (2.7, 3.3)	1.3 (0.7, 1.9)
50th percentile	3.0	2.0	1.0
90th percentile	9.0	6.0	3.0
No.	407	359	...
Gallup			
Mean (95% CI)	4.8 (3.1, 6.5)	4.7 (3.1, 6.3)	0.1 (–2.4, 2.4)
50th percentile	3.0	3.0	0.0
90th percentile	10.0	8.0	2.0
No.	126	93	...
Total gun stock in marital households, ^b millions (95% CI)			
NSPOF	113.7 (97.8, 129.6)	59.8 (51.6, 68.0)	53.9 (18.1, 89.7)
Gallup	135.2 (84.9, 185.5)	102.5 (64.5, 140.5)	32.7 (–30.4, 95.8)

Note. For the NSPOF and GSS, we restricted the sample to married respondents who reported living in a household containing at least 2 adults. For the Gallup, we include the proportion of respondents who reported a gun in the home combined with the proportion of respondents who reported a gun elsewhere on their property, such as in a garage, shed, or car. CI = confidence interval; NSPOF = National Study of the Private Ownership of Firearms; GSS = General Social Survey.

^aRestricted to households with telephones.

^bCalculated as the average number of guns reported by husbands multiplied by the estimated proportion of marital households owning guns, derived from husband reports multiplied by total number of marital households (and a similar method for wives). Standard errors were calculated with approximation for variance of the product of 2 random variables.¹⁷

group with firearms sales data. Gun stocks were calculated as the product of estimated household ownership rates and number of guns per firearm-containing household; standard errors were calculated via the approximation given by the following formula¹⁷:

$$\text{Var}(XY) \approx [(1/N)\sum_i(y_i)]^2\sigma_x^2 + [(1/N)\sum_i(x_i)]^2\sigma_y^2 + \sigma_x^2\sigma_y^2,$$

where X and Y are random variables representing household ownership and the number of guns per firearm-containing households, respectively; $(1/N)\sum_i(x_i)$ and $(1/N)\sum_i(y_i)$ represent the sample averages of X and Y ; and σ_x^2 and σ_y^2 represent the variances of the 2 random variables. Cumulative sales figures may overstate the civilian gun stock because of depreciation, although more than two thirds of all guns sold in the United States

since 1899 were made within the past 40 years.^{12,18}

The 1994 National Study of the Private Ownership of Firearms was a telephone survey of 2568 adults.¹³ Each adult was asked, “Do you or any members of your household 18 years of age or older currently have any firearms in your home, car, or elsewhere around your home? Do not include airguns, toys, models, or starter pistols.”

The July 1997 Gallup telephone survey interviewed 1008 adults, each of whom was asked, “Do you have a gun in your house?” and “Do you have a gun anywhere else on your property such as in your garage, barn, shed, or in your car or truck?”

We also used data from the National Opinion Research Center/University of Chicago’s General Social Survey for the years 1980 through 1996. This survey includes the

question “Do you happen to have in your home (or garage) any guns or revolvers?”¹⁹

Each of these surveys interviewed only 1 adult from each household in the sample, selected by a process designed to be equivalent to random. We excluded from the General Social Survey those households without telephones and focused, in both the General Social Survey and the National Study of the Private Ownership of Firearms, on married respondents living in a household with at least 2 adults.

Results

Each of the surveys allowed estimates of personal gun ownership as well as household possession. This is an important distinction because, in most families, a gun is viewed by

TABLE 2—National Household Prevalence and Number of Guns Estimated Directly and With Adjustment for Wives' Underreport

Survey	Estimated Prevalence		Estimated No. ^a (Millions)	
	As Measured, % (95% CI)	Adjusted, % (95% CI)	As Measured (95% CI)	Adjusted (95% CI)
NSPOF (1994) (n = 2568)	34.5 (32.6, 36.4)	38.0 (33.3, 42.7)	121.2 (110.9, 131.5)	150.0 (133.2, 166.8)
Gallup (1996) (n = 1008)	40.8 (37.7, 43.9)	44.0 (36.5, 51.5)	167.6 (133.4, 201.8)	183.7 (131.8, 235.6)
GSS (1994–1996) ^b (n = 3884)	44.3 (42.7, 45.9)	45.7 (41.7, 49.7)

Note. Adjustments applied the prevalence and average number reported by husbands to all marital households. Standard errors were calculated as the square root of the sum of the variance for the estimated ownership rate (or gun stock) for married households, calculated from husbands' responses, and the variance for the estimated ownership rate (or gun stock) for unmarried households, calculated from all unmarried respondents' reports. For the NSPOF and GSS, we restricted the sample to married respondents who reported living in a household containing at least 2 adults. For the Gallup survey, we include respondents who reported a gun in the home and respondents who reported a gun elsewhere on their property, such as in a garage, shed, or car. CI = confidence interval; NSPOF = National Study of the Private Ownership of Firearms; GSS = General Social Survey.

^aEstimated by calculating average number of guns in telephone households multiplied by number of households. Standard errors were calculated with approximation for variance of the product of 2 random variables.¹⁷ The NSPOF stock figures reported are substantially lower than the estimate of 192 million guns derived from self-reported gun ownership.¹³

^bCalculated after excluding households without telephones.

all concerned as the private property of a particular family member. This fact was documented in the Gallup survey, which found that only 5.4% of respondents who reported guns in their home indicated that there was joint ownership for one or more of them.

Table 1 shows that husbands were 4 or 5 times as likely to personally own a gun as their wives. Husbands were also more likely than wives to report household gun ownership, with gaps of approximately 12 percentage points in the 2 telephone surveys. The median gender gap in the General Social Survey since 1988 is 7 percentage points. Our findings are consistent with those reported elsewhere.^{13,20,21}

In the 2 surveys that included a follow-up question on the number of guns in the home, husbands reported more than did wives in the National Study of the Private Ownership of Firearms but not in the Gallup survey, although even the latter showed a gap of 2 guns at the 90th percentile (Table 1). The gun stock in marital households that was indicated by husbands' reports was larger than that reported by wives by an average of 43.3 million.

Table 2 shows the consequences of these differences. Included are national estimates using all households, as well as the results of applying the husband-reported prevalence and average count to all marital households. The adjusted prevalence estimates for the National Study of the Private Ownership of Firearms and the Gallup survey were higher than the unadjusted estimates by 3.5 and 3.2 percentage points, respectively. The adjusted gun stock estimates were also closer to the number of guns (223 million) that entered into private hands in the United States between 1899 and 1993.¹⁸

Yet, even the adjusted gun stock estimates in Table 2 are lower than estimates derived by using self-reports of personal (rather than household) gun ownership and multiplying by the total number of adults (rather than the total number of households). In the National Study of the Private Ownership of Firearms, this implies a gun stock of 192 million.¹³

Discussion

Our results suggest that wives underreport guns in the home and pose a challenge to the assumption, incorporated in most surveys on this subject, that any adult in the household will be a reliable reporter of household gun ownership. Ambiguity in whether the survey questions asked about personal or household ownership could explain some of the gender gap, although the survey with the least ambiguous question (the National Study of the Private Ownership of Firearms) involved the largest gap. Alternatively, gun ownership may be a sensitive behavior subject to social desirability bias, with interview mode effects^{22,23} that may be more pronounced among women because they are more likely than men to be anti-gun.^{13,24} Lack of awareness may also explain part of the gender gap. Some wives may not know about their husbands' guns, either because wives are less interested in guns or because some husbands are reluctant to reveal their gun ownership. This last possibility is suggested by the recent finding that 11% of married respondents recalled a disagreement in their household in which a woman opposed keeping a gun in the home.^{24,25} Sampling does not appear to explain much of the gender gap,

since gaps were small on questions about nonsensitive behaviors.²⁰

We suggest that future survey research on gun-related topics focus, whenever possible, on respondents' reports about their own guns; because of the household misreporting issues noted here, self-reports of gun ownership appear to produce more accurate estimates of America's gun stock than do reports about household guns. □

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Nighttime Observations of Safety Belt Use: An Evaluation of California's Primary Law

James E. Lange, PhD, and Robert B. Voas, PhD

ABSTRACT

Objectives. An analysis was conducted to determine what effect California's change to a primary safety belt law had on safety belt use among nighttime weekend drivers.

Methods. Observations of 18 469 drivers in 2 California communities were made during voluntary roadside surveys conducted every other Friday and Saturday night from 9 PM to 2 AM for 4 years.

Results. Rates of safety belt use rose from 73.0% to 95.6% ($P < .0005$). For drivers with blood alcohol concentrations of 0.10 or higher, rates rose from 53.4% to 92.1% ($P < .0005$).

Conclusions. Because substantial improvement in safety belt use was seen even in a group of high-risk drivers, the injury reduction benefits of this law may be high. (*Am J Public Health.* 1998;88:1718-1720)

On January 1, 1993, California became the first state in the United States to modify an existing safety belt law from a secondary to a primary enforcement law.¹ The primary law gives police the authority to stop a vehicle solely on the basis of their observation of noncompliance with the safety belt law. The secondary law permitted police officers to cite unbelted occupants only when the vehicle was stopped for another violation.

Immediately after implementation of the primary enforcement law, a California statewide telephone survey¹ found that 55% of respondents reported increased use of safety belts. Daytime observation studies at traffic intersections found use rate increases of between 13 and 20 percentage points,^{2,3} and Winnicki's⁴ time-series graph of California's Fatality Analysis Reporting System data indicates an approximately 15 percentage point increase in usage rates among drivers and passengers.

Observation studies in California reported to date have been conducted only during the day. By excluding nighttime weekend drivers, they may be omitting a particularly high-risk segment of the driving population. Analyses of fatal accident statis-

tics are problematic because inclusion in the fatality sample is dependent, in part, on safety belt use. Further, some risky behaviors, such as alcohol use, are correlated both with fatal accidents and with failing to use a safety belt,⁵ so changes in these risk variables may have consequences for safety belt use that are not related to safety belt laws.

Community Roadside Surveys

Oceanside and Salinas in California were sites for an experimental, community-

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Note. The opinions stated in this report are not necessarily those of the National Institute on Alcohol Abuse and Alcoholism or the Center for Substance Abuse Prevention.

EXHIBIT 36

Determinants of social desirability bias in sensitive surveys: a literature review

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Abstract Survey questions asking about taboo topics such as sexual activities, illegal behaviour such as social fraud, or unsocial attitudes such as racism, often generate inaccurate survey estimates which are distorted by social desirability bias. Due to self-presentation concerns, survey respondents underreport socially undesirable activities and overreport socially desirable ones. This article reviews theoretical explanations of socially motivated misreporting in sensitive surveys and provides an overview of the empirical evidence on the effectiveness of specific survey methods designed to encourage the respondents to answer more honestly. Besides psychological aspects, like a stable need for social approval and the preference for not getting involved into embarrassing social interactions, aspects of the survey design, the interviewer's characteristics and the survey situation determine the occurrence and the degree of social desirability bias. The review shows that survey designers could generate more valid data by selecting appropriate data collection strategies that reduce respondents' discomfort when answering to a sensitive question.

Keywords Sensitive questions · Social desirability bias · Survey design · Survey Methodology · Measurement error

1 Introduction

An increasing number of survey statisticians and social scientists focus on the investigation of social taboos, illegal behavior and extreme opinions. Different national surveys contain item batteries asking about sensitive information. For example, the German General Social Survey (ALLBUS) 2000 asked interviewees to self-report on following four minor offences: (1) using public transportation without buying a valid ticket, (2) driving a car with more than the permitted level of blood alcohol, (3) taking goods from a department store without paying, and (4) deliberately making false statements on tax forms in order to pay less. Other

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surveys, like the US National Crime Victimization Survey (NCVS) or the European Crime and Safety Survey (EU ICS), ask questions on sensitive topics like experiences with criminal victimization. Recently, a national study on right-wing extremism was conducted in Germany, collecting data on socially undesirable attitudes like anti-Semitism, xenophobia, and chauvinism (Decker and Brähler 2006). In Switzerland, the Swiss Multicenter Adolescent Survey on Health (SMASH) 2002 asked 16–20 years old youths about their use of illicit drugs, and their drinking and smoking habits. To cite a last example, the US General Social Survey (GSS) monitors the sexual activity of the population and also asks about very sensitive topics like prostitution (‘Thinking about the time since your 18th birthday, have you ever had sex with a person you paid or who paid you for sex?’) or infidelity (‘Have you ever had sex with someone other than your husband or wife while you were married?’). Obtaining valid and reliable data on the basis of such items has proven to be a difficult business and the possibilities of doing so continues to be a lively research activity. Survey methodologists’ state-of-the-art knowledge suggests that answers to sensitive questions are often distorted by social desirability bias. The first section of this article reviews the main theoretical explanations regarding the process of self-reporting in sensitive surveys. ‘Sensitivity’ is a complex theoretical concept whose dimensions are identified and discussed. Next, psychological mechanisms are presented, relating ‘sensitivity’ to other theoretical constructs and to different aspects of data quality. The review focuses on the behavior of both main actors of a survey interview, the respondent and the interviewer, and discusses how survey response is affected by (a) perceived gains, risks and losses of the respondent and (b) the behavior of the interviewer. The second section reviews empirical findings on the effectiveness of different survey methods (such as randomized response or the unmatched count technique) on the respondent’s propensity to misreport in sensitive surveys and outlines future research perspectives.

2 Sensitivity and social desirability: defining the concepts

For the term ‘sensitivity’ different conceptualizations can be observed in the survey literature (Lee 1993). One approach is post hoc assessment of sensitivity via empirical indicators of survey quality (Lensvelt-Mulders 2008; Tourangeau and Yan 2007). For example, questions that are supposed to be sensitive are often associated with comparatively higher item non-response rates than non-sensitive questions. Table 1 summarizes item nonresponse rates for selected items, taken from the German General Social Survey (ALLBUS). The questions were administered to a national random sample from all German speaking persons who resided in private households in Germany and were 18 years old or older:

Table 1 shows that some items (household net income and voting intention) have consistently more missing data than other items (religious denomination, educational attainment, membership of a trade union, employment status and age). Against the background of the assumption ‘the more sensitive the item is the higher item nonresponse will be’ it seems apparent that the income question has the highest sensitivity of all items with nonresponse rates ranging from 20.7 to 26.2%. In contrast, questions asking about employment status and age seem to have the lowest sensitivity with proportions of missing data ranging from 0.0 to 0.4% for age and from 0.1 to 0.2% for employment status respectively.

Other empirical approaches ask respondents to assess the sensitivity of survey items on specific rating-scales (Bradburn and Sudman 1979; Coutts and Jann 2011). Recently, Coutts and Jann (2011, p. 184) carried out an online survey study that asked 2,075 respondents from a German access panel to rate several petty offences (keeping to much change, freerid-

Table 1 Rates of item nonresponse (%) for the German general social survey ALLBUS, selected years and items

Topic	ALLBUS 1990 (%)	ALLBUS 2000 (%)	ALLBUS 2006 (%)
Household net-income	26.2	23.5	20.7
Voting intention ^a	14.4	22.7	14.2
Religious denomination	0.4	0.7	0.5
Educational attainment	0.8	0.3	0.2
Membership of a trade union	1.7	0.2	0.4
Employment status	0.1	0.2	0.1
Age	0.4	0.0	0.3

Data was either collected by PAPI—paper and pencil interviewing (ALLBUS 1990 and 2000), CAPI—computer assisted personal interviewing (ALLBUS 2000 and 2006), or CASI—computer assisted self interviewing (ALLBUS 2006)

^a Statistic includes answer category ‘don’t know’

ing, shoplifting, marihuana use and drunk driving) and immoral activities (to cheat on one’s partner). For each item, a total sensitivity score was calculated by adding the proportions of interviewees who stated (1) that the behavior in question is not alright, and (2) that admitting it would be uncomfortable for most. The most sensitive topics turned out to be shoplifting (79%) and infidelity (73%). These were followed by drunk driving (53%) and marijuana use (43%), both with medium sensitivity scores. In contrast, freeriding (22%) and keeping too much change (20%) were considered as topics with lower sensitivity.

Theory-driven approaches try to distinguish different aspects of the theoretical construct ‘sensitivity’. According to Lee and Renzetti a topic labeled ‘sensitive’ is one that “potentially poses for those involved a substantial threat, the emergence of which renders problematic for the researcher and/or the researched, the collection, holding, and/or dissemination of research data” (Lee and Renzetti 1993, p. 5). They argue that research on sensitive topics seems to be linked with risks and costs, such as negative feelings of shame and embarrassment or negative consequences, such as the possibility of sanctions. Finally, they strongly emphasize the social dimension of sensitivity: “In other words, the sensitive character of a piece of research seemingly inheres less in the topic itself and more in the relationship between that topic and the social context within which the research is conducted” (Lee and Renzetti 1993, p. 5).

Another useful specification of the concept ‘sensitivity’ is introduced by Tourangeau and Yan (2007). They distinguish between three distinct aspects of the term ‘sensitivity’:

1. The first dimension is ‘intrusiveness’ and refers to the fact that within a given culture certain questions per se may be perceived as too private or taboo, independent of the respondents’ true status on the variable of interest. Questions asking about the respondents’ sexual preferences, health status or income are often perceived as too intrusive.
2. The second dimension is ‘threat of disclosure’, pertaining to respondents’ concerns about possible risks, costs or negative consequences of truthfully reporting a sensitive behavior should the sensitive answers become known to third persons or institutions beyond the survey setting. Such negative consequences could be: job loss, family upset or even prosecution. Questions asking the respondent to self-report illegal behavior (e.g. employee theft, tax fraud or illegal entry in surveys of immigrants) may fall into this category.
3. The third dimension is ‘social desirability’. This dimension refers to truthfully reporting an attitude or behavior that clearly violates existing social norms and thus is deemed unacceptable by society. To conform to social norms, respondents may present themselves in a

positive light, independent of their actual attitudes and true behaviors respectively. More specifically, ‘social desirability’ refers to the respondents’ tendency to admit to socially desirable traits and behaviors and to deny socially undesirable ones. Finally, socially desirable answers could also be conceptualized as respondents’ temporary social strategies coping with the different situational factors in surveys (e.g. presence of interviewer, topic of question, etc.).

Unlike ‘intrusiveness’, the problem associated with ‘social desirability’ is not the sensitivity of a question but the sensitivity of an answer. Fowler (1995, p. 29) summarizes this issue as follows: “Questions tend to be categorized as ‘sensitive’ if a ‘yes’ answer is likely to be judged by society as undesirable behaviour. However, for those for whom the answer is ‘no’ questions about any particular behaviour are not sensitive.” Whereas answers suggesting deviations from social norms are seen socially undesirable, self-reports suggesting norm-conforming behaviors are considered socially desirable associated with expected gains such as social approval of the interviewer. Given that, respondents tend to underreport socially undesirable behavior and overreport socially desirable behavior. They distort their answers towards the social norm in order to maintain a socially favorable self-presentation (an overview of the literature of social norms can be found in [Rauhut and Krumpal 2008](#)).

Two sub-dimensions of the concept ‘social desirability’ are often distinguished ([Randall and Fernandes 1991](#)): One sub-dimension refers to social desirability as a stable personality characteristic, such as a constant need for social approval and impression management, to cause socially desirable misreporting ([Crowne and Marlowe 1960, 1964](#); [DeMaio 1984](#)). A strong approval motive and an invariant desire to generate a positive image may thus reduce the interviewee’s willingness to disclose self-stigmatizing information. By contrast, the second sub-dimension refers to social desirability as an item characteristic, considering various activities or attitudes to be more or less socially undesirable and thus relates perceived desirability of a behavior to particular items. Thus, effects of social desirability are strongly influenced by characteristics of a specific item ([Groves 1989](#)).

Social desirability refers to making oneself look good in terms of prevailing cultural norms when answering to specific survey questions. However, the general need for social approval and impression management may vary with specific subgroup norms ([Johnson and van de Vijver 2002](#); [Lee and Renzetti 1993](#)). Furthermore, the tendency to give socially desirable responses may vary across cultural orientations like collectivistic cultures that emphasize good relationships with other group members versus individualistic orientations that set value on the pursuit of one’s personal values, attitudes and goals ([Lalwani et al. 2006](#)).

3 Response error and other types of survey errors

Questions asking about sensitive topics are assumed to generate response errors thus having a negative impact on data quality. Before investigating how sensitive questions increase the likelihood of response errors, especially response bias, it is important to define the terms ‘response error’ and ‘response bias’ and distinguish these concepts from other types of survey errors. Useful typologies of survey errors can be seen in [Fox and Tracy \(1986\)](#) and [Groves et al. \(2004\)](#). One fundamental distinction classifies survey errors as either sampling errors or nonsampling errors.

The first class of survey error, sampling error, arises from the fact that only a subset of all potential respondents in the sampling frame is actually measured. The survey methodol-

ogy literature distinguishes two types of sampling errors: sampling variance and sampling bias (Groves et al. 2004, p. 57). Sampling variance arises from the fact that by a random process many different samples each with different subsets of elements could be drawn from the population under investigation. Each possible sample will produce different estimates on the survey statistic. Sampling bias can result from the possibility that certain subgroups in the target population are not represented (or underrepresented) in the sampling frame thus the selection process excluding them systematically. To the extent that excluded members differ from included members on key variables of the survey, the survey statistics will systematically deviate from the true parameters of the target population.

The second class of error, nonsampling error, is much more relevant in sensitive surveys (Fox and Tracy 1986, p. 8). One type of error in this class is nonresponse error, which refers to differences between the values of statistics computed on the basis of the entire sample and statistical estimates based only on the actual respondent subset of the sample. Another type of nonsampling error is response error. This kind of error arises from an observational gap between the true score of a respondent and the actual answer provided (Marquis et al. 1981, pp. 2–8). Response error is derived from the observation process itself, the term ‘response error’ is often used synonymously with ‘measurement error’. Each specific type of nonsampling error can be separated into a random part, which reduces the reliability of measurements and a nonrandom part introducing bias into survey estimates. The systematic part of nonresponse error is often labeled ‘nonresponse bias’ representing systematic differences between respondents and nonrespondents. Technically, nonresponse bias for the sample mean is defined as the product of the nonresponse rate and the difference between the nonrespondent and the respondent mean. The nonresponse rate is “the proportion of eligible sample elements for which data are not collected” (Groves et al. 2004, p. 59). When nonresponse (e.g. refusals to answer a sensitive question) is related to key variables of the survey (e.g. sensitive behavior to be measured) the results may be no longer valid. Additionally, the standard error of the estimates becomes greater as the sample size becomes smaller.

The basic distinction between random and systematic error can also be applied to response error, the best documented source of error in sensitive surveys. The formal notation of response error on an individual level decomposes an answer A_{it} of respondent i on occasion t into three components (Tourangeau et al. 2000, pp. 266–267):

1. The first is the true score T_i , which represents the respondent’s actual status on the variable in question. Respondents’ true scores can sometimes be determined via external data sources like medical or administrative records.
2. The second reflects any general directional tendency across respondents to misreport, more specifically to underreport socially undesirable activities and to overreport socially desirable activities respectively. This component is called bias b . Response bias is “a systematic tendency to respond to a range of questionnaire items on some other basis than the specific item content” (Paulhus 1991, p. 17).
3. The third component, random error e_{it} , is directionless with an expected value assumed to be zero: $E(e_{it}) = 0$. This error component varies between respondents and between occasions within a single respondent:

$$A_{it} = T_i + b + e_{it}$$

If $b \neq 0$, survey measurements of the respondent’s true status are no longer valid. Whereas random error cancels out over repeated measurements, response bias does not. Rather, the systematic difference between observed scores and true scores persists.

There is ample empirical evidence that respondents systematically overreport socially desirable behaviors and attitudes and systematically underreport socially undesirable ones (Barnett 1998; Lee 1993; Tourangeau et al. 2000; Beyer and Krumpal 2010). For example, underreporting is quite common for socially undesirable behaviors like illicit drug use, smoking, alcohol consumption and abortion. Respondents also underreport crime victimization, certain types of income (e.g. welfare) and unpopular attitudes, like racism and anti-Semitism. By contrast, survey studies on socially desirable behavior found empirical evidence for over-reporting including activities such as voting, seat belt use, environmentally responsible action (e.g. energy conservation, recycling) and religious participation. Misreporting increases as the questions become more sensitive and decreases as the conditions of data collection become more private (Ong and Weiss 2000).

For sensitive behavior, social desirability bias on an aggregate level not only depends on the extent of sensitivity and privacy but also on the fraction of the population who are engaged in the sensitive behavior in question: “For socially desirable behaviour (...) the potential for overstatement is greater on library card ownership than for voting since only a minority of adults have library cards” (Sudman and Bradburn 1982, p. 56). After specification of the concepts ‘sensitivity’ and ‘response bias’ theoretical explanations and empirical studies on respondents’ behavior in sensitive surveys will be discussed.

4 Theoretical explanations of social desirability bias in sensitive surveys

Psychological studies on lying indicate that lying in everyday life is a common social interaction process suggesting relatively low cognitive burden (DePaulo et al. 1996, 2003). People lie to avoid negative emotions of shame, embarrassment and losing face in social interactions (Schaeffer 2000). Cognitive psychologists’ research suggest misreporting on sensitive questions being a controlled, deliberate and motivated process at least partly under the respondent’s voluntary control, rather than an automatic mental process happening completely outside of the respondent’s consciousness (Holtgraves et al. 1997; Holtgraves 2004). Respondents are supposed to edit their answers in a socially desirable way, either because of their inclination to impression management or because of their susceptibility to self-deception (Paulhus 2003): In the case of the impression management mechanism, respondents strive for social approval via selecting the answer that is expected to maximize positive valuations and minimize negative reactions by other subjects. In contrast, the concept of self deception assumes that interviewees want to maintain a positive self-image, to maximize self-worth and to reduce cognitive dissonance resulting from divergence between social norms, self-perception and self-demands on the one hand, and reality on the other hand. According to this perspective, respondents themselves are the main addressees of socially motivated misreporting.

The rational side of answering a sensitive question can be conceptualized within the framework of rational choice theory (RC theory) and subjective expected utility theory (SEU-theory) respectively. Empirical applications of RC theory assume the respondent’s likelihood to answer truthfully to be a function of expected risks and losses from answering truthfully (Becker 2006; Becker and Günther 2004). The general assumption of RC theory is that responding to a survey question is a goal-directed, utility-maximizing selection between different response options (Esser 1986; Stocké 2007a,b; Stocké and Hunkler 2007): Interviewees aim to maximize positive feelings of social approval and to avoid dismissive reactions from other individuals. For this purpose, respondents use strategies of impression management such as answering in a socially desirable way. RC theory

postulates three necessary preconditions for social desirability bias (Stocké 2007b): (1) a strong desire for social approval, (2) a nonzero subjective probability of negative sanctions due to a perceived lack of privacy, and (3) respondents' beliefs that the choice of one or another response option matters, i.e. that the other subjects' reactions will be clearly different for response option A compared to response option B. A multiplicative combination of all three factors is assumed to affect response behavior and to determine the strength and the direction of social desirability bias (Stocké 2007b, p. 495): "If only one of these conditions is not given, nothing will affect the prevalence of SD-bias [social desirability bias], and subjects are assumed to report their "true scores"." An analysis of a survey study on racial attitudes indicates empirical evidence for the postulated three-way interaction effect on the respondents' propensity to give a socially desirable answer (Stocké 2007b).

The behavioural model of SEU-theory can be applied to study respondents' perceptions in sensitive surveys, by modelling perceived losses and gains in the interview situation and investigating their impact on the respondent's decision of whether to respond truthfully or not (Rasinski et al. 1994, 1999): If respondents have been engaged in some frowned-upon behavior, one can think of the consideration whether to answer a sensitive question truthfully or not as "making a risky decision with incomplete knowledge about the associated risks and losses" (Rasinski et al. 1999, p. 467). The first factor, 'perceived risks', subsumes the respondent's perceptions of the conditional probabilities of alternative outcomes given each possible response option. The second factor, 'perceived losses and gains', associates each possible outcome with the respondent's valuations of this outcome. Applying the perspective of SEU-theory to the survey context, one can view a respondent's decision whether to admit to a sensitive behavior or not, as consideration of different risks, losses and outcomes associated with that decision.

In case of admission to a socially frowned-upon or illegal behavior perceived losses might be negative feelings of embarrassment during the interview, especially if the interviewer visibly showed disapproval. Furthermore, painful or stressful feelings, like guilt and shame, may arise in consequence of remembering and truthfully reporting embarrassing behavior that conflicts with the respondent's own values (Schaeffer 2000, p. 117). Outside the interview situation, repercussions like informal sanctions, harassment or even prosecution may result from disclosure of sensitive answers to persons or agencies other than the interviewer or the survey research institute. The different risks can be linked to potential subjective costs and losses: "These losses include further intrusions or solicitations, embarrassment, painful memories, and threat to the respondent's self-concept." (Schaeffer 2000, p. 118). Besides risks and losses, respondents might also take into account different perceived gains associated with truthful reporting. Subjective gains could motivate respondents to answer truthfully, especially if the survey is perceived as one with high legitimacy. Positive emotions and personal satisfaction may be generated via consistency with internalized norms (e.g. norms of politeness, cooperation, and norms regarding telling the truth) or via the promotion of public institution and social welfare.

There are several empirical applications of SEU-theory to misreporting on sensitive survey questions (Nathan et al. 1990; Rasinski et al. 1994, 1999; Sirken et al. 1991; Willis et al. 1994). Willis et al. (1994) found a significant relationship between evaluations of risks and losses concerning response disclosure and the decision to answer truthfully to a sensitive question. Rasinski et al. (1994, 1999) did a series of experimental studies using vignettes to investigate the impact of perceived risks, losses and variation in survey design and context on the likelihood of telling the truth in sensitive surveys: Survey design (e.g. interviewer- versus self-administered interviews) and context variables (e.g. husband and children are present

or not) were varied via vignettes. Perceived risks¹ and losses² were measured directly via specific items. For different conditions, experimental subjects rated whether the respondents in the hypothetical survey interviews were likely to tell the truth. [Rasinski et al. \(1994\)](#) found some empirical evidence for the SEU-theory's predictions relating respondents' perceived risks and losses to their tendency of responding truthfully to a sensitive survey question. They subjected 96 male and 96 female subjects to written hypothetical scenarios describing an interview situation. In the women's versions, the hypothetical interviewees were asked about abortion and drunk driving. In the men's versions, the interview topics were number of sex partners prior to marriage and drunk driving. The scenarios varied 3 aspects of the interview situation: a) the data collection mode (interviewer- versus self-administered); b) the interviewer's age (20 years versus 50 years); and c) the presence of family members (present versus absent). Subjects were randomly assigned to the scenarios. On a ten-point scale, subjects rated the likelihood of the hypothetical interviewee admitting to the sensitive behavior, and then judged risks and losses of possible outcomes (such as being embarrassed, receiving understanding or respondent's spouse finding out the sensitive information). The results of the vignette study indicate a lower probability of truthful reporting if family members were present and the interviewer was older. Furthermore, female subjects showed the lowest probability to tell the truth if the questions were interviewer-administered and family members were at home. Finally, [Rasinski et al. \(1994, p. 500\)](#) tested the SEU-theory's core prediction of a statistical association between risk/loss perceptions (independent variables) and the likelihood of admitting to a sensitive behavior (dependent variable).³ They found that subjects' decisions whether to tell the truth or not were statistically correlated with perceived risks, such as the risk of embarrassment over the interviewer's reaction or the risk of disclosure to the respondent's spouse. Fear of embarrassment with respect to the interviewer's reactions suggest the value of data collection modes that respondents perceive as more private, especially self-administered procedures without presence of an interviewer. [Rasinski et al. \(1999\)](#) conducted two experiments to test the SEU-model and to further investigate the effect of privacy on the probability of telling the truth in sensitive surveys. Again, context variables and features of the survey design influenced both, the subjective probabilities of negative outcomes and the level of misreporting.

To summarize, SEU-theory turns out to be a useful tool to parsimoniously conceptualize and measure respondent's perceptions of threat and to explain misreporting in sensitive surveys. [Rasinski et al. \(1994, 1999\)](#) showed that respondents are concerned about different risks and losses and that these concerns varied with specific survey conditions. From a practical viewpoint, survey designers may influence respondents' perceptions of different risks and losses. As a baseline, lack of privacy lowers the respondent's willingness to self-report norm-violating behavior. By carefully adjusting different features of the survey design and context, researchers may create a more private and comfortable interview setting. As a consequence of the improved survey conditions, it is assumed that respondents reduce their subjective probabilities of negative outcomes associated with truthfully responding to

¹ E.g. "likelihood the interviewer would show disapproval if respondent told the truth" or "likelihood spouse would learn truth about respondent" ([Rasinski et al. 1999, p. 470](#)).

² E.g. "degree of embarrassment felt if interviewer showed disapproval" or "degree of negative consequences [like family upset] if spouse learned respondent's answer" ([Rasinski et al. 1999, p. 470](#)).

³ The independent variables representing risk/loss perceptions were formed by multiplying each judgment of the probability of an outcome by the perceived costs of an outcome: (a) Embarrassment = interviewer showing disapproval · degree of embarrassment if interviewer showed disapproval; (b) Relief = interviewer showing understanding · degree of feeling better if interviewer showed understanding; (c) Spouse = spouse finds out · degree of negative consequences if spouse found out.

sensitive questions. Fewer concerns about social or legal costs and reduced feelings of jeopardy in turn are expected to improve the accuracy of respondents' self-reports in sensitive surveys.

5 Methods and context variables affecting social desirability bias in sensitive surveys

The development of techniques for eliciting from people what they would prefer to keep secret can be traced back to the fifteenth and sixteenth centuries. Excluding torture, priests in the Western Church were taught, via written manuals, "to probe the mind of penitents in order to bring forth admissions of sinfulness" (Lee 1993, p. 97). Tentler (1977, p. 94) describes rules of conduct, confessors were instructed to follow, like "not to show amazement; exhibit a contorted face; show revulsion (no matter what enormities are confessed); rebuke the penitent; or exclaim 'Oh, what vile sins!'" Furthermore, Archbishop Borromeo invented the confessional box in 1565 in order to create more anonymity, to reinforce social distance and to reduce the unease of the confessor and the sinner. The term 'confessing' refers to revealing intimate, personally threatening or self-discrediting information to another person. Eliciting sensitive information from the informant is a difficult business for the questioner. It becomes less difficult when trust is likely to develop via the establishment of a confidential, non-condemning and private atmosphere reducing the discomfort of the parties involved.

During the twentieth and twenty-first centuries, modern survey research has conducted numerous methodological experiments to study the impact of changes in situational variables and survey design on social desirability bias in sensitive surveys. Two sorts of studies can be distinguished to assess the accuracy of survey reports and to compare two or more different methods to ask the sensitive question: validation studies or record check designs, and comparative studies without validation data (Groves 1989; Marquis et al. 1986; Tourangeau et al. 2000). Validation studies can be considered as the golden standard for testing the value of a method because they enable the researcher to compare individual survey responses with the true status of each individual. They also allow for a comparison of survey estimates to the true means or proportions at the aggregate level. In practice, true scores are sometimes known from external data sources, such as medical or administrative records. To evaluate the effectiveness of alternative methods in reducing response bias, the proportion of correct answers can be calculated for each experimental condition. The method generating the comparatively highest proportion of correct answers can be considered most effective in improving response accuracy. In contrast, comparative studies are experimental surveys comparing different survey conditions without the possibility of external validation with some objective criterion due to strict data protection rules or the simple lack of such data. Survey researchers interpret the results of comparative studies according to the 'more-is-better' assumption for socially undesirable behavior and the 'less-is-better' assumption for socially desirable behavior respectively. When underreporting is expected, a higher survey estimate (mean or proportion) is assumed to be a more valid estimate for the population parameter. When overreporting is plausibly assumed, a lower estimate is interpreted as more valid.

5.1 The data collection mode

The data collection mode is assumed to be one important factor explaining the level of misreporting in sensitive surveys (Des Jarlais et al. 1999; Holbrook et al. 2003; Metzger et al. 2000; Okamoto et al. 2002; Tourangeau et al. 1997; Tourangeau and Yan 2007; Turner et al. 1998, 2005). The main distinction among the different modes is whether the questions

are interviewer- or self-administered. The most common interviewer-administered modes are: paper-and-pencil personal interviews (PAPI), computer-assisted personal interviews (CAPI) and computer-assisted telephone interviews (CATI). Common self-administered modes are: paper-and-pencil self-administered questionnaires (SAQ), walkman-administered questionnaires (audio-SAQ), computer-assisted self-administered interviews (CASI), audio computer-assisted self-interviewing (ACASI), interactive voice response (IVR, the telephone application of ACASI also referred to as T-ACASI) and web-surveys. Typologies of data collection methods and mixed-mode designs can be found in [De Leeuw et al. \(2008\)](#).

Several experimental field studies have investigated and quantified the effects of self-administration (compared to interviewer-administration) on response accuracy in sensitive surveys. In many cases self-administered survey modes increased levels of reporting of socially stigmatizing medical conditions, such as anxiety, depression and other psychiatric disorders. Furthermore, respondents self-reported more socially undesirable activities, illicit drug use (e.g. marijuana and cocaine), alcohol problems, risky sexual behavior and abortions when the questions were self-administered ([Tourangeau and Yan 2007](#), pp. 863–867). In addition, self-administration also decreased social desirability bias in answers to questions about racial attitudes ([Krysan 1998](#)), sexual activity ([Gribble et al. 1999](#)), same-gender sex ([Villarroel et al. 2006](#)) and sexually transmitted diseases ([Villarroel et al. 2008](#)). Empirical studies show that women tend to underreport the number of their past opposite-sex sexual partners, at the same time men tend to overreport the quantity of their sex partners ([Smith 1992](#)). Women seem to be embarrassed to report too many sexual partners and men seem to have difficulties to report little sexual experience. [Tourangeau and Smith \(1996\)](#) showed that the discrepancy between self-reports of men and women diminished when the questions were self-administered. In the absence of an interviewer the average number of self-reported sexual partners increased for women and decreased for men. In summary, methods of self-administration, minimizing the presence of the interviewer, seem to increase respondents' privacy, to reduce feelings of jeopardy and to decrease subjective probabilities of painful emotions like shame and embarrassment associated with the presence of an interviewer thus generating more honest answers to sensitive questions.

5.2 Interviewer effects

In the presence of an interviewer during the data collection, effects of interviewers' characteristics (e.g. gender and socio-economic status) and assumed interviewers' expectations on social desirability bias can be observed. [Katz \(1942\)](#) found increased reporting of pro-labour attitudes when interviews were conducted by working class interviewers. In two experimental surveys, [Robinson and Rhode \(1946\)](#) found fewer anti-Semitic opinions made in front of interviewers of Jewish appearance or name. [Schuman and Converse \(1971\)](#) found lower reporting of racial attitudes (e.g. identification with black militancy or anti-white sentiment) in black respondents depending upon whether the interviewer was black or white. In a nonexperimental validation study comparing self-reported voting with local registration and voting records, [Anderson et al. \(1988\)](#) found black non-voters interviewed by black interviewers to be more likely to incorrectly report that they voted compared to black non-voters who were interviewed by white interviewers. [Fowler and Mangione \(1990, p. 105\)](#) assume such interviewer effects to occur most likely in situations "when the topic of a survey is very directly related to some interviewer characteristics so that potentially a respondent might think that some of the response alternatives would be directly insulting or offensive or embarrassing to an interviewer." In order to avoid conflict in personally insignificant situations the respondent guesses the interviewer's internalized norms and expectations and adjusts his answer

accordingly. In terms of SEU-theory's predictions, heightened subjective costs of a truthful response increase the respondent's tendency to give a socially desirable response.

Besides the respondent's uneasiness facing an interviewer, some researchers also focus on the interviewer's feelings of embarrassment and discomfort associated with asking a specific question (Bradburn and Sudman 1979; Hox and De Leeuw 2002; Schnell and Kreuter 2005). If the interviewer feels uncomfortable about asking a certain question, she may skip the question entirely or deliberately change the wording of the question. Such interviewer effects may seriously distort answers to sensitive questions. Empirical findings suggest a positive association between interviewers' expectations of the study's difficulty and the actual problems they experience in the data collection process: Singer and Kohnke-Aquirre (1979) and Sudman et al. (1977a) gathered empirical evidence indicating lower reports of sensitive behaviors for interviewers expecting a study to be difficult. In the case of asking sensitive questions in face-to-face interviews, researchers often use a method called 'sealed envelope technique' (Barton 1958; De Leeuw 2001; Sudman and Bradburn 1974). In the sensitive questions part of the interview a self-administered questionnaire is handed to the respondent. The interviewer asks the respondent to fill out the separate questionnaire containing the sensitive questions. After that, respondents are requested to put the completed questionnaire into an envelope, seal it and give it to the interviewer. Thus the interviewers do not have to read the embarrassing question and also remain ignorant about the respondents' answers. In spite of the increased privacy, some respondents still refuse to fill out the confidential questionnaire (Becker 2006; Becker and Günther 2004).

5.3 Bystander effects

Another area of research on sensitive topics investigates the impact of bystanders (Aquilino 1997; Aquilino et al. 2000; Hartmann 1995; Reuband 1987, 1992; Smith 1997). Aquilino (1997) formulated a model and derived propositions on third-party effects in the interview situation. According to his considerations, the strength and direction of bystander (e.g. parents, spouse, siblings or children) effects is moderated by the following three factors: (a) the type of question, either asking for subjective (e.g. opinions) versus factual information (e.g. behavior), (b) the bystander's prior knowledge of the information, and (c) the subjective probability of negative consequences as a result of disclosing the sensitive information. If the question is factual and the bystander has no information about the respondent's true status or if the question asks about providing subjective information, the strength of the bystander effect will depend on the subjective probability of negative sanctions as a result of the bystander overhearing the sensitive information. Facing a high subjective probability of negative repercussion, third-party presence will elicit less socially undesirable answers. In contrast, if the survey question is factual and the bystander already knows the true status of the respondent, bystander presence is assumed to not affect self-reports or possibly generate more accurate self-reports. In an experimental study, Aquilino et al. (2000) empirically investigated the impact of the presence of third persons in the interview situation. Their empirical findings were consistent with the predictions of Aquilino (1997).

Several empirical studies focused on the effect of parental presence in surveys of adolescents asking sensitive questions about tobacco, alcohol, drug use, sexual intercourse and violence. They found lower levels of self-reporting of these illegal or socially stigmatized behaviors when the survey questionnaire was completed at home compared to a school setting (Brener et al. 2006; Gfroerer et al. 1997; Kann et al. 2002; Rootman and Smart 1985). Youths tend to deny or downplay drug use when their parents are involved in the survey and

at the same time show the propensity to overreport when the survey is instead conducted at their school and peers are present: “Indeed, one interpretation of consistent prevalence differences across school and home settings over time may be that the school setting fosters exaggeration, while the home setting fosters underreporting” (Fendrich and Johnson 2001, p. 635).

Tourangeau and Yan (2007, pp. 868–869) conducted a meta-analysis to quantify the average effect of bystanders’ presence on sensitive survey reporting. They included 9 non-experimental surveys focusing on either the general population or special populations like adolescents comparing answers given in the presence of a bystander with those given without a bystander’s presence. The empirical studies asked questions on various sensitive topics like drug use, smoking, alcohol consumption, voting behavior and attitudes on cohabitation and separation. Separate mean effects for the presence of the respondent’s spouse and parents respectively were estimated. The results for the presence of a spouse indicated overall lower reporting of sensitive characteristics when the spouse was absent; whereas the estimated mean effect size was not significant. In contrast, the presence of parents generated more socially desirable answers. The findings on the average impact of the parental presence indicate a strong and significant effect. Furthermore, the single effect sizes of the parental presence were consistent in direction and replicable across studies indicating a robust result.

5.4 Question wording and question context

Sensitive surveys often attempt to formulate and to present questions in a neutral way to lower respondents’ concerns about how the admission of a certain behavior will be judged. Researchers often write sensitive questions using unthreatening, euphemistic, familiar and forgiving words or phrases. In his humorous article, “Asking the embarrassing question”, Barton (1958) gives an overview of different possibilities to ask sensitive questions in non-embarrassing ways. Many textbooks on survey research and questionnaire design give general wisdom rules how to write and contextualize sensitive questions (Bradburn and Sudman 1979; Fowler 1995, pp. 28–45; Groves et al. 2004, pp. 230–232; Lee 1993, pp. 75–79; Sudman and Bradburn 1982). Most of these recommendations are based on survey practice. A recent experimental study conducted by Näher and Krumpal (2011) shows inconsistent results. In addition to question wording, appropriateness and question context seems to matter. Fowler (1995) recommends making sure that the sensitive question is appropriate for a certain respondent: “Researchers should be asking people questions only when there is a clear role for the answers in addressing the research questions” (Fowler 1995, p. 34). Other approaches recommend embedding the sensitive question in a series of questions starting with unoffending general questions connected to the topic of interest, and then gradually narrowing the focus to more specific behaviors. Carefully embedding the sensitive question in a carefully constructed context is assumed to lower the respondent’s feelings of jeopardy and to “reduce the focus on a specific behavior question” (Sudman and Bradburn 1982, p. 61).

Other contextual features assumed to affect reporting in sensitive surveys are confidentiality and data protection assurances. Many questionnaire introductions contain such assurances to increase respondents’ trust in data protection and to induce cooperation. Singer et al. (1995) reviewed the experimental literature on the effects of confidentiality assurances. They found lower item nonresponse, higher response rates and higher response accuracy for sensitive items (mostly illegal or socially disapproved behavior, but also income) in studies involving confidentiality assurances, although the average effect size was small. Overall, data protection assurances seem to reduce respondents’ concerns and to improve response quality. However, some positions argue that confidentiality assurances that are too elaborate and sophisticated

might have unintended effects in terms of heightening respondents' suspicions and concerns about who might get access to the data. In three experimental studies on nonsensitive topics, [Singer et al. \(1992\)](#) found higher nonresponse rates for sophisticated data protection assurances compared to shorter assurances or none at all.

5.5 The bogus pipeline procedure

There is some empirical evidence that a data collection strategy called the 'bogus pipeline procedure' increases respondents' motivation to report potentially self-discreditable information more accurately. The term 'bogus pipeline' refers to any methodology, in which respondents believe that an objective procedure (e.g. lie detector, biochemical test) will be used to reveal false self-reports independent of whether such verification actually takes place or not ([Akers et al. 1983](#); [Campanelli et al. 1987](#); [Jones and Sigall 1971](#); [Roese and Jamieson 1993](#)). In terms of SEU-theory, the rationale of bogus pipeline is to increase the respondent's subjective costs of misreporting. Being unmasked as a liar involved in some socially undesirable activities is assumed to generate more embarrassment than simply admitting to a frowned-upon behavior like using drugs or stealing. For the measurement of sensitive attitudes [Roese and Jamieson \(1993, p. 364\)](#) argue: "Hence, the BPL [bogus pipeline] was predicated on the motivational assumption that a desire to avoid appearing to be a liar or to be self-unaware would supersede the typically assumed tendency to exaggerate possession of favourable traits (...)." The empirical evidence in many cases supports the assumed effectiveness of bogus pipeline, although some studies show unexpected results: In the context of an experimental school study in Michigan, [Campanelli et al. \(1987\)](#) randomly assigned 291 students to either a bogus pipeline (173 students) or control condition (118 students). In addition to the questionnaire completion, saliva samples were collected from each student in the bogus pipeline condition. Furthermore, the same students were announced that the experimental results would enable a check on how accurate their alcohol consumption self-reports were. Contrary to their expectations, [Campanelli et al. \(1987\)](#) found no significant bogus pipeline effect; students in the bogus pipeline condition did not self-report more alcohol use and misuse compared to students in the control condition. [Aguinis et al. \(1993\)](#) conducted a meta-analysis to test whether the use of a bogus pipeline methodology generated more valid self-reports, compared to self-report measures alone, for the assessment of cigarette smoking behavior. The results of the quantitative literature review indicate that, overall, a larger fraction of respondents admitted to smoke frequently, compared to respondents interviewed in the control condition. [Aguinis et al. \(1995\)](#) conducted two meta-analyses of experimental studies on the effectiveness of the bogus pipeline procedure in improving the veracity of adolescents' marijuana and alcohol self-reports. They found no evidence for the bogus pipeline methodology to generate more self-disclosure of marijuana and alcohol consumption compared to the control condition. They explained their unexpected findings partly with the post hoc assumption that adolescents might have perceived the behaviors in question as not socially undesirable. In a meta-analysis of opinion studies, [Roese and Jamieson \(1993\)](#) investigated the impact of bogus pipeline use on self-reporting socially undesirable attitudes like racism and sexism. The research synthesis of 31 experimental studies indicates that the bogus pipeline procedure, overall, reduced socially desirable responding.

5.6 The randomized response technique

The randomized response technique (RRT) guarantees the respondent to maintain privacy via the possibility of randomizing his answer ([Warner 1965](#)). The technique has been refined

and several variants of the original method have been developed and implemented.⁴ All of these variants rely on the principle that the respondent uses a randomizing device, which is ideally under her control, to select which of two (or more) questions she will answer. Only the respondent knows the outcome of the randomizing device (e.g. cards, coins, dice) and whether they answered to the sensitive question or a surrogate. Since the interviewer is unaware of the outcome of the random experiment, a given answer does not reveal anything definite about the respondent's true status. Given the assumption that respondents understand the RRT scheme and comply with the RRT procedure, more accurate self-reports to sensitive questions are expected compared to direct questioning.

In the following, Warner's original scheme is described to illustrate the rationale of RRT schemes in general: The respondent is confronted with two statements, the socially undesirable one (e.g., 'I sometimes smoke marijuana') and its negation (e.g., 'I never smoke marijuana'). The interviewer asks 'Do you agree with the following statement?' Using a randomizer, the respondent determines which of the two statements he will answer. For example, the respondent may be given a box of 9 coloured marbles, 5 yellow and 4 blue marbles, and told to take one marble out of the box and to respond to the first statement if a yellow marble is selected, but to respond to the second statement if a blue marble is selected. Without revealing the outcome of the random experiment to the interviewer, the respondent answers with either a 'yes' or a 'no' according to his marijuana smoking habits.

In Warner's design, the prevalence of the socially undesirable behavior can be estimated on the basis of elementary probability theory: The expected value ϕ of observing a 'yes' answer can be modelled as $\phi = p\pi + (1 - p)(1 - \pi)$, where π is the unknown proportion of marijuana smokers in the population, and $p(p \neq 0.5)$ is the probability that the statement 'I sometimes smoke marijuana' is selected. Since the observed sample proportion of 'yes' answers is an estimate of ϕ , and the selection probability p is given by design, the population prevalence of the socially undesirable behavior π can be estimated. Such probabilistic link between the observed answer and the respondent's true status is also at the heart of alternative RRT schemes (overviews of proportion and variance estimators for different RRT schemes can be found in [Fox and Tracy 1986](#)). Furthermore, the relationship between explanatory variables and the socially undesirable characteristic is of interest. Adapted logistic regression models allow for the analysis of the relationship between a response variable measured by the RRT and background variables ([Maddala 1983](#); [Scheers and Dayton 1988](#)).

Several experimental studies comparing results generated by the RRT with alternative data collection methods indicate that the RRT provides more valid estimates of stigmatized, illegal or socially undesirable behavior like drug use (RRT versus direct questioning; [Goodstadt and Gruson 1975](#)), child abuse (RRT versus self-administered interview using the sealed-envelope technique versus classical mail survey; [Zdep and Rhodes 1976](#)), premature sign-offs on audits (RRT versus self-administered questionnaire; [Buchman and Tracy 1982](#); [Reckers et al. 1997](#)), academic cheating behavior among students (RRT versus self-administered questionnaire; [Scheers and Dayton 1987](#)) and abortion (RRT versus face-to-face interview versus audio computer-assisted self-interview versus self-administered questionnaire; [Lara et al.](#)

⁴ Development of RRT schemes in chronological order: (1) Warner's original method: statement and negation of the statement procedure ([Warner 1965](#)); (2) the unrelated question technique with unknown population prevalence of the innocuous attribute ([Greenberg et al. 1969, 1971](#); [Horvitz et al 1967](#)); (3) the forced response technique ([Boruch 1971](#)); (4) Moor's procedure ([Moors 1971](#)); (5) Kuk's 'two packs of cards' technique ([Kuk 1990](#)); (6) two-stage RRT formats ([Mangat 1994](#); [Mangat and Singh 1990](#)).

Also, another body of statistical literature shows considerable progress in the optimization and enhancement (e.g. improving efficiency) of RRT estimators: [Bellhouse \(1980\)](#), [Bourke and Moran \(1988\)](#), [Dowling and Shachtman \(1975\)](#), [Folsom et al. \(1973\)](#), [Liu and Chow \(1976\)](#), [Loynes \(1976\)](#), [O'Hagan \(1987\)](#), [Pollock and Bek \(1976\)](#), [Sen \(1974\)](#) and [Tamhane \(1981\)](#).

2004). In addition, validation studies comparing responses generated by different methods to individual 'true scores' determined from administrative or medical records, confirm the effectiveness of the RRT in reducing response bias in socially sensitive self-reports like self-reported arrests (RRT versus direct questioning; Tracy and Fox 1981) and welfare benefit fraud (RRT versus computer-assisted self-interview versus face-to-face direct questioning; Van der Heijden et al. 2000). Lensvelt-Mulders et al. (2005) conducted a meta-analysis of 6 validation studies and 32 experimental studies without validation data comparing the RRT with other interview methods such as computer-assisted self-interviews or face-to-face direct questioning. Overall, their results indicate that self-reports on sensitive issues are more accurate and more socially undesirable answers are elicited when RRT is employed.

However, other studies have found no superiority of the RRT and standard direct questioning sometimes elicited more socially undesirable answers than did the RRT (for an overview see Holbrook and Krosnick 2010a). Furthermore, some studies yielded evidence suggesting difficulties in making the RRT practical (McAuliffe et al. 1991; Stem and Steinhorst 1984; Weissman et al. 1986). RRT questions impose a higher cognitive burden on the question-and-answer process compared to more conventional data collection methods (Lensvelt-Mulders and Boeije 2007). Some respondents assume a trick and therefore may be confused and distrustful (Boeije and Lensvelt-Mulders 2002; Landsheer et al. 1999; Wiseman et al. 1976). Empirical evidence indicates that a substantial proportion of respondents do not comply with the RRT instructions. They give self-protective 'no'-answers regardless of the outcome of the random device. New developments in the analysis of RRT data account for such self-protective response behavior (Cruyff et al. 2007; Ostapczuk et al. 2009; Coutts and Jann 2011). Alternatively, the crosswise model was proposed to overcome some of the drawbacks of the RRT (Yu et al. 2008; Jann et al. 2011; Coutts et al. 2011).

5.7 The unmatched count technique

The unmatched count technique (UCT) was developed as an alternative to the RRT to protect the respondent's privacy in sensitive surveys. Several other labels, which all refer to the same method, can be found in the literature: 'Block total response' (Raghavarao and Federer 1979; Smith et al. 1974), 'item count technique' (Chaudhuri and Christofides 2007; Droitcour et al. 1991; Tsuchiya 2005), 'unmatched count technique' (Dalton et al. 1994; Coutts and Jann 2011) or 'unmatched block count' (Dalton et al. 1997).

Two subsamples of respondents are generated via randomization. One group of respondents is asked to answer to a short list (SL) of items including only a set of innocuous items (j). The other group of respondents is requested to respond to a long list (LL) of items including the same set of innocuous items plus the sensitive item ($j + 1$). For example, to estimate the prevalence of bilking the following list of items could be used:

1. Have you been to a restaurant, café or bar during the last year? (SL and LL)
2. Have you had dinner in a three-star restaurant during the last four years? (SL and LL)
3. Have you ever left a restaurant or café without paying the bill on purpose? (sensitive item, LL only)
4. Have you run a restaurant by yourself during the last five years? (SL and LL)

Without telling the interviewer which specific items were answered 'yes', respondents in both groups count the number of 'yes'-answers and report solely the sum of items with 'yes'-answers. Since only the number of items in which the respondent was involved is reported, it is not possible to infer whether the respondent engaged in the stigmatized behavior unless 'yes'-answers were given to all or none of the items in the list. The procedure is expected to heighten

the respondents' sense of privacy thus eliciting more socially undesirable answers compared to standard direct questioning. An unbiased estimate of the population's proportion involved in the norm-violating behavior can be obtained by calculating the difference between the two subsample means $\hat{\pi} = \bar{x}_{j+1} - \bar{x}_j$, where \bar{x}_{j+1} is the observed sample mean of 'yes'-responses in the group answering to the long list (LL) and \bar{x}_j is the observed sample mean of 'yes'-responses in the subsample answering to the short list (SL). A double-lists variant of the UCT produces a more efficient estimator compared to the basic procedure (overviews of proportion and variance estimators for different UCT schemes can be found in [Biemer et al. 2005](#); [Droitcour et al. 1991](#); [Tsuchiya et al. 2007](#)).

In several empirical studies, the UCT was applied to estimate the proportion of persons involved in socially undesirable activities (for an overview see [Holbrook and Krosnick 2010b](#)). Some studies found significantly higher proportions of stigmatizing self-reports in the UCT condition compared to direct questioning for behaviors like employee theft ([Wimbush and Dalton 1997](#)), sexual risk behavior after drinking among college students ([LaBrie and Earleywine 2000](#)), hate crime victimization among college students ([Rayburn et al. 2003](#)), eating disordered behavior and attitudes ([Anderson et al. 2007](#)), and shoplifting ([Tsuchiya et al. 2007](#)). However, studies on cocaine use prevalence found significantly lower survey estimates for the UCT compared to standard direct questioning ([Biemer and Brown 2005](#); [Biemer et al. 2005](#)). The reason for failure of the UCT to yield more accurate estimates of cocaine use could have resulted from measurement errors due to problems in cognitive processing: "Deciding which items apply and keeping a running tally of these as the list is read has proven difficult for some respondents." ([Biemer et al. 2005](#), p. 150).

5.8 The nominative technique

The 'nominative technique' (NT) is a variant of the multiplicity methods developed by Sirken ([Sirken 1970, 1975](#); [Sirken et al. 1975](#)). The NT requires the interviewee to serve as an informant by reporting about threatening or illegal behaviors of other persons (e.g. relatives or friends) which are 'nominated' by the interviewee. The anonymity of the persons whose behavior is reported is guaranteed because the interviewer is ignorant about whom the incriminating information is being provided ([Lee 1993](#)). One attempt to estimate the prevalence of socially undesirable behavior ('being intoxicated' and 'smoking marijuana') via NT can be seen in [Sudman et al. \(1977b\)](#). Furthermore, the National Surveys on Drug Abuse 1977, 1979, and 1982 (conducted in the U.S.) used a variant of the NT to estimate the lifetime prevalence of heroin use. As a result, the NT yielded higher estimates of lifetime heroin prevalence compared to the corresponding self-report estimates. The NT version asked the respondent to report, first, how many of his or her close friends have ever used heroin, and second, how many other close friends of each reported heroin user also knew that he or she used heroin. The second question estimates the number of persons which could also report that heroin user and thus allows for the calculation of weights that correct for multiple reports/counts of a particular heroin user ([Droitcour 1985](#), p. 108). Each reported heroin user is weighed inversely to his probability of being reported: The reporting weight is defined as the inverse of the total number of subjects T in the population who are eligible to report a specific heroin user i : $\frac{1}{1+T_{ij}}$.

For each respondent j , the reporting weight must be attached to each report of a heroin-using friend i . In the case of a complete census of the population, weighted individual reports of heroin users could simply be added for all users in the population, so that the total sum of weighted counts of heroin users would equal the total number of heroin users in

the population. In order to obtain the population's proportion of heroin users, the total sum of weighted counts has to be divided by the total population size. The same logic could be applied to the calculation of survey estimates from sample data.

One advantage of the NT is smaller sampling error of estimates compared to estimates based on self-reports. Reported clusters of x 'nominated' friends provide an effective sample size between one and x times the individual sample size. The intra-cluster correlation ρ among reports i within respondents j will determine the decrease in sampling variance of survey estimates based on NT. A decreasing ρ , measuring the degree of homogeneity of reports within respondents, increases the effective sample size and decreases the sampling variance of survey estimates based on clusters (Kish 1965). However, sampling error is only one dimension of total response error. Response accuracy is questionable because many respondents don't know the number of persons who also know about the heroin use of the respondent's close friends: "In fact, the nominative approach might tend to produce over-estimates, because of the potential for undercounts of the numbers of others who 'know' (Droitcour 1985, p. 116). Future survey studies should conduct additional validity tests of the NT by comparing sensitive behaviors with non-sensitive behaviors. The assumption 'higher validity in the NT condition' would be supported if the NT estimates yielded higher prevalence rates for sensitive behaviors and prevalence estimates similar to results based on self-reporting for non-sensitive behaviors.

6 Summary and perspectives

The review of the theoretical and empirical literature on the determinants of social desirability bias identified several factors assumed to affect the respondent's propensity to self-report accurately on sensitive topics. On the one hand, the concept 'sensitivity' refers to certain behaviors that are taboo, illegal or socially sanctioned. On the other hand, the term also encompasses unsocial attitudes and opinions. A respondent's confession of being involved in activities that clearly violate social norms could either cause embarrassment in the interview situation or result in legal or social sanctions in the case that the sensitive information would become public. Anticipating such risks and threats, survey respondents often choose to misreport on sensitive topics or not to answer at all. The respondent's need for social approval, self-presentation concerns and impression management strategies yield socially desirable responses on the individual level and a predictable bias in survey estimates on the aggregate level. In the case of socially undesirable activities, sample proportions will underestimate the true prevalence and frequency of the frowned upon activities in question. In the case of socially desirable behavior, an overestimation of the true level will occur. The degree of social desirability bias in sensitive surveys depends on the perceived items' sensitivity, the degree of privacy in the interview situation, the fraction of the population who have behaved in the socially undesirable manner, and on specific aspects of the survey design.

Improving the validity of answers to sensitive questions has proved a difficult task. Social desirability bias could be reduced by appropriately tailoring the survey design. The literature review of the recent research indicates that cognitive psychologists, social scientists and survey statisticians have made some progress in reducing measurement errors due to deliberate misreporting on sensitive topics, principally by increasing the anonymity of the question-and-answer process (e.g. via the randomized response technique or self-administered interviews), by decreasing the respondent's concerns in admitting to some taboo (e.g. via confidentiality assurances or clever wording and framing of the sensitive item), by increasing the respondent's subjective probability of being caught as a liar (e.g. via the bogus pipeline procedure),

by heightening the respondent's subjective benefit of telling the truth (e.g. via emphasizing the importance and scientific character of the survey), or by manipulating the survey situation (such as reducing the presence of the interviewer and bystanders).

Future research on sensitive topics could investigate the interaction effect between psychological variables and design aspects on survey response in more detail. Such research would deepen our understanding of the cognitive mechanisms underlying the link between survey design and survey response. For example, the literature review shows that the effectiveness of the bogus pipeline procedure is still controversial. Psychological variables such as the perceived level of the items' sensitivity or trust in the institution conducting the survey could moderate the effectiveness of these methods. Therefore, prospective survey studies are encouraged to advance the approaches of Bradburn and Sudman (1979) and Rasinski et al. (1994, 1999) and to include rating-scales measuring the respondents' and the interviewers' perceived sensitivity of the overall survey situation and the perceived sensitivity of specific items. It would be possible to identify specific subgroups which are characterized by different degrees of sensitivity perceptions and to study the complex interactions between these perceptions and the survey design.

Finally, a stronger foundation of the research on sensitive topics in a general theory of human action could further illuminate the social mechanisms operating in the interview situation. The survey interview involves social interactions between several actors (respondents, interviewers, bystanders, and data collection institutions). The impact of varying degrees of anonymity in interactive social situations could be analyzed by means of rational choice theory (e.g. Levitt and List 2007). A clearer understanding of the social interactions in the data collection process and the effects of these interactions on data quality could provide applied researchers with a substantiated basis for designing better data collection instruments and conducting high quality surveys.

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EXHIBIT 37

Validity of a Household Gun Question in a Telephone Survey

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Synopsis

The validity of self-reported data on the presence of guns in the home obtained in a telephone survey was assessed in samples of households where a

hunting license had been purchased or a handgun registered.

The survey was conducted among a random sample of Ingham County, MI, residents who had purchased a hunting license between April 1990 and March 1991 and among those registering a handgun during 1990. A third study sample was selected from the county's general adult population using a random digit dialing method. The interviews were conducted between November 1991 and January 1992.

The proportion of respondents who reported that at least one gun was kept in their household was 87.3 percent among handgun registration households and 89.7 percent among hunting license households. In the survey of the general population of the county, approximately one-third of the respondents reported keeping a gun in the household, 67 percent of them for hunting and 23 percent for safety.

Despite some limitations, the data indicate that a question on gun presence in a household can be used in a telephone survey.

GUNS ARE INVOLVED in more than 33,000 deaths each year in the United States, second only to motor vehicles as a major cause of injury-related deaths (1). The age-adjusted rate of firearm-related mortality during 1991 in the United States was 15.2 deaths per 100,000 population; in Michigan it was 16.2 deaths per 100,000 (2).

In 1992, guns played a role in 3 of the 10 leading causes of death in both Michigan and the United States—accidents and adverse effects, suicide, and homicide (3). In Michigan in 1992, there were 728 firearm-related homicides, 597 firearm-related suicides, and 34 unintentional firearm-related deaths, according to the unpublished data of the Michigan Department of Public Health. Nationally, however, self-destructive use of guns claims more lives than either criminal assaults or accidents (4).

Household ownership of guns increased significantly through the 1960s and 1970s, as did the proportion of all suicides committed with guns (4). During this period, the number of females committing suicide using firearms more than doubled, and firearm suicides among children ages 5–19 years increased 299 percent (5).

Nationally, firearms are the fourth leading cause of unintentional injury deaths among children ages 5–14 years and the third leading cause among 15–24-year-olds (6). Most unintentional firearm-related deaths occur in or around the home, and most involve handguns (6).

Researchers at the Centers for Disease Control and Prevention of the Public Health Service predict that within a few years firearms will surpass motor vehicles as the leading cause of injury deaths (7).

According to a study by the U.S. General Accounting Office, one-quarter of the unintentional fatal injuries occur with the victim's own gun; another 20 percent with the gun of a parent, sibling, or other relative; and 12 percent with the gun of a friend or neighbor (8). Researchers also estimate that there are four to seven nonfatal injuries for every fatal unintentional shooting (9).

Since easy access to firearms is considered to be a risk factor for suicides (10), homicides in the home (11), and unintentional firearm-related injury and death (12), data on the presence of guns in the home are needed to guide public policy. To address this data need in Michigan, questions on gun presence and

storage practices were added to the 1992 Michigan Behavioral Risk Factor Survey (BRFS) of households.

The Household Gun Question

Kellermann and coworkers conducted a landmark study validating responses to the question, "Are guns of any kind kept in your household?" in a face-to-face survey in Memphis, TN, and Seattle, WA (13). A sample of 75 names and addresses of people who had recently registered handguns was selected; people in 53 of these households were contacted, and those in 35 agreed to be interviewed. Of the 35 responses to the household gun question, 34 were considered valid, 31 responding in the affirmative and 3 reporting that previously there had been a gun in the household.

Prior to the inclusion of a series of questions on the presence, characteristics, and storage practices of guns in the home in the Michigan BRFS, a pilot study was conducted to validate within a telephone survey the same question that was used by Kellermann and colleagues (13), that is, "Are guns of any kind kept in your household?" Validation of this question was repeated because of the small sample used in the Kellermann study, the concern that the validity of this question might vary by region, and because of the inconsistency in the literature concerning the impact of the survey mode on the responses to sensitive questions.

In comparisons between the results from face-to-face surveys and those conducted by telephone, underreporting in telephone surveys has been observed for drug use (14), mental health symptoms (15), and unlawful union campaign practices (16). Other studies dealing with questions about alcohol (17,18), however, have not observed underreporting by telephone mode as compared with face-to-face. A review of surveys on physical abuse of women (19) found conflicting results concerning the possibility of a mode effect. The results of a meta-analysis covering a range of subject areas indicated a small tendency for higher social desirability effects in telephone versus face-to-face surveys (20). Aquilino has hypothesized that the inconsistency in mode effect may be related to the degree of threat associated with the question (14).

Methods

Ingham County, MI, was selected as the study site. It is located in south central Michigan, includes the State capital of Lansing, and has a population of

approximately 281,900. Data from the 1990 census indicate that Ingham County, compared with the State as a whole, has a similar proportion of whites (84.1 percent versus 83.5 percent), but a slightly smaller proportion of African Americans (9.9 percent versus 13.9 percent) and a higher proportion of "other" racial groups (6.0 percent versus 2.6 percent). The age distribution of county residents is similar to the State's, with approximately 30 percent of the residents being younger than age 20 and approximately 60 percent ages 20–64. Ingham County has a higher proportion of urban residents than the State (86 percent versus 70 percent) and a higher proportion of residents who have graduated from college (29 percent versus 17 percent). The proportion of the population living below the poverty line, however, is somewhat higher in the county than in the State as a whole (16.6 percent versus 13.1 percent), and the average per capita income in Ingham County is slightly lower than the State average (\$13,740 versus \$14,154).

Despite these differences, Ingham County was thought to be similar enough to the State as a whole to make it an appropriate geographic area in which to conduct a study validating questions for use in the statewide BRFS.

Random samples were selected from two populations in Ingham County thought likely to have guns in their households—(a) people who had purchased a hunting license and (b) people who had registered a handgun. The samples were selected systematically from among those who had purchased a hunting license (which would allow hunting of deer, small game, and waterfowl) between April 1990 and March 1991 and among those who had registered a handgun during 1990.

To legally purchase and possess a handgun in Michigan, a person must be at least 18 years old and must first obtain a license to purchase signed by an authorized local law enforcement official. Within 10 days after purchase, the handgun must be presented to the local police agency to be registered and have a safety inspection certificate issued, at which point a copy of the registration is forwarded to the State police. This process allows the handgun to be kept in a home or business and allows for limited transportation. License to carry a concealed handgun is an entirely different process. A person must obtain a special license to carry a concealed handgun or to transport a handgun in a motor vehicle. Although a license is not required to purchase or possess long guns (that is, rifles and shotguns) in Michigan, they cannot be sold to anyone younger than age 18.

Telephone numbers were obtained by matching last

Table 1. Item nonresponse to household gun and income questions by three study samples, in percentages with 95 percent confidence interval (CI) limits, in Ingham County, MI, telephone survey

Samples	Gun presence ¹			Income ²			
	Don't know	Refused	95 percent CI	Don't know	95 percent CI	Refused	95 percent CI
General population.....	0.0	5.7	(±4.0)	1.5	(±2.3)	11.7	(±6.8)
Likely ownership households ³ ...	0.0	8.3	(±3.9)	1.6	(±1.8)	8.3	(±3.9)
Handgun registrants.....	0.0	9.2	(±6.1)	0.0	...	10.3	(±6.4)
Hunting licensees.....	0.0	7.6	(±5.1)	2.9	(±3.2)	6.7	(±4.8)

¹Nonresponses to the question, "Are guns of any kind kept in your household?"

²Nonresponses to the household income question, "Which of the following categories best describes your annual household income from all sources: less than \$10,000, \$10,000 to less than \$15,000, \$15,000 to less than \$20,000,

\$20,000 to less than \$25,000, \$25,000 to less than \$35,000, \$35,000 to \$50,000, or over \$50,000?"

³Combined sample of handgun registrant households and hunting licensee households.

Table 2. Percentages and 95 percent confidence interval (CI) limits of respondents from likely gun households who reported the presence of a gun in the home, overall and by age group¹, Ingham County, MI, telephone survey

Samples	Age (in years) ²							
	Total	95 percent CI	18-34	95 percent CI	35-54	95 percent CI	55 and older	95 percent CI
Likely gun households ³	88.6	(±4.7)	79.7	(±10.3)	94.1	(±5.0)	90.6	(±10.2)
Hunting licensees.....	89.7	(±6.1)	84.4	(±12.6)	93.5	(±7.2)	89.5	(±13.8)
Handgun registrants.....	87.3	(±7.3)	74.1	(±16.6)	94.9	(±6.9)	92.3	(±15.5)

¹Respondents who refused to answer the question were not included in this analysis.

²Age of respondent reflects the age of the oldest person in the household of

the same sex as the registrant or licensee.

³Combined sample of handgun registrant households and hunting licensee households.

names and addresses with telephone directory listings. All personal identifiers were then purged from the samples, except for sex as determined by first names. After matching, 188 telephone numbers were retained in the hunting license sample and 193 in the handgun registration sample. Within each household contacted, the oldest person of the same sex as the hunting licensee or gun registrant was selected to be interviewed. This intrahousehold selection procedure represented a compromise between interviewing the person most likely to know whether a gun was present in the household and the BRFs method of using a household level question and maintaining anonymity of the respondent.

The third study sample was selected from the general adult population of Ingham County using a random digit dialing method. Within each household, the adult age 18 or older with the most recent birth date was selected to be interviewed.

Interviewing was conducted by telephone between November 1991 and January 1992. The same questionnaire was used with all three samples. Prior to the interview, respondents were assured that all responses were confidential and participation was voluntary. The introduction described the survey as a "survey of Ingham County residents' attitudes about safety in their community." Since one purpose of the survey

was to validate the household gun presence question, respondents were not told that the survey included questions on guns, nor were they informed that their telephone number had been obtained through a sample of hunting licensees or gun registrants.

The survey instrument contained 35 questions, beginning with eight about neighborhood crime and crime prevention. Following these introductory questions was the transitional statement and gun question—"Some people keep guns in their household. Are guns of any kind kept in your household?" After this filter question, additional questions were asked of respondents who answered yes, that is, questions about primary reason for the gun, number of guns in the household, types of guns, and storage practices. All respondents were then asked a set of four attitudinal questions about gun acquisition.

The data from the Ingham County general population survey were weighted by the number of adults in the household and a poststratification weighting factor reflecting the age-sex population structure of Ingham County. SUDAAN software was used to calculate the prevalence estimates and confidence intervals (21).

A subset of these same questions was included in the 1992 Michigan BRFs. The survey protocol of the BRFs was similar to that used in the general

population survey for Ingham County and is described elsewhere (22).

Results

Eighty-seven completed interviews were obtained from handgun registrant households, 105 from hunting licensee households, and 148 from the general adult population. Telephone numbers in the samples that did not result in an interview can be accounted for by households and eligible respondents who could not be contacted, nonworking numbers, ineligible numbers (for example, business numbers, residences outside of Ingham County), and refusals. The unit (or participant) refusal rate, defined as the percent of all eligible respondents contacted who refused to be interviewed, was 23.7 percent among the handgun registrant sample, 26.9 percent among the hunting licensee sample, and 18.2 percent for the general population survey. The item refusal rate (that is, refusal to respond to "Are guns of any kind kept in your household?") was 9.2 percent among the handgun registrant sample, 7.6 percent among the hunting licensee sample, and 5.7 percent among the general population (table 1). Although the item refusal rate was slightly higher in the two samples likely to have guns than in the Ingham County general population sample, the differences were not statistically significant. None of the respondents reported that they did not know whether there was a gun in their household. For comparison, item refusal rates for the household income question are also presented.

The proportion of respondents who reported that guns were kept in their households was 87.3 percent of handgun registrant households and 89.7 percent of hunting licensee households (table 2). Approximately 11 percent of these two samples combined answered no to the household gun presence question. Among respondents from the likely gun households, there were no statistically significant associations (at the $P = .05$ level with a χ^2 -test) in the proportion reporting no to the household gun presence question by household income (\$20,000 or less, more than \$20,000), education of the respondent (high school graduate or less, more than high school graduate), or age of respondent (18–34 years, 35–54 years, 55 years or older), although the test of the age variable approached the ($P = .055$) level of significance.

Attitudes towards policies relating to gun ownership or increased regulation appeared to be similar among the likely gun household samples who responded yes to the household gun presence question and those who responded no or refused to answer, as measured by the proportion who either disagreed or

'Researchers at the Centers for Disease Control and Prevention of the Public Health Service predict that within a few years firearms will surpass motor vehicles as the leading cause of injury deaths.'

strongly disagreed with four statements about gun ownership restrictions (table 3). Responses from the general population survey of Ingham County indicated a lower level of disagreement with three of these four attitudinal statements than the responses from the likely gun households.

Approximately one-third—34.7 percent (± 7.9)—of the Ingham County general population sample reported that a gun or guns were kept in their household. The primary reason given by the majority of respondents in Ingham County for keeping a gun in their household was hunting (66.8 percent), followed by safety (22.8 percent) (table 4). Thirty percent kept one gun in the household, 52.7 percent kept 2–4 guns, and 17.3 percent kept 5 or more guns. The majority (79.5 percent) kept long guns (rifles or shotguns or both) but no handguns, 5.9 percent kept handguns only, and 14.5 percent kept both handguns and long guns.

Hunting was reported as the primary reason for keeping a gun by the majority of likely gun households (90.6 percent of the hunting licensee sample; 50 percent of the handgun registrant sample). Ten out of the 60 handgun registrant sample respondents who reported the type of guns in the household also reported that only rifles or shotguns or both were kept in their household, reflecting a possible inconsistency.

Discussion

The prevalence of guns in households was found to be lower in Ingham County, at 34.7 percent, than in the State as a whole, at 46.2 percent. This statewide prevalence was similar to the results of a Cable News Network-USA Today-Gallup poll in December 1993 that produced a national estimate of 49 percent (23). Results from Behavioral Risk Factor Surveys in other States indicate a generally similar prevalence of household gun presence; 40 percent of households in New Mexico reported having one or more guns in the home (24), as did 53 percent of households in Louisiana (25).

Table 3. Proportion of respondents who disagreed or strongly disagreed with four statements concerning restrictions to gun possession among the combined likely gun households (by response to household gun question) and among the Ingham County, MI, general population sample

Statement ¹	Likely gun households disagreeing with 4 statements						Ingham County sample disagreeing with 4 statements	
	Yes ²		No-refused ²		Total ²		Percent	CI
	Percent	CI	Percent	CI	Percent	CI		
Criminal record check	4.5	(±3.3)	8.3	(±9.0)	5.2	(±3.2)	5.5	(±3.9)
2-week waiting period	39.7	(±7.7)	36.1	(±15.7)	39.1	(±6.9)	9.9	(±5.3)
Handgun ban	92.3	(±4.2)	82.4	(±12.8)	90.5	(±4.2)	56.8	(±9.4)
Require safety course	22.6	(±6.6)	19.4	(±13.0)	22.0	(±5.9)	5.0	(±3.1)

¹Respondents were read the following instructions: "Next I will read four separate statements and then ask whether you strongly agree, agree, disagree, or strongly disagree." 1. "Everyone buying a gun should be checked to see if they have a prior criminal record." 2. "There should be a 2-week waiting period for

anyone purchasing a gun." 3. "Handguns should be banned." 4. "Everyone buying a firearm should be required to attend a gun safety course."

²Response to the question, "Are guns of any kind kept in your household?"

Table 4. Gun characteristics and reasons for gun ownership reported by likely gun sample, Ingham County, MI, general population sample, and statewide 1992 Michigan Behavioral Risk Factor Survey (BRFS)

Characteristics	Likely gun samples						General populations			
	Handgun ¹	95 percent CI	Hunting ²	95 percent CI	Combined ³	95 percent CI	Ingham ⁴	95 percent CI	BRFS ⁵	95 percent CI
Primary reason for gun:										
Safety	18.2	(±9.3)	4.7	(±4.5)	10.6	(±4.9)	22.8	(±17.1)	18.6	(±2.8)
Hunting	50.0	(±12.1)	90.6	(±6.2)	72.8	(±7.1)	66.8	(±17.5)	61.4	(±3.4)
Other	31.8	(±11.3)	4.7	(±4.5)	16.6	(±5.9)	10.4	(±12.5)	20.0	(±2.6)
Number of guns:										
1	20.5	(±11.9)	6.8	(±5.7)	11.9	(±5.8)	30.0	(±17.0)	26.9	(±3.2)
2-5	27.3	(±13.2)	55.4	(±11.4)	44.9	(±9.0)	52.7	(±17.1)	44.8	(±3.4)
6 or more	52.3	(±14.8)	37.8	(±11.1)	43.2	(±9.0)	17.3	(±10.2)	28.2	(±3.3)
Type of gun:										
Handguns	15.0	(±9.1)	0.0	...	6.4	(±4.1)	5.9	(±9.4)	10.0	(±2.1)
Rifles, shotguns	16.7	(±9.5)	76.3	(±9.3)	50.7	(±8.3)	79.5	(±14.5)	60.3	(±3.4)
Both	68.3	(±11.8)	23.8	(±9.3)	42.9	(±8.2)	14.5	(±13.3)	29.7	(±3.1)

¹79 responses to household gun question; 87.3 percent (±7.3) reported that guns were kept in their household.

²97 responses to household gun question; 89.7 percent (±6.1) reported that guns were kept in their household.

³176 responses to household gun question; 88.6 percent (±4.7) reported that

guns were kept in their household.

⁴140 responses to household gun question; 34.7 percent (±7.9) reported that guns were kept in their household.

⁵2,365 responses to household gun question; 46.2 percent (±2.4) reported that guns were kept in their household.

Primary reason for the gun presence in the household appeared to be similar in Ingham County and the State as a whole. There did appear, however, to be a higher proportion of households with only long guns in Ingham County compared with the State. Among the combined likely gun households, the reason for gun presence was similar to the results from the statewide and county-level population samples. A higher proportion of likely gun households, however, kept five or more guns, and a higher proportion kept both handguns and long guns.

Since the respondents were not told during the introduction to the survey that questions about guns were included, the unit refusal rate reflects a general unwillingness to participate in a survey concerned with attitudes about safety in the community rather than an unwillingness to answer questions about guns. Although higher than optimal, these refusal

rates fall within the range of refusal rates in telephone surveys of the general population, which Dillman and coworkers note range from 9 to 36 percent (26), and Steeh (27) has concluded are tending to increase. Item refusal rates do, however, reflect an unwillingness to answer questions specifically about guns. Among the likely gun households, the item refusal rate for the household gun question was similar to the rate for the income question, which is also thought to be sensitive (28). Among the general population of Ingham County, the lower item refusal rate for the gun presence question compared with the item refusal rate for the income question (although the difference was not statistically significant) was hypothesized to reflect the possibility that the gun presence question may be sensitive only among those who do have a gun in their household.

If it can be assumed that all of the people who

purchased a hunting license owned a gun and that all of the persons who registered a handgun were still in possession of the handgun and kept it in their household, then 11.4 percent of the responses were invalid and would result in an underreporting of household gun presence. These validation results, however, cannot be generalized to the general population. They relate only to those households in which someone purchased a handgun through the legal registration process in Michigan and those households in which someone had purchased a hunting license. It could be hypothesized that persons who acquire handguns through an illegal process might be less likely to report the presence of a gun in their household in a telephone interview. Data to this effect are not available, however, and it would be difficult to attempt a validation study among this group.

There were several limitations to this study. The likely ownership samples were limited to those listed in the telephone directory. Studies have indicated that people living in households with unlisted telephone numbers may tend to have different characteristics such as being younger, having less education, and more likely to be divorced (29). A second limitation, also related to the survey methodology, is the noncoverage of households that do not have telephones, which is a limitation of the survey mode itself. In Michigan as a whole, only 4.1 percent of households do not have a phone. In Ingham County, 3.6 percent of households do not have one. Telephone noncoverage is not evenly distributed across socioeconomic groups, however, with education and income being two of the most important correlates; telephone noncoverage is highest among those with lower educational status and income (30). The State health department's unpublished results from the 1992 Michigan BRFSS indicate that households with lower income report a lower prevalence of household gun presence, which in combination with the undercoverage among households with lower income could tend to overestimate household gun presence. However, results from this study do not indicate that the validity of responses is related to household income.

If a gun was owned by a household member but kept outside the household, "no" would have, in fact, been a valid response to the household gun presence question. A question about keeping a gun outside of the household was not asked in this study. However, in the CNN-USA Today-Gallup national poll, 1.7 percent of the total respondents reported to have a gun on their property but not in their home (23). Two other possibilities where "no" would have been a valid response are that some of those who

'Within the context of the limitations . . . it appears that the household gun question is relatively valid in a telephone survey mode among registered handgun owners and hunting licensees.'

purchased a hunting license may not have owned a gun and some of those who registered a handgun may no longer have been in possession of it at the time of the interview. Nearly 9 percent of the handgun registrant households interviewed by Kellermann and coworkers (13) reported that, although guns were not currently kept in the household, guns had recently been kept in their homes. This was considered to be a valid response in the Kellermann study. All three of these scenarios might tend to inflate the estimate of the underreporting of gun presence from this study.

Another potential limitation of this study is that the word gun in the household gun presence question might not have been interpreted as the developers of this questionnaire intended, that is, as a powder firearm, since a definition of the word was not given. It appears unlikely, however, that gun was interpreted by respondents to mean a toy gun or a pellet or BB gun. Oral responses to the question "What is the primary reason that there is a gun in your household?" were recorded for those responses that fell into the precoded "other" category. An examination of these responses did not reveal any indication that the gun to which the respondent was referring was not a powder firearm.

An interesting inconsistency that arose from these data was the 16.7 percent of the handgun registrant sample that reported they did have guns in the household then subsequently reported that they had no handguns. Again, a valid scenario might be that truly the handgun was no longer kept in the household, or it might conceivably indicate the possibility of an underreporting of handgun as the type of gun in the household.

Within the context of the limitations discussed previously, it appears that the household gun question is relatively valid in a telephone survey mode among registered handgun owners and hunting licensees. In comparison with the results from Kellermann and coworkers' face-to-face validation (13), however, the results from this study do indicate that a mode effect may exist for this household gun presence question, although the magnitude of the mode's effect cannot be estimated.

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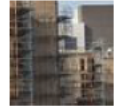
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OP-ED OP-ED OPINION

Why banning assault rifles won't reduce gun violence

By ADAM WINKLER
DEC 11, 2015 | 5:00 AM



An employee checks the chamber of an assault-style rifle at a shooting range in Randolph, N.J. on Dec. 9. (Jewel Samad / AFP/Getty Images)

#9081

The gun control movement in America has been reinvigorated, and at the top of its agenda are bans on assault weapons. "The killers in San Bernardino used military-style assault weapons — weapons of war," President Obama said Saturday, calling for a ban on these guns. Gun control proponents were also emboldened by the Supreme Court's decision Monday to allow an Illinois ban on assault rifles to stand.

Yet we already know that banning assault weapons won't reduce gun crime or deaths. Worse, the bans may make it harder to enact more effective gun control laws.

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The problem starts with the term itself. The "assault weapons" for sale in the U.S. now aren't really weapons of war. Many people mistake these firearms for machine guns capable of shooting multiple rounds of ammunition with a single pull of the trigger. The federal government banned the sale of machine guns to civilians in 1986. (The National Rifle Assn. likes to claim that gun laws never work, but the machine gun ban has worked just fine. Such guns are almost never used in criminal activity, and none of the recent mass shootings in the U.S. involved a machine gun. The San Bernardino terrorists tried to modify one of their guns to turn it into a machine gun.)

Around the same time the machine gun ban went into effect, gun makers started marketing ordinary rifles that look like military machine guns. Colt's AR-15, for example, mirrored the U.S. Armed Forces' M-16: matte black finish,

These rifles are easy to use, even for beginners. They are accurate, have little kick and are highly customizable with add-ons such as special sights and grips. In part because of these attributes, and in part because of their sleek military styling, these guns have become hugely popular among law-abiding gun owners.

As a matter of functionality, these guns are just like other rifles. They're more powerful than some handguns and rifles, and less powerful than others.

They're "semiautomatic" — a technical term that applies to the way rounds are chambered, not to the way the guns shoot. Many handguns are semiautomatic too. Military-style rifles fire only one round for each pull of the trigger, just like a revolver, a shotgun, a hunting rifle or any other of the 300 million legal guns in America.

Horror in San Bernardino: The U.S. infatuation with guns is bordering on a society-wide suicidal impulse

DEC 02, 2015 | 4:05 PM

It's true that these rifles are often sold with detachable high-capacity ammunition magazines that increase their lethality, enabling a shooter to fire more than a dozen rounds quickly. (Such magazines are illegal to sell in California.) But again, these firearms are not unique in this. About half the handguns in the U.S. also have detachable high-capacity magazines.

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The only thing unique about assault rifles is their menacing name and look, and it is these elements that make them such an appealing — if not particularly sensible — target of gun control advocates.

California was the first state to ban the weapons. It happened in 1989, after a shooter used one to kill five schoolchildren in Stockton. A federal ban went into effect in 1994 and then "sunsetted" in 2004. Today, eight states, including California and New York, have assault weapon bans on their books.

The laws, however, are largely ineffectual. Because these guns are really just ordinary rifles, it is hard for legislators to effectively regulate them without banning half the handguns in the country (those that are semiautomatic and/or have detachable magazines) and many hunting rifles as well.

Lawmakers have instead focused on cosmetics. The federal ban applied to all semiautomatic rifles with detachable magazines and two or more military-style features, like flash suppressors and a bayonet attachment. California law tightens the rules a bit; even one of the military-style features is prohibited.

But gun makers have been able to easily skirt these laws. They just sell the same semiautomatic rifle, with the same lethality, but without the military-style features.

Little wonder then that a 2004 study commissioned by the Department of Justice found that the federal ban didn't lead to any decrease in gun crime or gun deaths. For starters, rifles, assault or otherwise, are rarely used in gun crime. Notwithstanding the two rifles used in San Bernardino (and a few other memorable mass killings), rifles account for only about 3% of criminal gun deaths. Gun crime in the United States, including most mass shootings, is overwhelmingly handgun crime.

The nationwide federal ban on assault weapons did accomplish one thing: According to the 2004 study, fewer of the banned guns were found at crime scenes (down from 2% of guns recovered to 1%). Although this suggests that gun laws affect the inventory of guns in the marketplace — again, contrary to the claims of the NRA — the study's authors concluded that criminals had just switched to other guns.

America's gun debate suffers because of unreasonable, extreme positions taken by the NRA. But gun control advocates who push for bans on one kind of rifle primarily because it looks scary also contribute to the problem. Such bans don't reduce gun crime, but they do stimulate passionate opposition from law-abiding gun owners: Gun control advocates ridicule the NRA's claim that the government is coming to take away people's guns, then try to outlaw perhaps the most popular rifle in the country.

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There are approaches to gun control, such as universal background checks and cracking down on rogue gun dealers, that can reduce the daily death toll from guns. It may seem like a victory for the forces of good to ban assault weapons, but such laws aren't the answer. Assault weapon bans are bad policy and bad politics.

Adam Winkler is a law professor at the UCLA School of Law and the author of "Gunfight: The Battle Over the Right to Bear Arms in America."

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by Weapon, 2013–2017

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Weapons	2013	2014	2015	2016	2017
Total	12,253	12,270	13,750	15,296	15,129
Total firearms:	8,454	8,312	9,778	11,138	10,982
Handguns	5,782	5,673	6,569	7,204	7,032
Rifles	285	258	258	378	403
Shotguns	308	264	272	261	264
Other guns	123	93	177	187	187
Firearms, type not stated	1,956	2,024	2,502	3,108	3,096
Knives or cutting instruments	1,490	1,595	1,589	1,632	1,591
Blunt objects (clubs, hammers, etc.)	428	446	450	479	467
Personal weapons (hands, fists, feet, etc.) ¹	687	682	659	669	696
Poison	11	10	8	13	13
Explosives	2	7	1	1	0
Fire	94	71	84	114	103
Narcotics	53	70	75	122	97
Drowning	4	14	14	9	8
Strangulation	85	89	99	99	88
Asphyxiation	95	102	120	93	105

Weapons	2013	2014	2015	2016	2017
Other weapons or weapons not stated	850	872	873	927	979

- ¹ Pushed is included in personal weapons.

EXHIBIT 40

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Rational Basis Analysis of "Assault Weapon" Prohibition

David B. Kopel*

I. INTRODUCTION

One evening, a gang brawl broke out in the street next to the northwest Denver home of a young woman named Sharon Deatherage. A police car happened upon the scene, and sped away without taking any action, never to return. As a result of this experience, the young woman, who lived alone, decided that she would have to take measures to protect herself because she could not rely on the Denver City government for protection. Because of an injury to her wrist, she was unable to use a handgun. At the suggestion of a firearms instructor, she bought an M-1 carbine, which is a relatively small, low-powered semiautomatic rifle, and which has been commercially available for nearly half a century.¹ Not long after she bought the weapon, the City of Denver turned Ms. Deatherage into a criminal by declaring her M-1 carbine and its attached 30-round ammunition magazine an illegal "assault weapon."

Three states—California,² New Jersey,³ and Connecticut⁴—have enacted "assault weapon" prohibitions, as have over two dozen cities or counties.⁵ At the federal level, the Bureau of Alcohol, Tobacco and Firearms has used its authority over the import of "non-sporting" weapons to impose a 1989 import ban on certain rifles, and a 1993 import ban on certain pistols. As of August 1994, Congress had not enacted a comprehensive federal "assault weapon" prohibition. The Congressional (pg.382) prohibition is the "Feinstein Amendment," which outlaws 184 "assault weapons."⁶

Scholarly legal analysis of the "assault weapon" issue consistently puts "assault weapon" prohibition in the context of "gun control." Scholars have asked whether outlawing "assault weapons" would violate either the right to arms guarantee of the Second Amendment to the United

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¹ Deposition of Sharon Deatherage, State of Colo. ex. 60, at 3, 5-8, *Robertson v. Denver*, no. 90CV603 (Denver Dist. Ct. Feb. 26, 1993).

² CAL. PENAL CODE §§ 12275-12290 (West 1992).

³ N.J. STAT. ANN. §§ 2C:39-1 to 39-12, 43-6 to 43-7, 58-5 to 58-11 (West 1982 & Supp. 1993).

⁴ 1993 Conn. Legis. Serv. 93-306 (West).

⁵ See, e.g., New York City, N.Y. Local Law 78-88-823 (1991); HAW. REV. STAT. §§ 134-1, 134-4, 134-8 (West 1988 & Supp. 1993).

⁶ Peter G. Kokalis, *Feinstein Amendment Could Ban 184 Firearms, Not 19*, GUN WEEK, Jan. 14, 1994, at 7.

States Constitution,⁷ a state constitutional right to arms,⁸ or the militia clauses of the United States Constitution.⁹ Although such scholarship has been valuable, this Article suggests that the first, and perhaps dispositive, question in analyzing "assault weapon" prohibition is whether such legislation passes the rational basis test.

Employing the rational basis test, before analyzing the of right to bear arms provisions, is useful for several reasons. For example, the Second Amendment is of limited use in analyzing prohibitions enacted by states or subdivisions of states. Despite some recent Supreme Court dicta suggesting that the individual right to keep and bear arms is incorporated in the Fourteenth Amendment,¹⁰ federal courts have been unwilling to apply the Second Amendment to non-federal action.¹¹ Further, forty-three states have their own state constitutional right to bear arms. In all of these states, except Massachusetts, the right is considered to inhere in individuals, rather than the state government.¹² But seven states, including California and New Jersey, do not (pg.383) have a state constitutional right to bear arms. And even in states that do have a constitutional right, right to arms jurisprudence is not as fully developed as, for example, free speech or search and seizure jurisprudence. Thus, use of a right to arms guarantee to test the Constitutionality of "assault weapon" prohibition will involve the judiciary analyzing a Constitutional right with which many judges have little prior professional experience. In contrast, almost every judge with Constitutional law experience will have some familiarity with a rational basis analysis. To the extent that a right to bear arms analysis does become necessary, analysis of "assault weapon" prohibition under the rational basis test can help clarify the issues relevant to the right to arms.

This Article begins in Part II, with a brief summary of rational basis jurisprudence. Next, Part III applies the rational basis test to various characteristics that are said to distinguish "assault weapons" from other firearms. These characteristics include the weapons' rate of fire, ammunition capacity, ammunition lethality, design history, and the presence of features such as a folding stock and a barrel thread for a muzzle brake, or a bayonet lug. In Part IV, the article examines another basis for treating "assault weapons" differently from other weapons—the frequency with which "assault weapons" are used in crime. Finally, this Article discusses the rationality of a prohibition on firearms based on their suitability for sports.

⁷ See Eric C. Morgan, Note, *Assault Rifle Legislation: Unwise and Unconstitutional*, 17 AM. J. CRIM. L. 143 (1990); Robert A. O'Hare, Jr. & Jorge Pedreira, *An Uncertain Right: The Second Amendment and the Assault Weapon Controversy*, 66 ST. JOHN'S L. REV. 179 (1992).

The Second Amendment states: "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." U.S. CONST. amend. II.

⁸ Glenn Harlan Reynolds, *The Right to Keep and Bear Arms under the Tennessee Constitution*, 61 TENN. L. REV. (forthcoming 1994).

⁹ Keith R. Fafarman, *State Assault Rifle Bans and the Militia Clauses of the United States Constitution*, 67 IND. L.J. 187 (1991).

¹⁰ "[T]he full scope of liberty guaranteed by the Due Process Clause cannot be found in or limited by the precise terms of the specific guarantees elsewhere provided in the Constitution ... [such as] the freedom of speech, press, and the religion; the right to keep and bear arms" *Planned Parenthood v. Casey*, 112 S. Ct. 2791, 2805 (1992) (quoting with approval *Poe v. Ullman*, 367 U.S. 497, 543 (1961) (Harlan, J., dissenting)); *Moore v. East Cleveland*, 431 U.S. 494, 502 (1976) (quoting *Poe*, 367 U.S. at 543).

¹¹ *E.g.*, *Fresno Rifle Club v. Van de Kamp*, 965 F.2d 723 (9th Cir. 1992).

¹² The most thorough discussions of state constitutional guarantees may be found in Robert Dowlut, *Federal and State Constitutional Guarantees to Arms*, 15 U. DAYTON L. REV. 59 (1989); Robert Dowlut & Janet A. Knoop, *State Constitutions and the Right to Keep and Bear Arms*, 7 OKLA. CITY U. L. REV. 177 (1982).

II. TAKING RATIONAL BASIS SERIOUSLY

When legislation impinges on fundamental constitutional rights, judicial review of the legislation employs the "strict scrutiny" test. The legislation is declared constitutional only if the legislation is "narrowly tailored" to achieve a "compelling state interest," and there is no "less restrictive means" to achieve the same goal. In contrast, legislation which does not involve fundamental rights is usually reviewed under the "rational basis" standard; the court will not declare the law unconstitutional unless the court finds that the law lacks a rational basis.

This Article is based on the controversial presumption that the rational basis test actually matters. This presumption has clearly been false during most of the decades since the rational basis test was created. Many courts have treated the rational basis test as little more than a requirement that the law in question be defended by a government (pg.384) attorney who communicates in English and makes at least the attempt to provide a rationale for the law. In the days of the common law of contracts, it was said that "a peppercorn would suffice" to provide consideration. Many courts have been willing to find that a peppercorn's worth of argument will suffice for a law to pass the rational basis test.¹³

However, such is not necessarily, the proper application of the rational basis test. In recent years, the United States Supreme Court has sometimes applied the test seriously.¹⁴ As the court announced in 1976, the rational basis test "is not a toothless one."¹⁵ Since then, the Court has repeatedly used rational basis to strike down laws which the Court found to involve irrational discrimination, even though there was no protected class or specific constitutional right involved.¹⁶

Of particular significance is the case of *Cleburne v. Cleburne Living Center*,¹⁷ a case which illustrates some of the analytic techniques a court may use in rejecting purported rational bases of a law. The city of Cleburne had denied a special use zoning permit to a home for the mentally retarded. The Supreme Court overturned the holding of the lower federal court, and held that the mentally retarded were *not* a suspect or quasi-suspect class. Accordingly, the rational basis test was appropriate. In applying the rational basis test, the Court carefully examined each of the city's three stated justifications for its decision. One basis—fears of local residents—was found to be illegitimate. The Court found another basis—the building's location in a floodplain—was inconsistent with other city actions that had allowed other group care homes to be built in floodplains. Further, the Court found that the city (pg.385) had insufficiently demonstrated its concern

¹³ E.g., *United States v. Marshall*, 908 F.2d 1312 (7th Cir. 1990).

¹⁴ See generally Gayle Lynn Pettinger, Note, *Rational Basis with Bite: Intermediate Scrutiny by any Other Name*, 62 IND. L.J. 779 (1986-87).

¹⁵ *Mathews v. De Castro*, 429 U.S. 181, 185 (1976); *Mathews v. Lucas*, 427 U.S. 495, 510 (1976). See also *Young v. Haines*, 718 P.2d 909, 917 (Cal. 1986).

¹⁶ See, e.g., *Williams v. Vermont*, 472 U.S. 14 (1985) (holding that a tax credit for purchasers of out-of-state cars that only state residents could receive violates the Fourteenth Amendment's Equal Protection Clause; as in *Zobel v. Williams*, 457 U.S. 55 (1982), the decision was not based on the right to interstate travel); *Hooper v. Barnalillo County Assessor*, 472 U.S. 612 (1985) (rejecting tax exemptions for person who is a resident before a particular date); *Metropolitan Life Ins. Co. v. Ward*, 470 U.S. 869, 883 (1985) (eliminating statute that gave tax preference to domestic insurance industries); *Zobel v. Williams*, 457 U.S. 55 (1982) (holding that payment of benefits to state residents based on length of residence violated Equal Protection Clause); *Miller v. Carter*, 547 F.2d 1314, 1316 (7th Cir. 1977), *aff'd by an equally divided court*, 434 U.S. 356 (1978) (remanding Equal Protection Clause claim for further consideration). See also *Mahone v. Addicks Util. Dist.*, 836 F.2d 921, 937 (5th Cir. 1988).

¹⁷ 473 U.S. 432 (1985).

that the home would be overcrowded. Accordingly, the Court found that the statute violated the Equal Protection Clause.

The Court's willingness to declare every one of the government's purported rationales to be illegitimate, inconsistent, or insufficiently demonstrated suggests a new vigor in application of the rational basis test. The *Cleburne* decision also suggests three prongs for rational basis analysis: Illegitimacy, inconsistency, and insufficient demonstration.¹⁸ Although these three prongs are not necessarily the only reasons that a statute may fail the rational basis test, the three *Cleburne* prongs do suggest a framework for analyzing bases asserted to justify governmental actions. This Article, by employing the *Cleburne* framework, attempts in a small way to advance the analytic systemization and rigor of rational basis analysis.

Under state constitutions, state courts have sometimes forcefully applied their own state's version of the rational basis test.¹⁹ Under many state constitutions, it is no innovation for legislation to be declared unconstitutional after rational basis review.²⁰

While the rational basis test does not impose the very high burdens associated with the strict scrutiny test—such as the shifting of the burden of proof to the government and the requirement that the legislation be "necessarily" related to a "compelling" government interest—the rational basis test, if taken seriously, does not give the government a free ride.

It is true that, even after *Cleburne*, many courts consider a law's enactment to be tantamount to proof of its rationality. But, unless *Cleburne* and other Supreme Court rational basis cases from recent years are to be ignored, the rational basis should be taken seriously.(pg.386)

III. INCONSISTENT: PROHIBITION BASED ON THE CHARACTERISTICS OF "ASSAULT WEAPONS"

"Assault weapons" are said by gun prohibition advocates to possess certain unique features which render them far more dangerous than other firearms. This Part examines each of the various physical characteristics said to be unique to "assault weapons," and analyzes whether any of them creates a classification that can survive meaningful rational basis scrutiny.

At this point, it should be stated that this Article will not discuss assault rifles. As the United States Defense Department's Defense Intelligence Agency book *Small Arms Identification and Operation Guide* explains, "assault rifles" are "short, compact, selective-fire weapons that fire a

¹⁸ *Id.*

¹⁹ In Colorado, a classification "must be reasonable and not arbitrary and must be based on substantial differences" having a reasonable relation to public purpose to be achieved. *Dunbar v. Hoffman*, 468 P.2d 742, 744 (Colo. 1970). In California, it is required that "the court conduct 'a serious and genuine judicial inquiry into the correspondence between the classification and the legislation goals.'" *Elysium Inst., Inc. v. County of Los Angeles*, 283 Cal. Rptr. 688, 698 (Cal. Ct. App. 1991) (citing *Fein v. Permanente Medical Group*, 695 P.2d 665 (Cal. 1985)).

²⁰ *People v. Instawhip Denver, Inc.*, 490 P.2d 940, 943 (1971) (voiding regulation of dairy products because it lacked "a real and substantial relation to the public health, safety, morals and welfare"); *Branson v. City and County of Denver*, 707 P.2d 338, 340 (Colo. 1985) (voiding as irrational statute giving widows of firefighters in cities with more than 100,000 population less benefits than widows in smaller cities); *Gallegos v. Phipps*, 779 P.2d 856, 860-61 (Colo. 1989) (holding that it is irrational to make tavern owner's duty of care to a licensee higher than duty of care to an invitee).

cartridge intermediate in power between submachine gun and rifle cartridges."²¹ In other words, assault rifles are battlefield rifles which can fire automatically.²²

Weapons capable of fully automatic fire, including assault rifles, have been regulated heavily in the United States since the National Firearms Act of 1934.²³ Taking possession of such weapons requires paying a \$200 federal transfer tax and submitting to an FBI background check, including ten-print fingerprints.²⁴

Many civilians have purchased semiautomatic-only rifles that look like military assault rifles. These civilian rifles are, unlike actual assault rifles, incapable of automatic fire. For example, the AK-47 is an assault rifle formerly used by the Russian military, which now uses the AKM-74. Only a few hundred AK-47 firearms have been imported into the United States. On the other hand, tens of thousands of AKS (pg.387) firearms (a Chinese semiautomatic rifle which looks like the AK-47, but cannot fire automatically) have been imported into the United States and sold to civilians.²⁵ Similarly, the semiautomatic Colt Sporter rifle, of which tens of thousands have been sold, looks like the automatic U.S. Army M-16 assault rifle. "Assault weapon" legislation involves semiautomatic firearms, like the AKS and the Colt Sporter, but not automatic firearms, like the AK-47 or the M-16.

Other firearms manufacturers produce guns that do not look like an assault rifle, but that have a military appearance that some people find repugnant. Such guns typically have black plastic components, in contrast to the brown wood components found on more familiar firearms. The Calico M-900 carbine is an example of a gun which, although not related in design to any military firearm, has a military appearance. The TEC-9 handgun, not resembling a military gun, also has futuristic styling. Guns such as the Calico and the TEC-9 with futuristic styling are also singled out for prohibition by "assault weapon" legislation.

While the Defense Intelligence Agency's term of art "assault rifle" has a precise and technical meaning, the phrase "assault weapon" has a less certain meaning. No "assault rifle" (by Defense Intelligence Agency definition) is an "assault weapon" because all "assault rifles" are automatic, while no "assault weapons" are automatic.²⁶ "Assault rifles" are used by the military, whereas no "assault weapon" is used by the military.²⁷ "Assault rifles" are all rifles, but "assault weapons" include semiautomatic rifles, semiautomatic shotguns, revolver-action shotguns, semiautomatic handguns, and semiautomatic airguns.

²¹ DEFENSE INTELLIGENCE AGENCY, SMALL ARMS IDENTIFICATION AND OPERATION GUIDE - EURASIAN COMMUNIST COUNTRIES 105 (Washington: Government Printing Office, 1988).

²² Because the guns are "selective fire," the shooter can flip a selector switch to choose between automatic and semiautomatic fire, sometimes with the additional option of tri-burst fire.

²³ National Firearms Act, ch. 757, 48 Stat. 1236 (1934).

²⁴ 26 U.S.C. §§ 5811-5812, 5845 (1988).

As of May 1986, production of new automatics (including assault rifles) for the civilian market became completely illegal, although there have been some disputes among the lower federal courts about the constitutionality of the prohibition. *See Farmer v. Higgins*, 907 F.2d 1041 (11th Cir. 1990), *rev'g* 1:87-CV-440-JOF (1989), *cert. denied*, 498 U.S. 1047 (1991); *but cf.* *United States v. Dalton*, 990 F.2d 1166 (10th Cir. 1993); *United States v. Rock Island Armory, Inc.*, 773 F. Supp 117 (C.D. Ill.), *app. dismissed*, 1991 U.S. App. LEXIS 19505 (7th Cir. Aug. 13, 1991).

²⁵ Stockton murderer Patrick Purdy did not use an AK-47. He used a Chinese, semiautomatic gun known as the AKM-56S. *See* 135 CONG. REC. 19, S1871 (1989) (Testimony of James J. Baker).

²⁶ A few guns labeled "assault weapons" are revolver-type guns (such as the Striker 12 shotgun), while others are single-shot (able to fire only a single shot before reloading), such as the Encom CM-55 shotgun.

²⁷ Again, there are a few exceptions. The Uzi Pistol is used by the Israeli army.

Not surprisingly, attempted legislative definitions of "assault weapons" have varied widely. Some definitions are simply a list of guns.²⁸ Other definitions may involve a set of various characteristics. Still others may involve a list and a set of characteristics.²⁹ The discussion below examines the various purported characteristics of (pg.388) "assault weapons."³⁰

A. Rate of Fire

Foremost among the features which are said to make "assault weapons" different from other firearms is their "high rate of fire."³¹ If "assault weapons" were actually automatic firearms, such as machine guns, then the claim would clearly be true. With an automatic weapon, if the shooter squeezes and holds the trigger, bullets will fire automatically and rapidly until the trigger is released.

Semiautomatic firearms, however, are by definition not automatic. With a semiautomatic, pressing the trigger fires one, and only one bullet.³² To fire another bullet, the shooter must release the trigger, and then press it again. Thus, a semiautomatic can shoot only as fast as a person can squeeze the trigger. So, although gun prohibition advocates sometimes use the catch-phrase "spray-fire," a semiautomatic firearm, unlike a machine gun, cannot "spray fire," because the shooter must press the trigger for each shot.

The "semi" in "semiautomatic" comes from the fact that the energy created by the explosion of gunpowder, used to force the bullet down the barrel, is diverted away from the shooter. The energy is directed forward, and is used to reload the next cartridge into the firing chamber. Thus, in semiautomatic action firearms the shooter does not need to perform an additional step, such as cocking a lever ("lever action") or operating a slide ("slide action"), in order to load the next round. Although a semiautomatic firearm does not require a separate (pg.389) step to load the next round into the firing chamber, the semiautomatic is not unique in this regard. In a revolver or a double-barreled shotgun or rifle, the shooter can also fire the next shot as fast he can squeeze the trigger.

How does the actual rate of fire of a semiautomatic compare to the rate of other guns? The Winchester Model 12 pump action shotgun can fire six "00 buckshot" shells, each containing twelve .33 caliber pellets, in three seconds. Each of the pellets is larger than the bullet fired by an AKS. In other words, the Winchester Model 12 pump action shotgun can, in three seconds, unleash seventy-two separate projectiles, each capable of causing injury or death. The Remington Model 1100 shotgun (which is a common duck-hunting gun) fires semiautomatically and is not usually labeled an "assault weapon." It can unleash the same seventy-two projectiles in 2.5 seconds. In

²⁸ CAL. PENAL CODE, *supra* note 2; Conn. Legis. Serv., *supra* note 4.

²⁹ N.J. STAT ANN., *supra* note 3; Kokalis, *supra* note 6, at 7.

³⁰ The phrase "assault weapon" is used in quotes because, as will be detailed below, the phrase is not a legitimate definition of firearms that are in any meaningful way different from other firearms. In contrast, the phrase "assault rifle" is generally used without quotation marks, because "assault rifle" clearly defines a set of firearms that are distinguishable from other firearms.

³¹ CAL. PENAL CODE, *supra* note 2. Similarly, Bridgeport, Connecticut police chief Thomas Sweeney asserted: "World War II-era semi-automatics are not included in the ban [recently enacted by Connecticut] because they don't fire as fast as modern semi-automatics." *Cop Out*, SHOOTING INDUSTRY, at 173 (Shot Show Issue 1994).

³² A bullet is the single lead projectile that is fired from a rifle or handgun. Before being fired, the bullet is contained in a shell (usually made of brass) that also contains gunpowder and a primer. When the trigger is pulled, a firing pin strikes the primer, igniting the gunpowder, pushing the bullet out of the shell, and down the barrel.

The operation of a shotgun is essentially similar, except that the shotgun shoots a set of pellets, or shot, rather than a single bullet, and the shell is made of plastic (sometimes paper), rather than brass.

A "round" is a single unit of rifle, handgun, or shotgun ammunition, fully assembled.

contrast, an AKS would take about a minute to fire forty aimed shots, or perhaps twice that many without aiming and the AKS rounds would be slightly smaller than the pellets from the Winchester or Remington.³³ Similarly, an old-fashioned .357 revolver can fire six shots in as little as two seconds.

If one tests a firearm under highly artificial conditions—such as bolting the gun to heavy platform and squeezing the trigger by jerking one's arm back and forth—a semiautomatic will "cycle" slightly faster than other firearms. But the only meaningful rate of fire for a weapon is how fast a person, shooting at actual targets, can hit those targets. In terms of actually hitting a target, a study conducted by the United States Navy Seals is revealing. According to the Navy study, at close (pg.390) range, a bolt-action gun³⁴ cycles only one-tenth of a second slower than a semiautomatic; at longer ranges, the cyclic rate is the same for both types of guns. The Navy studies also confirmed something that most gun-owners understand—but something which persons whose familiarity with weapons is limited to "Rambo" movies do not—shooters who fire without aiming virtually never hit their target. It is nearly impossible for even trained shooters to fire on target at much faster than one shot per second.³⁵

Because, under highly artificial conditions, a semiautomatic can be shown to fire slightly faster than other guns, a prohibition of all semiautomatics might pass a lenient version of the rational basis test. Under this test, any distinction, no matter how slight or meaningless, would be held sufficient. Most "assault weapon" legislation, however, cannot clear even this low hurdle, at least in regard to rate of fire. The legislation almost always bans some, but not all, semiautomatics. All semiautomatics have one of three types of action design—recoil-operated, blowback, or gas operated³⁶—and the guns typically selected for prohibition are not exclusively of one type or another. Thus, some semiautomatics are prohibited because of their alleged high rate of fire, while other semiautomatics, with an identical rate of fire, are not prohibited. Accordingly, "rate of fire," standing alone, provides no more than a shred of a rational basis for prohibiting all semiautomatics, and provides no rational basis at all for banning only some semiautomatics.

³³ See Morgan, *supra* note 7, at 149; William R. McGrath, *An Open Letter to American Politicians*, POLICE MARKSMAN, May/June 1989, at 19; EDWARD EZELL, THE AK-47 STORY, (Smithsonian Institution 1986). See also Kent Jenkins, Jr., *Calls for Ban Boost Assault Rifle Sales*, WASH. POST, Mar. 6, 1989, at B1 ("[BATF] weapons experts say that the guns' firing mechanisms are no different from those of other rifles.").

According to testimony of the Bureau of Alcohol, Tobacco and Firearms:

The AK-47 is a select fire weapon capable of firing 600 rounds per minute on full automatic and 40 rounds per minute on semiautomatic. The AKS and AK-47 are similar in appearance. The AK-47 is an NFA [National Firearms Act of 1934] type weapon, having been manufactured as a machine gun. The AKS is difficult to convert, requiring additional parts and some machinery The AKS is a semiautomatic that, except for its deadly military appearance, is no different from other semiautomatic rifles. As a matter of fact, the identical firearm with a sport stock is available and, in appearance, no different than other so-called sporting weapons.

Morgan, *supra* note 7, at 148 n.29 (quoting Assault Weapon Import Control Act of 1989, 1989: Hearings on H.R. 1154 before Subcomm. on Trade of the House Comm. on Ways and Means, 101st Cong., 1st Sess. 70 (1989).)

³⁴ In a bolt-action gun, after one cartridge is fired, the shooter pulls on the bolt handle to load the next cartridge into the chamber. R.A. STEINDLER, THE FIREARMS DICTIONARY 15 (1970). The bolt-action rifle was the military firearm of the U.S. Army during World War I, and of military forces in other parts of the world for decades thereafter.

³⁵ Affidavit of Ron Phillips, Colo. ex. 29, at 2, Robertson v. Denver, *supra* note 1; Johnson aff., Colo. ex. 51, at 3, Robertson v. Denver, *supra* note 1 (Defense Intelligence Agency expert in assault weapons classification).

³⁶ STEINDLER, *supra* note 34, at 20.

B. Magazine Capacity

A second feature, supposedly unique to "assault weapons," is their high ammunition capacity.³⁷ In fact, most semiautomatic firearms, both banned and nonbanned, store their ammunition in detachable boxes or tubes called "magazines." The number of rounds a gun can fire without reloading depends on the size of magazine, an interchangeable, removable part that can be purchased separately. Thus, ammunition (pg.391) capacity has nothing to do with the gun itself. The magazine, not the gun, is the variable. Any gun that accepts detachable magazines can accept a magazine of any size.³⁸

It follows that the rational way to ban guns based on potential large ammunition capacity would be to outlaw all guns which can accept detachable magazines. Alternatively, a rational ban might apply only to guns in which large capacity magazines (however one defines "large") are actually inserted. Another approach to controlling ammunition capacity would be to regulate or outlaw magazines that hold more than a certain number of rounds. Such proposals have been made by former President Bush (fifteen rounds),³⁹ Senator Diane Feinstein (ten rounds),⁴⁰ and the lobby Handgun Control, Inc. (six rounds).⁴¹ This prohibition is at least minimally rational.

Whether such regulation would pass a rationality test is, however, debatable. Changing a magazine takes only a second or two.⁴² A person simply hits the magazine release button and the empty magazine falls to the ground. A new magazine is then inserted. In one firearms demonstration, a police shooter emptied a thirty round magazine attached to a banned Colt rifle in 5.9 seconds. The officer then fired a fifteen round magazine attached to an unbanned Glock pistol, changed magazines (2.25 seconds), and then fired another 15 rounds. The same thirty rounds were fired by the Glock in 8.92 seconds.⁴³ Does the difference between six and nine seconds to fire thirty shots constitute "a real and substantial" difference?

Certainly not in the Stockton, California schoolyard where mass murderer Patrick Purdy killed five children, and wounded twenty-nine in January 1989. Using a Chinese semiautomatic rifle with large capacity magazines, Purdy fired approximately 110 rounds in four to six minutes. The rate of fire could be duplicated by virtually every gun currently manufactured. Even including time for reloading, a simple (pg.392) revolver or a bolt-action hunting rifle can easily fire that fast.⁴⁴

C. Conversion to Full Automatic

One of the most widely-asserted claims about semiautomatic "assault weapons" is that they can easily be converted into fully automatic weapons. According to the Bureau of Alcohol, Tobacco

³⁷ CAL. PENAL CODE, *supra* note 2.

³⁸ Morgan, *supra* note 7, at 149; GARY KLECK, POINT BLANK: GUNS AND VIOLENCE IN AMERICA 79 (1992).

³⁹ N.Y. Times, May 16, 1989, at A1.

⁴⁰ Kokalis, *supra* note 6, at 7.

⁴¹ Richard M. Aborn, Testimony before the Committee on Codes of the Assembly of the State of New York (Jan. 3, 1991).

⁴² See James B. Jacobs, *Assault Rifles are Bad Targets*, NEWSDAY, May 28, 1993, at 58 ("[a] spent magazine can be popped out and a new one inserted in an instant.")

⁴³ Malcolm Gladwell, *Irrational Bans on "Assault Weapons" Draw False and Ignorant Distinction*, DISPATCH (Columbus, Oh.), Mar. 27, 1993, at 7.

⁴⁴ Phillips aff., *supra* note 35 at 2.

and Firearms (BATF), all so-called "assault weapons" are "difficult to convert to automatic fire."⁴⁵ The conversion requires several hours work by a skilled gunsmith willing to commit a major felony.⁴⁶ The (pg.393) gunsmith must also have access to expensive equipment, such as precision lathes. The origin of the easy convertability myth may lie with the semiautomatic M10 pistol. Versions of the pistol built during the early 1980s were easy to convert, requiring no technical skill and only five minutes of work. The BATF, using administrative authority, classified those early M10s as machine guns, requiring a federal license for possession.⁴⁷ Subsequent models of the M10 have been produced without the easy convertability.

D. Lethality of Ammunition

"Assault weapons" are also said to fire "high-power" or "high-velocity" bullets which are unusually destructive. Elementary ballistics show this claim to be false.

As detailed above, ammunition for genuine assault rifles (battlefield weapons such as the AK-47 or M-16) is classified as being "intermediate" in power. The ammunition for semiautomatic rifles which look like, but do not fire like, automatic rifles is the same. This ammunition uses bullets which weigh the same or less than bullets used for big-game hunting. For example, a 9mm bullet, used in the Uzi pistol, weighs between 88 and 147 grains (depending on the manufacturer and model); a 7.62 x 39 bullet, used in Kalashnikov rifles, weighs 110 to 125 grains; while the bullet for

⁴⁵ Statement of Edward D. Conroy, Deputy Associate Director, Law Enforcement, BATF, before U.S. Senate Subcommittee on the Constitution, Feb. 10, 1989, at 1; Charles Mohr, *Firearms Market Thrives Despite an Import Ban*, N.Y. TIMES, Apr. 3, 1989, at A14.

⁴⁶ S. REP. NO. 160, 101st Cong., 1st sess. 3 (1989) (testimony of Detective Jimmy L. Trahin of the Los Angeles Police Department Firearms/Forensics Ballistics Unit, stating that: "99% of these so-called assault weapons are not easily converted.")
A machine gun expert explains the complexity of converting a semiautomatic rifle to automatic:

If time and effort are of no consequence, any firearm, even a lever-action rifle, can be converted to fully automatic fire. Converting a semiautomatic-only AK to automatic fire requires a great deal of skill and knowledge and no small amount of effort and equipment. Without being too specific, the procedure is more or less as follows:

1) A portion of the receiver must be modified. A hole through each side of the receiver (larger on one side than the other) must be precisely located (to within 0.0015) and drilled to accept the axis pin for the auto safety sear and its coil spring. This special coil spring also retains the hammer and trigger pins. If not installed correctly, the hammer and trigger axis pins will not be retained, and these components will fall out of the receiver. A slot must also be carefully milled into the rightside bolt-carrier rail to accept the auto safety sear. The three new components required are not easily procured or fabricated.

2) The hammer must be built up by welding and then with great skill re-shaped to provide a notch not present on the semiautomatic-only version.

3) An extension must be added at the rear of the sear by welding and then re-shaped to contact the selector lever.

4) A portion of the selector-lever stop on the rightside exterior of the receiver must be removed and another detent milled into the receiver for the new semiauto position.

5) The bolt carrier must be built up by welding and then re-shaped to actuate the auto safety sear.

If welded components are not subsequently and properly heat-treated, wear will be accelerated and these parts will fail in a short period of time, often with dangerous consequences. Furthermore, if this conversion is performed on an AKM type with a sheet-metal receiver, failure to install a completely unavailable five-component, anti-bounce mechanical drag device on the hammer (especially if the firing pin is not spring-retracted) will probably result in a disastrous ignition out of battery.

Peter G. Kokalis, *Full Auto*, SOLDIER OF FORTUNE, Dec. 1989, at 16.

⁴⁷ Michael Hancock, *The Convertible Submachine Gun Boondoggle*, N.Y. TIMES, June 15, 1985, at A22.

the popular 30-06 hunting rifle ranges from 55 to 250 grains (twenty-one of the twenty-two bullet types for the 30-06 are 100 grains or above); the bullet for the ubiquitous Colt .45 pistol weighs 185 to 230 grains; and bullets for the 458 Winchester magnum weigh between 300 and 510 grains.⁴⁸

One of the reasons that the ammunition for the military-style rifle is smaller, and hence less powerful, is that it was created for soldiers who would have to carry large quantities of ammunition over long distances.⁴⁹ In contrast, standard hunting ammunition can be heavier, because a hunter will carry only a few rounds on a trip that is usually completed in a single day, or at most a few days.

The second major factor in the force of a bullet's impact is its velocity. Other things being equal, a bullet traveling at high velocity (pg.394) will be more destructive than a bullet traveling at lower velocity. The muzzle velocities for the ammunition types listed above are: For the 9mm, between 975 and 1,500 feet per second (fps); for the 7.62 x 39, from 2,100 to 2,500 fps; for the 30-06, from 2,100 to 4,080 fps; for the Colt pistol, 770 to 1140 fps; and for the 458 Winchester magnum, from 2,100 to 2,500 fps.⁵⁰

A bullet's power to damage its target depends mainly on the kinetic energy delivered by the bullet. Kinetic energy is produced by the combination of bullet weight and velocity.⁵¹ A typical 7.62 x 39 bullet for the AKS rifle (a Kalashnikov variant) achieves 1,445 foot-pounds of kinetic energy per second. In contrast, the 30-06 hunting rifle bullet carries 2,820 foot-pounds of energy.⁵²

The claim that the ammunition for semiautomatic pistols and shotguns is uniquely destructive is even less plausible than is the claim regarding semiautomatic rifles. Most "assault pistols" fire ammunition in the .45 or 9mm calibers, and have the same velocity as any other pistol in those common calibers.⁵³ The shotguns labeled "assault weapons" also fire shells identical to those fired by all other shotguns.

The great irony of the claim that the rifles dubbed semiautomatic "assault weapons" are uniquely destructive is that they are the only rifles that have ever been designed *not* to kill. The semiautomatic rifles use the same ammunition as battlefield weapons such as the M-16, which deliberately use intermediate power ammunition intended to wound rather than to kill. The theory is that wounding an enemy soldier uses up more of his side's resources (to haul him off the battlefield and then care for him) than does killing an enemy.⁵⁴

Colonel Martin L. Fackler, M.D., former Director of the United (pg.395) States Army Wound Ballistics Lab, the only research center in the world which studies wound ballistics, states:

⁴⁸ FRANK C. BARNES, CARTRIDGES OF THE WORLD 59, 92, 110, 231, 249 (7th ed. 1993).

⁴⁹ Gladwell, *supra* note 43, at 7.

⁵⁰ BARNES, *supra* note 48, at 46.

⁵¹ If the bullet enters and exits the target's body, only part of the kinetic energy is transferred to the target. If the bullet does not exit, all the kinetic energy will be transferred. Accordingly, bullets which are designed to deform on impact, and not exit the body, will generally do more damage than will other bullets. Bullets designed not to exit the target's body are available for virtually all types of firearms.

⁵² See Lindsey, *The Idolatry of Velocity, or Lies, Damned Lies, and Ballistics*, 20 J. TRAUMA 1068 (1980).

⁵³ The videotape produced by Handgun Control, Inc. as a part of the lobbying campaign for prohibition acknowledges that "assault weapon" bullets are nothing special. The tape includes an interview with Dr. Hermann, Director of the Institute for Forensic Sciences. Dr. Hermann explains that the Uzi bullet is "slightly larger and slightly faster than the .38 special [a medium-sized handgun bullet]. It does not produce a large cavitary destructive wound through the body." HANDGUN CONTROL, INC., *THE DEADLY DISTINCTION* (1989).

⁵⁴ Martin L. Fackler, *Getting Your Guns Straight*, WASH. POST, Apr. 24, 1993, at A25.

Military bullets are designed to limit tissue disruption—to wound rather than kill. The full-metal-jacketed bullet is actually more effective for most warfare; it removes the one hit and those needed to care for him ... newspaper descriptions comparing their effects with a grenade exploding in the abdomen ... must cause the thinking individual to ask: ... how is it possible that 29 children and one teacher out of 35 hit in the Stockton schoolyard survived? If producers of "assault rifles" had advertised their effects as depicted by the media, they would be liable to prosecution under truth-in-advertising laws.⁵⁵

Assertions that the bullets from Kalashnikov rifles will tumble as they travel through the body, thereby greatly increasing the size of the wound channel, are nonsense. Dr. Fackler writes: "As a combat surgeon in Da Nang in 1968, I operated on many who had been wounded by AK-47 bullets. The typical wound was no more disruptive than that caused by many common handgun bullets."⁵⁶ The .223 rifle round, used in many of the rifles dubbed "assault weapons" is described as producing wounds "less severe than those produced by hunting ammunition such as the 30-30."⁵⁷

E. Accessories

The more recent efforts at banning "assault weapons" focus on whether a firearm has two or more of a certain set of accessories.⁵⁸ Unlike classifications based on the false assertion that "assault weapons" fire faster, have more ammunition capacity, or use more (pg.396) destructive ammunition, the accessory-based definitions do pass the most minimal levels of rationality, because an "assault weapon" is defined as a firearm with a particular set of accessories. Likewise, a law which prohibited only pool tables which have bumpers in the playing area ("bumper pool") would likewise achieve minimal rationality. The classification would accurately separate certain guns from other guns. But, do the accessory-based classifications create a distinction without a difference? Let us examine the accessories which are usually used in defining an "assault weapon."

1. Pistol Grips

The major purpose of a pistol grip on a long gun is to stabilize the firearm while firing from the shoulder. By holding the pistol grip, the shooter keeps the barrel from rising after the first shot, and thereby stays on target for a follow-up shot. The defensive application is obvious, as is the public safety advantage in preventing stray shots.

It is true that a pistol grip allows a rifle to be fired without resting against the shoulder. Does this provide a rational basis for making the rifle illegitimate? Only if one also bans handguns; for every handgun, because it has a pistol grip, can be fired without resting against the shoulder.

⁵⁵ Martin L. Fackler, WALL ST. J., Apr. 10, 1989, at A15, col. 1 (letter to the editor).

⁵⁶ Fackler, *supra* note 54. See also EMERGENCY WAR SURGERY, SECOND UNITED STATES REVISION OF THE EMERGENCY WAR SURGERY HANDBOOK, UNITED STATES DEPARTMENT OF DEFENSE 24 (Thomas E. Bowen, M.D. & Ronald F. Bellamy, M.D., eds., 1988) ("[M]any wounds from this weapon resemble those caused by much lower velocity handguns."); Martin L. Fackler et al., *Wounding Effects of the AK-47 Rifle Used by Patrick Purdy in the Stockton Schoolyard Shooting of Jan. 17, 1989*, 11 AM. J. FORENSIC MED. & PATHOL. 185 (1990); Martin L. Fackler, *Wounding Patterns of Military Rifle Bullets*, 22 INTL. DEF. REV. 59 (1989); Martin L. Fackler, *Wound Ballistics: A Review of Common Misconceptions*, 259 JAMA 2730 (1980).

⁵⁷ VINCENT C. DIMAJO, GUNSHOT WOUNDS: PRACTICAL ASPECTS OF FIREARMS, BALLISTICS AND FORENSIC TECHNIQUES 146 (1985).

⁵⁸ Kokalis, *supra* note 6.

Unless self-defense is considered illegitimate (see discussion part V, *infra*), a pistol grip is a legitimate defensive tool. With a pistol grip, a rifle can be held with one hand while the other hand dials 911 or opens a door.⁵⁹ The application in a home defense situation is obvious, because burglary victims will not always have time to raise their gun to their shoulder, and may not even be in a position to take a shot from the shoulder.

2. Muzzle Brakes

A gunsmith can attach a muzzle brake to any gun. However, many semiautomatic rifles dubbed "assault weapons" have a threaded barrel for easy attachment of the brake. A muzzle brake reduces the gun's recoil and makes it easier to control.

Recoil vibrations look, mathematically, like a sine wave; as the (pg.397) recoil sine waves travel from the firing chamber toward the muzzle end of the barrel, the waves will "whip" the muzzle around slightly. As a result, accuracy is diminished; a bullet that exits the muzzle when the muzzle is being whipped in one direction, at the top of a sine wave, will travel in a different direction from a bullet that leaves when the muzzle is whipped in a different direction, at the bottom of the sine wave. A new muzzle brake, the Browning "Ballistic Optimizing Shooting System," allows the shooter to "tune" the barrel vibrations produced by recoil. Different types of ammunition will produce different recoil vibration waves. For example, in the 270 Winchester rifle caliber a 160 grain bullet with 51 grains of gunpowder will produce different vibrations from a 130 grain bullet with 55 grains of gunpowder. The Browning muzzle brake can be adjusted by the shooter based on different types of ammunition, to optimize the recoil vibration for each particular type. One reviewer described the results of the tuning allowed by the Browning muzzle brake as, "[t]he most significant advancement in rifle accuracy in my lifetime."⁶⁰ Other reviewers have been equally positive. They note that the Browning brake significantly reduces felt recoil to the shooter, and thereby reduces the "flinch" that causes shooters to jerk the rifle off-target.⁶¹

Clearly, a gun with a muzzle brake is different than one without. It is both significantly more accurate because the muzzle and the shooter are both less likely to move out of position, and more comfortable to shoot. Improved accuracy and shooting comfort seem a dubious basis for classifying a firearm as uniquely suitable for prohibition.

3. Flash Hiders

Another common accessory is the flash suppressor, which reduces the flash of light from a rifle shot. Reduced flash decreases shooter's blindness—the momentary blindness caused by the sudden flash of light from the explosion of gunpowder. The flash reduction is especially important for shooting at dawn or at dusk. Additionally, reduced flash means that a person shooting at an attacker at night will less markedly reveal his own position. The flash hider also adds about one to three inches to the barrel length, thus making the firearms more difficult to (pg.398) conceal.

In the summer of 1993, a Virginia Governor's Task Force held meetings on "assault weapons." Mr. Ed Owens, a senior official with BATF was asked "if the flash suppressor, the

⁵⁹ THE GUN DIGEST BOOK OF ASSAULT WEAPONS 46 (1st ed. 1986).

⁶⁰ Jon R. Sundra, *The Most Significant Advancement in Rifle Accuracy in my Lifetime*, SHOOTING INDUSTRY 36 (Shot Show Super Issue 1994).

⁶¹ Peter Maxwell, *Meet the "BOSS,"* NEW ZEALAND GUNS, Mar./Apr. 1994, at 56-57.

bayonet mount and the grenade launcher are features that affect the fire power?" Owens replied "it doesn't have a thing to do with it." Owens was then asked "if you had to pick the characteristics that give these weapons their killing power, what would be the main features?" Owens replied, "killing power is the cartridge, the larger the cartridge, the more deadly the weapon."⁶² (As noted above, "assault weapons" fire a smaller cartridge than standard hunting rifles.)

4. Night Sights

Another purported rational basis of "assault weapons" prohibition has been that many of the guns are said to be configured to allow easy attachment of night sights. It should be noted, however, that a mounting attachment which is perfectly configured to attach night sights is also perfectly configured to attach sights which work only during the daytime.

In any case, there is nothing illegitimate about night sights. While it is generally illegal to hunt at night, it is legal to defend home, person, and property at night. Turning on a light to try to find an attacker's position would reveal one's own position, and thereby give the criminal the first shot.

5. Folding Stocks

Guns with folding stocks are sometimes singled out for harsh treatment. For example, the New Jersey legislature's "assault weapon" ban outlaws the Ruger Mini-14 rifle, but only the model with a folding stock.⁶³ A folding stock makes a gun shorter and easier to carry, thus making it useful to hunters. A folding stock also makes a gun more maneuverable in a confined setting such as a home, and hence harder (pg.399) for an attacker to take away.⁶⁴ The reduced size makes the gun easier to conceal, for legitimate or illegitimate purposes. Unless all handguns are also deemed illegitimate, because they are far more concealable than rifles in any configuration, there is no rational claim that a rifle's folding stock makes it less legitimate than other firearms.

6. Bayonet Lugs

⁶² Memorandum from Richard E. Gardiner, NRA Legislative Counsel to James J. Baker, NRA Executive Director, regarding Virginia Governor's Task Force (transcript of Meeting on Assault Firearms Definition, July 8, 1993).

⁶³ N.J. STAT. ANN. § 2C:39-1(w)(3) (West 1993).

⁶⁴ Another useful defensive configuration is the ability to select different types of ammunition "on the fly." Imagine a parent confronted with a violent burglar. Shooting the burglar might be the only way to protect nearby children. But a conventional hunting rifle cartridge would penetrate the criminal, then a wall, and might hit a child. The parent would be better off with a shotgun loaded with light birdshot—to knock the burglar down, but not penetrate a wall.

On the other hand, suppose the burglar's entry had transpired a little differently. The whole family might be huddled in one room, while the burglar kicked and banged at the creaking door. Then the optimal self-defense shot would be a slug from a shotgun — to crash through the thick door and into the burglar.

In short, different home family defense situations require different ammunition. An excellent gun for home defense, then, would be a shotgun for which the shooter could rapidly select different loads. There is such a gun. The shotguns which are singled out by name in most "assault weapon" legislation, such as the Striker 12, are the only long guns with such beneficial features. The Striker 12 is so named because it is a shotgun with an external rotating cylinder. The shooter can quickly dial any of 12 different rounds.

Under legislation sponsored by Representative William Hughes in 1990, any gun which could accept a bayonet could be considered an illegal "assault weapon."⁶⁵ Bayonets are obviously of no sporting utility, although they could be marginally useful in the personal and civil defense contexts. The major problem with the bayonet-ban, however, is that *any* rifle barrel can be a bayonet mount. Moreover, how many, if any, criminals have ever charged their victims with a bayonet.

7. Grenade Launchers

Some guns are selected for prohibition because they have an attachment that allows for the easy mounting of a grenade launcher. A gun which launches grenades is distinguishable from a gun which does not. The explosion from a grenade is much more powerful, and much less discriminating than is a bullet from a firearm. But possession of grenades, as well as the components necessary to assemble grenades, is already strictly regulated by federal law, under terms (pg.400) similar to those applicable to machine guns. Possession of grenade launchers is similarly regulated.⁶⁶

Given the existing rational regulation of grenades, grenade components, and grenade launchers, it must then be asked whether the fact that a grenade launcher could be attached to a particular gun has any genuine impact on public safety. When asked by a *Wall Street Journal* reporter, neither the BATF nor the Department of Justice was able to indicate a single instance of a grenade launcher (or a bayonet attached to a rifle) being used in a crime in the United States.⁶⁷

F. Design History

The features discussed above all relate to the physical characteristics of a firearm. Besides physical traits, having a particular design history may also make a gun into an "assault weapon." A common statutory definition of an "assault pistol" is:

All semiautomatic pistols that are modifications of rifles having the same make, caliber and action design but a shorter barrel and no rear stock or modifications of automatic weapons originally designed to accept magazines with a capacity of twenty-one (21) or more rounds.⁶⁸

The definition raises serious problems regarding vagueness. Gun owners are required to know details of the design history of their gun, and of the models which preceded the gun they own.⁶⁹ Even assuming (pg.401) that small details of firearms design history were common knowledge

⁶⁵ Kokalis, *supra* note 6.

⁶⁶ 18 U.S.C. §§ 841-844 (1993).

⁶⁷ James Bovard, *The Assault on Assault Weapons*, WALL ST. J., Jan. 6, 1994, at A12. Grenade launchers were used by the ATF in its attack on the Branch Davidian compound in Waco, but it is not at this point clear whether the ATF's actions were criminal. *Id.*

⁶⁸ DENVER REV. MUN. CODE § 38-130(b)(1)(c) (1991).

⁶⁹ There is no reasonable way for a person of common intelligence to know if a particular pistol was originally based on a rifle design, or based on the design of an automatic weapon. Persons attempting to comply with this language must also learn not only from what guns their pistol was designed, but also learn the design history of the ancestor guns themselves—whether the ancestor automatic firearm was "originally designed to accept magazines with a capacity of twenty-one (21) or more rounds." DENVER REV. MUN. CODE § 38-130(b)(1)(c) (1991). It is irrationally burdensome to require citizens who wish to learn if their pistols are legal to research both how their pistol was designed, and how the ancestors to that pistol were "originally designed."

Having somehow discovered the design history of a pistol, a person must then attempt to discover its design mechanics—if

among ordinary gunowners, there is no rational basis for outlawing a gun based on its design history.⁷⁰ To whatever extent guns with an allegedly pernicious design history have common physical traits making them more dangerous, legislation can be drafted on the basis of those traits. To hold that a firearm's military design history creates a rational basis for prohibition would be the same as authorizing a prohibition on "CJ" Jeeps, which, although operationally similar to other civilian jeeps, have a military design history.

Moreover, to prohibit an object based on a mere historical relation to the military could, under *Cleburne's* illegitimacy prong, reflect an illegitimate bias against the military, and hence fail to survive careful rational basis scrutiny.⁷¹

G. Positive Operational Characteristics

Given the above discussion, which has pointed out how the guns labeled "assault weapons" are similar to other guns, one may wonder why anyone would want to own such a gun. Although a person's choice of firearms model, like their choice of automobiles, may reflect emotional or aesthetic values rather than practical ones, there are two significant reasons why many practical gun owners would choose an "assault weapon."

1. The Guns are Reliable, Rugged, and Simple

Most of the rifles dubbed "assault weapons" have a greater immunity to weather conditions and abuse than more traditional hunting rifles.⁷² A semiautomatic AKS can be dropped in the mud, (pg.402) dragged through brush, and can withstand the rigors of extremely cold or hot climes. Although the guns are not military arms, they do share many common components with the automatic assault rifles that they resemble. As a result, they share an imperviousness to rough conditions and a lack of cleaning with military guns. The ruggedness stems in part from the fact that the guns have fewer moving parts than specialized sports guns, and are hence easier for persons who are not firearms hobbyists to maintain.

In addition, many "assault weapons" have large trigger guards which are designed so that the shooter can press the trigger while wearing gloves. Plastic stocks (found on many "assault weapons") are superior because wood stocks, when cold and wet, may swell, thereby degrading the accuracy of the firearm. Plastic stocks are also less likely than wood stocks to break if the gun is dropped.

the pistol has the same action as the ancestor rifle. In redesigning a rifle into a pistol, the designer will often modify the action (such as by shortening the piston stroke). It is irrational to require ordinary persons to reconstruct the technical development of a complex part of their firearms.

⁷⁰ Cf. *Zobel v. Williams*, 457 U.S. 55 (1982) (conferring state benefits based on historical pattern of residence, rather than current residency status, is irrational).

⁷¹ The fact that the prohibited guns are descendants of military designs is often listed as a basis for the prohibition by prohibition advocates. DENVER REV. MUN. CODE § 38-130(a). It is true that many of the banned guns are related in design history to military guns, but so are most other guns. Civilian guns have always been derivative of, and often identical to, military guns. Morgan, *supra* note 7, at 155. Thus, a prohibition on "assault weapons" because of their military design history inconsistently, and irrationally, excludes the vast majority of firearms, which are also based on military design.

⁷² Steven R. Myers, *The Legitimate Uses of Assault Weapons*, WASH. POST, Mar. 4, 1989 (letter to the editor); Patrick Mott, *In Defense of the AK-47*, L.A. TIMES, Feb. 24, 1989, at V1, col. 1 (discussing design attributes and adaptability to field use).

The statements about reliability in this section do not of course apply to every single gun that is sometimes denominated an "assault weapon." The TEC-9 pistol, for example, is often criticized for jamming at the wrong moment.

The simplicity of design and ease of use of these weapons—only revolvers are easier to load and shoot—also makes them suited as weapons of self-defense for persons who are not gun aficionados. However, this ease of use is no advantage from the viewpoint of gun prohibitionists. Councilwoman Cathy Reynolds, sponsor of Denver's "assault weapon" prohibition, has complained that the guns "are very easy to use."⁷³

2. The Guns are Very Accurate

The firing of any gun produces recoil or kick. Recoil makes it more difficult to aim and control a shot. Guns with less recoil are easier to fire safely, and better-suited for self-defense. People without a great deal of upper body strength may find a low-recoil gun to be the only kind they can successfully use for self-defense. In a semiautomatic, the energy from the gun-powder explosion is directed forward, rather than backwards towards the shooter. This energy is used to load the next cartridge into the firing chamber, ready for a new trigger press. As a result, semiautomatics have less recoil than other guns, and are therefore quite appropriate for use in situations where accuracy is crucial for safety, such as self-defense in an urban environment.^(pg.403)

As discussed above, some rifles or shotguns dubbed "assault weapons" have a pistol grip in front of the trigger guard. The pistol grip helps stabilize the firearm, to keep the barrel from rising after the first shot, and thereby stay on target for a follow-up shot. Also enhancing the accuracy of a follow-up shot is the fact that in many "assault weapons" the stock is relatively level with the barrel—a configuration which helps the barrel stay on target after the first shot.

It would be rather irrational to ban a firearm because it was particularly accurate and, hence, posed a smaller danger of stray shots.⁷⁴ Public safety is enhanced if persons using guns for personal and civil defense hit their targets. The defensive use of firearms will sometimes involve more than a single shot. Of what rational benefit to public safety is a law that encourages citizens to use guns with high recoil that fire wildly, thereby endangering every person in the vicinity?

H. Conclusion Regarding Physical Characteristics

Can "assault weapon" legislation survive a careful rational basis test? In some cases, as in Connecticut, a legislative body defines "assault weapon" simply by listing particular guns, while other nearly identical guns are left uncontrolled.⁷⁵ In California, the model for many of the subsequently-enacted "assault weapon" prohibitions, the banned guns were selected by persons thumbing through a picture book of guns.⁷⁶ The incoherence of a picture-book-based firearms law was pointed out in a confidential memorandum from the California Attorney General's chief firearms

⁷³ Cathy Reynolds, *Headlines*, Summer 1989 (newsletter).

⁷⁴ The accuracy advantage is maintained only out to distances of about 200 yards. Above that distance, the tighter chambering of bolt-action rifles, despite the bolt-action's higher recoil, results in greater accuracy.

⁷⁵ Lolita C. Baldor, *New Gun Ban Has Loophole*, CONN. POST, Sept. 20, 1993, at A1, A4.

⁷⁶ Richard Gardiner, testimony at Florida Assault Weapon Commission hearings. Bovard, *supra* note 67, at A12 (stating that "San Francisco lawyer Don Kates suggested that legislators, in compiling the list of prohibited guns, appeared to have selected from 'some picture book ... of mislabeled firearms they thought looked evil.'").

expert, which observed that "[a]rtificial distinctions were made between semi-automatic weapons.... We can effectively control *all* semi-automatic weapons or leave them all alone."⁷⁷

Nor can the purported physical differences between "assault weapons" and other firearms form the basis of a rational classification. (pg.404) Contrary to the imagery promoted by the gun control lobby, so-called "assault weapons" do not fire faster and do not have a greater ammunition capacity than many other firearms. Some "assault weapons" do possess features or accessories such as pistol grips or muzzle brakes, but these features do not make "assault weapons" illegitimate. If it is assumed that accuracy, particularly in a self-defense context, is not a negative feature on a gun, then the accessories on "assault weapons" cannot form a basis for prohibition. The firearms commonly dubbed "assault weapons" are generally more rugged and reliable, and easier to shoot accurately than are many other firearms.

Indeed, Professor Jacobs, of New York University, observes that there is less of a rational basis for banning "assault weapons" than there would be for almost any other firearm:

Pistols are dangerous because they are easily carried and concealed; shotguns because they spray metal projectiles over a wide area; certain hunting rifles because they fire large caliber bullets, and certain "sniper rifles" because they are accurate over great distances. Assault rifles are not remarkable by any of these criteria.⁷⁸

Because the rational basis test precludes "discriminations which are entirely arbitrary,"⁷⁹ the physical characteristics of so-called "assault weapons" cannot survive careful rational basis review.

IV. INSUFFICIENTLY DEMONSTRATED USE IN CRIME

An alternative rational basis for the prohibition of "assault weapons" might be the frequency of their use in crime. After all, even if brown dogs are physically like black dogs, the fact that black dogs are ten times more likely to bite would form a rational basis for greater regulation of black dogs.

Whether the frequency of use in crime provides a rational basis for an "assault weapon" prohibition depends largely on the fact-finder's depth of inquiry. If the fact-finder unquestionably accepts the legislative findings that accompany an "assault weapon" prohibition, the legislative statement that "assault weapons" are frequently used in (pg.405) crime becomes a fact, and would form a rational basis for prohibition.⁸⁰ Likewise, if at an evidentiary hearing, the fact-finder accepted

⁷⁷ Memorandum from S.C. Helsley, Asst. Dir., Invest. & Enforcement Branch, Calif. Dept. of Justice, to Patrick Kenday, Asst. Atty. Gen. 3-4, Feb. 14, 1991 (emphasis in original).

⁷⁸ Jacobs, *supra* note 42.

⁷⁹ State v. Reed, 473 A.2d 775, 781 (Conn. 1984).

⁸⁰ In contrast to the rational basis test, application of the strict scrutiny/fundamental rights test would suggest that even compelling proof that "assault weapons" are frequently used in crime would not provide a constitutional basis for prohibition. See American Booksellers Assoc. v. Hudnut, 771 F.2d 323, 329-30 (7th Cir. 1985), *aff'd*, 475 U.S. 1001 (1986):

[W]e accept the premises of this legislation [against sexualized depictions of women as subordinate]. Depictions of subordination tend to perpetuate subordination. The subordinate status of women in turn leads to affront and lower pay at work, insult and injury at home, battery and rape on the streets ... Yet all is protected as speech, however insidious.

Similarly, the Colorado Supreme Court has explained that even the most urgent needs of law enforcement do not rise above

without question the statements of government officials who supported prohibition, a rational basis for prohibition would exist.

But such blind deference is not appropriate for application of the rational basis test. *Cleburne* found the city's fears about the risks of crowding caused by the location of a group home to be irrational because the purported harms had been "insufficiently demonstrated."⁸¹

The *Cleburne* approach appears consistent with what Justice Stone wrote in *Carolene Products*:

Where the existence of a rational basis for legislation whose constitutionality is attacked depends upon facts beyond the sphere of judicial notice, such facts may properly be made the subject of judicial inquiry, and the constitutionality of a statute predicated upon the existence of a particular state of facts may be challenged by showing to the court that those facts have ceased to exist.⁸² (pg.406)

State court jurisprudence also suggests that judges should not blindly accept the government's allegations regarding the factual basis for legislation.⁸³

If the assertions of government officials are subjected to any judicial scrutiny, then it rapidly becomes clear that the factual basis for prohibition is built on a foundation of sand. In Denver, for example, Chief of Police Ari Zavaras testified to the City Council that "assault weapons are becoming the weapons of choice for drug traffickers and other criminals."⁸⁴ In a lawsuit resulting from the prohibition that the Chief had endorsed, the Colorado Attorney General's office examined the Chief's *ipse dixit*. The State of Colorado inventoried every single firearm in Denver police custody as of March 1991. Of the 232 shotguns seized by the police, not a single one was covered by the ordinance. Of the 282 rifles in the police inventory, nine (3.2%) were covered by the ordinance. Of the 1,248 handguns in the police inventory, a mere eight (0.6%) were so-called

the Constitution: "[N]o matter how necessary to law enforcement a legislative act may be, if it materially infringes upon personal liberties guaranteed by the constitution, then that legislation must fall. Grim as it may be, if effective law enforcement must be dependent upon unconstitutional statutes, then the choice of the way ahead is for the people to act or fail to act under the amendatory processes of the constitution." *Arnold v. City and County of Denver*, 464 P.2d 515, 517-18 (Colo. 1970) (striking vagrancy ordinance although city argued "forcefully and quite compellingly" that ordinance was necessary to fight crime. *Id.* at 517.).

⁸¹ See *Cleburne*, 473 U.S. at 447-50.

⁸² *United States v. Carolene Prods. Co.*, 304 U.S. 144, 153 (1938) (citations omitted). Justice Stone had earlier written:

In ascertaining whether challenged action is reasonable, the traditional common law technique does not rule out but requires some inquiry into the social and economic data to which it is to be applied ... The judge, then, must open his eyes to all those conditions and circumstances within the range of judicial knowledge, in the light of which reasonableness is to be measured.

Harlan Stone, *The Common Law in the United States*, 50 HARV. L. REV. 4, 24 (1936).

⁸³ See *Englewood v. Apostolic Christian Church*, 362 P.2d 172 (Colo. 1961) (stating: "It is well established that whether [a law] has a reasonable connection [to its purpose] "is a question of the determination of the judiciary." *Id.* at 174.).

In *Colorado Springs v. Grueskin*, a city imposed a number of safety restrictions on the delivery of gasoline. There was no suggestion that the fundamental rights test should be used; and the city Fire Chief testified as to the safety advantages of the restrictions. Nevertheless, challengers of the ordinance provided expert testimony that convinced the trial court that the restrictions did not effectively promote public safety. The Colorado Supreme Court upheld the trial court's striking of the ordinance, notwithstanding the Fire Chief's arguments about fire safety. 422 P.2d 384 (1967).

⁸⁴ Affidavit of Avi Zavaras, Colo. ex. B., at 6, *Robertson v. Denver*, *supra* note 1.

"assault pistols" covered by the ordinance.⁸⁵ Of the fourteen banned guns in Denver police custody, only one had been used in a crime of violence. Half had been seized from persons who were never charged with any offense.⁸⁶

A. "Assault Weapons" are Used in Only About One Percent of Gun Crime

The following statistics summarize the findings of official governmental statistical surveys. Because different governments reported data for different years, or reported different types of data (e.g. (pg.407) homicides vs. gun seizures), the raw figures reported from each jurisdiction are sometimes not directly comparable.

Akron. Of the 669 guns seized by the Akron police in 1992, fewer than 1% were "assault weapons."⁸⁷ The 1% figure represents a decline from 1988, when about 2% of seized guns were "assault weapons."⁸⁸

Baltimore County. During the first nine months of 1990, out of 644 weapons logged in to the Baltimore County Police Property Room, only two were "assault weapons." Out of 305 murders in the city of Baltimore in 1990, only seven (2.3%) involved rifles and shotguns of any kind, much less any subset of those firearms labeled "assault weapons."⁸⁹

Bexar County, Texas (including San Antonio). From 1987 to 1992, "assault weapons" were used in 0.2% of homicides and 0.0% of suicides. From 1985 to 1992, they constituted 0.1% of guns seized by the police, according to Vincent DiMaio, the county's Chief Medical Examiner.⁹⁰

California. In 1990, "assault weapons" comprised thirty-six of the 963 firearms involved in homicide or aggravated assault and analyzed by police crime laboratories, according to a report prepared by the California Department of Justice, and based on data from police firearms laboratories throughout the state. The report concluded that "assault weapons play a very small role in assault and homicide firearm cases."⁹¹ Of the 1,979 guns seized from California narcotics dealers in 1990, fifty-eight were "assault weapons."⁹²

⁸⁵ Police Firearms Data, Colo. ex. 65, Robertson v. Denver, *supra* note 1. Even the low percentage of "assault weapons" was artificially inflated by police weapons retention policies initiated at the request of the City Attorney. Stipulation, Colo. ex. 66., Robertson v. Denver, *supra* note 1.

The author of this article represented Colorado in the trial court.

⁸⁶ Colo. ex. 64, Robertson v. Denver, *supra* note 1.

⁸⁷ *Assault Weapons Seized in Akron Last Year*, AKRON BEACON JOURNAL, Jan. 6, 1993 (quoting police Major Leonard Strawderman).

⁸⁸ Robert Hiles, *Police Gunning to Boost Odds*, AKRON BEACON-JOURNAL, March 13, 1989, at A9.

⁸⁹ Letter from Thomas E. Hickman, State's Attorney for Carroll County, to the Hon. John S. Arnick, Chairman of the House Judiciary Committee 2 (Feb. 14, 1991) (citing Ronald Banks, BALTIMORE EVENING SUN, Feb. 11, 1991 (letter to the editor)).

⁹⁰ Vincent C. DeMaio et al., *Assault Weapons as a Public Health Hazard*, 268 JAMA 3073 (1992) (letter to the editor).

⁹¹ David Alan Coia, *Assault Rifles Said to Play a Small Role in Violent Crimes*, WASH. TIMES, June 27, 1992 (quoting Torrey D. Johnston, REPORT ON A SURVEY OF THE USE OF "ASSAULT WEAPONS" IN CALIFORNIA IN 1990, Office of the Attorney General, California Department of Justice, (1991)) (the report, prepared in response to a request by a California State Senator, was suppressed by the California Attorney General's Office, which claimed that the report did not exist. A leaked copy was released to the media). See also Alan W. Bock, *Statistical Overkill on Banned Rifles*, ORANGE COUNTY REG., June 28, 1992, at K4; Mike McNulty, *The War on Gun Ownership Still Goes On!*, GUNS & AMMO, Dec. 1992, at 30-31, 90.

⁹² David Freed, *Assault Rifles are Not Heavily Used in Crimes*, L.A. TIMES, Apr. 21, 1992, at A18.

Chicago. From 1985 through 1989, only one homicide was (pg.408) perpetrated with a military caliber rifle.⁹³ Of the 17,144 guns seized by the Chicago police in 1989, 175 were "military style weapons."⁹⁴

Chicago suburbs. From 1980 to 1989, "assault weapons" totaled 1.6% of seized drug-related guns.⁹⁵

Connecticut. "Assault weapons" constituted 198 of the 11,002 firearms confiscated by police in the years 1988 through 1992.⁹⁶

Denver. A gun-by-gun examination of the firearms in Denver police custody as of March 1991 found fourteen "assault weapons" among the 1,752 crime guns. Only one of those guns had been used in a crime of violence (an aggravated assault).⁹⁷

Florida. The Florida Assault Weapons Commission found that "assault weapons" were used in seventeen of 7,500 gun crimes for the years 1986 to 1989.⁹⁸

Los Angeles. Of the more than 4,000 guns seized by police during one year, only about 3% were "assault weapons."⁹⁹

Maryland. In 1989-90, there was only one death involving a "semiautomatic assault rifle" in all twenty-four counties of the State of Maryland.¹⁰⁰

Massachusetts. Of 161 fatal shootings in Massachusetts in 1988, three involved "semiautomatic assault rifles."¹⁰¹ From 1985 to 1991, the guns were involved in 0.7% of all shootings.¹⁰²

Miami. The Miami police seized 18,702 firearms from January 1, (pg.409) 1989 to December 31, 1993. Of these, 3.13% were "assault weapons."¹⁰³

Minneapolis. From April 1, 1987 to April 1, 1989, the Minneapolis police property room received 2,200 firearms, nine of which were "assault weapons."¹⁰⁴

⁹³ Jay Edward Simkin, *Control Criminals, Not Guns*, WALL ST. J., March 25, 1991, at A10.

⁹⁴ Gene O'Shea, *Chicago Police Back Assault Weapons Ban Approved by Senate*, SOUTHTOWN ECONOMIST, June 12, 1990.

⁹⁵ KLECK, *supra* note 38, at 130 (discussing J.G. Mericle, *Weapons Seized During Drug Warrant Executions and Arrests*, unpublished report of Metropolitan Area Narcotics Squad, Will and Grundy Counties, Illinois (1989)).

⁹⁶ Letter from Major Kenneth H. Kirschner, Commanding Officer, Bureau of Police Support, to Lt. Col. George H. Moore, Commanding Officer, Off. of Admin. Serv., (Mar. 11, 1993) (on file with author).

⁹⁷ Reply Brief of State of Colorado, at 13-15, *Robertson v. Denver*, No. 90CV603 (Denver Dist. Ct., Feb. 26, 1993).

⁹⁸ FLORIDA ASSAULT WEAPONS COMMISSION, ASSAULT WEAPONS/CRIME SURVEY IN FLORIDA FOR YEARS 1986, 1987, 1988, 1989 (1990).

⁹⁹ S. REP. NO. 160, 101st Cong., 1st sess. 3 (1989) (testimony of Detective Jimmy L. Trahin of the Los Angeles Police Department Firearms/Ballistics Unit).

¹⁰⁰ Letter from Thomas E. Hickman, State's Attorney for Carroll County, Maryland, to Rep. John S. Arnick, Chair of the Maryland Senate Judicial Proceedings Committee, 2 (February 14, 1991) (on file with author).

¹⁰¹ M. Arnold, Massachusetts State Police, Firearms Identification Section, *Massachusetts State Police Ballistics Records*.

¹⁰² M. Arnold, Massachusetts State Police, Firearms Identification Section, *Massachusetts State Police Ballistic Records*, March 14, 1990 & April 11, 1991.

¹⁰³ Letter from Jess I. Galan, Criminalist, Crime Laboratory Bureau, to Richard Gardiner, Legislative Counsel, National Rifle Association.

¹⁰⁴ Memorandum from Sgt. W. Reins to Chief John T. Laux, 1 (April 3, 1989) (on file with author); MINNESOTA MEDICAL ASSOC. FIREARM INJURY PREVENTION TASK FORCE, *Firearm Mortality in Minnesota*, MINN. MED., Mar. 1994, at 23.

Nashville. Of the 190 homicides perpetrated in Nashville in 1991-92, none were committed with an "assault weapon."¹⁰⁵

Newark. According to surgeons at the University Hospital in Newark, in the 1980s there was one wounding in the city in that decade in which the bullet removed was the type found in "semiautomatic assault rifles."¹⁰⁶

New Jersey. According to the Deputy Chief Joseph Constance of the Trenton New Jersey Police Department, in 1989, there was not a single murder involving any rifle, much less a "semiautomatic assault rifle," in the State of New Jersey.¹⁰⁷ No person in New Jersey was killed with an "assault weapon" in 1988.¹⁰⁸ Nevertheless, in 1990 the New Jersey legislature enacted an "assault weapon" ban that included low-power .22 rifles, and even BB guns. Based on the legislature's broad definition of "assault weapons," in 1991, such guns were used in five of 410 murders in New Jersey; in forty-seven of 22,728 armed robberies; and in twenty-three of 23,720 aggravated assaults committed in New Jersey.¹⁰⁹

New York City. Of 12,138 crime guns seized by New York City police in 1988, eighty were "assault-type" firearms.¹¹⁰

New York State. Semiautomatic "assault rifles" were used in (pg.410) twenty of the 2,394 murders in New York State in 1992.¹¹¹

San Diego. Of the 3,000 firearms seized by the San Diego police in 1988-90, nine were "assault weapons" under the California definition.¹¹²

San Francisco. Only 2.2% of the firearms confiscated in 1988 were military-style semiautomatics.¹¹³

Virginia. Of the 1,171 weapon analyzed in state forensics laboratories in 1992, 3.3% were "assault weapons."¹¹⁴

¹⁰⁵ Letter from Sgt. Brooks Harris, Crime Analysis Section, Nashville P.D. to Sen. Harlan Matthews (June 2, 1993) (on file with author).

¹⁰⁶ Nicholas Veronis, *Newark Survey Finds Assault Rifle Used in only One Shooting in '80s*, STAR-LEDGER (Newark, N.J.), May 16, 1990, at 15.

¹⁰⁷ Testimony of Dept. Chief Joseph Constance, before the Maryland Senate Judicial Proceedings Committee 3 (March 7, 1991).

¹⁰⁸ Dan Weissman, *Florio Urges Ban on Assault Rifles, Stresses His Support for Abortion*, STAR-LEDGER (Newark, N.J.), July 18, 1989, at 15.

¹⁰⁹ Iver Peterson, *Both Sides Say Trenton's Ban on Assault Rifles Has Little Effect on Crime*, N.Y. TIMES, June 20, 1993.

¹¹⁰ *Handguns, not Assault Rifles, are NYC Weapon of Choice*, WHITE PLAINS REPORTER-DISPATCH, Mar. 27, 1989, at A8-A9.

¹¹¹ Frederic Dicker, *Real Story on Assault Weapons is Hit & Myth*, N.Y. POST, Jan. 10, 1994, at 14 (discussing unpublished data from New York State Division of Criminal Justice Services).

¹¹² Joe Hughes, *Smaller Guns are 'Big Shots' with the Hoods*, SAN DIEGO UNION, Aug. 29, 1991.

¹¹³ Morgan, *supra* note 7, at 151.

¹¹⁴ Margaret Edds, *Assault Weapons Rarely Used in Crimes, Gun-control Panel Told*, VIRGINIA PILOT & LEDGER-STAR, Aug. 4, 1993.

Washington, D.C. The *Washington Post* reports: "[L]aw enforcement officials say that the guns have not been a factor in the area's murder epidemic."¹¹⁵ "Assault weapons" were 3% of guns seized in 1990.¹¹⁶

National statistics. Less than four percent of all homicides in the United States involve any type of rifle.¹¹⁷ No more than .8% of homicides are perpetrated with rifles using military calibers. (And not all rifles using such calibers are usually considered "assault weapons.") Overall, the number of persons killed with rifles of any type in 1990 was lower than the number in any year in the 1980s.¹¹⁸

B. Police Shootings

Although people reading newspapers might infer that police officers by the score are being murdered by "assault weapons," police officer deaths in the line of duty are at the lowest level in decades.¹¹⁹ From 1975 to 1992, out of 1,534 police officers feloniously murdered in the (pg.411) United States, sixteen were killed with firearms defined as "assault weapons" by California law.¹²⁰ The *Journal of California Law Enforcement* wrote: "It is interesting to note, in the current hysteria over semi-automatic and military look-alike weapons, that the most common weapon used in the decade to murder peace officers was that of the .38 Special and the .357 Magnum revolver."¹²¹ The *Journal* found that "calibers which correspond to military-style shoulder weapons" accounted for 8% of total firearms used to murder police officers in California.¹²²

The impression conveyed by some television programs is that shoot-outs between police and criminals involve steadily escalating amounts of fire-power. However, according to the New York City police department study of shootings at police in 1989, the average number of shots fired at the police per encounter was 2.55, and this number represented a decline from previous years.¹²³

C. The Cox Newspapers Study

In contrast to the evidence discussed above, there is one report, from the Cox Newspapers chain, which finds that "assault weapons" are disproportionately used in crime.¹²⁴ If the rational basis test means "a shred of evidence," the Cox report would suffice as a shred. But if judicial analysis is

¹¹⁵ Kent Jenkins, Jr., *Calls for Ban Boost Assault Rifle Sales: Weapons not Considered Factor in Killings*, WASH. POST, Mar. 6, 1989, at B1.

¹¹⁶ K. BEA, CONG. RESEARCH SVC. REPORT FOR CONGRESS—"ASSAULT WEAPONS:" MILITARY STYLE SEMIAUTOMATIC FIREARMS FACTS AND ISSUES 18, table 5 (Cong. Research. Svc., May 13, 1992) (rev. ed. June 4, 1992) (citing G.R. Wilson, Chief, Firearms Section, Metropolitan Police Dept., Jan. 21, 1992).

¹¹⁷ Morgan, *supra* note 8, at 152.

¹¹⁸ In 1990, 3.7% of homicides were perpetrated with rifles. UNIFORM CRIME REPORTS 17 (1991).

¹¹⁹ Telephone Interview with L. Behn, FBI Technical Information Specialist (Mar. 25, 1993) (on file with author).

¹²⁰ ALAN S. KRUG, THE "ASSAULT WEAPON" ISSUE 16-17 (National Rifle Assoc. Publications, 1993 ed.) (using FBI, state and local police agency data).

¹²¹ GEORGE T. WILLIAMS & CHARLES B. MOORMAN, *A Decade of Peace Officers Murdered in California: The 1980s*, 46 J. CALIF. LAW ENF. 1, 6 (Feb. 1991).

¹²² *Id.*

¹²³ KLECK, *supra* note 38, at 78-79.

¹²⁴ Jim Stewart & Andrew Alexander, *Assault Guns Muscling in on Front Lines of Crime*, ATLANTA JOURNAL-ATLANTA CONSTITUTION, May 21, 1989, at A1, A8.

to be as searching as Justice Stone's opinion in *Carolene Products*¹²⁵ suggests, the Cox report may not bear close scrutiny.

The Cox reporters examined records of gun traces conducted by BATF and found that for drug offenses, "assault weapons" were involved in approximately 12% of the traces. Because "assault weapons" amount to less than 12% of all firearms and if they are used in 12% of all drug crimes, then assault weapons are disproportionately involved in drug crimes.¹²⁶ (pg.412)

Extrapolating from the trace data, the Cox Newspaper reporters asserted that "assault weapons" were used in ten percent of all firearms crime, and that because "assault weapons" were (by Cox's estimate) 0.5% of the total gun supply, "assault weapons" are "20 times more likely to be used in a crime than a conventional firearm."¹²⁷ Yet when asked about the figure, BATF wrote: "[C]oncluding that assault weapons are used in 1 of 10 firearms related crimes is tenuous at best since our traces and/or the UCR [Uniform Crime Reports] may not truly be representative of all crimes."¹²⁸

Police reports from major cities support the BATF viewpoint. As detailed below, the police statistics for the major cities report far less prevalence of "assault weapons" than the Cox report claimed to find. For example, the percentage of "assault weapons" reported by Cox newspapers, based on the BATF traces, was 10% for Chicago, 19% for Los Angeles, 11% for New York City, and 13% for Washington. In each of those cities, police departments conducted complete counts of all guns which had been seized from criminals (not just the guns for which the police department requested a BATF trace). According to the actual police department counts of crime guns in each city, the percentage of assault weapons were only 3% for Chicago, 1% for Los Angeles, 1% for New York City, and 0% for Washington, D.C.¹²⁹

Cox's problem may be that BATF traces are not an accurate indicator of which guns are used in crime. In an average year, there are about 360,000 violent crimes committed with firearms. Of those 360,000 crimes, BATF is asked to trace about 5,600 crime guns (less than 2% of total crime guns).¹³⁰ It is statistically likely that there would be a difference between the 2% of guns traced and crime guns as a whole. The 2% of guns selected for a trace request are not a random sample, but rather a select group chosen by local police departments. (pg.413) According to basic statistics theory, a non-random sample of 2% is unlikely to accurately represent the larger whole. A non-random sample becomes statistically valid only when 60% to 70% of the total relevant population is sampled. As the Congressional Research Service explains:

[T]he firearms selected for tracing do not constitute a random sample and cannot be considered representative of the larger universe of all firearms used by criminals, or any

¹²⁵ See *supra* note 82 and accompanying text.

¹²⁶ "Assault weapons" were also involved in 11% of traces relating to the Gun Control Act of 1968 (which criminalizes non-violent behavior such as the sale of a handgun to a person from another state, and imposes various record-keeping requirements on firearms dealers), and in 30% of the very small number of organized crime traces conducted by BATF. See Stewart, *supra* note 130.

¹²⁷ See Stewart, *supra* note 124.

¹²⁸ Letter from Daniel M. Hartnett, Bureau of Alcohol, Tobacco and Firearms, Letter to Rep. Richard T. Schulze 3 (Mar. 31, 1992) (on file with author).

¹²⁹ KLECK, *supra* note 38, at 75. To many people, it may seem surprising that the use of "assault weapons" in Washington, D.C. is so low. It should be noted that since Washington, D.C. passed its "assault weapon" liability law in 1990, which allows anyone who is injured by an "assault weapon" in Washington (even a criminal) to sue the manufacturer, not a single suit has been brought.

¹³⁰ KLECK, *supra* note 38, at 75 (citing 1990 BATF Report).

subset of that universe. As a result, data from the tracing system may not be appropriate for drawing inferences such as which makes or models of firearms are used for illicit purposes.¹³¹

There are a number of possible reasons why "assault weapons" would be more likely be selected for a trace request than other guns. Most "assault weapons" were manufactured relatively recently, and newer guns are easier to trace. Moreover, many "assault weapons" have an unusual appearance, which might pique curiosity (and, hence, generate a trace request) more than an old-fashioned, common crime gun such as a Smith & Wesson .38 Special. The vast publicity surrounding "assault weapons" may also have increased police interest in these guns, and hence increase the likelihood of trace requests.

D. Planning for the Future

Faced with evidence that, contrary to the legislative findings which underlay a prohibition, "assault weapons" are rarely used in crime, some courts have concluded that prohibition is still legitimate because "[t]he prohibition of a harmful act need not be postponed until it occurs."¹³² Because the future is unknowable, the courts' concerns about future criminal use of the guns is at least more plausible than some legislators' plainly erroneous claims that the guns are currently the "weapon of choice" for criminals. Nevertheless, for a law to pass a rational basis test, there must be at least credible evidence that the guns in question could become increasingly used in crime. Yet, semiautomatics are more than a century old, and large capacity (pg.414) magazines are older still.¹³³ If semiautomatics and large capacity magazines, after a century of availability, remain rarely used in crime, it is not rational to ban them based on the theory that they might one day become crime guns.¹³⁴ Any gun could become a crime gun in the future, but the possibility hardly means that a legislative body can ban any gun that it wrongly considers to be a criminal's "weapon of choice."

Consider, for example, the big-game hunting rifles that the gun control lobbies currently appear to approve. These rifles are extremely powerful, and are capable of being used at very long distances. The rifles are, after all, designed to kill animals such as an 800 pound elk with a single shot at a distance of a third of a mile or more. Accordingly, the big-game rifles would be well-suited for assassinations. Suppose that a future legislature bans these big-game rifles by calling them "assassination weapons," and a court reviewing the ban was presented with extensive evidence that big-game rifles (a/k/a "assassination weapons") are used in only about 1% of assassinations, and that there is no persuasive evidence of a trend towards increased use. Surely the court would not uphold the "assassination weapon" prohibition merely based on a legislature's self-inflicted and unfounded fear that big-game rifles at some point could become frequently used in assassinations.

V. ILLEGITIMATE: BANNING PROTECTIVE GUN OWNERSHIP

¹³¹ See BEA, *supra* note 116.

¹³² Arnold v. Cleveland, 616 N.E.2d 163, 172 (Ohio 1993) (citations omitted).

¹³³ See Fafarman, *supra* note 9, at 189 (first Winchester semiautomatic in 1903 and first Remington semiautomatic in 1906); HAROLD F. WILLIAMSON, WINCHESTER: THE GUN THAT WON THE WEST 13 (1952) (Volcanic Company was producing carbines which could fire 30 rounds without reloading in 1856).

¹³⁴ It should not be surprising that the guns are rarely used in crimes. All rifles and shotguns are difficult to conceal. So-called "assault pistols," which are quite large for handguns, are also difficult to conceal.

A. The Legitimacy of Self-Defense

"Assault weapons" are also said to be appropriate for prohibition because they are not suitable for sports—because they are, as the Denver City Council put it, "designed primarily for military or antipersonnel use."¹³⁵ Consistent with these findings, BATF exercised its (pg.415) authority to ban the import of certain "assault weapons" because the Bureau found that they were not "particularly suitable" for sports.¹³⁶ The Bureau also noted that several of the non-importable guns were well-suited for defensive purposes. Firearms expert Jack Lewis, whose two books on "assault weapons" are cited as authoritative by gun control advocates in their briefs defending "assault weapon" bans, likewise writes that almost all of the guns dubbed "assault weapons" are well-suited for defensive purposes, although some of the guns are too heavy and cumbersome for field sports.¹³⁷

A ban based on a weapon's utility for antipersonnel or defensive purposes fails the *Cleburne* consistency prong because virtually all guns (except for a few highly specialized models such as those used by biathletes) are designed primarily for anti-personnel use. Guns are generally made for injuring and killing people. It is irrational to ban particular guns based on a characteristic that they share with almost all guns. A law might as well assert that "assault weapons" are uniquely pernicious because they share the characteristic of using gunpowder.

But even assuming that there is a real line between sporting guns and defensive guns and that the "assault weapon" bans draw that line correctly,¹³⁸ drawing the line as prohibiting defensive guns fails the (pg.416) *Cleburne* legitimacy prong. Without reference to a particular right to keep and bear arms, use of deadly physical force for self-defense and the defense of others is lawful in every state. In fact, many state constitutions guarantee a right of self-defense, and American common law recognizes a self-defense right of very long standing.¹³⁹ Because self-defense is a recognized, lawful activity everywhere, prohibiting an object simply because it is useful for self-defense rather than for

¹³⁵ DENVER, COLO. REV. MUN. CODE, § 38-130(a) (1989). Similarly, the city of Cleveland's ban on "assault weapons" was predicated on the finding that "the primary purpose of assault weapons is antipersonnel...." *Arnold*, 116 N.E.2d at 172 (citing CLEVELAND, OHIO ORD. No. 415-89, § 628.01). California's ban includes the legislative finding: "The Legislature has restricted the assault weapons ... based upon the finding ... that its function as a legitimate sports or recreational firearm is substantially outweighed by the danger that it can also be used to kill or injure human beings." CAL. PENAL CODE § 12275.5 (Deering 1994).

¹³⁶ BUREAU OF ALCOHOL, TOBACCO AND FIREARMS, REPORT AND RECOMMENDATION OF THE ATF WORKING GROUP ON THE IMPORTABILITY OF CERTAIN SEMIAUTOMATIC RIFLES (1989).

¹³⁷ Of the semiautomatics evaluated by Lewis, virtually every one was praised for its utility in survival, law enforcement, or other civil defense type situations. The guns were also touted for day-to-day home defense, in part because of their reliability, in part because of their simplicity and ruggedness (meaning that persons who are not experts in gun care can maintain the firearms safely), in part because of their low recoil (making them easier for persons without great upper body strength to control), and in part because of their intimidating appearance, which could convince an attacker to flee or surrender without a fight. For example, the Steyr AUG-SA has "excellent bio-engineering," a superior and innovative safety, is easy to maneuver for self-defense, and hard for an attacker to take away. Its barrel is so well made that no amount of target practice will wear it out. The gun never needs cleaning, even if thrown in mud or snow. THE GUN DIGEST BOOK OF ASSAULT WEAPONS 46-49 (Jack Lewis ed., 1st ed., 1986).

The SIG SG-551 SP carbine works "like a fine Swiss watch" and does not have "any notable recoil." Its "fast second shot" is useful for defending livestock from coyotes, and is "perfectly suitable" for police and civilian defensive roles. THE GUN DIGEST BOOK OF ASSAULT WEAPONS 201-13 (Jack Lewis ed., 2d ed., 1989).

The M11 pistol finds its "best role as a home defense weapon," in part because its intimidating appearance would force "most burglars and intruders to consider instant surrender." *Id.* at 71.

¹³⁸ Most of the banned rifles are used in target competition. Some of these rifles, such as the Colt Sporter and the Heckler & Koch HK-91 are generally regarded as among the finest target rifles in the world.

¹³⁹ See e.g., RICHARD M. BROWN, NO DUTY TO RETREAT (1991).

sport cannot be legitimate. Hence, that prohibition cannot pass the "illegitimacy" prong of the *Cleburne* rational basis test.

B. Police Exemption

In response to the above analysis regarding the legitimacy of lawful self-defense, it might be suggested that "assault weapons" are not defensive weapons, instead they are offensive weapons, better suited for killing large numbers of innocent people than for protecting innocent life. The analysis of the physical characteristics of "assault weapons"¹⁴⁰ suggests that claims regarding the extraordinary offensive capabilities of "assault weapons" are incorrect. But the rationality of the offensive/defensive distinction can be addressed more directly by examining the inconsistency of the claim within the very legislation that makes the claim.

Every "assault weapon" prohibition ever enacted or proposed in the United States (or any other nation) includes an exception for police possession of these weapons. Yet, the only reason for police to possess firearms is for protection activities. It is irrational to ban firearms on the grounds that they are not suitable for protection, and to simultaneously allow the police to use them. Unlike police officers, ordinary citizens cannot make a radio call for backup that will bring a swarm of police officers within seconds. The lives of ordinary citizens are just as valuable as the lives of police officers, and ordinary citizens are just as entitled to use the best firearms available for protection.¹⁴¹

Conversely, are "assault weapon" only useful for massacring the innocent? If so, then such weapons have no rational place in the hands of domestic law enforcement. Unlike the security forces in other, less (pg.417) free countries, the American police do not need highly destructive weapons allegedly designed for killing large numbers of people at once.

VI. CONCLUSION

"Equal protection of the laws requires that statutory classifications be based on differences that are real in fact...."¹⁴² The classification of "assault weapons" is not based on differences that are real in fact. The banned firearms do not fire faster than many guns that are not banned. The banned firearms do not have a larger ammunition capacity than many guns that are not banned. In fact, the number of rounds a semiautomatic can fire without reloading has nothing to do with the gun. Rather, that capacity is determined solely by the magazine, a separate, detachable, and interchangeable part. All the other physical characteristics of "assault weapons" which might form a rational basis for prohibiting them are simply not valid (such as claims about ammunition lethality), are trivial (such as bayonet lugs), or make the gun more accurate (such as a muzzle brakes). Official statistics prove that so-called "assault weapons" are rarely involved in criminal activity, and hence the use of "assault weapons" in crime is insufficiently demonstrated to pass the rational basis test.

Banning "assault weapons" has been justified on the basis that these weapons are better suited for personal protection than they are for recreation. However, this justification is illegitimate because the use of deadly force for protection from grave, imminent harm is lawful in the United States.

¹⁴⁰ *Id.* at 6.

¹⁴¹ Such an exemption could not be defended on the grounds that the guns can only used by persons with special training; "assault weapon" prohibitionists may complain that the guns are "very easy to use." Reynolds, *supra* note 73.

¹⁴² *People v. Montoya*, 647 P.2d 1203, 1205-06 (Colo. 1982).

The demand for "assault weapon" prohibition is often accompanied by a self-righteous insistence that only a criminal or a maniac would oppose prohibiting extremely dangerous firearms which have no legitimate use and are the criminal weapon of choice. But the closer one looks at the reasons given for "assault weapon" bans the less one sees. The prohibition is no more rational than a prohibition on beer based on legislative "findings" that beer grows on trees, that a single sip always causes instant physical addiction, and that beer is more dangerous than other alcohol because it is stored in aluminum containers. If the rational basis test means anything, it means that an "assault weapon" prohibition is unlawful.

EXHIBIT 41

Assault Weapon Bans: Can They Survive Rational Basis Scrutiny?

Clayton E. Cramer¹

ABSTRACT: In the last two decades, legislatures and courts have been increasingly willing to argue that a certain class of firearms termed “assault weapons” are not protected by the Second Amendment, and may be regulated or banned even though functionally identical firearms are not generally subject to such laws. Do such underinclusive bans survive even the lowest level of scrutiny: rational basis?

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I. Introduction

The U.S. Supreme Court has long recognized that distinctions in laws must be rationally related to a legitimate state interest.² Do AW bans meet this standard, or are they panic driven responses to fear of gang violence and random mass murders?

II. What Is An “Assault Weapon”?

Starting in 1989, with passage of California’s Roberti-Roos Assault Weapons Control Act³ a new term has entered American legal vocabulary: “assault weapon” (AW). What are they? Generally, these are semiautomatic rifles and pistols which use detachable magazines. The rifles are functionally identical to sporting arms that have been in use for decades in America (although AWs usually fire a less powerful cartridge than hunting rifles), with a somewhat military appearance (black plastic stocks, pistol grips, and bayonet lugs being common components). The handguns are functionally indistinguishable from handguns used for more than a century by civilians in the U.S. (semiautomatic, detachable magazine fed).

Most statutes have combined a ban based on maker and model name with a prohibition on weapons that are “substantially identical”⁴ to those on the named list. These named lists in different laws, while similar, tend to vary slightly. New Jersey’s named list

² *Cleburne v. Cleburne Living Center, Inc.*, 473 US 432, 436, 440 (1985) (“The general rule is that legislation is presumed to be valid and will be sustained if the classification drawn by the statute is rationally related to a legitimate state interest.”)

³ Carl Ingram, *Assault Gun Ban Wins Final Vote: Deukmejian's Promised Approval Would Make It 1st Such U.S. Law*, TIMES, May 19, 1989, http://articles.latimes.com/1989-05-19/news/mn-112_1_assault-weapons-ban-military-style-assault-types-of-semiautomatic-rifles/2, last accessed February 27, 2016.

⁴ N.J.S.A. 2C:39-1(w)(2) (“Any firearm manufactured under any designation which is substantially identical to any of the firearms listed above.”)

bans the “Demro TAC-1 carbine” which is not named by California’s similar statute.⁵ Yet many guns appear on both lists (sometimes with very slight differences in name): FN-FAL, FN-LAR, or FN-FNC type semiautomatic firearms (in New Jersey’s list);⁶ Fabrique Nationale FAL, LAR, FNC (in California’s list).⁷

That most such laws choose to ban AWs primarily by name and model number, and not by functional characteristics, should be a tipoff that whatever the public safety hazards of these weapons, those interested in banning them had a hard time finding the common risk factors that would have enabled them to write a functional definition of an AW.

Comparing the lists of named weapons and functional characteristics leads to some startling conclusions. The weapons in most cases were derived from full automatic military weapons and bear a strong resemblance to their full automatic ancestors. There are some exceptions, such as the Calico M-950, which has no military origins. None of these weapons are readily convertible to full automatic fire; if they were, they would already be considered machineguns (“machinegun” is one word in federal law, but two words everywhere else) under federal law⁸ and subject to the much stricter federal⁹ and state licensing laws regulating machine guns.¹⁰

⁵ Cal. Penal Code § 30510 (2014).

⁶ N.J.S.A. 2C:39-1(w)(1).

⁷ Cal. Penal Code § 30510 (2014).

⁸ 26 USC § 5845(b) (2014)(“The term ‘machinegun’ means any weapon which shoots, is designed to shoot, or can be readily restored to shoot, automatically more than one shot, without manual reloading, by a single function of the trigger. The term shall also include the frame or receiver of any such weapon, any part designed and intended solely and exclusively, or combination of parts designed and intended, for use in converting a weapon into a machinegun, and any combination of parts from which a machinegun can be assembled if such parts are in the possession or under the control of a person.”) See 27 Code of Federal Regulations §179.11, ATF Rul. 82-3, 82-8, 83-5, and 81-4 for regulations redefining previously semiautomatic guns or parts into machineguns.

⁹ Generally see 26 USC §§ 5801-5872.

¹⁰ Cal. Penal Code § 32650(a)(2014).

III. Named Lists As Careless Bills of Attainder

American laws usually prohibit or regulate items not by name but by functional characteristics. As an example, California defines a number of items as “destructive devices.” One clearly describes a Molotov cocktail, by functional characteristics, not by name: “Any breakable container that contains a flammable liquid with a flashpoint of 150 degrees Fahrenheit or less and has a wick or similar device capable of being ignited, other than a device which is commercially manufactured primarily for the purpose of illumination.”¹¹ This clearly matches the dictionary definition: “a crude incendiary grenade consisting of a glass container filled with flammable liquid and a wick for ignition.”¹² The California Penal Code definition is clearly legally superior to a dictionary definition for the following reasons: a defendant could argue that he did not know what the phrase “Molotov cocktail” meant and was therefore ignorant that he was violating the law; minor non-functional changes (such as substituting an electrical ignitor instead of a wick) might create questions as to whether a named prohibition of a “Molotov cocktail” was insufficiently precise.

While most AW bans also have functional definitions of the banned weapons, named list definitions based on manufacturer’s name and model number are a common part of these laws. These are similar to “bills of attainder,” in which legislative acts punish persons by name for alleged crimes instead of specifying a crime and allowing due process by the courts to determine guilt. While Colt Industries is not a person, and Colt’s AR-15 is not a person, it is clear that a law banning sale of a named product made by Colt, with

¹¹ Cal. Penal Code § 16460(5) (2016).

¹² Christopher G. Morris, Academic Press Dictionary of Science and Technology 1404 (1991).

no similar ban on sales by another manufacturer would effectively deny Colt equal protection of the law. To make these distinctions in an arbitrary manner is contrary to existing case law.¹³

Not only does the named list approach lead to equal protection problems, but it makes it very easy to subvert these laws. As an example of the defective nature of named lists, California's Assault Weapons Control Act (AWCA) banned the Intratec TEC-9 by name. The manufacturer responded by making minor non-functional changes to the gun and giving it a new model number: DC9¹⁴ (presumably "Designed for California"). The TEC-9 and TEC-DC9 are otherwise identical."¹⁵ When the 1994 federal ban took effect listing the TEC-9: "Intratec... manufactured an AB-10 ('after ban') model that does not have a threaded barrel or a barrel shroud but is identical to the TEC-9 in other respects, including the ability to accept an ammunition magazine outside the pistol grip." While the federal AW ban prohibited new manufacture of 32 round magazines, ones made before the new law work in the AB-10.¹⁶

The U.S. Constitution's Art. I, sec. 10 prohibition on states passing bills of attainder only limits the legislative branches of state government.¹⁷ In the past, clever state governments have worked around this by executive orders, such as Missouri Governor

¹³ *Cleburne v. Cleburne Living Center, Inc.*, 473 U.S. 432, 439 (1985) ("The Equal Protection Clause of the Fourteenth Amendment commands that no State shall "deny to any person within its jurisdiction the equal protection of the laws," which is essentially a direction that all persons similarly situated should be treated alike.")

¹⁴ Bruce H. Kobayashi and Joseph E. Olson, In Re 101 California Street: A Legal and Economic Analysis of Strict Liability for the Manufacture and Sale of "Assault Weapons", *STANFORD LAW & POLICY REVIEW*, 8:41, 46, 47 (1997).

¹⁵ Christopher S. Koper, An Updated Assessment of the Federal Assault Weapons Ban: Impacts on Gun Markets and Gun Violence, 1994-2003, 10 <https://www.ncjrs.gov/pdffiles1/nij/grants/204431.pdf>, last accessed March 14, 2016. This report was funded by the Department of Justice in response to a request by Congress.

¹⁶ *Id.*.

¹⁷ U.S. Const., Art I, § 9., cl 1. ("No State shall ... pass any Bill of Attainder...")

Boggs' 1838 order to the militia that Mormons be driven from the state or killed.¹⁸ As a recent work on constitutional law described the problem of bills of attainder:

[T]he paradigmatic example of legislation whose violation of equality and due process contravenes the rule of law. It denies the separation of powers between legislature and judiciary, and the related distinction between legislative and judicial process, and so removes the protection that law is meant to provide from governmental hostility and arbitrary power.¹⁹

In the 1990s, the 6th Circuit Court of Appeals struck down named list “assault weapon” bans for vagueness.²⁰ Even when the ordinance was amended to prohibit “assault weapons” based on functional characteristics, the 6th Circuit ruled that such definitions were vague, because they may require more knowledge than a person of “average intelligence [possesses] to determine whether a particular firearm is included within its prohibition.”²¹

IV. What Makes “Assault Weapons” So Dangerous?

The California Department of Justice examined the issue of AWs and public safety both before and after passage of the AWCA in 1989. These reports were not part of the legislative process. They demonstrate that there was no rational basis for the law. Steve

¹⁸ W. Paul Reeve, Ardis E. Parshall, ed., *Mormonism: A Historical Encyclopedia* 330 (2010).

¹⁹ T.R.S. Allen, *Constitutional Justice: A Liberal Theory of the Rule of Law* 148 (2001).

²⁰ *Springfield Armory, Inc. v. City of Columbus*, 29 F. 3d 250, 251 (6th Cir. 1994) (Striking down a city ordinance for vagueness and not reaching bill of attainder question because of vagueness: “The ordinance defines “assault weapon” as any one of thirty-four specific rifles, three specific shotguns and nine specific pistols, or “[o]ther models by the same manufacturer with the same action design that have slight modifications or enhancements....” The weapons are specified by brand name and model, not generically or by defined categories.... Plaintiffs challenge the ordinance as an unconstitutional bill of attainder because it constrains only the named manufacturers while other manufacturers are free to make and sell similar products. Plaintiffs also contend that the ordinance is unconstitutionally vague.”)

²¹ *Peoples Rights Organization v. City of Columbus*, 152 F. 3d 522, 535 (6th Cir. 1998) (“Therefore, anyone who possesses a semiautomatic center fire rifle or carbine that accepts a detachable magazine is subject to prosecution so long as a magazine exists with a capacity of twenty rounds or more. Since the ordinance contains no scienter requirement, an owner's complete lack of knowledge as to the magazine's existence is of no consequence.”)

Helsley, Acting Assistant Director of the Investigation and Enforcement Branch wrote a memo on October 31, 1988, a year before the bill passed, answering the question “whether a definition could be formulated which would allow legislative control of ‘assault rifles’ without infringing on sporting weapons. I do not think that the necessary precision in possible.”²² Helsley also pointed out that,

Obviously, there have been some high visibility crimes which involved semi-automatics UZI’s and AK-47’s, but I suspect a close analysis would put that frequency at or slightly above the statistical aberration level. Last year, I surveyed the firearms used in violent crimes which were submitted to BFS [Bureau of Forensic Services] analysis (Attachment 18). I believed that this would provide a good picture of what criminals use when they want to hurt someone. The figures are self-explanatory and confirmed our intuition that assault type firearms were the least of our worries. It’s really the .22 and .38 Caliber handguns and 12 gauge shotguns that inflict the majority of the carnage.

Consequently, I believe that assault weapons cannot be defined in a workable way, by size, caliber, action type or magazine capacity. ... Unless a realistic definition can be developed for “assault weapons”, we should leave the issue alone.²³

After passage of the law in 1989, the California Criminalistics Institute (a unit of the California Department of Justice),²⁴ studied the use of “assault weapons” in 1990 based on information from crime labs throughout the state. Their conclusions?

It is clear from this data that assault weapons play a very small role in assault and homicide cases submitted to city and county labs. This data shows that in the neighborhood of less than 5% of homicide and assault weapons fall into the §12276 PC list. This is in agreement with previous data collected on firearms submitted to CA DOJ labs prior to the enactment of the AWCA [Assault Weapons Control Act] as well as for the year following the effective date of that law.²⁵

²² S.C. Helsley to G.W. Clemons, Assault Rifles, October 31, 1988, 1. Because this document required a Public Records Access request to pry loose, you can read it at <http://www.claytoncramer.com/primary/other/Helsley88AWCa.pdf>, last accessed April 6, 2016.

²³ *Id.* at 3.

²⁴ California Criminalistics Institute, <https://oag.ca.gov/ccci>, last accessed April 5, 2016.

²⁵ Torrey D. Johnson, Report on a Survey of the Use of “Assault Weapons” in California in 1990, 1, available at <http://www.claytoncramer.com/primary/other/Johnson91AWCa.pdf>.

The report explains that they counted “4844 guns which included 45 ‘assault weapons’ (>1% assault weapons).” (Assault weapons were actually 0.9% of this total.) As the report further explained, the Los Angeles Sheriff’s Office destroyed 3881 guns, preventing their identification. “If the LASO data is ignored, the total number of guns is 963 which includes 36 ‘assault weapons’ (~3.7%) which is probably a more accurate reflection of numbers of ‘assault weapons’ actual[ly] encountered in homicides and assaults.” Even with this significant loss of data, the report explained why relying on crime labs for determining frequency of criminal use of assault weapons likely overstated their presence:

First, if all guns are not being examined by forensic laboratories, many of those not seen will be the usual pistols and revolvers which make up the bulk of guns used in violent crimes thus maintaining the proportions. It is likely that, if there is a skewing of the data, that it is to accentuate the apparent use of “assault weapons”. This because these weapons are infrequently seen by law enforcement so they are unfamiliar with them as a group and there is frequently a question of whether the firearm is or has been converted to full automatic fire (machine gun). This results in an increased likelihood that a recovered ‘assault weapon’ will be examined by a forensic specialist.²⁶

The report also acknowledges that there were difficulties determining whether a particular firearm was actually a weapon regulated by the AWCA, and they used the “most generous interpretation... This will give the worst case results.”²⁷ The report concludes: “The incidence of the use of ‘assault weapons’ is very much lower than the media and law makers seem to represent.”²⁸

²⁶ *Id.* at 2.

²⁷ *Id.* at 3.

²⁸ *Id.* at 7.

So with so much agreement within the California Department of Justice that assault weapons constituted only a tiny fraction of criminal misuses, why did California Attorney-General John van de Kamp assert the importance of passing the AWCA? His speech to California police chiefs suggests that he saw this as a wedge issue for breaking open the gates to more restrictive gun control laws:

"It can win, but the margin of victory will be narrow at best," he said. Past defeats have resulted from debate deteriorating "into a pitched battle between those who would ban all guns and those who would regulate none of them," he said.

This time, Van de Kamp said, the debate should be limited to law enforcement issues. He said there are many members of the NRA, among them police officers, who do not agree with the association's consistent opposition to all forms of gun control.²⁹

Other evidence suggests the AWCA was based not on public safety but political expedience: "Sponsors of the AWCA, including Senator Roberti, Assemblyman Roos, Attorney General Van de Kamp, and law enforcement administrators, held a strategy session at which they decided that 'certain weapons probably had too large a constituency to ever be worth the risk of including, Ruger Mini 14, M1 Carbine, M1 Garand, etc.'³⁰ and that "[i]nformation on assault weapons would not be sought from forensic laboratories as it was unlikely to support the theses [that assault weapons were the preferred choice of drug-trafficking organizations and violent criminals] on which the legislation would be based."³¹ [bracketed material in original] Helsley also explained the very odd named list

²⁹ Steve Emmons, Van de Kamp Asks Police Chiefs for Support in Outlawing Assault Rifles, LOS ANGELES TIMES, Feb. 9, 1989.

³⁰ Steve Helsley to Patrick Kenady, <https://web.archive.org/web/20081201093921/http://www.hoboes.com/pub/Politics/United%20States/Trust%20the%20Government/Insight%20into%20Anti-Legislation>, last accessed April 9, 2016.

³¹ Bruce H. Kobayashi and Joseph E. Olson, In Re 101 California Street: A Legal and Economic Analysis of Strict Liability for the Manufacture and Sale of "Assault Weapons", STANFORD LAW & POLICY REVIEW, 8:41, 44 (1997).

this way: “[T]he list had become an odd collection of firearms which range from the long out of production, to exorbitantly expensive, to the ‘evil’ AK 47. As no specifically defined problem drove our efforts, such an odd collection should not be surprising. ... Most if not all of the principal players in crafting the legislation had absolutely no knowledge of firearms. Most of the weapons on the list are low production or long out of production items that constitute absolutely no conceivable threat.”³² In some cases, non-firearms have been added to the list: the Knight’s Armament RAS was on the list in 2000³³ even though the RAS is only a rail adapter system for attaching sights, flashlights, and the like.³⁴

The clear intent was to go after a small minority of guns and their owners, a group unlikely to have the political power to defend their interests. The relevance of this will appear when we examine the Romer decision. Excluding data that would argue against their claims demonstrates a lack of rational basis and intellectual honesty.

Also, Van de Kamp was widely considered an unannounced candidate for governor at the time³⁵ and likely was using his support for this law as an opportunity to have a high public profile. While seeking higher public office is not intrinsically problematic, it is not an adequate justification to avoid rational basis. The percentages of AWs criminally used were so low that a ban on handguns or knives would have had a far stronger effect in reducing murders, but this would have been a bridge too far in the California of 1989. Failure to pass it would have done nothing to raise van de Kamp’s visibility for higher office.

³² *Op cit.*, n. 35.

³³ <http://oag.ca.gov/sites/all/files/agweb/pdfs/firearms/infobulbs/kaslist.pdf>, last accessed April 13, 2016.

³⁴ <https://www.knightarmco.com/portfolio/m4-carbine-ras/>, last accessed April 13, 2016.

³⁵ Ken Hoover, California Attorney General Urges Assault Rifle Ban, UPI, Feb. 13, 1989.

Other studies also demonstrate that AW bans were politicians' irrational responses to public safety concerns. In 1994, the federal government passed an assault weapon ban similar to those passed by many of the states in years before and after 1994, based on named lists and functional specifications.³⁶ The federal ban also prohibited new manufacture for civilian use of Large Capacity Magazines (LCMs) (those holding more than 10 rounds).³⁷ This law was passed with a sunset clause, causing its automatic repeal in 2004.³⁸

One part of the federal law directed the U.S. Attorney-General to "to study the ban's impact and report the results to Congress within 30 months of the ban's enactment ..."³⁹ That first report on the effectiveness of the federal law found very little measureable result. The authors (Roth and Koper) admitted on the very first page that they had a hard time "discerning the effects of the ban" at least partly because "the banned weapons and magazines were rarely used to commit murders in this country" before the 1994 ban.⁴⁰

Roth and Koper tried to figure out if the ban reduced the number of victims per mass murder.⁴¹ If the public safety hazard associated with AWs was because of high capacity magazines with the ability to spray bullets everywhere, you would expect to see mass murders decline.

So what did the report find? They found a 6.7% reduction in murder rates in the 15 states where the federal ban *could* have made a difference. But this reduction was not statistically significant. Because assault weapons had been used in a tiny percentage of

³⁶ *Op cit.* n. 11 at 4-6.

³⁷ *Id.*, 6.

³⁸ *Id.*, 4.

³⁹ *Id.*, 20.

⁴⁰ Jeffrey A. Roth and Christopher S. Koper, "Impacts of the 1994 Assault Weapons Ban: 1994-96," 1NCJ 173405, (Washington: National Institute of Justice, 1999), <https://www.ncjrs.gov/pdffiles1/173405.pdf>, last accessed Mar. 17, 2016.

⁴¹ *Id.*, at 7.

murders before the ban, "it is highly improbable that the assault weapons ban produced an effect this large...."⁴² "The ban did not produce declines in the average number of victims per incident of gun murder or of gun murder victims with multiple wounds."⁴³

What about "protecting police officers?" This was a reason offered repeatedly for the ban. There was a decline in assault weapons used to murder police officers, but Roth and Koper also admitted that "such incidents are sufficiently rare" that it was impossible to determine whether or not the law reduced gun murders of police officers.⁴⁴

Koper's 2004 final report on the effect of the federal ban on crime rates observes the ban was so narrowly written as to be easily subverted: "Relatively cosmetic changes, such as removing a flash hider or bayonet mount, are sufficient to transform a banned weapon into a legal substitute, and a number of manufacturers now produce modified, legal versions of some of the banned guns"⁴⁵ One recent reminder was the 2015 San Bernadino terrorist attack in which the shooter purchased one of these slightly altered guns, and modified it to be functionally equivalent to a banned AW.⁴⁶ Emphasizing the cosmetic nature of both the named list and functional irrelevance of the specification lists, Koper observes:

The gun ban provision targets a relatively small number of weapons based on outward features or accessories that have little to do with the weapons' operation. Removing some or all of these features is sufficient to make the weapons legal. In other respects (e.g, type of firing mechanism, ammunition fired, and the ability to accept a detachable

⁴² *Id.* at 8-9.

⁴³ *Id.* at 9.

⁴⁴ *Id.*

⁴⁵ *Op cit.* note 11 at 10.

⁴⁶ Josh Richman, San Bernardino shooting stirs gun debate, San Jose Mercury-News, Dec. 4, 2015, http://www.mercurynews.com/california/ci_29204710/san-bernardino-shoots-reignites-californias-gun-debate, last accessed Mar. 17. 2016.

magazine), AWs do not differ from other legal semiautomatic weapons.⁴⁷

If these bans were so easily subverted in ways that did not involve any significant functional change to the firearms available for sale, can such laws qualify as rationally based?

Along with how easily these laws were subverted, Koper summarized other studies showing that the banned guns were used in a tiny percentage of crimes. While the definition of AWs varied across different studies:

According to these accounts, AWs typically accounted for up to 8% of guns used in crime, depending on the specific AW definition and data source used A compilation of 38 sources indicated that AWs accounted for 2% of crime guns on average. Similarly, the most common AWs prohibited by the 1994 federal ban accounted for between 1% and 6% of guns used in crime according to most of several national and local data sources examined for this and our prior study ...⁴⁸

By comparison, “knives and other cutting instruments” in 2014 caused 13.1% of U.S. murders.⁴⁹ Yet knives can be purchased over the Internet or mail order with no questions asked, even when the search phrase is, “combat knives military” (roughly analogous to “assault weapons”) which returns 1,625 results on Amazon.com with prices starting at \$3.⁵⁰

Unlike AWs, knives are silent, and can be used without neighbors calling 911 to report gunshots. Even publications long supportive of AW bans have sometimes admitted that there was no rational basis for such laws:

⁴⁷ *Op cit.* note 11 at 11.

⁴⁸ *Id.*, at 15.

⁴⁹ FBI, Crime in the United States 2014, Table 7.

⁵⁰ http://www.amazon.com/s/ref=sp_pg_3?fst=as%3Aoff&rh=n%3A3375251%2Cn%3A10971181011%2Cn%3A706813011%2Cn%3A3222111011%2Cn%3A3222119011%2Ck%3Acombat+knives+military&page=3&sort=price-asc-rank&keywords=combat+knives+military&ie=UTF8&qid=1457994371. Last accessed March 14, 2016.

But in the 10 years since the previous ban lapsed, even gun control advocates acknowledge a larger truth: The law that barred the sale of assault weapons from 1994 to 2004 made little difference.

It turns out that big, scary military rifles don't kill the vast majority of the 11,000 Americans murdered with guns each year. Little handguns do.

In 2012, only 322 people were murdered with any kind of rifle, F.B.I. data shows.

The continuing focus on assault weapons stems from the media's obsessive focus on mass shootings, which disproportionately involve weapons like the AR-15, a civilian version of the military M16 rifle. This, in turn, obscures some grim truths about who is really dying from gunshots....

One reason: The use of these weapons may be rare over all, but they're used frequently in the gun violence that gets the most media coverage, mass shootings.

The criminologist [James Alan Fox](#) at Northeastern University estimates that there have been an average of 100 victims killed each year in mass shootings over the past three decades. That's less than 1 percent of gun homicide victims.⁵¹

"We spent a whole bunch of time and a whole bunch of political capital yelling and screaming about assault weapons," Mayor Mitchell J. Landrieu of New Orleans said. He called it a "zero sum political fight about a symbolic weapon."⁵²

So, if the guns prohibited were a tiny fraction of criminally misused guns, and a tiny fraction of far more commonly used and available murder weapons, why was so much political capital spent on these laws? As Koper's study observes, their use in the highly publicized but rare mass murders gave them a high profile:

Early studies of AWs, though sometimes based on limited and potentially unrepresentative data, also suggested that AWs recovered by police were often associated with drug trafficking and organized crime (Cox Newspapers, 1989; also see Roth and Koper, 1997, Chapter 5),

⁵¹ Lois Beckett, The Assault Weapon Myth, N.Y. Times, Sep. 14, 2015, <http://www.nytimes.com/2014/09/14/sunday-review/the-assault-weapon-myth.html? r=0>, last accessed March 14, 2016.

⁵² *Id.*

fueling a **perception** that AWs were guns of choice among drug dealers and other particularly violent groups.⁵³ [emphasis added]

As Koper points out: “Looking at the nation’s gun crime problem more broadly, however, AWs and LCMs were used in only a minority of gun crimes prior to the 1994 federal ban, and AWs were used in a particularly small percentage of gun crimes.”⁵⁴ It hardly needs saying that perception is not reality, although reality is certainly a requirement for an action being reasonable.

Underlying all of the “assault weapon” statutes and ordinances is the explicitly stated belief that they are a public safety hazard. California’s Roberti-Roos Assault Weapons Control Act (AWCA) justified its need by: “The Legislature hereby finds and declares that the proliferation and use of assault weapons poses a threat to the health, safety, and security of all citizens of this state.”⁵⁵ While the statement might well be true, the same could be said for handguns, knives, and automobiles, all of which caused more deaths than the rarely criminally misused named AWs as we discussed above. In light of the apparent suppression of contrary data on criminal misuse, can this statement of need be adjudicated as rational?

So, AW bans seem to be a strong reaction to a category of weapons that are used far less often for murder than the relatively lightly regulated category of knives. The statutes also seem to be easily subverted by functionally irrelevant changes to firearms.

⁵³ *Op cit.* n. 11 at 14.

⁵⁴ *Id.*

⁵⁵ Cal. Penal Code § 12275.5(a)(1990).

V. Sentence Length As An Indicator of Irrationality

Looking at the minimum sentences provided for AW violations relative to other crimes gives a pretty clear picture of what the legislatures considered the level of public safety hazard associated with AWs. California's minimum sentence for possession of an unlicensed machine gun⁵⁶ is substantially shorter than the minimum sentence for sale or importation of an "assault weapon."⁵⁷ Even more curiously, possession of a hand grenade is even a lighter sentence than either.⁵⁸ (This is a prohibition on functional hand grenades; possession or importation of a "metal military practice handgrenade or metal replica handgrenade" is prohibited elsewhere.⁵⁹) Adding to this strange disparity, the minimum sentence for forcible rape⁶⁰ is less than the minimum sentence for import or transfer of an "assault weapon." Clearly, the California legislature considers "assault weapons" a greater public safety hazard than machine guns, grenades, or rapists, if the severity of the sentence is any indicator. This suggests a panic reaction, not a rational decision.

⁵⁶ Cal. Penal Code § 32625(a) and 1170 (h)(1) ("a felony punishable pursuant to this subdivision where the term is not specified in the underlying offense shall be punishable by a term of imprisonment in a county jail for 16 months, or two or three years. ").

⁵⁷ Cal. Penal Code § 30600 (2014) ("[U]pon conviction shall be punished by imprisonment pursuant to subdivision (h) of Section 1170 for four, six, or eight years. ")

⁵⁸ Cal. Penal Code § 12301(a)(2) (defines grenade as "destructive device") and 12301(b) (2014) ("shall be punished by imprisonment in the county jail for a term not to exceed one year, or in state prison, or by a fine not to exceed ten thousand dollars (\$10,000) or by both such fine and imprisonment. ")

⁵⁹ Cal. Penal Code § 12020(a)(1)(2014) ("Any person in this state who does any of the following is punishable by imprisonment in a county jail not exceeding one year or in the state prison: . . . Manufactures or causes to be manufactured, imports into the state, keeps for sale, or offers or exposes for sale, or who gives, lends, or possesses any metal military practice handgrenade or metal replica handgrenade. . . ")

⁶⁰ Cal. Penal Code § 264(a)(2014) (" [R]ape, as defined in Section 261 or 262, is punishable by imprisonment in the state prison for three, six, or eight years. ")

VI. Rational Basis Scrutiny

Can AW laws survive “rational basis” scrutiny? What is the legitimate state interest rationally related to AW bans? They affect weapons that are a small minority of criminally misused guns, and which are already subject to substantial federal and state regulations because they are firearms. Weapons that are more commonly used for murder are available for mail order purchase with no similar level of restrictions.

What is the “rational basis” test? In *Cleburne v. Cleburne Living Center* (1985), the U.S. Supreme Court held that, “The general rule is that legislation is presumed to be valid and will be sustained if the classification drawn by the statute is rationally related to a legitimate state interest.”⁶¹ Preventing mentally delayed people from living a residential neighborhood was not a legitimate state interest.

Many of the existing Equal Protection Clause cases have involved not criminal prosecutions, but administrative actions for which, while there might be genuine concerns about inequality in results, no one would be going to prison. In *Plyer v. Doe* (1977), the Court struck down a law that denied public school education to illegal alien children, upholding a District Court opinion that the discrimination lacked “rational basis.”⁶² In *Cleburne v. Cleburne Living Center* (1985), the city of Cleburne denied a special use permit for a group home for the retarded in a residential neighborhood.⁶³ In *FCC v. Beach Communications, Inc.* (1993) the Court held that a cable TV company was subject to city

⁶¹ *Cleburne v. Cleburne Living Center, Inc.*, 473 US 432, 436, 437 (1985).

⁶² *Plyer v. Doe*, 457 US 202, 208 (1977).

⁶³ *Cleburne v. Cleburne Living Center, Inc.*, 473 US 432, 436, 437 (1985).

franchise rules because “transmission lines interconnect separately owned and managed buildings or if its lines use or cross any public right-of-way.”⁶⁴

Worse, the minimum sentences associated with some of these AW bans (such as California’s) are far more severe than those for possession of machine guns and hand grenades, both of which would seem at least as severe a public safety hazard as AWs. That violation of the AW bans is more serious than forcible rape also shows a certain disproportionate reaction by the legislature.

The AW bans impose prison sentences on violators—far more serious a consequence than the largely economic injuries struck down in many of the previously mentioned cases. But there are Supreme Court decisions where there was no “reasonable” connection between the statute and legitimate governmental end⁶⁵ and where jail time was the penalty.⁶⁶ By comparison, the Supreme Court’s decision *D.C. v. Heller* (2008) explicitly rejects “rational basis” as the standard of scrutiny concerning “the right to keep and bear arms ...” pointing to *U.S. v. Carolene Products* (1938) n. 4.⁶⁷

In *Romer v. Evans* (1996) the Court overruled an amendment to the Colorado State Constitution because:

⁶⁴ *FCC v. Beach Communications, Inc.*, 508 US 307, 311 (1993).

⁶⁵ *Meyer v. Nebraska*, 262 U.S. 390, 399, 400 (1923) (“The established doctrine is that this liberty may not be interfered with, under the guise of protecting the public interest, by legislative action which is arbitrary or without **reasonable** relation to some purpose within the competency of the State to effect.”); *Pierce v. Society of Sisters*, 268 US 510, 536 (1925) (“Plaintiffs asked protection against arbitrary, **unreasonable** and unlawful interference with their patrons and the consequent destruction of their business and property.”).

⁶⁶ *Meyer v. Nebraska*, 262 US 390, 397 (1923) (“Any person who violates any of the provisions of this act shall be deemed guilty of a misdemeanor and upon conviction, shall be subject to a fine of not less than twenty-five dollars (\$25), nor more than one hundred dollars (\$100) or be confined in the county jail for any period not exceeding thirty days for each offense.”)

⁶⁷ *D.C. v. Heller*, 128 S. Ct. 2783, 2817 n. 27 (“If all that was required to overcome the right to keep and bear arms was a rational basis, the Second Amendment would be redundant with the separate constitutional prohibitions on irrational laws, and would have no effect.”)

First, the amendment has the peculiar property of imposing a broad and undifferentiated disability on a single named group, an exceptional and, as we shall explain, invalid form of legislation. Second, its sheer breadth is so discontinuous with the reasons offered for it that the amendment seems inexplicable by anything but animus toward the class it affects; it lacks a rational relationship to legitimate state interests.⁶⁸

Similarly,

A second and related point is that laws of the kind now before us raise the inevitable inference that the disadvantage imposed is born of animosity toward the class of persons affected. "[I]f the constitutional conception of 'equal protection of the laws' means anything, it must at the very least mean that a bare . . . desire to harm a politically unpopular group cannot constitute a *legitimate* governmental interest."⁶⁹

The AW bans impose a “broad and undifferentiated disability on a single named group,” a category of firearms that have very little in common except for a somewhat menacing appearance, as well as creating a risk of arrest and prison for their owners. (Those who register them are losing privacy rights even if the AWs remain in their owner’s home.)

Like homosexuals (the protected group in *Romer*), gun owners and sometimes AW owners have been subject to ferocious, often religiously based criticism, comparing them to sexual deviants: “Why can't they stand up and be proud and let the rest of the world know about their guns? Why all this shame over being ‘outed’?”⁷⁰ While many of the Tweets below are not specific to AW owners, it is a pretty good assumption that the authors of these bigoted statements would apply them even more to AW owners. Other comments continue in that same frame of denigrating gun owners as sexually confused, inadequate, or terrorists, although often more vulgarly:

⁶⁸ *Romer v. Evans*, 517 US 620, 632 (1996).

⁶⁹ *Id.* at 634.

⁷⁰ Comment by honoredcitizen on Noah Rothman, Jeanine Pirro Rips Into Newspaper That Outed Her As A Gun Owner In ‘Pedophile-Like’ Online Map, Mediaite, Jan. 7, 2013, <http://www.mediaite.com/tv/jeanine-pirro-rips-into-newspaper-that-outed-her-as-a-gun-owner-in-pedophile-like-online-map/>, last access Mar. 16, 2016.

- The Coalition to Stop Gun Violence Tweeted about the gun industry: “You’d be hard-pressed to imagine a more degenerate, immoral industry.”⁷¹
- “[W]hat kind of a pussyboy needs a gun at a bbq. ... “[N]o, they have the gun because their sausage is so small, they might have to defend themselves from the pig.”
- With reference to the magazine whose article CSGV was insulting: “Well what do you expect from a porn rag?”⁷²
- An article about guns intended for younger or smaller shooters included these comments: “Gun owners are terrorists ...” “They’re nuts.” “How is this different from ISIS sending kids out with bombs strapped to their bodies.” “Like they want them to be terrorists?”⁷³
- A poster from CSGV showing Satan has the headline: “If the devil did exist, he’d certainly fetishize weapons designed to take human life.”
- CSGV’s responses to criticism of the religious angle of the poster certainly shows the religious-like fanaticism that drives the contempt.⁷⁴ This is another parallel to the assumptions the Romer decision made about the reasons why Coloradoans passed Amendment 2.

⁷¹ CSGV BBQ Guns 1, <http://gunfreezone.net/index.php/2015/11/20/csgv-discovers-bbq-guns-bigotry-and-stupidity-ensues/csgv-bbq-guns-1/>, last accessed Mar. 17, 2016. The gunfreezone.net web page is archive of Tweets by CSGV and its followers who understandably would not want most of this preserved.

⁷² Comments, *Id.*

⁷³ Comments, <http://gunfreezone.net/index.php/2016/02/24/latest-gun-outrage-is-late/csgv-cricket-2/>, last accessed Mar. 17, 2016.

⁷⁴ <http://gunfreezone.net/index.php/2015/07/31/csgv-ratchets-up-the-rhetoric-some-followers-are-not-amused/csgv-devil-1/>, last accessed Mar. 17, 2016.

In response to the CSGV question, “What’s the first word that comes to your mind when you hear ‘Gun Culture’?”⁷⁵ Comments again included sexual perversion and bigoted attacks:

- “Probably ammosexual. But the vision that comes to mind is more powerful – a bunch of fat, unkempt, white guys walking around with guns in their belts and dangling off their shoulders, in public places attempting to intimidate others, but claiming they aren’t.”
- “[C]oward, fear mongering, disrespectful, misogynist, racist redneck white men that run around with physical penis limitations armed with their penis extensions and their low i.q. scaring me and my friends.”
- “Insecure, bullying rednecks.”
- “Stench.”
- “Hill billies[sic]”
- “IDIOTS REDNECKS STUBBORN UNKIND SELFISH”
- “Under-endowed”
- “Fear of death by intellectually challenged yahoos.”
- “Small dicks”
- “Terrorist”.⁷⁶

One would hope that these will be recognized as bigoted descriptions, much like describing gay men as effeminate child molesters. These comments by gun control

⁷⁵ <http://gunfreezone.net/index.php/2015/07/15/csgv-hitting-every-branch-of-the-bigot-tree-on-their-way-down/csgv-gun-culture-2/>, last accessed Mar. 17, 2016.

⁷⁶ Comments, *Id.*

organizations and activists are probably not typical of Americans, in the same way that the Westboro Baptist Church of “God Hates Fags!” is hardly typical of the support for Colorado’s Amendment Two at the heart of the Romer decision, but it certainly shows the same irrational bigotry.

Others have been less anonymous in their comparisons and denigration.

If you own multiple guns or feel the need to possess a military-style assault weapon, it's because you have a small penis. ... But owning lots of guns or pseudo-machine guns means you have a tiny wiener and you're incredibly self-conscious about it. That's the plain and simple truth, even if it's not true.⁷⁷

That last sentence can be read several different ways, but when your claim is that is that something is truth even though not true, you have defined “not rational.”

Another problem with AW bans is that owners of assault weapons are rejected as legitimate citizens. After New York passed the SAFE Act in 2013, Governor Cuomo made it very clear that people who disagreed with the SAFE Act should leave the state, albeit on less severe conditions than Gov. Boggs’ order to the Mormons in 1838:

Are they these extreme conservatives who are right-to-life, pro-assault-weapon, anti-gay? Is that who they are? Because if that's who they are and they're the extreme conservatives, they have no place in the state of New York, because that's not who New Yorkers are.⁷⁸

Cuomo essentially told AW owners that they were outside the legitimate membership of the polity of New York, almost like they were illegal aliens (the parallel to Plyer). While journalists and gun control advocates might properly be considered outside the mainstream, the elected governor of New York is not.

⁷⁷ Todd Hartley, I’m With Stupid, ASPEN TIMES, Dec. 28, 2012, <http://www.aspentimes.com/article/20121228/COLUMN/121229911>, last accessed Mar. 16, 2016.

⁷⁸ Jesse McKinley, Comment by Cuomo Outrages Republicans, N.Y. TIMES, Jan. 22, 2014, http://www.nytimes.com/2014/01/23/nyregion/cuomo-comment-elicits-retort-from-republicans.html?_r=0, last accessed March 16, 2016.,

Court decisions have also demonstrated an irrational basis for such laws.

Upholding an Illinois city AW ban, Judge Easterbrook wrote:

If it has no other effect, Highland Park's ordinance may increase the public's sense of safety. Mass shootings are rare, but they are highly salient, and people tend to overestimate the likelihood of salient events. ... If a ban on semiautomatic guns and large-capacity magazines reduces the perceived risk from a mass shooting, and makes the public feel safer as a result, that's a substantial benefit.⁷⁹

The same reasoning could have been applied to uphold the constitutional provision struck down in *Romer*: “Colorado voters may be irrational in their bigotry against homosexuals, but if it reduces their perceived risk of homosexuals being given free rein to molest children, that’s a substantial benefit.” Clearly, when the courts argue that *feeling* safer is a legitimate reason to do something that makes no *real* difference in public safety, this is the definition of irrational. It makes people feel better, but without any actual basis in fact.

VII. AW Bans Fail Rational Basis Analysis

The evidence is clear that AW bans fail rational basis scrutiny because AWs are seldom criminally misused relative to more readily accessible weapons. The disproportionate minimum sentences in California’s AWCA law relative to much more dangerous weapons suggests a panic reaction that is hardly rational. The comments of journalists, elected officials, and gun control activists reveal bigotry that makes Colorado Amendment 2 seem pretty calm by comparison. Even the courts are reduced to arguing that *perceived* benefit as opposed to *actual* benefit is a sufficient reason to uphold bans.

⁷⁹ *Friedman v. City of Highland Park, Illinois*, 784 F. 3d 406, 412 (7th Cir. 2015).

ASSAULT WEAPON BANS: CAN THEY SURVIVE RATIONAL BASIS SCRUTINY?

There is no way to hold that AW bans which deny a fundamental right, as Heller determined the Second Amendment to protect, survives the “rational basis” standard of scrutiny.

EXHIBIT 42



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Promoting firearms safety training!

M1 Carbine

Inland M1A1 Carbine 6630815

Listing # 4842

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Listing Format: Auction
Current price : \$1,201.00
Starting bid: \$1.00
of bids: 13
Closes: 4 Days, 3 Hours
Location: Alabama, United States
Started: 3/18/2019
Ends: 3/30/2019
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IMAGE THUMBNAILS



DESCRIPTION

Inland M1A1 Carbine 6630815

Carbine has an N stamped front sight on an Inland MFG Div General Motors 10-44 barrel, with an ME of 2+. It has a type II barrel band stamped KI. The Inland Trigger housing has an M magazine catch, a J.A. O. rotary safety, an I-I straight hammer and an unmarked hole in sear. The rear adjustable stamped sight is marked I.R. CO. The type V slide is stamped 7160091. The low wood, with "Slim Jim" pistol grip, is all foreign wood, including the 2 rivet hand guard. The leather is in good condition with a minor cut on the top. The butt plate is missing the springs.

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EXHIBIT 43

ABOUT THE CMP

The Civilian Marksmanship Program (CMP) is a national organization dedicated to training and educating U. S. citizens in responsible uses of firearms and airguns through gun safety training, marksmanship training and competitions. The CMP is a federally chartered 501(c)(3) corporation that places its highest priority on serving youth through gun safety and marksmanship activities that encourage personal growth and build life skills. Links on this



(<http://thecmp.org/wp-content/uploads/CMPAnnualReport18w.pdf>)

page will lead you to more detailed information about the CMP and its programs.

Statutory mission. The federal law enacted in 1996 (*Title 36 U. S. Code, 40701-40733*) that created the Corporation for the Promotion of Rifle Practice and Firearms Safety, Inc. (CPRPFS, *the formal legal name of the CMP*) mandates these key “functions for the corporation:

1. To instruct citizens of the United States in marksmanship;
2. To promote practice and safety in the use of firearms;
3. To conduct competitions in the use of firearms and to award trophies, prizes, badges, and other insignia to competitors.

The law specifically states: *In carrying out the Civilian Marksmanship Program, the corporation shall give priority to activities that benefit firearms safety, training, and competition for youth and that reach as many youth participants as possible.*

([HTTP://THECMP.ORG/WP-CONTENT/UPLOADS/2019CMPBROCHURE_W.PDF](http://thecmp.org/wp-content/uploads/2019CMPBROCHURE_W.PDF)) **CMP** **GOVERNANCE AND LEADERSHIP**

The CMP is governed by a Board of Directors (<http://thecmp.org/about/board/>) made up of eleven members who have extensive experience and leadership credentials in military and business. The Chairman of the Board serves as the Chief Executive Officer. The Chief Operating Officer (<http://thecmp.org/about/coo/>) directs CMP sales programs at CMP South headquarters in Anniston, Alabama and oversees day-to-day operation of CMP training and competition programs at CMP North headquarters at Camp Perry, Ohio. The DCM Emeritus (<http://thecmp.org/about/director/>) is a part-time consultant who works on several projects for the CMP.



MORE INFO IN ABOUT THE CMP

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EXHIBIT 47

1 IN THE SUPREME COURT OF THE UNITED STATES

2 - - - - - x

3 DISTRICT OF COLUMBIA, :

4 ET AL., :

5 Petitioners :

6 v. : No. 07-290

7 DICK ANTHONY HELLER. :

8 - - - - - x

9 Washington, D.C.

10 Tuesday, March 18, 2008

11

12 The above-entitled matter came on for oral
13 argument before the Supreme Court of the United States
14 at 10:06 a.m.

15 APPEARANCES:

16 WALTER DELLINGER, ESQ., Washington, D.C.; on behalf
17 of the Petitioners.

18 GEN. PAUL D. CLEMENT, ESQ., Solicitor General,
19 Department of Justice, Washington, D.C.; on behalf
20 of the United States, as amicus curiae.

21 ALAN GURA, ESQ., Alexandria, Va.; on behalf of the
22 Respondent.

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Official - Subject to Final Review

1 P R O C E E D I N G S

2 (10:06 a.m.)

3 CHIEF JUSTICE ROBERTS: We will hear
4 argument today in Case 07-290, District of Columbia
5 versus Heller.

6 Mr. Dellinger.

7 ORAL ARGUMENT OF WALTER DELLINGER

8 ON BEHALF OF THE PETITIONERS

9 MR. DELLINGER: Good morning, Mr. Chief
10 Justice, and may it please the Court:

11 The Second Amendment was a direct response
12 to concern over Article I, Section 8 of the
13 Constitution, which gave the new national Congress the
14 surprising, perhaps even the shocking, power to
15 organize, arm, and presumably disarm the State militias.
16 What is at issue this morning is the scope and nature of
17 the individual right protected by the resulting
18 amendment and the first text to consider is the phrase
19 protecting a right to keep and bear arms. In the
20 debates over the Second Amendment, every person who used
21 the phrase "bear arms" used it to refer to the use of
22 arms in connection with militia service and when Madison
23 introduced the amendment in the first Congress, he
24 exactly equated the phrase "bearing arms" with, quote,
25 "rendering military service." We know this from the

1 inclusion in his draft of a clause exempting those with
2 religious scruples. His clause says "The right of the
3 people to keep and bear arms shall not be infringed, a
4 well armed and well regulated militia being the best
5 security of a free country, but no person religiously
6 scrupulous of bearing arms shall be compelled to render
7 military service in person."

8 And even if the language of keeping and
9 bearing arms were ambiguous, the amendment's first
10 clause confirms that the right is militia-related.

11 CHIEF JUSTICE ROBERTS: If you're right,
12 Mr. Dellinger, it's certainly an odd way in the Second
13 Amendment to phrase the operative provision. If it is
14 limited to State militias, why would they say "the right
15 of the people"? In other words, why wouldn't they say
16 "state militias have the right to keep arms"?

17 MR. DELLINGER: Mr. Chief Justice, I believe
18 that the phrase "the people" and the phrase "the
19 militia" were really in -- in sync with each other. You
20 will see references in the debates of, the Federalist
21 Farmer uses the phrase "the people are the militia, the
22 militia are the people."

23 CHIEF JUSTICE ROBERTS: But if that's right,
24 doesn't that cut against you? If the militia included
25 all the people, doesn't the preamble that you rely on

1 not really restrict the right much at all? It includes
2 all the people.

3 MR. DELLINGER: Yes, I do believe it
4 includes all the people in the sense of
5 Verdugo-Urquidez, all those who are part of the polity.
6 What -- what defines the amendment is the scope and
7 nature of the right that the people have. It's, it is a
8 right to participate in the common defense and you have
9 a right invocable in court if a Federal regulation
10 interferes with your right to train for or whatever the
11 militia has established. So that --

12 JUSTICE KENNEDY: One of the concerns,
13 Mr. Dellinger, of the framers, was not to establish a
14 practice of amending the Constitution and its important
15 provisions, and it seems to me that there is an
16 interpretation of the Second Amendment differing from
17 that of the district court and in Miller and not
18 advanced particularly in the red brief, but that
19 conforms the two clauses and in effect delinks them.
20 The first clause I submit can be read consistently with
21 the purpose I've indicated of simply reaffirming the
22 existence and the importance of the militia clause.
23 Those were very important clauses. As you've indicated,
24 they're in Article I and Article II. And so in effect
25 the amendment says we reaffirm the right to have a

1 militia, we've established it, but in addition, there is
2 a right to bear arms. Can you comment on that?

3 MR. DELLINGER: Yes.

4 JUSTICE KENNEDY: And this makes, it does --
5 I think you're write right in the brief to say that the
6 preface shouldn't be extraneous. This means it's not
7 extraneous. The Constitution reaffirms the rights,
8 reaffirm several principles: The right of the people to
9 peaceably assemble, the right to be secure in their
10 homes, the Tenth Amendment reaffirms the rights, and
11 this is simply a reaffirmation of the militia clause.

12 MR. DELLINGER: Justice Kennedy, I think any
13 interpretation that delinks the two clauses as if they
14 were dealing with related but nonetheless different
15 subject matters has that to count against it, and what
16 you don't see in the debates over the Second Amendment
17 are references to, in those debates, the use of weapons
18 for personal purposes. What you see is the clause that,
19 that literally transposes to this: "Because a well
20 regulated militia is necessary to the security of a free
21 State, the right of the people to keep and bear arms
22 shall not be" --

23 JUSTICE KENNEDY: Well the subject is "arms"
24 in both clauses, as I've suggested is the common
25 subject, and they're closely related.

1 MR. DELLINGER: I think, as this Court
2 unanimously held in Miller, or at least noted in
3 Miller -- I'll leave aside the debate. The court
4 unanimously said in Miller that the Second Amendment
5 must be interpreted in light of its obvious purpose to
6 ensure the continuation and render possible the
7 effectiveness of the military forces.

8 JUSTICE SCALIA: I don't see how there's
9 any, any, any contradiction between reading the second
10 clause as a -- as a personal guarantee and reading the
11 first one as assuring the existence of a militia, not
12 necessarily a State-managed militia because the militia
13 that resisted the British was not State- managed. But
14 why isn't it perfectly plausible, indeed reasonable, to
15 assume that since the framers knew that the way militias
16 were destroyed by tyrants in the past was not by passing
17 a law against militias, but by taking away the people's
18 weapons -- that was the way militias were destroyed.
19 The two clauses go together beautifully: Since we need
20 a militia, the right of the people to keep and bear arms
21 shall not be infringed.

22 MR. DELLINGER: Yes, but once you assume
23 that the clause is designed to protect the militia, it
24 -- surely it's the militia that decides whether personal
25 possession is necessary. I mean, Miller -- what makes

1 no sense is for Miller to require the arm to be
2 militia-related if the right is not, and the key phrase
3 is "bear arms." If people --

4 JUSTICE KENNEDY: Well, do you think the
5 clause, the second clause, the operative clause, is
6 related to something other than the militia?

7 MR. DELLINGER: No. I think --

8 JUSTICE KENNEDY: All right. Well, then --

9 MR. DELLINGER: -- the second clause, the
10 phrase "keep and bear arms," when "bear arms" is
11 referred to -- is referred to in a military context,
12 that is so that even if you left aside --

13 JUSTICE KENNEDY: It had nothing to do with
14 the concern of the remote settler to defend himself and
15 his family against hostile Indian tribes and outlaws,
16 wolves and bears and grizzlies and things like that?

17 MR. DELLINGER: That is not the discourse
18 that is part of the Second Amendment. And when you read
19 the debates, the congressional debates, the only use of
20 the phrase "keep and bear arms" is a military phrase,
21 and --

22 JUSTICE SCALIA: Blackstone thought it was
23 important. Blackstone thought it was important. He
24 thought the right of self-defense was inherent, and the
25 framers were devoted to Blackstone. Joseph Story, the

1 first commentator on the Constitution and a member of
2 this Court, thought it was a personal guarantee.

3 MR. DELLINGER: When Blackstone speaks of
4 the personal guarantee, he describes it as one of the
5 use of weapons, a common law right. And if we're
6 constitutionalizing the Blackstonian common law right,
7 he speaks of a right that is subject to due restrictions
8 and applies to, quote "such weapons, such as are allowed
9 by law." So Blackstone builds in the kind of
10 reasonableness of the regulation that the District of
11 Columbia has. Now, the --

12 CHIEF JUSTICE ROBERTS: Well, that may be
13 true, but that concedes your main point that there is an
14 individual right and gets to the separate question of
15 whether the regulations at issue here are reasonable.

16 MR. DELLINGER: I don't dispute, Mr. Chief
17 Justice, that the Second Amendment is positive law that
18 a litigant can invoke in court if a State were to decide
19 after recent events that it couldn't rely upon the
20 Federal Government in natural disasters and wanted to
21 have a State-only militia and wanted to have everybody
22 trained in the use of a weapon, a Federal law that
23 interfered with that would be a law that could be
24 challenged in court by, by an individual. I mean, I
25 think the better --

1 JUSTICE GINSBURG: Mr. Dellinger --

2 MR. DELLINGER: Yes.

3 JUSTICE GINSBURG: -- short of that, just to
4 get your position clear, short of reactivating State
5 militias, on your reading does the Second Amendment have
6 any effect today as a restraint on legislation?

7 MR. DELLINGER: It would, Justice Ginsburg,
8 if the State had a militia and had attributes of the
9 militia contrary to a Federal law. And if it didn't --

10 JUSTICE GINSBURG: But it doesn't, as far as
11 I know.

12 MR. DELLINGER: As far as I know, today it
13 doesn't. And I'm not -- and the Respondents make that,
14 that argument that the amendment is without a use. But
15 you don't make up a new use for an amendment whose
16 prohibitions aren't being violated. I mean --

17 JUSTICE ALITO: Your argument is that its
18 purpose was to prevent the disarming of the organized
19 militia, isn't that correct?

20 MR. DELLINGER: That is correct.

21 JUSTICE ALITO: And if that was the purpose,
22 then how could they -- how could the Framers of the
23 Second Amendment have thought that it would achieve that
24 person, because Congress has virtually plenary power
25 over the militia under the militia clauses?

1 MR. DELLINGER: That is because, I think,
2 Justice Alito, that those who wanted to retake State
3 authority over the militia didn't get everything they
4 wanted. Madison actually did this somewhat reluctantly
5 and wanted to maintain national control.

6 JUSTICE SCALIA: They got nothing at all,
7 not everything they wanted. They got nothing at all.
8 So long as it was up to the Federal Government to
9 regulate the militia and to assure that they were armed,
10 the Federal Government could, could disband the State
11 militias.

12 MR. DELLINGER: Yes, but if -- well --

13 JUSTICE SCALIA: So what, what was the
14 function served by the Second Amendment as far as the
15 militia is concerned?

16 MR. DELLINGER: It is by no means clear that
17 the Federal Government could abolish the State militia.
18 It may be presupposed by the Article I, Section 8,
19 clauses 15 and 16, and by the Second Amendment that the
20 States may have a militia. That issue has been left
21 open as to whether you could do that, and it can be
22 called into Federal service but only in particular
23 circumstances.

24 Now I think the better argument for the
25 other side, if, if there is to be a militia relatedness

1 aspect of the Second Amendment, as we think clear from
2 all of its terms, then Heller's proposed use of a
3 handgun has no connection of any kind to the
4 preservation or efficiency of a militia and therefore
5 the case is over.

6 CHIEF JUSTICE ROBERTS: Well, but your
7 reading of the militia clause, the militia clause
8 specifically reserves concern rights to the States by
9 its terms. And as I understand your reading, you would
10 be saying the Second Amendment was designed to take away
11 or expand upon the rights that are reserved, rather than
12 simply guaranteeing what rights were understood to be
13 implicit in the Constitution itself.

14 MR. DELLINGER: I'm not sure I followed the,
15 the question exactly, but --

16 CHIEF JUSTICE ROBERTS: Well, the militia
17 clause, Article I, Section 8, says certain rights are
18 reserved to the States with respect to the militia. And
19 yet you're telling us now that this was a very important
20 right that ensured that they kept arms, but it wasn't
21 listed in the rights that were reserved in the militia
22 clause.

23 MR. DELLINGER: The debate over the militia
24 clause -- what is shocking about the militia clauses is
25 that this is a, a new national government that for the

1 first time has the power to create a standing army of
2 professionals. The militia were people who came from
3 the people themselves, put down their weapons of trade.
4 The States were devoted to the ideo of their militia of
5 volunteers, and of all the powers granted to the Federal
6 Government one of the most surprising was to say that
7 Congress shall have the power to organize, arm, and
8 discipline the militia and to -- even though the
9 officers could be appointed by the State, the discipline
10 had to be according to Congress. And this was -- this
11 caused a tremendous negative reaction to the proposed
12 Constitution.

13 JUSTICE KENNEDY: But the Second -- the
14 Second Amendment doesn't repeal that. You don't take
15 the position that Congress no longer has the power to
16 organize, arm, and discipline the militia, do you?

17 MR. DELLINGER: No.

18 JUSTICE KENNEDY: So it was supplementing
19 it. And my question is, the question before us, is how
20 and to what extent did it supplement it. And in my view
21 it supplemented it by saying there's a general right to
22 bear arms quite without reference to the militia either
23 way.

24 MR. DELLINGER: It restricted in our view
25 the authority of the Federal Government to interfere

1 with the arming of the militia by the States. And the
2 word that caused the most focus was to "arm" and that is
3 to disarm.

4 Now, what I think is happening is that two
5 different rights are being put together. One was a
6 textual right to protect the militia. I think the
7 better argument for the -- for the other side, for
8 Mr. Heller, is that the amendment's purpose is militia
9 protective, but it was overinclusive in the way that
10 several of you have suggested, and that is that, as the
11 court below said, preserving the individual right,
12 presumably to have guns for personal use, was the best
13 way to ensure that the militia could serve when called.

14 But that right, this right of personal
15 liberty, the Blackstonian right, is an unregulated right
16 to whatever arm, wherever kept, however you want to
17 store it, and for the purposes an individual decides,
18 that is a libertarian ideal. It's not the text of the
19 Second Amendment, which is expressly about the security
20 of the State; it's about well-regulated militias, not
21 unregulated individual license, as is --

22 JUSTICE SOUTER: So what you are -- what you
23 are saying is that the individual has a right to
24 challenge a Federal law which in effect would disarm the
25 militia and make it impossible for the militia to

1 perform those functions that militias function. Isn't
2 that the nub of what you're saying?

3 MR. DELLINGER: Yes. That is correct.

4 JUSTICE SOUTER: Okay.

5 MR. DELLINGER: And if the Court --

6 JUSTICE STEVENS: May ask this question,
7 Mr. Dellinger? To what extent do you think the similar
8 provisions in State constitutions that were adopted more
9 or less at the same time are relevant to our inquiry?

10 MR. DELLINGER: I think they are highly
11 relevant to your inquiry because now 42 States have
12 adopted constitutional provisions.

13 JUSTICE STEVENS: I'm not talking about
14 those.

15 MR. DELLINGER: You're talking about at the
16 time.

17 JUSTICE STEVENS: I'm talking about the
18 contemporaneous actions of the States, before or at the
19 time of the adoption of the Second Amendment.

20 MR. DELLINGER: I think that the -- the
21 State amendments are generally written in different --
22 in different terms. If you're going to protect the kind
23 of right that is -- that is being spoken of here,
24 different from the militia right, the plain language to
25 do it would be "Congress or the States shall pass no law

1 abridging the right of any person to possess weapons for
2 personal use." And that's not the right that is created
3 here.

4 One of the troublesome aspects of viewing
5 this as a right of personal use is that that is the kind
6 of fundamental liberty interest that would create a real
7 potential for disruption. Once you unmoor it from -- or
8 untether it from its connection to the protection of the
9 State militia, you have the kind of right that could
10 easily be restrictions on State and local governments
11 and --

12 JUSTICE KENNEDY: Well, there's no question
13 that the English struggled with how to work this. You
14 couldn't conceal a gun and you also couldn't carry it,
15 but yet you had a right to have it.

16 Let me ask you this: Do you think the
17 Second Amendment is more restrictive or more expansive
18 of the right than the English Bill of Rights in 1689?

19 MR. DELLINGER: I think it doesn't address
20 the same subject matter as the English Bill of Rights.
21 I think it's related to the use of weapons as part of
22 the civic duty of participating in the common defense,
23 and it's -- and it's -- it's --

24 JUSTICE KENNEDY: I think that would be more
25 restrictive.

1 MR. DELLINGER: That -- that could well --
2 the answer then would be --

3 JUSTICE SOUTER: Well isn't it -- isn't it
4 more restrictive in the sense that the English Bill of
5 Rights was a guarantee against the crown, and it did not
6 preclude Parliament from passing a statute that would
7 regulate and perhaps limit --

8 MR. DELLINGER: Well --

9 JUSTICE SOUTER: Here there is some
10 guarantee against what Congress can do.

11 MR. DELLINGER: Parliament could regulate.
12 And Blackstone appears to approve of precisely the kinds
13 of regulations here. Now --

14 JUSTICE STEVENS: The Bill of Rights only
15 protected the rights of protestants.

16 MR. DELLINGER: This is correct.

17 JUSTICE STEVENS: And it was suitable to
18 their conditions then as allowed by law, so it was -- it
19 was a group right and much more limited.

20 MR. DELLINGER: I think that is -- that's
21 correct.

22 JUSTICE SCALIA: And as I recall the
23 legislation against Scottish highlanders and against --
24 against Roman Catholics did use the term -- forbade them
25 to keep and bear arms, and they weren't just talking

1 about their joining militias; they were talking about
2 whether they could have arms.

3 MR. DELLINGER: Well, the different kind of
4 right that you're talking about, to take this to the
5 question of -- of what the standard ought to be for
6 applying this, even if this extended beyond a
7 militia-based right, if it did, it sounds more like the
8 part of an expansive public or personal -- an expansive
9 personal liberty right, and if it -- if it is, I think
10 you ought to consider the effect on the 42 States who
11 have been getting along fine with State constitutional
12 provisions that do expressly protect an individual right
13 of -- of weapons for personal use, but in those States,
14 they have adopted a reasonableness standard that has
15 allowed them to sustain sensible regulation of dangerous
16 weapons. And if you --

17 CHIEF JUSTICE ROBERTS: What is -- what is
18 reasonable about a total ban on possession?

19 MR. DELLINGER: What is reasonable about a
20 total ban on possession is that it's a ban only on the
21 possession of one kind of weapon, of handguns, that's
22 been considered especially -- especially dangerous. The
23 --

24 CHIEF JUSTICE ROBERTS: So if you have a law
25 that prohibits the possession of books, it's all right

1 if you allow the possession of newspapers?

2 MR. DELLINGER: No, it's not, and the
3 difference is quite clear. If -- if you -- there is no
4 limit to the public discourse. If there is an
5 individual right to guns for personal use, it's to carry
6 out a purpose, like protecting the home. You could not,
7 for example, say that no one may have more than 50
8 books. But a law that said no one may possess more than
9 50 guns would -- would in fact be I think quite
10 reasonable.

11 CHIEF JUSTICE ROBERTS: The regulation --
12 the regulation at issue here is not one that goes to the
13 number of guns. It goes to the specific type. And I
14 understood your argument to be in your brief that
15 because rifles and shotguns are not banned to the staple
16 extent as handguns, it's all right to ban handguns.

17 MR. DELLINGER: That is correct because
18 there is no showing in this case that rifles and
19 handguns are not fully satisfactory to carry out the
20 purposes. And what -- and what the court below says
21 about -- about the elimination of this --

22 JUSTICE KENNEDY: The purposes of what?

23 MR. DELLINGER: I'm sorry.

24 JUSTICE KENNEDY: You said there is no
25 showing that rifles and handguns. I think you meant

1 rifles and other guns.

2 MR. DELLINGER: Yes, I'm sorry. Rifles and
3 handguns.

4 JUSTICE KENNEDY: Is necessary for the
5 purpose of what? What is the purpose?

6 MR. DELLINGER: The purpose -- if the
7 purpose -- if we are shifting and if we assume for a
8 moment arguendo that you believe this is a right
9 unconnected to the militia, then the purpose would be,
10 say, defense of the home. And where the government
11 here, where the -- where the correct standard has been
12 applied, which is where a State or the district has
13 carefully balanced the considerations of gun ownership
14 and public safety, has eliminated one weapon, the court
15 below has an absolutist standard that cannot be
16 sustained. The court below says that once it is
17 determined that handguns are, quote, "arms," unquote,
18 referred to in the Second Amendment, it is not open to
19 the District to ban them. And that doesn't promote the
20 security of a free State.

21 JUSTICE GINSBURG: But wasn't there a leeway
22 for some weapon prohibition? Let me ask you, in
23 relation to the States that do have guarantees of the
24 right to possess a weapon at home: Do some of those
25 States say there are certain kinds of guns that you

1 can't have, like machine guns?

2 MR. DELLINGER: Yes. And here what the
3 opinion below would do instead -- would -- it's hard to
4 see on the opinion below why machine guns or
5 armor-piercing bullets or other dangerous weapons
6 wouldn't be categorically protected --

7 JUSTICE BREYER: Could you go back to the --

8 MR. DELLINGER: -- in those States --

9 JUSTICE KENNEDY: If I could just have one
10 follow-on on Justice Ginsburg real quick. Do those
11 States -- Justice Ginsburg asked -- - that distinguish
12 among weapons, State constitutional provisions do not do
13 so?

14 MR. DELLINGER: No, it's not in the text of
15 the State constitutional provision; it's in their --

16 JUSTICE GINSBURG: It's in interpretation.

17 MR. DELLINGER: -- reasonable application.

18 And here, the question is how has the balance been
19 struck? The District allows law-abiding citizens to
20 have functioning firearms in the home. From the time it
21 was introduced in 1976, it has been the consistent
22 position that you're entitled to have a functioning
23 firearm. At issue is the one type of weapon --

24 JUSTICE SCALIA: Mr. Dellinger, let's come
25 back to your description of the opinion below as

1 allowing armor-piercing bullets and machine guns. I
2 didn't read it that way. I thought the opinion below
3 said it had to be the kind of weapon that was common for
4 the people --

5 MR. DELLINGER: That is --

6 JUSTICE SCALIA: -- that is common for the
7 people to have. And I don't know -- I don't know that a
8 lot of people have machine guns or armor-piercing
9 bullets. I think that's quite unusual. But having a
10 pistol is not unusual.

11 MR. DELLINGER: The number of machine guns,
12 I believe, is in excess of a hundred thousand that are
13 out there now, that are --

14 JUSTICE SCALIA: How many people in the
15 country?

16 MR. DELLINGER: Well, there are 300 million,
17 but whether that's common or not, but the --

18 JUSTICE SCALIA: I don't think it's common.

19 MR. DELLINGER: But it's the -- the court
20 protects weapons suitable for military use that are
21 lineal descendants. I don't know why an improved bullet
22 wouldn't be covered, unless you adopt the kind of
23 reasonableness standard that we suggest, where you look
24 to the fact that -- and I don't -- some people think
25 machine guns are more dangerous than handguns -- they

1 shoot a lot of people at once -- but a handgun is
2 concealable and movable. It can be taken into schools,
3 into buses, into government office buildings, and that
4 is the particular danger it poses in a densely populated
5 urban area.

6 CHIEF JUSTICE ROBERTS: Well, I'm not sure
7 that it's accurate to say the opinion below allowed
8 those. The law that the opinion, the court below, was
9 confronted with was a total ban, so that was the only
10 law they considered.

11 If the District passes a ban on machine guns
12 or whatever, then that law -- that law would be
13 considered by the court and perhaps would be upheld as
14 reasonable. But the only law they had before them was a
15 total ban.

16 JUSTICE SCALIA: Or a law on the carrying of
17 concealed weapons, which would include pistols, of
18 course.

19 MR. DELLINGER: Let me fight back on the
20 notion that it's a -- it's a total ban. It's not as if
21 every kind of weapon is useful.

22 CHIEF JUSTICE ROBERTS: Are you allowed to
23 carry the weapons that are allowed? I read the "carry
24 clause" to apply without qualification. So while you
25 say you might be able to have a shotgun in the home, you

1 can't carry it to get there.

2 MR. DELLINGER: No. You can -- you can with
3 a proper license. The District has made it clear that
4 there is no doubt that it interprets its laws to allow a
5 functioning gun. And to say that something is a total
6 ban when you own only one particular kind of weapon
7 would apply to a machine gun if it were or came into
8 common use and --

9 JUSTICE ALITO: But even if you have -- even
10 if you have a rifle or a shotgun in your home, doesn't
11 the code prevent you from loading it and unlocking it
12 except when it's being used for lawful, recreational
13 purposes within the District of Columbia? So even if
14 you have the gun, under this code provision it doesn't
15 seem as if you could use it for the defense of your
16 home.

17 MR. DELLINGER: That is not the city's
18 position, and we have no dispute with the other side on
19 the point of what the right answer should be.

20 It is a universal or near universal rule of
21 criminal law that there is a self-defense exception. It
22 goes without saying. We have no argument whatsoever
23 with the notion that you may load and have a weapon
24 ready when you need to use it for self- defense.

25 I'm going to reserve the remainder of my

1 time for rebuttal.

2 CHIEF JUSTICE ROBERTS: Why don't you
3 remain, Mr. Dellinger. We'll make sure you have
4 rebuttal.

5 JUSTICE KENNEDY: Because I did interrupt
6 Justice Breyer.

7 JUSTICE BREYER: I just wondered if you
8 could say in a minute. One possibility is that the
9 amendment gives nothing more than a right to the State
10 to raise a militia. A second possibility is that it
11 gives an individual right to a person, but for the
12 purpose of allowing people to have guns to form a
13 militia. Assume the second. If you assume the second,
14 I wanted you to respond if you -- unless you have done
15 so fully already, to what was the Chief Justice's
16 question of why, on the second assumption, this ban on
17 handguns, not the other part, of the District of
18 Columbia, a total ban, why is that a reasonable
19 regulation viewed in terms of the purposes as I
20 described them?

21 MR. DELLINGER: It's a reasonable regulation
22 for two kinds of reasons.

23 First, in order -- the amendment speaks of a
24 well-regulated militia. Perhaps it's the case that
25 having everybody have whatever gun they want of whatever

1 kind would advance a well- regulated militia, but
2 perhaps not. But, in any event --

3 JUSTICE SCALIA: It means "well trained,"
4 doesn't it?

5 MR. DELLINGER: When you -- when you have
6 one --

7 JUSTICE SCALIA: Doesn't "well regulated"
8 mean "well trained"? It doesn't mean -- it doesn't mean
9 "massively regulated." It means "well trained."

10 MR. DELLINGER: Well, every -- every phrase
11 of the amendment, like "well regulated," "security of
12 the State," is something different than a -- a
13 libertarian right. Here you have, I think, a fully --
14 on this, particularly on a facial challenge, there is no
15 showing that rifles and shotguns are not fully available
16 for all of the purposes of defense.

17 There is no indication that the District
18 militia is an entity that needs individuals to have
19 their own handguns. You -- you -- there is a step that
20 is -- that is missing here. The well-regulated militia
21 is not necessarily about everyone having a gun. A
22 militia may decide to organize -- be organized that way,
23 in which case you would have a different notion.

24 But here, I think, when you come down to
25 apply this case, if you look at about five factors, that

1 other weapons are allowed, important regulatory
2 interests of these particularly dangerous weapons are --
3 is clearly a significant regulatory, and important
4 regulatory, interest. In two respects this is removed
5 from the core of the amendment. Even if it is not
6 limited to militia service, even in the court below, no
7 one doubts that that was, as the court below said, the
8 most salient objective.

9 So this is in the penumbra or the periphery,
10 not the core. It was undoubtedly aimed principally, if
11 not exclusively, at national legislation which displaced
12 the laws in all of the States, rural as well as urban.

13 Here you've got local legislation responsive
14 to local needs, and this is local legislation in the
15 seat of the government where Congress, which was created
16 in order to protect the security of the national
17 government, and where it would be extraordinary to
18 assume that this is the one place that you're not going
19 to incorporate it, the one area in the United States
20 where no government, free of restrictions of the Second
21 Amendment, could control dangerous weapons.

22 CHIEF JUSTICE ROBERTS: Thank you,
23 Mr. Dellinger.

24 General Clement.

25 ORAL ARGUMENT OF GEN. PAUL D. CLEMENT

1 ON BEHALF OF THE UNITED STATES,

2 AS AMICUS CURIAE

3 GENERAL CLEMENT: Mr. Chief Justice, and may
4 it please the Court:

5 The Second Amendment to the Constitution, as
6 its text indicates, guarantees an individual right that
7 does not depend on eligibility for or service in the
8 militia.

9 JUSTICE STEVENS: May I ask you a
10 preliminary question. Do you think it has the same
11 meaning that it would have if it omitted the
12 introductory clause referring to militia?

13 GENERAL CLEMENT: I don't think so, Justice
14 Stevens, because we don't take the position that the
15 preamble plays no role in interpreting the amendment.
16 And we would point to this court's decision in Miller,
17 for example, as an example of where the preamble can
18 play a role in determining the scope --

19 JUSTICE STEVENS: So you think some weight
20 should be given to the clause. And also, the other
21 question I wanted to ask you is: Does the right to keep
22 and bear arms define one or two rights?

23 GENERAL CLEMENT: Oh, I suppose it probably
24 does define two rights that are closely related.

25 JUSTICE STEVENS: There's a right to keep

1 arms and a right to bear arms?

2 GENERAL CLEMENT: I think that's the better
3 view, and a number of State courts that have interpreted
4 analogous provisions have distinguished between the two
5 rights and looked at them differently.

6 And, obviously, the term "keep" is a word
7 that I think is something of an embarrassment for an
8 effort to try to imbue every term in the operative text
9 with an exclusively military connotation because that is
10 not one that really has an exclusive military
11 connotation. As Justice Scalia pointed out, "keep" was
12 precisely the word that authorities used in statutes
13 designed specifically to disarm individuals.

14 JUSTICE GINSBURG: It doesn't mean all. It
15 doesn't mean -- "keep," on your reading, at least if
16 it's consistent with Miller, keep and bear some arms,
17 but not all arms.

18 GENERAL CLEMENT: Absolutely, Justice
19 Ginsburg, and just -- I mean, to give you a clear
20 example, we would take the position that the kind of
21 plastic guns or guns that are specifically designed to
22 evade metal detectors that are prohibited by Federal law
23 are not "arms" within the meaning of the Second
24 Amendment and are not protected at all.

25 And that would be the way we would say that

1 you should analyze that provision of Federal law, as
2 those are not even arms within the provisions of the
3 Second Amendment.

4 I think to make the same argument about
5 machine guns would be a much more difficult argument, to
6 say the least, given that they are the standard-issue
7 weapon for today's armed forces and the State-organized
8 militia.

9 JUSTICE KENNEDY: So in your view this
10 amendment has nothing to do with the right of people
11 living in the wilderness to protect themselves, despite
12 maybe an attempt by the Federal Government, which is
13 what the Second Amendment applies to, to take away their
14 weapons?

15 GENERAL CLEMENT: Well, Justice Kennedy, I
16 wouldn't say that it has no application there. As I
17 say, I think the term "arms," especially if Miller is
18 going to continue to be the law, is influenced by the
19 preamble. But the way we would look at it --

20 JUSTICE KENNEDY: I agree that Miller is
21 consistent with what you've just said, but it seems to
22 me Miller, which kind of ends abruptly as an opinion
23 writing anyway, is just insufficient to subscribe -- to
24 describe the interests that must have been foremost in
25 the framers' minds when they were concerned about guns

1 being taken away from the people who needed them for
2 their defense.

3 GENERAL CLEMENT: Well, Justice Kennedy, we
4 would analyze it this way, which is we would say that
5 probably the thing that was foremost in the framers'
6 minds was a concern that the militia not be disarmed
7 such that it would be maintained as a viable option to
8 the standing army. But especially when you remember, as
9 Justice Alito pointed out, that the Constitution in
10 Article I, Section 8, clauses 15 and 16, the militia
11 clauses, as unamended, gave the Federal power -- the
12 Federal authorities virtually plenary authority to deal
13 with the organization and regulation of the militia.
14 The most obvious way that you could protect the militia
15 --

16 JUSTICE STEVENS: Not plenary authority.
17 Not plenary authority.

18 GENERAL CLEMENT: Except for that which is
19 reserved in --

20 JUSTICE STEVENS: Who appoints the officers?

21 GENERAL CLEMENT: Yes -- no, absolutely.
22 There is something reserved in clause 16.

23 But let me just say, if the Second Amendment
24 had the meaning that the District of Columbia ascribes
25 to it, one would certainly think that James Madison,

1 when he proposed the Second Amendment would have
2 proposed it as an amendment to Article I, Section 8,
3 clause 16.

4 He didn't. He proposed it as an amendment
5 to Article I, Section 9, which encapsulates the
6 individual rights to be free from bills of attainder and
7 ex post facto clauses.

8 JUSTICE STEVENS: Do you think he was guided
9 at all by the contemporaneous provisions in State
10 constitutions?

11 MR. DELLINGER: I am sure he was influenced
12 by that, although I think, honestly --

13 JUSTICE STEVENS: And how many of them
14 protected an individual right? Just two, right?

15 GENERAL CLEMENT: I think -- I think
16 Pennsylvania and Vermont are the ones that most
17 obviously protected.

18 JUSTICE STEVENS: And the others quite
19 clearly went in the other direction, did they not?

20 GENERAL CLEMENT: Well, I don't know about
21 quite clearly. The textual indication in the State
22 amendments that probably most obviously goes in the
23 other direction is the phrase "keep and bear arms for
24 the common defense." And, of course, there was a
25 proposal during the debate over the Second Amendment to

1 add exactly those words to the Second Amendment, and
2 that proposal was defeated, which does --

3 JUSTICE STEVENS: There was also a proposal
4 to make it clear there was an individual right, which
5 was also rejected.

6 GENERAL CLEMENT: I'm sorry, Justice
7 Stevens. Which aspect of that did you have in mind?

8 JUSTICE STEVENS: The Pennsylvania proposal.

9 GENERAL CLEMENT: Oh, but I don't think that
10 ever made it to the floor of the House or the Senate
11 that I'm aware of. And I think that this happened at
12 the actual Senate floor. There was a proposal to add
13 the words "in the common defense," and that was
14 rejected. I mean, but --

15 JUSTICE KENNEDY: You think Madison was
16 guided by the experience and the expressions of the
17 right in English law, including the Bill of Rights of
18 1689?

19 GENERAL CLEMENT: I do, Justice Kennedy, and
20 I think in that regard it is telling that -- I mean,
21 there are a variety of provisions in our Bill of Rights
22 that were borrowed from the English Bill of Rights. Two
23 very principal ones are the right to petition the
24 government and the right to keep and bear arms. I don't
25 think it's an accident --

1 JUSTICE GINSBURG: If we're going back to
2 the English Bill of Rights, it was always understood to
3 be subject to the control and limitation and restriction
4 of Parliament. And I don't think there's any doubt
5 about that. And that's what we're talking about here,
6 are legislative restrictions.

7 GENERAL CLEMENT: Well, Justice Ginsburg, I
8 think you could say the same thing for every provision
9 of the English Bill of Rights. And obviously, when
10 those were translated over to our system you had to make
11 adjustment for --

12 JUSTICE SOUTER: But isn't there one
13 difference? Not every provision of the English Bill of
14 Rights had an express reference to permission by law,
15 which is a reference to parliamentary authority. So
16 that there -- there -- there was a peculiar recognition
17 of parliamentary legislative authority on this subject.

18 GENERAL CLEMENT: That's exactly right,
19 Justice Souter. And the way I counted it, I only found
20 three provisions in the English Bill of Rights that had
21 a comparable reference to Parliament.

22 JUSTICE STEVENS: This provision has the
23 additional limitation to "suitable to their conditions,"
24 and a large number of people were not permitted to have
25 arms.

1 GENERAL CLEMENT: Again, that is also true
2 and is also relatively unique to this amendment. And if
3 I get to the point in the argument where I talk about
4 why we think that something less than strict scrutiny is
5 appropriate, I think I would point precisely to those
6 elements of the English Bill of Rights as being
7 relevant.

8 But what I was about to say is I think what
9 is highly relevant in considering the threshold question
10 of whether there's an individual right here at all is
11 that the parallel provisions in the English Bill of
12 Rights that were borrowed over included the right to
13 petition and the right to keep and bear arms. Both of
14 those appear with specific parallel references to the
15 people. They are both rights that are given to the
16 people.

17 And as this Court has made clear in
18 Verdugo-Urquidez, that's a reference that
19 appears throughout the Bill of Rights as a reference to
20 the entire citizenry.

21 JUSTICE SOUTER: May I go back to another
22 point, which is to the same point, and that is
23 consistent with your emphasis on the people was your
24 emphasis a moment ago on the distinction between keeping
25 and bearing arms. The "keep" part sounds in your, in

1 your mind at least, to speak of an individual right not
2 necessarily limited by, by the exigencies of military
3 service.

4 My question is, if that is correct and
5 "keep" should be read as, in effect, an independent
6 guarantee, then what is served by the phrase "and bear"?
7 In other words, if the people can keep them and they
8 have them there for use in the militia as well as to
9 hunt deer, why do we -- why do we have to have a further
10 reference in there to a right to bear as well as to keep
11 arms? And my point is it sounds to me as though "keep
12 and bear" forms one phrase rather than two. But I want
13 to know what your answer is to that.

14 GENERAL CLEMENT: The way I would read it,
15 Justice Souter, is that "keep" is really talking about
16 private possession in the home. And the way that I
17 would look at it is in order to exercise, for example,
18 an opportunity to hunt, that you would need to bear the
19 arms as well. And I would point you -- I think it's a
20 useful point --

21 JUSTICE SOUTER: But wait a minute. You're
22 not saying that if somebody goes hunting deer he is
23 bearing arms, or are you?

24 GENERAL CLEMENT: I would say that and so
25 would Madison and so would Jefferson, I would submit.

1 They use --

2 JUSTICE SOUTER: Somebody going out to -- in
3 the eighteenth century, someone going out to hunt a deer
4 would have thought of themselves as bearing arms? I
5 mean, is that the way they talk?

6 GENERAL CLEMENT: Well, I will grant you
7 this, that "bear arms" in its unmodified form is most
8 naturally understood to have a military context. But I
9 think the burden of the argument on the other side is to
10 make it have an exclusively military context. And as a
11 number of the briefs have pointed out, that's not borne
12 out by the framing sources.

13 In one place, although it's not bearing
14 arms, it's bearing a gun, I think it's highly relevant
15 that Madison and Jefferson with respect to this hunting
16 bill that Jefferson wrote and Madison proposed,
17 specifically used in the hunting context the phrase
18 "bear a gun," and so I do think in that context --

19 JUSTICE SOUTER: But it's "arms" that has
20 the kind of the military -- the martial connotation, I
21 would have thought.

22 JUSTICE SCALIA: Wasn't -- wasn't it the
23 case that the banning of arms on the part of the
24 Scottish highlanders and of Catholics in England used
25 the term, forbade them to "bear arms"? It didn't mean

1 that could just not join militias; it meant they
2 couldn't carry arms.

3 GENERAL CLEMENT: And again, I think various
4 phrases were, were used. I also think that some of the
5 disarmament provisions specifically used the word
6 "keep." And so I think there is some independent
7 meaning there, which is one point.

8 And then I do think that, even in the
9 context of bearing arms, I will grant you that "arms"
10 has a military connotation and I think Miller would
11 certainly support that, but I don't think it's an
12 exclusively military connotation.

13 JUSTICE STEVENS: Not only Miller, but the
14 Massachusetts declaration. "The right to keep and bear
15 arms for the common defense" is what is the normal
16 reading of it.

17 GENERAL CLEMENT: Oh, absolutely. And I
18 grant you if this, if the Second Amendment said "keep
19 and bear arms for the common defense" this would be a
20 different case. But --

21 JUSTICE STEVENS: --- the right to keep and
22 bear -- I'm sorry. It's one right to keep and bear, not
23 two rights, to keep and to bear.

24 GENERAL CLEMENT: Well, I mean it's -- it's
25 my friends from the District that are emphasizing that

1 no word in the Constitution is surplusage. So I would
2 say that in a context like this you might want to focus
3 both on "keep" and on "bear arms."

4 JUSTICE SOUTER: And you want to talk about
5 the standard, and your light's on.

6 (Laughter.)

7 GENERAL CLEMENT: Okay. I would like to
8 talk about the standard and my light is indeed on, so
9 let me do that.

10 I think there are several reasons why a
11 standard as we suggest in our brief rather than strict
12 scrutiny is an appropriate standard to be applied in
13 evaluating these laws. I think first and foremost, as
14 our colloquy earlier indicated, there is -- the right to
15 bear arms was a preexisting right. The Second Amendment
16 talks about "the right to bear arms," not just "a right
17 to bear arms." And that preexisting always coexisted
18 with reasonable regulations of firearms.

19 And as you pointed out, Justice Souter, to
20 be sure when you're making the translation from the
21 English Bill of Rights you always have to deal with
22 parliamentary supremacy. But it is very striking that,
23 as Justice Stevens said, the right was conditioned on
24 the conditions, which I think meant what class you were,
25 and also subject expressly to the Parliament, the laws

1 of Parliament.

2 JUSTICE SCALIA: The freedom of speech that
3 was referred to in the Constitution was also "the"
4 freedom of speech, which referred to the pre-existing
5 freedom of speech. And there were indeed some
6 restrictions on that such as libel that you were not
7 allowed to do. And yet we've never held that simply
8 because it was pre-existing and that there were some
9 regulations upon it, that we would not use strict
10 scrutiny. We certainly apply it to freedom of speech,
11 don't we?

12 GENERAL CLEMENT: Justice Scalia, let me
13 make two related points. One, even in the First
14 Amendment context, this Court has recognized -- and I
15 point you to the Court's opinion in Robertson against
16 Baldwin, which makes this point as to both the First and
17 the Second Amendment. This Court has recognized that
18 there are certain pre-existing exceptions that are so
19 well established that you don't really even view them as
20 Second Amendment or First Amendment infringement.

21 JUSTICE SCALIA: Like libel.

22 GENERAL CLEMENT: Like libel, and I would
23 say like laws barring felons from possessing handguns.
24 I don't think --

25 JUSTICE KENNEDY: Or would you say like

1 protecting yourself against intruders in the home?

2 GENERAL CLEMENT: Well, that gets to the
3 self-defense component and I don't know that I ever got
4 a chance to fully answer your question on that, Justice
5 Kennedy, which is we would say, notwithstanding the fact
6 that the preamble makes it clear that the preeminent
7 motive was related to ensuring that the militia remained
8 a viable option vis-a-vis the standing army, the
9 operative text is not so limited. And I think in that
10 regard it's worth emphasizing that the framers knew
11 exactly how to condition a right on militia service,
12 because they did it with respect to the grand jury
13 clause, and they didn't do it with respect to the Second
14 Amendment.

15 JUSTICE ALITO: If the amendment is intended
16 at least, in part to protect the right to self-defense
17 in the home, how could the District code provision
18 survive under any standard of review where they totally
19 ban the possession of the type of weapon that's most
20 commonly used for self-defense, and even as to long guns
21 and shotguns they require, at least what the code says
22 without adding a supposed gloss that might be produced
23 in a subsequent case, that even as to long guns and
24 shotguns they have to be unloaded and disassembled or
25 locked at all times, even presumably if someone is

1 breaking into the home?

2 GENERAL CLEMENT: Well, Justice Alito, let
3 me answer the question in two parts if I can, because I
4 think the analysis of the trigger lock provision may
5 well be different than the analysis of the other
6 provisions.

7 With respect to the trigger lock provision,
8 we think that there is a substantial argument that once
9 this Court clarifies what the constitutional standard
10 is, that there ought to be an opportunity for the
11 District of Columbia to urge its construction, which
12 would allow for a relatively robust self-defense
13 exception to the trigger lock provision. And this Court
14 could very well, applying Ashwan to prevent --
15 principles allow for that kind of --

16 JUSTICE SCALIA: I don't understand that.
17 What would that be -- that you can, if you have time,
18 when you hear somebody crawling in your -- your bedroom
19 window, you can run to your gun, unlock it, load it and
20 then fire? Is that going to be the exception?

21 GENERAL CLEMENT: If that's going to be the
22 exception, it could clearly be inadequate. And I think
23 that -- I mean the District of Columbia can speak to
24 this, but it seems to me that if, for example, the
25 police were executing a warrant at evening and had cause

1 for doing it at evening and saw somebody with a loaded
2 gun on their night stand, no children present without a
3 trigger lock, it seems to me that that would be a good
4 test case to decide whether or not their construction
5 would provide for an exception to the trigger lock
6 provision in that case.

7 JUSTICE GINSBURG: Can I interrupt for a
8 minute?

9 GENERAL CLEMENT: If it did, I think then
10 the statute might well be constitutional. If it didn't,
11 in my view, it probably wouldn't be.

12 JUSTICE GINSBURG: There is a lot of talk
13 about standards and stop words like strict scrutiny.
14 Does it make a practical difference whether we take your
15 standard or the strict scrutiny that was in the D.C.
16 Circuit's opinion? And specifically there is a whole
17 panoply of Federal laws restricting gun possession.
18 Would any of them be jeopardized under your standard?
19 And the same question with the District scrutiny, does
20 it make any difference?

21 GENERAL CLEMENT: In our view it makes a
22 world of difference, Justice Ginsburg, because we
23 certainly take the position, as we have since
24 consistently since 2001, that the Federal firearm
25 statutes can be defended as constitutional, and that

1 would be consistent with this kind of intermediate
2 scrutiny standard that we propose. If you apply strict
3 scrutiny, I think that the result would be quite
4 different, unfortunately.

5 CHIEF JUSTICE ROBERTS: Well, these various
6 phrases under the different standards that are proposed,
7 "compelling interest," "significant interest," "narrowly
8 tailored," none of them appear in the Constitution; and
9 I wonder why in this case we have to articulate an
10 all-encompassing standard. Isn't it enough to determine
11 the scope of the existing right that the amendment
12 refers to, look at the various regulations that were
13 available at the time, including you can't take the gun
14 to the marketplace and all that, and determine how
15 these -- how this restriction and the scope of this
16 right looks in relation to those?

17 I'm not sure why we have to articulate some
18 very intricate standard. I mean, these standards that
19 apply in the First Amendment just kind of developed over
20 the years as sort of baggage that the First Amendment
21 picked up. But I don't know why when we are starting
22 afresh, we would try to articulate a whole standard that
23 would apply in every case?

24 GENERAL CLEMENT: Well, Mr. Chief Justice,
25 let me say a couple of things about that, which is to

1 say that if this Court were to decide this case and make
2 conclusively clear that it really was focused very
3 narrowly on this case and it was in some respects
4 applying a sui generis test, we think that would be an
5 improvement over the court of appeals opinion, which is
6 subject to more than one reading, but as Justice
7 Ginsburg's question just said, it's certainly
8 susceptible to a reading that it embodies strict
9 scrutiny. In fact --

10 JUSTICE GINSBURG: Well, it did. It said
11 it's just like the First Amendment. First Amendment has
12 exceptions, but strict scrutiny applies. It says strict
13 scrutiny applies here too.

14 GENERAL CLEMENT: I --

15 JUSTICE SCALIA: But that opinion also, it
16 didn't use the militia prologue to say it's only the
17 kind of weapons that would be useful in militia, and
18 that are commonly -- commonly held today. Is there any
19 Federal exclusion of weapons that applies to weapons
20 that are commonly held today? I don't know what you're
21 worried about. Machine guns, what else? Armored
22 bullets, what else?

23 GENERAL CLEMENT: Well, Justice Scalia, I
24 think our principal concern based on the parts of the
25 court of appeals opinion that seemed to adopt a very

1 categorical rule were with respect to machine guns,
2 because I do think that it is difficult -- I don't want
3 to foreclose the possibility of the Government, Federal
4 Government making the argument some day -- but I think
5 it is more than a little difficult to say that the one
6 arm that's not protected by the Second Amendment is that
7 which is the standard issue armament for the National
8 Guard, and that's what the machine gun is.

9 CHIEF JUSTICE ROBERTS: But this law didn't
10 involve a restriction on machine guns. It involved an
11 absolute ban. It involved an absolute carry
12 prohibition. Why would you think that the opinion
13 striking down an absolute ban would also apply to a
14 narrow one -- narrower one directed solely to machine
15 guns?

16 GENERAL CLEMENT: I think, Mr. Chief
17 Justice, why one might worry about that is one might
18 read the language of page 53a of the opinion as
19 reproduced in the petition appendix that says once it is
20 an arm, then it is not open to the District to ban it.

21 Now, it seems to me that the District is not
22 strictly a complete ban because it exempts pre-1976
23 handguns. The Federal ban on machine guns is not,
24 strictly speaking, a ban, because it exempts pre --
25 pre-law machine guns, and there is something like

1 160,000 of those.

2 JUSTICE SCALIA: But that passage doesn't
3 mean once it's an arm in the dictionary definition of
4 arms. Once it's an arm in the specialized sense that
5 the opinion referred to it, which is -- which is the
6 type of a weapon that was used in militia, and it is --
7 it is nowadays commonly held.

8 GENERAL CLEMENT: Well --

9 JUSTICE SCALIA: If you read it that way, I
10 don't see why you have a problem.

11 GENERAL CLEMENT: Well, I -- I hope that you
12 read it that way. But I would also say that I think
13 that whatever the definition that the lower court
14 opinion employed, I do think it's going to be difficult
15 over time to sustain the notion -- I mean, the Court of
16 Appeals also talked about lineal descendants. And it
17 does seem to me that, you know, just as this Court would
18 apply the Fourth Amendment to something like heat
19 imagery, I don't see why this Court wouldn't allow the
20 Second Amendment to have the same kind of scope, and
21 then I do think that reasonably machine guns come within
22 the term "arms."

23 Now, if this Court wants to say that they
24 don't -- I mean -- I mean -- we'd obviously welcome that
25 in our -- in our obligation to defend the

1 constitutionality of acts of Congress.

2 The one other thing I would say is that this
3 is an opinion that is susceptible of different readings.
4 It's interesting that Respondents' amici have different
5 characterizations of it. The Goldwater Institute calls
6 it strict scrutiny; the State of Texas calls it
7 reasonable -- reasonableness review.

8 CHIEF JUSTICE ROBERTS: Thank you, General.

9 GENERAL CLEMENT: Thank you.

10 CHIEF JUSTICE ROBERTS: Mr. Gura.

11 ORAL ARGUMENT OF ALAN GURA

12 ON BEHALF OF THE RESPONDENTS

13 MR. GURA: Thank you, Mr. Chief Justice, and
14 may it please the Court:

15 All 50 states allow law-abiding citizens to
16 defend themselves and their families in their homes with
17 ordinary functional firearms including handguns. Now,
18 I'd like to respond to one point that was raised lately
19 by the General --

20 JUSTICE SCALIA: Talk a little slower; I'm
21 not following you.

22 MR. GURA: Okay. I'd like to respond --
23 certainly, Justice Scalia. I'd like to respond to the
24 point about the -- the District of Columbia's position
25 over the years with respect to the functional firearms

1 ban.

2 The Petitioners have had two opportunities
3 to urge courts to adopt this so-called self-defense
4 exception which they construed in the amendment. The
5 first opportunity came in 1978 in McIntosh versus
6 Washington, where the petitioners urged the Court of
7 Appeals of the District of Columbia to uphold the law
8 because it was irrational in their view to prohibit
9 self-defense in the home with firearms. They deemed it
10 to be too dangerous, and this was a legitimate policy
11 choice of the City Council, and they actually prevailed
12 in that view.

13 The second opportunity that the Petitioners
14 had to urge this sort of self-defense construction was
15 actually in this case in the district court. We had a
16 motion for summary judgment and we made certain factual
17 allegations in this motion, and on page 70a of the joint
18 appendix we see portions of our statement of undisputed
19 material facts. Fact number 29, which was conceded by
20 the District of Columbia, reads: The defendants
21 prohibit the possession of lawfully owned firearms for
22 self-defense within the home, even in instances when
23 self-defense would be lawful by other means under
24 District of Columbia law. The citation for that is a
25 functional firearms ban, and that point was conceded.

1 Certainly the idea that people can guess as
2 to when it is that they might render the firearm
3 operational is -- is not a one that the Court should
4 accept, because a person who hears a noise, a person who
5 perhaps is living in a neighborhood where there has been
6 a spate of violent crimes, has no idea of when the
7 District of Columbia would permit her to render the
8 firearm operational. And, in fact, there is a
9 prosecution history not under this specific provision,
10 but certainly other under gun prohibition -- laws that
11 we are challenging here today to prosecute people for
12 the possession or for the carrying of a prohibited
13 firearm even when the police ruled the shooting has been
14 lawful self-defense.

15 JUSTICE BREYER: You're saying that this is
16 unreasonable, and that really is my question because I'd
17 like you to assume two things with me, which you
18 probably don't agree with, and I may not agree with
19 them, either.

20 (Laughter.)

21 JUSTICE BREYER: But I just want you to
22 assume them for the purpose of the question. All right.

23 Assume that the -- that there is an
24 individual right, but the purpose of that right is to
25 maintain a citizen army; call it a militia; that that's

1 the basic purpose. So it informs what's reasonable and
2 what isn't reasonable.

3 Assume -- and this is favorable to you but
4 not as favorable as you'd like -- assume that we are
5 going to decide whether something is proportionate or
6 apply an intermediate standard in light of the purpose.
7 All right.

8 Now, focus on the handgun ban. As I read
9 these 80 briefs -- and they were very good, I mean
10 really good and informative on both sides -- and I'm
11 trying to boil down the statistics where there is
12 disagreement, and roughly what I get -- and don't
13 quarrel with this too much; it's very rough -- that
14 80,000 to 100,000 people every year in the United States
15 are either killed or wounded in gun-related homicides or
16 crimes or accidents or suicides, but suicide is more
17 questionable. That's why I say 80,000 to 100,000.

18 In the District, I guess the number is
19 somewhere around 200 to 300 dead; and maybe, if it's
20 similar, 1,500 to 2,000 people wounded. All right.

21 Now, in light of that, why isn't a ban on
22 handguns, while allowing the use of rifles and muskets,
23 a reasonable or a proportionate response on behalf of
24 the District of Columbia?

25 MR. GURA: Because, Your Honor, for the same

1 reason it was offered by numerous military officers at
2 the highest levels of the U.S. military in all branches
3 of service writing in two briefs, they agree with us
4 that the handgun ban serves to weaken America's military
5 preparedness. Because when people have handguns --
6 handguns are military arms, they are not just civilian
7 arms -- they are better prepared and able to use them.
8 And, certainly, when they join the military forces, they
9 are issued handguns.

10 And so if we assume that the sort of
11 military purpose to the Second Amendment is an
12 individual right, then the handgun ban, as noted by our
13 military amici, would impede that.

14 JUSTICE BREYER: Well, I didn't read -- I
15 read the two military briefs as focusing on the nature
16 of the right, which was quite a pretty good argument
17 there that the nature of the right is to maintain a
18 citizen Army.

19 And to maintain that potential today, the
20 closest we come is to say that there is a right for
21 people to understand weapons, to know how to use them,
22 to practice with them. And they can do that, you see,
23 with their rifles. They can go to gun ranges, I guess,
24 in neighboring States.

25 But does that make it unreasonable for a

1 city with a very high crime rate, assuming that the
2 objective is what the military people say, to keep us
3 ready for the draft, if necessary, is it unreasonable
4 for a city with that high crime rate to say no handguns
5 here?

6 JUSTICE SCALIA: You want to say yes.

7 JUSTICE BREYER: Now, why?

8 JUSTICE SCALIA: That's your answer.

9 JUSTICE BREYER: Well, you want to say yes,
10 that's correct, but I want to hear what the reasoning is
11 because there is a big crime problem. I'm simply
12 getting you to focus on that.

13 MR. GURA: The answer is yes, as Justice
14 Scalia noted, and it's unreasonable, and it actually
15 fails any standard of review that might be offered under
16 such a construction of individual rights because
17 proficiency with handguns, as recognized as a matter of
18 judicial notice by the First Circuit in Cases back in
19 1942 -- that was a handgun case where the First Circuit
20 examined the restriction on the carrying of the
21 30-caliber revolver. And the First Circuit accepted, as
22 a matter of judicial notice, that proficiency in use and
23 familiarity with the handgun at issue would be one that
24 would further a militia purpose. And so --

25 JUSTICE STEVENS: Let me ask this question:

1 In answering yes, do you attach any significance to the
2 reference to the militia in the Second Amendment?

3 MR. GURA: Yes, I do, Your Honor.

4 JUSTICE STEVENS: You think that is -- to
5 understand the amendment, you must pay some attention to
6 the militia requirement?

7 MR. GURA: Yes, Your Honor, we must --

8 CHIEF JUSTICE ROBERTS: So a conscientious
9 objector who likes to hunt deer for food, you would say,
10 has no rights under the Second Amendment. He is not
11 going to be part of the militia. He is not going to be
12 part of the common defense, but he still wants to bear
13 arms. You would say that he doesn't have any rights
14 under this amendment?

15 MR. GURA: No, Your Honor. I think that the
16 militia clause informs the purpose -- informs a purpose.
17 It gives us some guidepost as to how we look at the
18 Second Amendment, but it's not the exclusive purpose of
19 the Second Amendment. Certainly, the Founders cared
20 very much about --

21 JUSTICE GINSBURG: Is it a limitation? Is
22 it any limitation on the legislature? Is the first
23 clause any limitation on the legislature?

24 MR. GURA: It is a limitation to one extent,
25 Your Honor, the extent recognized in Miller where the

1 Miller Court asked whether or not a particular type of
2 arm that's at issue is one that people may individually
3 possess. It looked to the militia clause and,
4 therefore, adopted a militia purpose as one of the two
5 prongs of Miller.

6 And so, certainly, if there were -- if the
7 Court were to continue Miller -- and Miller was the only
8 guidance that the lower court had, certainly, as to what
9 arms are protected or unprotected by the Second
10 Amendment. And yet --

11 JUSTICE STEVENS: If it limits the kinds of
12 arms to be appropriate to a militia, why does it not
13 also limit the kind of people who may have arms?

14 MR. GURA: It does not eliminate the kind of
15 people, Your Honor, because the Second Amendment is the
16 right of the people. And it would certainly be an odd
17 right that we would have against the Congress, if
18 Congress could then redefine people out of that right.
19 Congress could tomorrow declare that nobody is in a
20 militia, and then nobody would have the right against
21 the government.

22 JUSTICE GINSBURG: If you were thinking of
23 "the people," what those words meant when the Second
24 Amendment was adopted, it was males between the ages of
25 what -- 17 and 45? People who were over 45 had no --

1 they didn't serve in the militia.

2 MR. GURA: Well, certainly, there were many
3 people who were not eligible for militia duty, or not
4 subject to militia service, who nevertheless were
5 expected to, and oftentimes did, in fact, have guns.

6 JUSTICE SCALIA: Which shows that maybe
7 you're being unrealistic in thinking that the second
8 clause is not broader than the first. It's not at all
9 uncommon for a legislative provision or a constitutional
10 provision to go further than is necessary for the
11 principal purpose involved.

12 The principal purpose here is the militia,
13 but the -- but the second clause goes beyond the militia
14 and says the right of the people to keep and bear arms.

15 Now, you may say the kind of arms is colored
16 by the militia. But it speaks of the right of the
17 people. So why not acknowledge that it's -- it's
18 broader than the first clause?

19 MR. GURA: Well, we do acknowledge that,
20 Your Honor.

21 JUSTICE SOUTER: Then why have the first
22 clause? I mean what is it doing -- I mean what help is
23 it going to be?

24 MR. GURA: Well, it was a way in which to
25 remind us -- the Framers certainly felt that a militia

1 was very important to the preservation of liberty. The
2 Framers had just fought a revolutionary war that relied
3 heavily on militia forces, and so they wanted to honor
4 that and remind us as to the purpose -- one purpose, not
5 the exclusive purpose, but a purpose -- of preserving
6 the right --

7 JUSTICE KENNEDY: Could it also be simply to
8 reaffirm that the provisions in the main text of the
9 Constitution remain intact?

10 MR. GURA: That's correct, Your Honor. In
11 fact, that view was taken by William Rawle in his 1828
12 treatise, view of the Constitution. Rawle was, of
13 course, a ratifier of the Second Amendment. He sat in
14 the Pennsylvania Assembly in 1790. And if you look at
15 his description of the Second Amendment, he bifurcates
16 it. First, he discusses the militia clause, and he
17 lavishes some qualified praise on it. And then --

18 JUSTICE KENNEDY: But you were about to tell
19 us before the course of the questioning began about the
20 other purposes that the amendment served. I'm -- I want
21 to know whether or not, in your view, the operative
22 clause of the amendment protects, or was designed to
23 protect in an earlier time, the settler in the
24 wilderness and his right to have a gun against some
25 conceivable Federal enactment which would prohibit him

1 from having any guns?

2 MR. GURA: Oh, yes. Yes, Justice Kennedy.

3 The right of the people to keep and bear arms was
4 derived from Blackstone. It was derived from the
5 common-law English right which the Founders wanted to
6 expand.

7 In fact, the chapter in which Blackstone
8 discusses this in his treatise, his fifth auxiliary
9 right to arms, is entitled --

10 JUSTICE BREYER: That brings me back to the
11 question because Blackstone describes it as a right to
12 keep and bear arms "under law." And since he uses the
13 words "under law," he clearly foresees reasonable
14 regulation of that right. And so does the case not
15 hinge on, even given all your views, on whether it is or
16 is not a reasonable or slightly tougher standard thing
17 to do to ban the handgun, while leaving you free to use
18 other weapons?

19 I mean, I notice that the militia statute,
20 the first one, spoke of people coming to report, in
21 1790, or whenever, with their rifles, with their
22 muskets, but only the officers were to bring pistols.
23 So that, to me, suggests they didn't see pistols as
24 crucial even then, let alone now.

25 MR. GURA: Well, certainly they saw --

1 JUSTICE BREYER: What's your response to the
2 question?

3 MR. GURA: Well, my response is that the
4 government can ban arms that are not appropriate for
5 civilian use. There is no question of that.

6 JUSTICE KENNEDY: That are not appropriate
7 to --

8 MR. GURA: That are not appropriate to
9 civilian use.

10 JUSTICE GINSBURG: For example?

11 MR. GURA: For example, I think machine
12 guns: It's difficult to imagine a construction of
13 Miller, or a construction of the lower court's opinion,
14 that would sanction machine guns or the plastic,
15 undetectable handguns that the Solicitor General spoke
16 of.

17 The fact is that this Court's Miller test
18 was the only guidance that we had below, and I think it
19 was applied faithfully. Once a weapon is, first of all,
20 an "arm" under the dictionary definition -- and Webster
21 has a very useful one -- then you look to see whether
22 it's an arm that is meant to be protected under the
23 Second Amendment, and we apply the two-pronged Miller
24 test. And usually one would imagine if an arm fails the
25 Miller test because it's not appropriate for common

1 civilian applications --

2 JUSTICE GINSBURG: But why wouldn't the
3 machine gun qualify? General Clement told us that's
4 standard issue in the military.

5 MR. GURA: But it's not an arm of the type
6 that people might be expected to possess commonly in
7 ordinary use. That's the other aspect of Miller.
8 Miller spoke about the militia as encompassing the
9 notion that people would bring with them arms of the
10 kind in common use supplied by themselves. And --

11 CHIEF JUSTICE ROBERTS: Is there any
12 parallel --

13 JUSTICE GINSBURG: At this time -- I would
14 just like to follow up on what you said, because if you
15 were right that it was at that time, yes; but that's not
16 what Miller says. It says that the gun in question
17 there was not one that at this time -- this time, the
18 time of the Miller decision -- has a reasonable
19 relationship to the preservation or efficiency of a
20 well-regulated militia. So it's talking about this
21 time.

22 MR. GURA: That's correct. The time frame
23 that the Court must address is always the present. The
24 framers wished to preserve the right to keep and bear
25 arms. They wished to preserve the ability of people to

1 act as militia, and so there was certainly no plan for,
2 say, a technical obsolescence.

3 However, the fact is that Miller spoke very
4 strongly about the fact that people were expected to
5 bring arms supplied by themselves of the kind in common
6 use at the time. So if in this time people do not have,
7 or are not recognized by any court to have, a common
8 application for, say, a machine gun or a rocket launcher
9 or some other sort of --

10 CHIEF JUSTICE ROBERTS: Is there any
11 parallel at the time that the amendment was adopted to
12 the machine gun? In other words, I understand your
13 point to be that, although that's useful in modern
14 military service, it's not something civilians possess.
15 Was there anything like that at the time of the
16 adoption, or were the civilian arms exactly the same as
17 the ones you'd use in the military?

18 MR. GURA: At the time that -- even at the
19 time Miller was decided, the civilian arms were pretty
20 much the sort that were used in the military. However,
21 it's hard to imagine how a machine gun could be a
22 "lineal descendent," to use the D.C. Circuit's wording,
23 of anything that existed back in 1791, if we want to
24 look to the framing era. Machine guns --

25 JUSTICE KENNEDY: It seems to me that

1 Miller, as we're discussing it now, and the whole idea
2 that the militia clause has a major effect in
3 interpreting the operative clause is both overinclusive
4 and underinclusive. I would have to agree with Justice
5 Ginsburg that a machine gun is probably more related to
6 the militia now than a pistol is. But that -- that
7 seems to me to be allowing the militia clause to make no
8 sense out of the operative clause in present-day
9 circumstances.

10 MR. GURA: Your Honor, even within the
11 militia understanding, the understanding of the militia
12 was always that people would bring whatever they had
13 with them in civilian life. So if a machine gun, even
14 though it may be a wonderful --

15 JUSTICE KENNEDY: My point is: Why is that
16 of any real relevance to the situation that faces the
17 homeowner today?

18 MR. GURA: It's only of relevance if the
19 Court wishes to continue reading the militia clause as
20 informing the type of weapon which is protected.

21 JUSTICE KENNEDY: Well, you're being
22 faithful to Miller. I suggest that Miller may be
23 deficient.

24 MR. GURA: I agree with Your Honor, and
25 certainly in our brief we suggest that the militia

1 emphasis of Miller is not useful as a limiting principle
2 to the type of arms that may be -- that may be
3 permitted. Because, on the one hand, there's a great
4 deal of weaponry that might be wonderful for military
5 duty but is not appropriate for common civilian use,
6 which would not be protected even under the Miller
7 test's first prong.

8 And, on the other hand, everything that
9 civilians today might wish to have in ordinary common
10 use -- handguns, rifles, and shotguns -- are militarily
11 useful weapons.

12 So we de-emphasize the military aspects of
13 Miller as being ultimately not very useful guidance for
14 courts. And the better guidance would be to emphasize
15 the commonsense rule that I think judges would have
16 really no trouble applying, and we do this all the time
17 in constitutional law: To simply make a decision as to
18 whether or not whichever arm comes up at issue is an arm
19 of the kind that you could really reasonably expect
20 civilians to have.

21 JUSTICE BREYER: Why -- now, when say "keep"
22 and "bear," I mean you are -- I think you're on to
23 something here. Because you say let's use our common
24 sense and see what would be the equivalent today. Fine.

25 If we know that at the time, in 1789,

1 Massachusetts had a law that said you cannot keep loaded
2 firearms in the house, right, and you have to keep all
3 of the bullets and everything and all of the powder
4 upstairs, why did they have that law? To stop fires
5 because it's dangerous? They didn't have fire
6 departments. Now we do -- or they weren't as good.

7 We now have police departments, and the
8 crime wave might be said similar to what were fires
9 then. And, therefore, applying the similar kind of
10 thing, you say: Fine, just as you could keep pistols
11 loaded but not -- not loaded. You had to keep powder
12 upstairs because of the risk of fire. So today,
13 roughly, you can say no handguns in the city because of
14 the risk of crime.

15 Things change. But we give in both
16 instances, then and now, leeway to the city and States
17 to work out what's reasonable in light of their
18 problems. Would that be a way of approaching it?

19 MR. GURA: The legislature has a great deal
20 of leeway in regulating firearms. There is no dispute
21 about that. However, I wouldn't draw a complete analogy
22 between the Boston fire ordinances that Your Honor notes
23 and the functional firearms ban.

24 First, even the Boston firearms ordinances
25 did not include handguns actually. At the time the word

1 "firearm" was not understood to include pistols.
2 General Gage's inventory of weapons seized from the
3 Americans in Boston included some 1800 or so firearms
4 and then 634 pistols. Nowhere in the Boston code do we
5 see a prohibition on keeping loaded pistols in the home.
6 And certainly the idea that -- that self-defense is a
7 harm is one that is --

8 JUSTICE BREYER: Not self-defense being the
9 harm. And I agree with you that this, the firearm
10 analogy, floats up there, but it isn't going to decide
11 this case, the Massachusetts statute. I agree with you
12 about that.

13 What you've suddenly given me the idea of
14 doing, which I'm testing, is to focus not just on what
15 the kind of weapon is -- don't just look to see whether
16 it's a cannon or a machine gun, but look to see what the
17 purpose of this regulation is, and does it make sense in
18 terms of having the possibility of people trained in
19 firearms?

20 Let's look at those military briefs. Let's
21 say that the generals have it right, there is some kind
22 of right to keep trained in the use of firearms subject
23 to regulation. We have regulation worried about crime,
24 back to my first question.

25 MR. GURA: Well, back to Your Honor's first

1 question, we don't agree that the military purpose is
2 the exclusive purpose of the Second Amendment. And we
3 also don't agree that it could be a reasonable
4 regulation or under any standard of review to prohibit
5 people from having functional firearms in their own home
6 for purposes of self-defense.

7 JUSTICE SCALIA: You don't even agree that
8 Massachusetts was subject to the Second Amendment.

9 MR. GURA: Well, originally it was not. But
10 what we've seen with the Fourteenth Amendment, and we've
11 seen --

12 JUSTICE SCALIA: But the time we're talking
13 about, the firearms in the home ordinance, when was
14 that?

15 MR. GURA: 1783 I believe was the statute.

16 JUSTICE STEVENS: How do you explain the
17 fact that you include self-defense, but only two States,
18 Pennsylvania and Vermont, did refer to self-defense as a
19 permissible justification and all of the others referred
20 to common defense or defense of the State, and in the
21 Articles of Confederation and the Constitution itself
22 there is no reference to self-defense?

23 MR. GURA: Your Honor, the State courts
24 interpreting those provisions that you reference had a
25 different interpretation. For example, in 1895

1 Massachusetts --

2 JUSTICE STEVENS: 1895. I'm talking about
3 contemporaneous with the adoption of the Second
4 Amendment.

5 MR. GURA: Well, at the time we haven't seen
6 State court decisions from exactly that era.

7 JUSTICE STEVENS: Just the text of the State
8 constitutional provisions, two of them refer to
9 self-defense. The rest refer only to common defense; is
10 that not correct?

11 MR. GURA: On their literal text, yes. But
12 judges did not interpret them that way, for example in
13 North Carolina --

14 JUSTICE STEVENS: I understand that judicial
15 interpretation sometimes is controlling and sometimes is
16 not. But the text itself does draw a distinction, just
17 as the Second Amendment does. It doesn't mention
18 self-defense.

19 MR. GURA: While it might not mention
20 self-defense, it was clear that the demands that the
21 States made at the ratifying conventions were for an
22 individual right, and Madison was interested in --

23 JUSTICE STEVENS: Well, if you look at the
24 individual rights I suppose you start back in 1689, the
25 Declaration of Rights in England. And the seventh

1 provision that they talked about said that: "The
2 subjects which are protestants may have arms for their
3 defense suitable to their conditions and as allowed by
4 law." Now do you think the term "suitable to their
5 conditions" limited the number of people who had access
6 to arms for self-defense?

7 MR. GURA: It was in England, but that was
8 criticized by the framers. St. George Tucker's edition
9 of Blackstone --

10 JUSTICE STEVENS: So you think that the
11 Second Amendment is a departure from the provision in
12 the Declaration of Rights in England?

13 MR. GURA: It's quite clearly an expansion
14 upon it.

15 JUSTICE STEVENS: So that's not really
16 your -- you would not confine the right the way the
17 English did then.

18 MR. GURA: I think the common law of England
19 is a guide, and it's always a useful guide because
20 that's where the -- where we -- where we look to, to
21 interpret --

22 JUSTICE SCALIA: It's useful for such
23 purposes as what "keep and bear arms" means and things
24 of that sort.

25 MR. GURA: It certainly is, Your Honor. And

1 it's also useful to see how --

2 JUSTICE SCALIA: They certainly didn't want
3 to preserve the kind of militia that America had, which
4 was a militia separate from the state, separate from the
5 government, which enabled the revolt against the
6 British.

7 MR. GURA: That's correct, Your Honor.

8 JUSTICE SOUTER: Is there any -- is there
9 any record evidence that the anti-Federalist objections
10 to the Constitution that ultimately resulted in the
11 Second Amendment were premised on any failure to
12 recognize an individual right of self-defense or hunting
13 or whatnot, as distinct from being premised on concern
14 about the power of the national government and the
15 militia clauses in Article 1?

16 MR. GURA: Yes, Justice Souter. If we look
17 to, for example, the -- the demands of the Pennsylvania
18 minority, the anti-Federalists there were extremely
19 influential. They couched their demands in unmistakably
20 self-defense terms. In fact, they added a provision --

21 JUSTICE SOUTER: No, but they didn't -- they
22 didn't limit it to self-defense. I mean, what provoked
23 it, as I understand it, was concern about the militia
24 clauses, and here I mean you're certainly correct. I
25 agree with you. Pennsylvania went beyond that. It

1 was -- it was one of three States, as I understand, that
2 did go beyond it. But the provocation for getting into
3 the subject, as I understand it, was, in each instance
4 including Pennsylvania, concern over the national
5 government's power over militias under Article 1.

6 MR. GURA: Justice Souter, we wouldn't see
7 the history that way. Certainly there is agreement that
8 the militia clauses in the Constitution were
9 controversial. And there were separate amendments that
10 were proposed and always rejected that would have
11 addressed that explicitly. In fact, if we look at
12 Virginia's proposals, it's agreed by the Petitioners
13 that Virginia was the model for the Bill of Rights and
14 specifically, of course, for the Second Amendment.

15 We saw one set of proposed amendments from
16 Virginia entitled Bill of Rights, and the Second
17 Amendment language comes from paragraph 17 of that Bill
18 of Rights. And then we see a list of other amendments,
19 and then we have the 11th proposed amendment, which
20 speaks exactly to the -- reverting control over the
21 militia back to the -- back to the States.

22 Now, there is no reason to suppose that
23 Virginia would have made the same demand twice, that
24 they would have, like all the other demands, it had
25 separate "keep and bear arms" provisions and separate

1 militia provisions, that people were being duplicative
2 for no reason. The fact is that the militia concerns
3 were heard and they were voted down, and the Second
4 Amendment concerns were the ones that the Federalists
5 were easily agreeable to because the right to keep and
6 bear arms by individuals was not controversial, it would
7 not have altered the structure of our Constitution, and
8 so those were agreed to quite readily.

9 CHIEF JUSTICE ROBERTS: Why isn't the
10 trigger-lock provisions that are at issue here, why
11 aren't they similar to the various provisions that
12 Justice Breyer mentioned like the gunpowder restriction?
13 In other words, for reasons of domestic safety, they
14 said you can't store the gunpowder anywhere but on the
15 top floor. Why isn't the modern trigger-lock provision
16 similar to those?

17 MR. GURA: Well, it's not similar because
18 the modern trigger-lock provisions are aimed squarely at
19 self-defense in the home. There is no risk today that
20 the kind of powder we use --

21 CHIEF JUSTICE ROBERTS: Well, there is
22 always a risk that the children will get up and grab the
23 firearm and use it for some purpose other than what the
24 Second Amendment was designed to protect.

25 MR. GURA: Oddly enough, a child can access

1 a firearm stored consistently with the District's law,
2 that is, a firearm which is disassembled and unloaded,
3 nothing would prevent a child --

4 CHIEF JUSTICE ROBERTS: Well, right. But, I
5 mean, you don't necessarily expect a young child to be
6 able to reassemble the pistol.

7 MR. GURA: That's true, Your Honor.
8 However, better safe storage approach is the one used by
9 the majority of jurisdictions, I believe, that do have
10 such laws, which is to require safe storage, for
11 example, in a safe. And that is a reasonable
12 limitation. It's a strict scrutiny limitation.
13 Whatever standard of view we may wish to apply, I think,
14 would encompass a safe storage provision.

15 But this is not a safe storage provision
16 because we have specific exceptions that allow you to
17 actually use the firearm in recreational shooting and
18 also in a place of business. And we have litigation
19 history from Washington, D.C., that tells us that we are
20 not supposed to have an operable firearm for purposes of
21 self-defense because they simply do not trust people to
22 defend themselves in our home. And -- and self-defense
23 is the heart of the Second Amendment right. That is
24 what Blackstone was getting at when he spoke of the
25 fifth auxiliary right to arms, because it protected the

1 right of personal preservation.

2 JUSTICE STEVENS: You say that the right of
3 self-defense was the heart of the Second Amendment, in
4 your view. Strangely that some provisions suggested
5 that and were not accepted by the authors of the Second
6 Amendment.

7 MR. GURA: Which provisions were those,
8 Justice Stevens?

9 JUSTICE STEVENS: Pennsylvania.

10 MR. GURA: Well, Pennsylvania's provision
11 was certainly influential. Remember, Madison was trying
12 to mollify the anti-Federalists' concerns. The Second
13 Amendment is clearly addressed to Pennsylvania and New
14 Hampshire and New York and all these other States that
15 were demanding a right to keep and bear arms, and there
16 was always understood to be an individual right because
17 that is the way in which the right that was violated by
18 the British in the war of revolution that occurred not
19 too long ago. And --

20 I'm finished.

21 JUSTICE BREYER: Thinking of your exchange
22 with the Chief Justice and think of the trigger lock in
23 your view and what the question was, do you want -- I
24 don't know how well trigger locks work or not -- but do
25 you want thousands of judges all over the United States

1 to be deciding that kind of question rather than the
2 city councils and the legislatures that have decided it
3 in the context of passing laws? I mean, isn't there an
4 issue here and a problem with respect to having courts
5 make the kinds of decisions about who is right or not in
6 that trigger-lock argument?

7 MR. GURA: When a fundamental right is at
8 stake, there is a role for judicial review, Your Honor.
9 We are not going to see a thousand judges review such
10 laws because Washington, D.C.'s is the only example of
11 it.

12 JUSTICE GINSBURG: If it's a fundamental
13 right, what about licensing? One piece -- we've talked
14 about trigger locks, we've talked about the ban on
15 handguns, but there is also a requirement that there be
16 a license for possession of a handgun. Assuming you're
17 right on the first question, that you couldn't flatly
18 ban handguns, what about a requirement that you obtain a
19 license to carry -- to have a handgun?

20 MR. GURA: Justice Ginsburg, that would
21 depend on the licensing law itself. We don't have a
22 problem with the concept of licensing so long as it's
23 done --

24 JUSTICE GINSBURG: What about this very law?
25 If you take out the ban -- there is a law on the books.

1 It's one of the ones that you challenged. It's section
2 22-4504(a). Wouldn't that be okay -- would that be
3 okay? It says that you have to have a license to carry.

4 MR. GURA: So long as the licensing law is
5 not enforced in an arbitrary and capricious manner, so
6 long as there are some hopefully objective standards and
7 hopefully some process for --

8 JUSTICE GINSBURG: It just says -- it says
9 you have to get a license if you want to possess a gun.
10 What kind of standard? It just says you have to have a
11 license.

12 MR. GURA: Well, the government could set
13 reasonable standards for that, Your Honor. The
14 government could require, for example, knowledge of the
15 State's use of force laws. They can require some sort
16 of vision test. They could require, perhaps,
17 demonstrated competency. And those are the types of
18 things that we sometimes see; background checks, of
19 course. Those are going to be reasonable licensing
20 requirements.

21 However, if the license requirement is we
22 only wanted to give licenses to people who look a
23 certain way or depends on how we feel or if the
24 licensing office is only open Thursdays at 3:00 in the
25 morning -- I mean, it all depends on the implementation.

1 And --

2 CHIEF JUSTICE ROBERTS: What about -- what
3 about age limits -- you've got to be over 18 or you've
4 got to be over 21 to get a license?

5 MR. GURA: Well, certainly the
6 age-of-majority issue is -- is an appropriate one. I
7 don't think there is a problem with requiring a majority
8 age 18 and then 21 for --

9 CHIEF JUSTICE ROBERTS: Is the age limit
10 necessarily the same nationwide? Maybe 16 in Wyoming
11 makes more sense but 21 in the District.

12 MR. GURA: Courts would have to examine
13 those at some point. The government would have to look
14 at the circumstances it confronted and enact, up to some
15 point, an age limit. I think it would be very difficult
16 to have an age limit that goes beyond 21, because that's
17 the majority age for most things in the United States.
18 And, in fact, we have the voting rights cases from the
19 late '60s where --

20 JUSTICE STEVENS: May I ask this question?
21 Are you, in effect, reading the amendment to say that
22 the right shall not be unreasonably infringed instead of
23 shall not be infringed?

24 MR. GURA: There is that inherent aspect to
25 every right in the Constitution.

1 JUSTICE STEVENS: So we can -- consistent
2 with your view, we can simply read this: "It shall not
3 be unreasonably infringed"?

4 MR. GURA: Well, yes, Your Honor, to some
5 extent, except the word "unreasonable" is the one that
6 troubles us because we don't know what this unreasonable
7 standard looks like.

8 JUSTICE SCALIA: You wouldn't put it that
9 way. You would just say it is not being infringed if
10 reasonable limitations are placed upon it.

11 MR. GURA: That's another way to look at it,
12 Your Honor. Certainly --

13 CHIEF JUSTICE ROBERTS: -- you would define
14 "reasonable" in light of the restrictions that existed
15 at the time the amendment was adopted.

16 MR. GURA: Those restrictions --

17 CHIEF JUSTICE ROBERTS: You know, you can't
18 take it into the marketplace was one restriction. So
19 that would be -- we are talking about lineal descendents
20 of the arms but presumably there are lineal descendents
21 of the restrictions as well.

22 MR. GURA: Framing our practices would
23 inform the kind of restrictions that would be accepted.
24 But even beyond that, they also inform the contours of
25 the right. In the Fifth Circuit, for example, we have

1 the Emerson decision now for seven years, and the way
2 that that court has examined the Second Amendment when
3 they get these felon and possession bans and drug addict
4 and possession challenges, what they say is, these
5 people simply are outside the right, as historically
6 understood in our country. And that's a very important
7 aspect to remember, that the Second Amendment is part of
8 our common law tradition, and we look to framing our
9 practices in traditional understandings of that right to
10 see both the reasonableness of the restrictions that are
11 available as well as the contours.

12 JUSTICE SOUTER: Can we also look to current
13 conditions like current crime statistics?

14 MR. GURA: To some extent, Your Honor, but
15 we have certainly --

16 JUSTICE SOUTER: Well, can they consider the
17 extent of the murder rate in Washington, D.C., using
18 handguns?

19 MR. GURA: If we were to consider the extent
20 of the murder rate with handguns, the law would not
21 survive any type of review, Your Honor.

22 JUSTICE SCALIA: All the more reason to
23 allow a homeowner to have a handgun.

24 MR. GURA: Absolutely, Your Honor.

25 JUSTICE BREYER: Whose judgment is that

1 to --

2 JUSTICE SOUTER: The question is whether
3 they may consider those statistics, and I take it your
4 answer is yes?

5 MR. GURA: Well, those statistics might be
6 considered in some way, the fact is that at some point
7 there is a role for judicial review. And you can't just
8 grab at statistics -- and some of the statistics that
9 were used here are very weak, and studies that have been
10 rejected by the National Academy of Sciences repeatedly.
11 I mean, we don't really have -- it's hard to say that
12 those laws --

13 JUSTICE SOUTER: But I think -- I don't want
14 you to misunderstand my question. My question is that
15 by looking to the statistics, I'm not suggesting that
16 there is only sort of one reasonable response to them.
17 I want to know whether -- whether the policymakers may
18 look to them; and I take it your answer is yes?

19 MR. GURA: To some degree, yes, policymakers
20 have to be informed by what's going on in order to make
21 policy. However, there are constitutional limitations
22 enforced by courts that are going to limit those
23 policies. And when you have a ban which bans 40 percent
24 of all weapons that are the type of weapons used by
25 civilians, 80 percent of all self-defense occurs with

1 handguns; when you have that kind of ban, functional
2 firearms ban, these are extreme measures --

3 JUSTICE SOUTER: They may be. I just want
4 to make sure you're not making the argument that because
5 there was not a comparable homicide rate, or for that
6 matter, a comparable need for self-defense from handgun
7 use in 1792, that there -- 1790 -- that therefore, the
8 statistics of today may not be considered? You're not
9 making that argument?

10 MR. GURA: No, Your Honor, the fact is that
11 we can always debate these things, but the object of the
12 Bill of Rights is to remove certain judgments from the
13 legislature, because we can make policy arguments,
14 normative arguments about many provisions of the
15 Constitution. But to make those arguments and say,
16 well, we've decided as a matter of policy that the right
17 to keep and bear arms is no longer a good idea and,
18 therefore, we are going to have restrictions that
19 violate that stricture in the Bill of Rights, that
20 shouldn't pass judicial review. At some point you have
21 to go to Article 5 if you think that the Constitution is
22 impractical.

23 JUSTICE KENNEDY: But Just to be clear --
24 and I don't want to misstate your position, but my
25 understanding, I at least inferred that you would

1 consider it reasonable to ban shipment of machine guns
2 and sawed-off shotguns in interstate commerce?

3 MR. GURA: Yes, Your Honor.

4 JUSTICE STEVENS: And how about a State
5 university wants to ban students having arms in the
6 dormitory?

7 MR. GURA: Certainly that creates some sort
8 of an evidentiary record. Conceivably that --

9 JUSTICE STEVENS: That's the bare fact.
10 That's what -- a State regulation prohibits students
11 from having arms on campus.

12 MR. GURA: We would have to do --

13 JUSTICE STEVENS: You'd have to think about
14 that.

15 MR. GURA: -- some fact finding. It's
16 something that might be doable, but again, that's so far
17 from what we have here. We have here a ban on all guns,
18 for all people, in all homes, at all times in the
19 Nation's capital. That questionably is too broad and
20 too sweeping under any level of review.

21 Thank you, Your Honor.

22 CHIEF JUSTICE ROBERTS: Thank you, Gura.

23 Mr. Dellinger, 10 minutes.

24 REBUTTAL ARGUMENT OF WALTER DELLINGER,

25 ON BEHALF OF THE PETITIONERS

1 MR. DELLINGER: Mr. Chief Justice, I want to
2 address first why this law is reasonable and should be
3 sustained, and why the judgement below has to be
4 reversed, however, whatever position you take on the
5 theories of the amendment. And in defending the eminent
6 reasonableness and careful balance of this law, I need
7 to start with the trigger law, about which Justice Alito
8 asked.

9 CHIEF JUSTICE ROBERTS: Well, before you
10 start with it, how many minutes does it take to remove a
11 trigger lock and load a gun? Because both the gun has
12 to be unloaded; it has to have a trigger lock under the
13 District laws.

14 MR. DELLINGER: Those are alternatives, Mr.
15 Chief Justice.

16 CHIEF JUSTICE ROBERTS: No, disassembled --

17 MR. DELLINGER: Just a trigger lock.

18 CHIEF JUSTICE ROBERTS: In either case it
19 has to be unloaded, correct?

20 MR. DELLINGER: There are some versions of
21 the trigger lock that allow you to put the trigger lock
22 on and then load the gun. But the piece that goes in
23 the trigger mechanism, even someone as clumsy as I could
24 remove it and effect it --

25 CHIEF JUSTICE ROBERTS: Well, the law, as I

1 understand it, says that the gun has to be unloaded. So
2 under your hypothetical, I assume that would violate the
3 District's law if the gun is still loaded.

4 MR. DELLINGER: You know, it's a question of
5 where you put the parenthesis. I read that as
6 disassembled and unloaded or under a trigger lock, and
7 that's the, that's the way the District --

8 CHIEF JUSTICE ROBERTS: So how long does it
9 take? If your interpretation is correct, how long does
10 it take to remove the trigger lock and make the gun
11 operable.

12 MR. DELLINGER: You -- you place a trigger
13 lock on and it has -- the version I have, a few -- you
14 can buy them at 17th Street Hardware -- has a code, like
15 a three-digit code. You turn to the code and you pull
16 it apart. That's all it takes. Even -- it took me 3
17 seconds.

18 JUSTICE SCALIA: You turn on, you turn on
19 the lamp next to your bed so you can -- you can turn the
20 knob at 3-22-95, and so somebody --

21 MR. DELLINGER: Well --

22 CHIEF JUSTICE ROBERTS: Is it like that? Is
23 it a numerical code?

24 MR. DELLINGER: Yes, you can have one with a
25 numerical code.

1 CHIEF JUSTICE ROBERTS: So then you turn on
2 the lamp, you pick up your reading glasses --

3 (Laughter.)

4 MR. DELLINGER: Let me tell you. That's
5 right. Let me tell you why at the end of the day this
6 doesn't -- this doesn't matter, for two reasons. The
7 lesson --

8 CHIEF JUSTICE ROBERTS: It may not matter,
9 but I'd like some idea about how long it takes.

10 MR. DELLINGER: It took me 3 seconds. I'm
11 not kidding. It's -- it's not that difficult to do it.
12 That was in daylight.

13 The other version is just a loop that goes
14 through the chamber with a simple key. You have the key
15 and put it together. Now, of course if you're going --
16 if you want to have your weapon loaded and assembled,
17 that's a different matter.

18 But here's where I want to address the
19 trigger lock. Here's why it doesn't matter for the
20 handgun law. The District believes that what is
21 important here is the ban on handguns. And it also
22 believes that you're entitled to have a functional,
23 usable weapon for self-defense in the home, and that's
24 why this is a very proportionate law.

25 CHIEF JUSTICE ROBERTS: Well, if

1 proportionate, in other words you're saying your
2 interest is allowing self-defense in the home --

3 MR. DELLINGER: Yes.

4 CHIEF JUSTICE ROBERTS: Does it really make
5 sense to say the best self-defense arm is a rifle, as
6 opposed to a pistol?

7 MR. DELLINGER: It is -- there has been no
8 showing here that a rifle or a shotgun is inadequate for
9 the purposes of self-defense in this facial challenge.

10 JUSTICE ALITO: Is there anything to show
11 that the District Council ever considered the issue of
12 self-defense? That -- because they banned handguns and
13 they had this provision on the trigger lock which -- and
14 the issue -- my question with the trigger lock doesn't
15 have to do with whether trigger locks are generally a
16 good idea. It's whether you're ever allowed to take it
17 off for purposes of defense. There's no -- is there
18 anything to show that the -- that the council actually
19 considered what sort of weapon is appropriate for
20 self-defense?

21 MR. DELLINGER: There are decisions in the
22 District of Columbia about the right of self-defense
23 that apply to this. But here's the most important
24 point. It cannot affect the validity of the handgun
25 law. If you disagree with us that my statements are not

1 sufficient to say that we believe that the law should be
2 read, given the self-defense compulsion, to allow
3 whatever use makes it functional, if you don't agree
4 with that and if you think there's a controversy on this
5 point, because we believe you should have a functional
6 firearm available in the home of law-abiding citizens
7 who wish one, if we are wrong about that and the trigger
8 lock is invalid, that has no effect on the handgun ban.

9 That is to say, the trigger lock applies to
10 all weapons. If it's valid and it means what they say
11 it does, none of the weapons would work. We don't need
12 a handgun; it's unusable. If it's invalid or if it has
13 the construction we believe, it cannot possibly affect
14 the handgun law. If you strike down the trigger lock
15 law, you're throwing us in the briar patch where we
16 think it's where we're happy to be if all we have to do
17 is to make clear in the trigger lock law what we have
18 said here today, that it's, it's available for
19 self-defense.

20 CHIEF JUSTICE ROBERTS: It's a related
21 point. Do you understand the ban -- the carry ban to
22 apply if you carry the firearm from one room in the
23 house to another?

24 MR. DELLINGER: That only applies if it's --
25 if it's unregistered. Now, you can't register a

1 handgun, you can't carry a handgun, but that's because
2 its both -- its possession is prohibited. That is to
3 say you can't carry marijuana or heroin from one room to
4 the other either, because you can't use it at all, I
5 think.

6 CHIEF JUSTICE ROBERTS: Why is the -- why is
7 the D.C. law phrased in those terms? In other words, if
8 you can't have a handgun at all, why do you have a
9 separate provision saying that you can't carry it
10 anywhere?

11 MR. DELLINGER: Well, it's -- it's -- the
12 carry provision, you cannot carry unregistered firearms.
13 That's just a general requirement, that firearms be
14 registered. You're not allowed to register handguns is
15 the mechanism by which they are prohibited.

16 Now, here is -- to address your question
17 about why a ban is unreasonable, the one thing we know
18 the Second Amendment is not about is it's not about the
19 interest of collectors. Some people collect guns the
20 way they do stamps, and if that were what the amendment
21 were about then prohibiting someone from having a
22 particular type of gun would prevent them from
23 completing the set. But the notion --

24 CHIEF JUSTICE ROBERTS: Why isn't that
25 covered by the provision that you have the right to keep

1 arms?

2 MR. DELLINGER: Well, the word "keep" would
3 encompass -- "keep" can encompass every use of an arm,
4 and that's why it provides no limit at all, unless you
5 read it in combination with "keep and bear" and that in
6 combination with "well-regulated militia."

7 JUSTICE SCALIA: You mean you can't have any
8 more arms than you would need to take with you to the
9 militia? You can't have a -- you can't have a -- you
10 know, a turkey gun and a duck gun and a 30.06 and a 270
11 and -- you know, different -- different hunting guns for
12 different --

13 MR. DELLINGER: Well --

14 JUSTICE SCALIA: You can't do that? I mean
15 a State could say you don't --

16 MR. DELLINGER: Of course you could do that.

17 JUSTICE SCALIA: You can have to have a 12
18 gauge and that's it.

19 MR. DELLINGER: And like the District that
20 allows that, as every State does. There are --

21 JUSTICE KENNEDY: I -- at least to me the
22 question is, what would be the constitutional basis for
23 insisting on Justice Scalia's suggestion that you need a
24 number of guns? You have argued, it seems to me, that
25 the District or a government could prohibit just what he

1 said, unless you needed one to take to the militia.

2 MR. DELLINGER: I do not know why that would
3 pass the reasonableness scrutiny, but this law would
4 because a powerful, overwhelming case could be made that
5 you're eliminating the one type of weapon -- this law is
6 -- is designed only for the weapon that is concealable
7 and movable, that can be taken into schools and onto the
8 Metro, can be easily stolen and transmitted among --

9 JUSTICE KENNEDY: I'm asking about the
10 constitutional standard you apply to a hypothetical
11 statute which would prohibit the guns Justice Scalia
12 described. What is your position as to the validity of
13 such a hypothetical law?

14 MR. DELLINGER: You would apply this
15 standard. You would ask whether the ban is one that's
16 carefully balanced considerations of gun ownership and
17 public safety. I don't see how, once we are in the land
18 where you -- where there is a right, there is a far
19 weaker case if there is any need for public safety to --
20 to limit the number of guns one has. Here there is an
21 overwhelming case and we are talking about local
22 legislation.

23 I know, Justice Kennedy, that you would be
24 concerned about a national government which sets a
25 single standard for rural and urban areas, for East and

1 West, North and South. Here you have legislation that
2 is adopted by a group of citizens in the District,
3 operating under the authority of Congress, but it is
4 local legislation. And if it's still good law, that
5 States and local governments across the country can
6 strike these balances, as they have, it would be deeply
7 ironic to preclude the District of Columbia as being the
8 only place that could enact legislation free of the
9 strictures of the Second Amendment.

10 And when you ask about the statistics, what
11 is critical here is not to apply the kind of categorical
12 standard the court below did or a kind of strict
13 scrutiny that would strike this law down. This is an
14 area, unlike areas where government regulation is
15 presumptively illegitimate, this text contemplates
16 regulation of inherently dangerous weapons. And where
17 the battle -- the great battle over methodology, to
18 which Justice Breyer replied, in these briefs --
19 indicates that this is the kind of right -- where you
20 have disputes among experts, it's a kind of right where
21 even if you recognize it, deference needs to be given to
22 the legislative resolution rather than have courts try
23 to decide how best to resolve the statistical and
24 methodological debates.

25 Thank you, Mr. Chief Justice.

1 CHIEF JUSTICE ROBERTS: Thank you,
2 Mr. Dellinger.

3 The case is submitted.

4 (Whereupon, at 11:43 a.m., the case in the
5 above-entitled matter was submitted.)

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EXHIBIT 48

California Becomes the First State To Vote Curbs on Assault Rifles

By Jane Gross, Special To the New York Times

March 14, 1989



See the article in its original context from
March 14, 1989, Section A, Page 1 Buy Reprints

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The California Assembly voted today to ban assault rifles, clearing the way for the state to become the first to prohibit the sale, possession or manufacture of the military-style, semiautomatic guns.

By a 41-to-38 vote, the Assembly joined the Senate, which passed a similar measure on Thursday, in dealing a stinging defeat to the National Rifle Association.

The two bills must be reconciled, probably this spring, and voted on again before going to Gov. George Deukmejian, a conservative Republican who backs this legislation although he has opposed sweeping gun controls. One area to be worked out in conferences is penalties for violators.

Spokesmen for gun-owner groups, which had lobbied fervently to stop the measure, said they had grown complacent from years of success in statehouses across the country and had underestimated their opponents' new strength.

Mike Roos, the Los Angeles Democrat who carried the bill in the Assembly, called this a "stunning day." Similar bills are under consideration in more than a dozen other states and in Congress.

"I think this action tells them that the largest state in the union thinks these guns are just too dangerous," Mr. Roos said.

Both the California Assembly and Senate bills contain clauses that would require registration of those semiautomatic assault weapons legally in private hands before last Oct. 1 and allow the owners to keep them.

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The Assembly bill, driven by the outcry after the killings last January of five California schoolchildren, would ban 24 specific assault weapons, the AK-47 and the Uzi among them. Senate Bill Is Broader

A broader bill, carried in the Senate by President Pro Tem David A. Roberti and passed by a 27-to-12 margin, bans a generic category of weapons - "semiautomatic, centerfire rifles capable of accepting a detachable magazine of 20 rounds or more" - but lists exceptions.

Semiautomatic rifles are those that require no manual action except a separate trigger pull to fire each bullet, as distinct from machine guns, which fire a rapid stream of bullets with a single trigger pull. A centerfire rifle is one that fires a cartridge whose detonator is seated in the center of the cartridge base, where it is struck by the firing pin after the trigger is pulled. High-powered rifles typically use centerfire cartridges.

But, while some hunting rifles used by sportsmen are both semiautomatic and centerfire, many advocates of stricter gun controls have argued that a rifle that holds 20 or more cartridges at once ought to be considered a military rather than a sporting weapon. Hunters Not Alarmed

There appeared to be wide agreement, even among hunters, that none of the weapons to be outlawed in California are used by sportsmen. In debate today, Rusty Areias, a Democrat from Los Banos and a hunter, said he had found no hunters among his constituency who had ever used any of the listed guns.

The National Rifle Association expressed disappointment at the passage of an "unworkable, inefficient and money-wasting" bill.

"This process is not over yet," said Steven F. Mays, an association spokesman. An association official in Washington, Wayne LaPierre, said the movement to ban assault rifles was "most intense in California," but he characterized New York and Florida as potential "hot spots."

The campaign to ban assault rifles began in Oakland and Los Angeles last fall, months before a drifter armed with a Chinese AK-47 semiautomatic rifle killed five schoolchildren in Stockton.

A groundswell of opposition against assault rifles had begun earlier in inner city neighborhoods transformed into war zones by drug gangs. Police chiefs, prosecutors, public officials and others joined to hold public hearings, do legal research and prepare drafts of sample legislation. Galvanized by a Massacre

But their efforts would likely have failed, according to both proponents and opponents, without the Stockton massacre, an event that turned a ghetto issue into a national one.

"We were able to hit the ground running," said Richard Iglehart, the chief assistant district attorney for Alameda County who has worked closely on the legislation.

H. L. Richardson, a recently retired State Senator who heads the Gun Owners of California, said gun control advocates chose "a very astute time to strike."

Mr. Richardson said the smartest move of the "anti-gunners" was highlighting the support of law enforcement officials like Daryl F. Gates, the Los Angeles Police Chief, and Sheriff Glen Craig of Sacramento County. Since fully automatic machine guns were banned in 1934, such law enforcement officials often stood behind gun control legislation, but never led the movement for its passage.

"They never stepped across the line from professional concern to political action," said Don Perata of the Alameda County Board of Supervisors, who organized the hearings about assault rifles last October. "That was the single most important factor, because it dispelled the notion we were simply a group of liberal do-gooders."

The National Rifle Association's advertising agency hurried out newspaper and radio advertisements, mounting an effort of a size not seen since 1982, when a state referendum that would have banned handguns began with strong support but lost. Earlier bills to ban assault rifles - last year, in 1986 and in 1985, following a massacre at a fast-food restaurant in Southern California - died in the Legislature.

A version of this article appears in print on , Section A, Page 1 of the National edition with the headline: California Becomes the First State To Vote Curbs on Assault Rifles

EXHIBIT 49

2021 National Firearms Survey: Updated Analysis Including Types of Firearms Owned

William English, PhD

Georgetown University

Expanded Report: May 13, 2022

Abstract

This report summarizes the findings of a national survey of firearms ownership and use conducted between February 17th and March 23rd, 2021 by the professional survey firm Centiment. This survey, which is part of a larger book project, aims to provide the most comprehensive assessment of firearms ownership and use patterns in America to date. This online survey was administered to a representative sample of approximately fifty-four thousand U.S. residents aged 18 and over, and it identified 16,708 gun owners who were, in turn, asked in-depth questions about their ownership and their use of firearms, including defensive uses of firearms.

Consistent with other recent survey research, the survey finds an overall rate of adult firearm ownership of 31.9%, suggesting that in excess of 81.4 million Americans aged 18 and over own firearms. The survey further finds that approximately a third of gun owners (31.1%) have used a firearm to defend themselves or their property, often on more than one occasion, and it estimates that guns are used defensively by firearms owners in approximately 1.67 million incidents per year. Handguns are the most common firearm employed for self-defense (used in 65.9% of defensive incidents), and in most defensive incidents (81.9%) no shot was fired. Approximately a quarter (25.2%) of defensive incidents occurred within the gun owner's home, and approximately half (53.9%) occurred outside their home, but on their property. About one out of ten (9.1%) defensive gun uses occurred in public, and about one out of thirty (3.2%) occurred at work.

A majority of gun owners (56.2%) indicate that they carry a handgun for self-defense in at least some circumstances, and about 35% of gun owners report carrying a handgun with some frequency. We estimate that approximately 20.7 million gun owners (26.3%) carry a handgun in public under a "concealed carry" regime; and 34.9% of gun owners report that there have been instances in which they had wanted to carry a handgun for self-defense, but local rules did not allow them to carry.

The average gun owner owns about 5 firearms, and handguns are the most common type of firearm owned. 48.0% of gun owners – about 39 million individuals – have

owned magazines that hold over 10 rounds (up to 542 million such magazines in total), and 30.2% of gun owners – about 24.6 million individuals – have owned an AR-15 or similarly styled rifle (up to 44 million such rifles in total). Demographically, gun owners are diverse. 42.2% are female and 57.8% are male. Approximately 25.4% of Blacks own firearms, 28.3% of Hispanics own firearms, 19.4% of Asians own firearms, and 34.3% of Whites own firearms. In total, Americans own over 415 million firearms, consisting of approximately 171 million handguns, 146 million rifles, and 98 million shotguns.

1 Introduction

This report summarizes the main findings of a national survey of firearms ownership and use conducted between February 17th and March 23rd, 2021 by the professional survey firm Centiment. This survey, which is part of a larger book project, aims to provide the most comprehensive assessment of firearms ownership and use patterns in America to date.

Before this survey, the most authoritative resource for estimating details of gun ownership in the U.S. has been the “Comprehensive National Survey on Firearms Ownership and Use” conducted by Cook and Ludwig in 1994 (Cook and Ludwig, 1996), and the most authoritative resource for estimating defensive gun use in the U.S. has been the “National Self-Defense Survey” conducted by Kleck and Gertz in 1993 (Kleck and Gertz, 1995, 1998). While valuable resources, they are both now a quarter century old, and no surveys of similar scope and depth have documented firearms ownership and use in more recent years.

Hepburn et al. (2007) conducted a more limited survey to ascertain the “gun stock” in 2004, a version of which was repeated in 2015 (Azrael et al., 2017). However, as they explain in introducing their latter survey, data sources on firearms ownership and use remain scarce:

Although the National Opinion Research Center’s General Social Survey and other surveys have asked respondents whether they personally own a firearm or live in a home with firearms, few have asked about the number of guns respondents own, let alone more detailed information about these firearms and the people who own them, such as reasons for firearm ownership, where firearms were acquired, how much firearms cost, whether they are carried in public, and how they are stored at home (Smith and Son 2015; Gallup 2016; Morin 2014). Because of this, the best and most widely cited estimates of the number of firearms

in civilian hands are derived from two national surveys dedicated to producing detailed, disaggregated, estimates of the U.S. gun stock, one conducted in 1994, the other in 2004 (Cook and Ludwig 1997, 1996; Hepburn et al. 2007).

Miller, Zhang, and Azrael conducted an expanded survey in 2021 of 5,932 gun owners with a focus on characterizing the demographics of those who acquired firearms for the first time during the COVID-19 Pandemic, based on a sub-sample of 447 individuals who fit this criterion (Miller et al., 2022). This team also described their survey as a “2021 National Firearms Survey,” and it is helpful to clarify that their survey was distinct from the survey reported here.

Richer survey data on firearms ownership and use has been collected by industry associations such as the National Shooting Sports Foundation (NSSF).¹ However, these surveys generally aim at assessing industry trends and market segmentation and are not necessarily designed to be nationally representative. In 2017, the Pew Research Center conducted one of the most recent and detailed surveys of the demographics of gun ownership (Brown, 2017).² Although it did not ask detailed questions concerning defensive use of firearms and the types of firearms owned, this recent Pew survey serves as a helpful benchmark for corroborating the general ownership estimates of the present survey.

Advances in survey research technologies make it possible to reach large, representative respondent populations today at a much lower cost than a quarter century ago. One of the limitations of the Cook and Ludwig survey, which sought to be nationally representative, was that the survey sample was relatively small, with about 2,500 respondents of whom only about 600, or (24.6%), owned a firearm when the survey was administered. As the investigators noted in their report, some sub-questions were not sufficiently well powered to make confident inferences, particularly concerning the defensive use of firearms. Similarly, Kleck and Gertz’s survey was limited to 4,977 respondents, and the more recent surveys by Pew, Hepburn, and Azrael are all based on less than 4,000 respondents.

¹See <https://www.nssf.org/research/>

²See Pew Research Center, June 2017, “America’s Complex Relationship With Guns” <https://www.pewresearch.org/social-trends/wp-content/uploads/sites/3/2017/06/Guns-Report-FOR-WEBSITE-PDF-6-21.pdf>

Today, professional survey firms like Centiment³ cultivate large pools of survey respondents, enabling representative sampling, and have techniques that encourage high response and completion rates while also ensuring the integrity of responses.⁴ The online survey summarized here was presented to a nationally representative sample (excluding residents of Vermont who had already responded to a pilot version of this survey) of 54,244 individuals aged 18 or over who completed an initial questionnaire that included an indirect question indicating whether they owned a firearm (respondents were presented with a list of items commonly owned for outdoor recreational purposes, including firearms, and were asked to select all items that they own).

This question identified 16,708 individuals as gun owners, who were then transferred to the main survey, which then asked detailed questions about their ownership and use of firearms. Given the length and detail of the survey, there was a slight amount of attrition, as 7.5%, or 1,258 individuals, did not make it through all questions to the end of the survey. However, 92.5% of the responding firearms owners (15,450) did proceed through all of the survey questions.

This survey thus contains what we believe is the largest sample of firearms owners ever queried about their firearms ownership and firearms use in a scientific survey in the United States. This survey was approved by Georgetown University's Institutional Review Board. Of note, this survey was conducted just after a period of widespread social unrest across the U.S. and a contentious presidential election, which background check data suggests led to record gun sales (approximately 39.7 million in 2020, up 40% from the prior year).⁵ It is thus a comprehensive and timely assessment of the state of firearms ownership and use in the United States. Finally, the extraordinarily large size of this sample enables us to make well-powered, statistically informative inferences within individual states, which considerably extends the value of this data.

The initial sample of respondents achieved excellent demographic representation across

³See <https://www.centiment.co/>

⁴See <https://help.centiment.co/how-we-safeguard-your-data>

⁵See McIntyre, Douglas A. "Guns in America: Nearly 40 million guns were purchased legally in 2020 and another 4.1 million bought in January" <https://www.usatoday.com/story/money/2021/02/10/this-is-how-many-guns-were-sold-in-all-50-states/43371461/>

all 49 states and DC, excluding Vermont (see Appendix A and B). For the purpose of estimating firearms ownership rates for the general U.S. population we employed raked weighting on gender, income, age, race, and state of residence. Note that there was a brief period in the first two days after the soft launch of the survey that comprehensive demographic data was not collected from those respondents who did not indicate firearms ownership, and thus did not proceed to the main survey (approximately 300 respondents). Although the survey company, Centiment, maintained demographic data on these panel respondents, it was determined that this data was not as comprehensive as the data collected by the survey, at which point the demographic questions were moved to the front of the survey, and asked of all respondents, including those who did not indicate firearms ownership. For the purpose of calculating statistics on national firearms ownership rates, we exclude the entire sample of both firearms owners and non-firearms owners from these first two days (410 respondents), leaving us with 53,834 respondents after this date for whom we have comprehensive demographic data. Firearms-owning respondents from the first two days are included in subsequent analysis of firearms owners, and we do possess comprehensive demographic information for these individuals.

Appendix B contains tables reporting the demographic sampling rates and the Census demographics used for raked weighting of the national survey. Note that the overall effect of weights is minimal given the high representativeness of the initial sample. For the purposes of analyzing responses within the sub-sample of firearms owners, we do not employ weighting schemes, in part because the “true” demographics of gun ownership are not knowable from an authoritative source analogous to the U.S. Census Bureau. However, as a robustness exercise, using weights based on estimates derived from the larger survey response rates yields results that are substantially identical for the analysis of responses from firearms owners.

One of the challenges in asking questions about firearms is eliciting truthful responses from firearms owners who may be hesitant to reveal information about practices that are associated with public controversy. The “tendency to respond to questions in a socially acceptable direction” when answering surveys is often referred to as “social desirability bias” (Spector, 2004), and there is evidence that it can influence survey responses to questions regarding firearms. For example, when Rafferty et al. (1995) conducted a telephone survey

of Michigan residents who had purchased a hunting license or registered a handgun, only 87.3 percent of the handgun registrants and 89.7 percent of hunting license holders reported having a gun in their household. Similarly, Ludwig et al. (1998) have documented a large gender gap in reporting of firearms ownership, finding that “in telephone surveys, the rate of household gun ownership reported by husbands exceeded wives’ reports by an average of 12 percentage points.” Asking questions via an anonymous survey instrument on the internet is likely to cause less concern or worry than traditional phone-based questionnaires with a live person on the other end or during face-to-face interviews, which is how the General Social Survey – one of the most prominent national surveys that regularly asks about firearm ownership – is conducted.⁶ Even when presented in the more impersonal setting of a computer interface, however, a survey must be worded thoughtfully so as to assure anonymity, and not give respondents reason to worry about answering truthfully.

This survey employs five common devices to encourage more truthful responses. First, it uses an indirect “teaser” question to pre-screen respondents in order to select those who own firearms. The initial question prompt presents the survey as concerned with “recreational opportunities and related public policies” and asks respondents if they own any of the following items, presented in a random order: Bicycle, Canoe or Kayak, Firearm, Rock Climbing Equipment, None of the Above. Only those who select “Firearm” are then presented the full survey. We also ask demographic questions at the outset, which allows us to assess the representativeness of the sample, including those who do not indicate firearms ownership. Second, the survey was carefully phrased so as to not suggest animus towards gun owners or ignorance of firearms-related terminology. Third, the survey assures respondents of anonymity. Fourth, in order to ensure that respondents are reading the survey questions carefully, and then responding with considered answers thereto, a “disqualifying” question (sometimes referred to as a “screening” question) was embedded a little over half of the way through the survey instructing respondents to select a particular answer for that question, which only those who read the question in its entirety would understand. Anyone registering an incorrect answer to this question was disqualified from the survey and their responses to

⁶For a description of the methods of the General Social Survey see: https://www.nsf.gov/pubs/2007/nsf0748/nsf0748_3.pdf

any of the survey questions were neither considered nor tallied.

Finally, while responses were required for basic demographic questions, if questions of a sensitive nature were left blank, the software would first call attention to the blank response and prompt the respondent to enter a response. However, if a respondent persisted in not responding and again tried to progress, rather than kick them out of the survey, they would be allowed to progress to the next section in the interest of obtaining the maximum amount of information that they were willing to share. Respondents were not made aware of this possibility in advance, and in practice such “opting out” of a particular question was seldom done (less than 1% of responses for the average question). This is the reason that small variations are sometimes observed in the total number of respondents for certain questions.

A pilot version of this survey was first fielded in Vermont as part of a research project aimed at documenting firearms ownership and firearms use rates in that specific state. The Vermont survey served as a proof of concept for the national version, demonstrating that this survey is a viable instrument for eliciting responses from firearms owners with both high response rates and low disqualification rates. The results of the Vermont survey are presented separately in Appendix A of this report and closely mirror national results.

This report focuses on providing descriptive statistics of answers to the major questions asked in the survey. Future research will examine responses, and relationships between them, in more detail. The report proceeds as follows: the next (second) section summarizes national firearms ownership estimates and demographics; the third section examines defensive uses of firearms; the fourth section examines question regarding carrying for self-defense; the fifth section summarizes ownership statistics, and the sixth section concludes.

2 Gun Ownership Demographics

- About a third of adults in the U.S. report owning a firearm, totaling about 81.4 million adult gun owners.
- 57.8% of gun owners are male, 42.2% are female.
- 25.4% of Blacks own firearms.

- 28.3% of Hispanics own firearms.
- 19.4% of Asians own firearms.
- 34.3% of Whites own firearms.

With raked weighting employed for gender, state, income, race, and age we find that 32.5% of US adults age 21 and over own a firearm (95% Confidence Interval, 32.1 - 32.9%). Expanding the sample population to include those age 18-20, who are restricted in some states from purchasing firearms, 31.9% of US adults age 18 and over own firearms (95% Confidence Interval, 31.5% - 32.3%). This is slightly above, but consistent with, the most recent in-depth survey of firearms ownership conducted by Pew in 2017 before the Covid-19 pandemic, which found that 30% of adults in America own a firearm (Brown, 2017). It is also consistent with recent Gallup polling in 2020 and 2021, which found that 32% and 31% of adults personally own a firearm (Gallup, 2021).

As a benchmark to assess the accuracy of the teaser question used to ascertain firearm ownership, we can also compare ownership rates of other items reported by respondents for this question. We find 52% of respondents indicating owning a bicycle, which closely matches Pew's finding that 53% of Americans own a bicycle, according to a poll conducted in 2014.⁷

The distribution of gun owners surveyed by state is illustrated in Figure 1, and ranges from 1,287 in California and 1,264 in Texas to 26 in Washington, DC and 24 in North Dakota.

Table 1 shows the proportion of the population in each state estimated to own a firearm. Massachusetts, Hawaii, Rhode Island, and New Jersey have the lowest rates of ownership with less than 20% of the adult population owning firearms, while Kentucky, Montana, West Virginia, and Idaho have the highest rates of ownership with more than 45% of the adult population owning firearms.

With regard to the demographics of gun ownership, we find that 57.8% of gun owners are male and 42.2% are female, the average age of gun owners is 46-50 years old, and the average annual household income is \$80,000-\$90,000. Approximately 18% of gun owners do not identify as White (alone). Overall, approximately 10.6% of gun owners identify as Black,

⁷See <https://www.pewresearch.org/fact-tank/2015/04/16/car-bike-or-motorcycle-depends-on-where-you-live/>

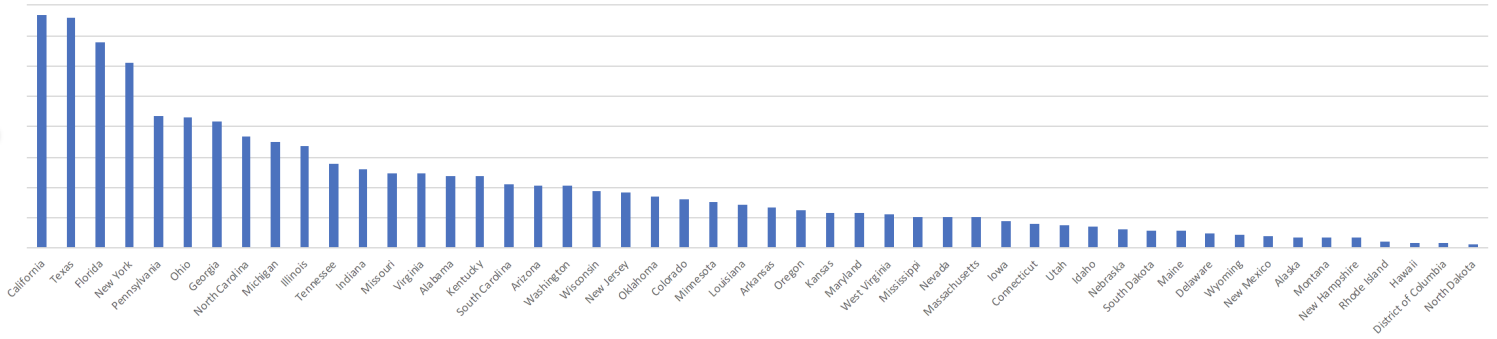


Figure 1: Distribution of Firearms Owners Surveyed

3.6% identify as Asian, 1.6% identify as American Indian, .2% identify as Pacific Islander, 82.0% identify as White, and 2.0% identify as Other. When analyzed within racial groups, we find that 25.4% of Blacks own firearms, 28.3% of Hispanics own firearms, 19.4% of Asians own firearms, and 34.3% of Whites own firearms.

According to the latest (2019) census estimates, there are approximately 255,200,373 individuals age 18 and over in the U.S., which implies that there are about 81.4 million adult gun owners.⁸ Note that this figure does not include those under the age of 18 who may use or possess firearms for purposes such as hunting or shooting sports.

In sum, firearms ownership is widespread, and firearms owners are diverse.

3 Defensive Use of Firearms

- 31.1% of gun owners, or approximately 25.3 million adult Americans, have used a gun in self-defense.
- In most cases (81.9%) the gun is not fired.
- Gun owners engage in approximately 1.67 million defensive uses of firearms per year.
- The majority of defensive gun uses take place outside of the home (74.8%).

⁸Census data is available at <https://www2.census.gov/programs-surveys/popest/tables/2010-2019/national/asrh/nc-est2019-syasexn.xlsx>

State	Proportion of adult population estimated to own firearms	95% Confidence Interval
Alabama	39.6%	35.2% – 44.1%
Alaska	33.4%	25.7% – 42.1%
Arizona	32.0%	28.8% – 35.4%
Arkansas	36.6%	31.1% – 42.5%
California	25.5%	24.0% – 27.0%
Colorado	33.6%	29.8% – 37.7%
Connecticut	20.2%	16.8% – 24.1%
Delaware	24.7%	18.9% – 31.6%
District of Columbia	23.9%	15.6% – 34.9%
Florida	30.3%	28.5% – 32.2%
Georgia	37.1%	34.5% – 39.9%
Hawaii	16.4%	10.6% – 24.5%
Idaho	54.5%	45.5% – 63.1%
Illinois	26.5%	24.3% – 28.9%
Indiana	40.3%	36.6% – 44.1%
Iowa	33.2%	28.1% – 38.8%
Kansas	42.8%	37.4% – 48.3%
Kentucky	46.7%	42.6% – 50.8%
Louisiana	32.8%	28.0% – 38.0%
Maine	35.9%	29.7% – 42.6%
Maryland	21.7%	18.5% – 25.2%
Massachusetts	15.8%	13.4% – 18.6%
Michigan	34.7%	32.0% – 37.5%
Minnesota	32.5%	28.4% – 36.8%
Mississippi	39.5%	33.5% – 45.8%
Missouri	39.7%	36.2% – 43.4%
Montana	48.4%	38.7% – 58.3%
Nebraska	37.2%	29.8% – 45.2%
Nevada	38.0%	32.8% – 43.4%
New Hampshire	24.1%	18.4% – 30.9%
New Jersey	19.3%	16.9% – 22.0%
New Mexico	33.8%	25.9% – 42.7%
New York	22.7%	21.3% – 24.2%
North Carolina	37.3%	34.5% – 40.2%
North Dakota	42.6%	29.9% – 56.4%
Ohio	33.7%	31.1% – 36.4%
Oklahoma	40.5%	36.2% – 45.0%
Oregon	38.3%	32.7% – 44.2%
Pennsylvania	30.3%	28.1% – 32.6%
Rhode Island	16.9%	11.4% – 24.2%
South Carolina	40.7%	36.5% – 45.1%
South Dakota	39.2%	32.4% – 46.4%
Tennessee	43.0%	39.5% – 46.6%
Texas	36.0%	34.1% – 38.0%
Utah	42.8%	36.1% – 49.8%
Virginia	30.6%	27.6% – 33.7%
Washington	32.8%	29.3% – 36.4%
West Virginia	53.0%	45.6% – 60.2%
Wisconsin	33.3%	29.9% – 36.9%
Wyoming	42.7%	34.5% – 51.2%

Table 1: Proportion of the population estimated to own a firearm in each state.

- About half of defensive gun uses involve more than one assailant (51.2%).
- Handguns are the firearm most commonly used in defensive incidents (65.9%), followed

by shotguns (21.0%) and rifles (13.1%).

Defensive use of firearms was assessed through a series of questions that asked for increasingly detailed information from those who indicated that they had used a firearm in self-defense.

First, all gun owners were asked, “Have you ever defended yourself or your property with a firearm, even if it was not fired or displayed? Please do not include military service, police work, or work as a security guard.” About a third (31.1%) answered in the affirmative, and they were then asked how many times they defended themselves with a firearm (from “once” to “five or more times”). As Figure 2 shows, a majority of gun owners who have used a firearm to defend themselves have done so on more than one occasion.

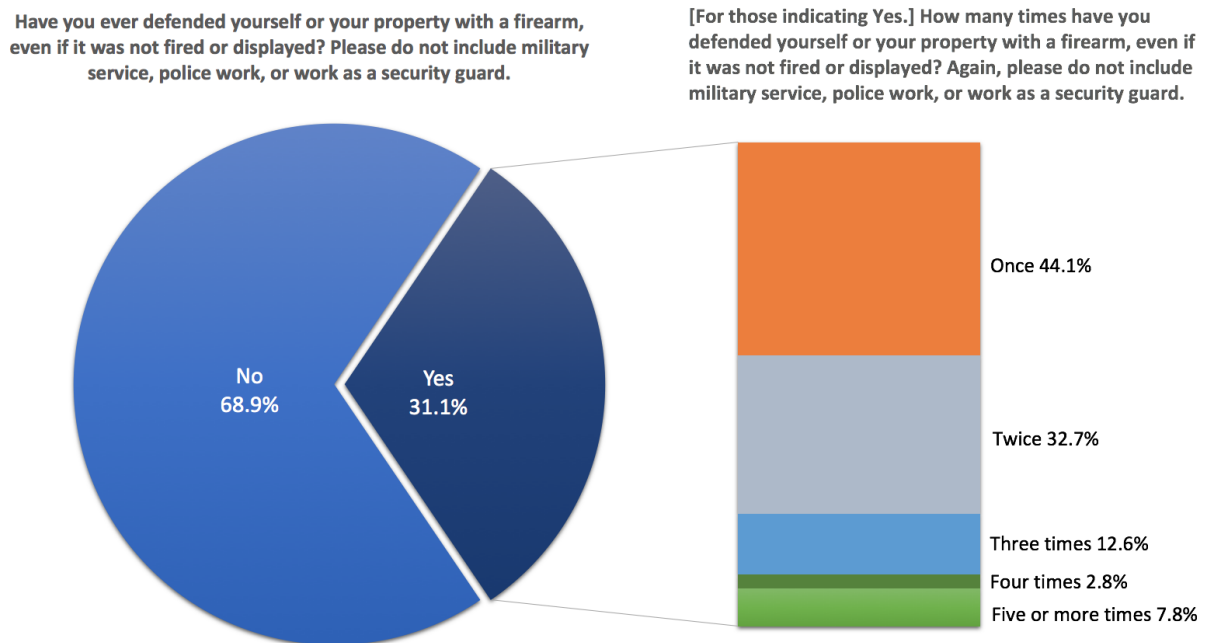


Figure 2: Defensive Gun Use: 31.1% of firearms owners have defended themselves of their property with a gun, and a majority have done so more than once.

Both men and women report having used firearms in self-defense at high rates, with 33.8% of male gun owners indicating they have defensively used a gun, and 27.3% of female gun owners indicating they have defensively used a gun. Table 2 further breaks down reports of

defensive use of firearms by categories of race and ethnic ancestry, illustrating that defensive gun use rates are higher in some minority groups.

Demographic Group	Proportion of Gun Owners Who Used Gun Defensively	95% Confidence Interval
White	29.7%	29.0% – 30.5%
Black	44.3%	41.2% – 47.5%
Asian	26.0%	21.7% – 30.9%
Native American	47.7%	42.7% – 52.7%
Pacific Islander	37.1%	26.0% – 49.7%
Other Ethnic Ancestry	36.2%	30.3% – 42.7%
Hispanic (any ancestry)	39.3%	36.0% – 42.8%
Male	33.8%	32.8% – 34.8%
Female	27.3%	26.2% – 28.4%

Table 2: Demographics of defensive gun use.

Given that 31.1% of firearms owners have used a firearm in self-defense, this implies that approximately 25.3 million adult Americans have defended themselves with a firearm. Answers to the frequency question suggest that these gun owners have been involved in a total of approximately 50 million defensive incidents. Assuming that defensive uses of firearms are distributed roughly equally across years, this suggests at least 1.67 million defensive uses of firearms per year in which firearms owners have defended themselves or their property through the discharge, display, or mention of a firearm (excluding military service, police work, or work as a security guard).⁹

⁹This is calculated by taking the total number of defensive incidents represented by the survey responses (50 million) and dividing by the number of adult years of the average respondent, which is 30. According to U.S. Census data, the average age of U.S. adults (i.e. the average age of those in the set of everyone 18 years or older) is 48, which also matches our survey data. Thus, the average respondent of the survey has 30 years of adult experience (48 years - 18 years = 30 adult years), over which the defensive incidents captured in this survey are reported.

Note that this estimate is inherently conservative for two reasons. First, it assumes that gun owners possessed firearms, or had access to firearms, from the age of 18. In so far as firearms were only first ac-

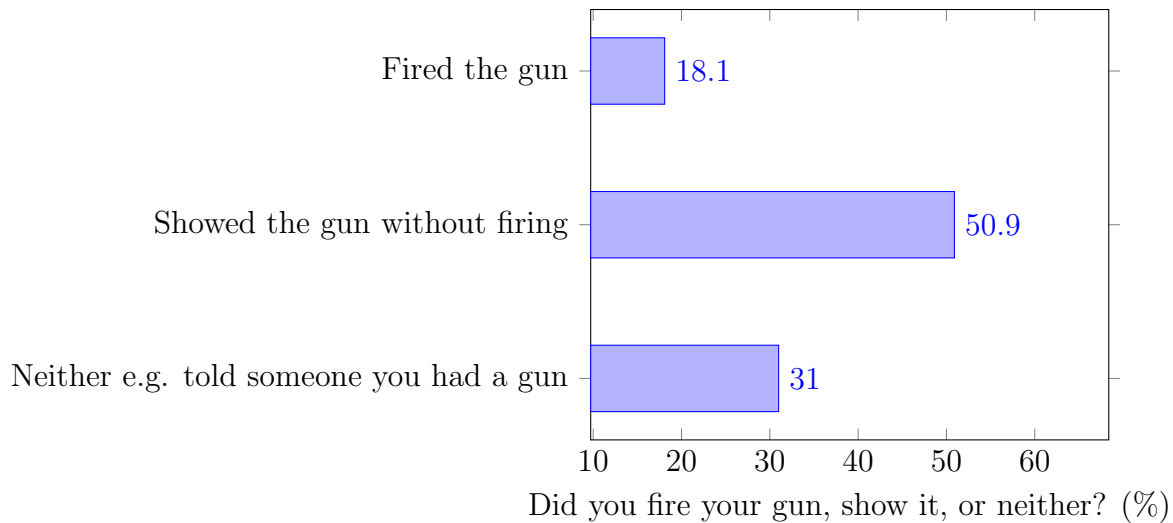


Figure 3: How Guns are Employed in Self-defense: In most defensive incidents no shots are fired.

Gun owner respondents were asked to answer detailed questions regarding each defensive incident. If a respondent reported a defensive gun use in later years, this would reduce the number of adult firearms owning years represented by the survey responses and result in a higher estimate of the number of defensive incidents per year. Second, this figure only captures defensive gun uses by those currently indicating firearms ownership. According to Kleck and Gertz (1995), only 59.5% of respondents who reported a defensive gun use personally owned a gun (p.187). This would suggest that the true number of defensive gun uses, if those who do not personally own firearms are included in the estimate, could be substantially higher - perhaps as high as 2.8 million per year.

This approach is also robust to critiques that have been made by Hemenway (1996) and others who argue that defensive gun use estimates from surveys can be exaggerated due to recollection bias when respondents are asked to recount incidents within a limited time period. The intuition behind these critiques is that if respondents are asked, for example, if they used a gun defensively within the last year, there is a possibility that people will respond affirmatively if they used a gun in self-defense in recent memory, even if that incident wasn't strictly within the last 12 months. This could lead to inflated "per year" estimates of defensive gun uses, which would only be further magnified when extrapolated out to total defensive gun uses over many years. However, the approach of this survey is not vulnerable to this critique because the survey asks about defensive gun use at any time, not simply those within the last year or some other short time horizon. We thus do not engage in the exercise of extrapolating out estimates from potentially biased measures of comparatively rare events in a restricted window of time. Rather our approach asks questions about defensive gun use in the manner that is most methodologically sound for eliciting unbiased estimates.

Finally, note that our overall approach assumes that children are not employing firearms for self-defense

incident that they reported. As Figure 3 shows, in the vast majority of defensive gun uses (81.9%), the gun was not fired. Rather, displaying a firearm or threatening to use a firearm (through, for example, a verbal threat) was sufficient. This suggests that firearms have a powerful deterrent effect on crime, which, in most cases, does not depend on a gun actually being fired or an aggressor being injured.

Figure 4 shows where defensive gun uses occurred. Approximately a quarter (25.2%) of defensive incidents took place within the gun owner's home, and approximately half (53.9%) occurred outside their home but on their property. About one out of ten (9.1%) of defensive gun uses occurred in public, and about one out of thirty (3.2%) occurred at work.

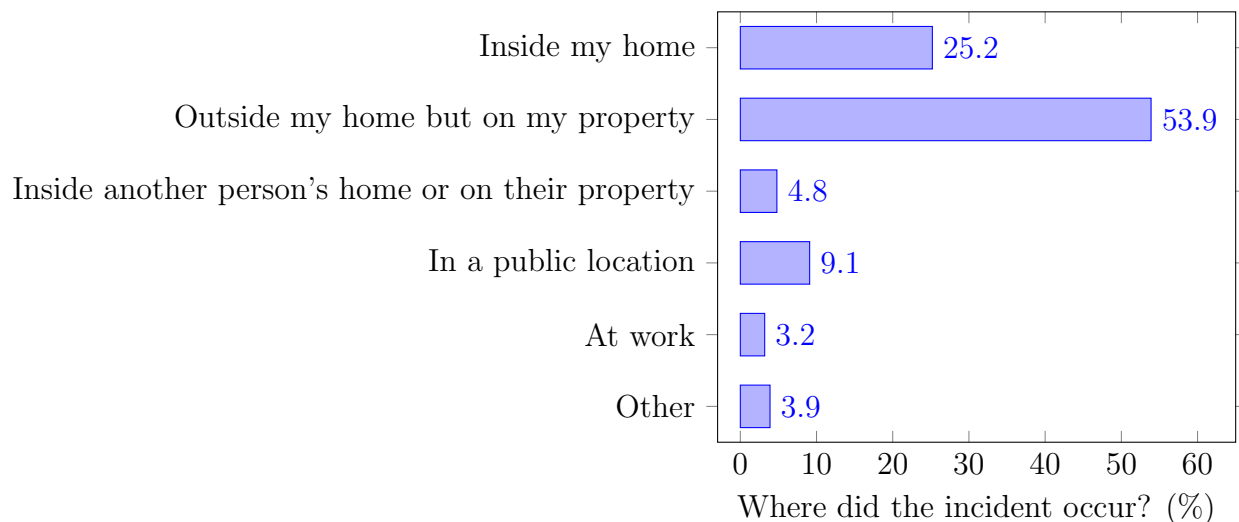


Figure 4: The Location of Defensive Incidents: Most take place outside the home.

For each incident, respondents were asked to indicate what sort of firearm was used. Figure 5 show the distribution of types of firearms employed in defensive incidents. Handguns were the most commonly used firearm for self-defense, used in nearly two-thirds (65.9%) of defensive incidents, followed by shotguns (21.0%) and rifles (13.1%).

Respondents were also asked to indicate how many assailants were involved in each de-

with any meaningful frequency. However, for the purpose of sensitivity analysis, if we lower the age used for calculating defensive incident frequency to assume that children as young as 12 years old are commonly possessing and using firearms for self-defense (and no non-firearms owning adults used firearms for self-defense), this would still imply 1.39 million defensive uses of firearms per year (48 years - 12 years = 36 years over which 50 million defensive incidents took place).

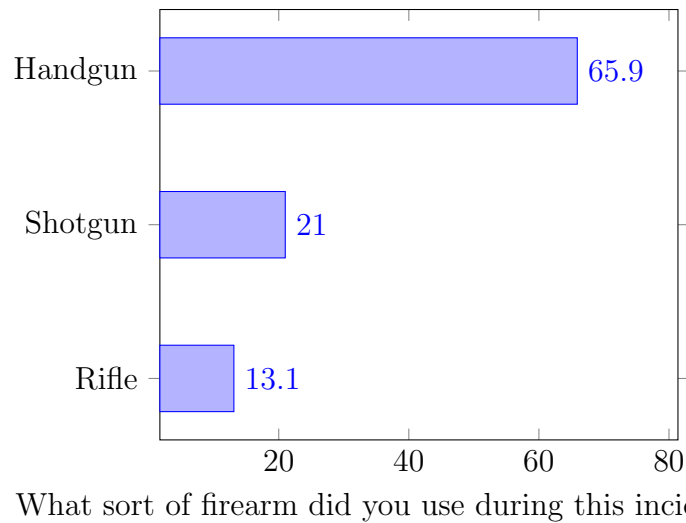


Figure 5: Type of Gun Used for Defense: Handguns are the most common type of firearm used in defensive encounters, followed by shotguns and rifles.

fensive incident. As Figure 6 illustrates, about half of defensive encounters (51.2%) involved more than one assailant. Presumably, part of the value of using a firearm in self-defense is that it serves as a force multiplier against more powerful or more numerous assailants. Survey responses confirm that encountering multiple assailants is not an infrequent occurrence in defensive incidents. 30.8% of defensive incidents involved two assailants, and 20.4% involved three or more, while slightly less than half (48.8%) involved a single assailant.

Finally, after respondents answered these detailed questions about each defensive incident, which all flowed from their initial affirmative answer to the question, “Have you ever defended yourself or your property with a firearm, even if it was not fired or displayed?”, all gun owners were asked, “Separate from any incident in which you directly used a gun to defend yourself, has the presence of a gun ever deterred any criminal conduct against you, your family, or your property?” This question was meant to capture incidents that did not involve active self-defense, but for which individuals believed that the presence of a firearm helped deter predatory behavior. For example, a situation in which a combative customer calmed down after noticing that shop owner had a handgun on his or her hip, or a situation in which a trespasser cooperatively left a property when questioned by a landowner who had a rifle slung over his or her shoulder, or a situation in which a friend showed up with a firearm

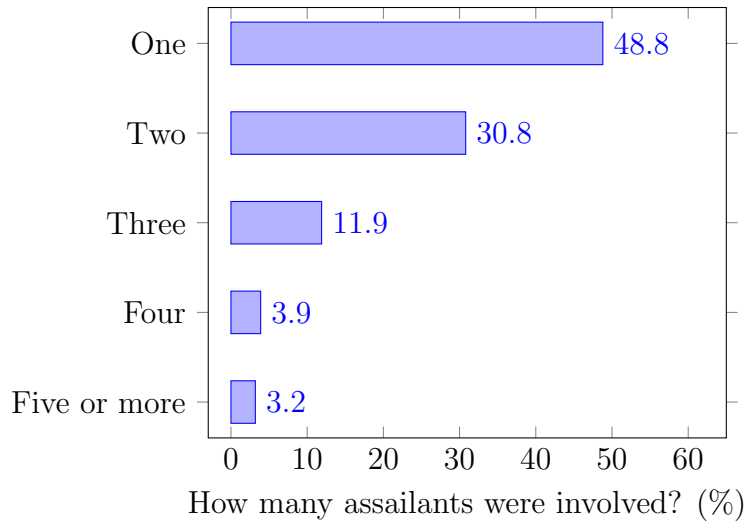


Figure 6: Distribution of the Number of Assailants Involved in a Defensive Incident: Multiple assailants are common.

to help diffuse a dangerous situation, could fall into this category. Respondents answering in the affirmative could indicate how many times such deterrence occurred, from once to five or more occasions. As Figure 7 illustrates, separate from the self-defense incidents summarized earlier, 31.8% of gun owners reported that the mere presence of a gun has deterred criminal conduct, and 40.2% of these individuals indicated that this has happened on more than one occasion. Extrapolated to the population at large, this suggests that approximately 25.9 million gun owners have been involved in an incident in which the presence of a firearm deterred crime on some 44.9 million occasions. This translates to a rate of approximately 1.5 million incidents per year for which the presence of a firearm deterred crime.

4 Carry Outside of the Home

- A majority of gun owners (56.2%) indicate that there are some circumstances for which they carry a handgun for self-defense.
- Approximately 26.3% of gun owners, or 20.7 million individuals, carry handguns for defensive purposes under a “concealed carry” regime.
- About a third of gun owners (34.9%) have wanted to carry a handgun for self-defense

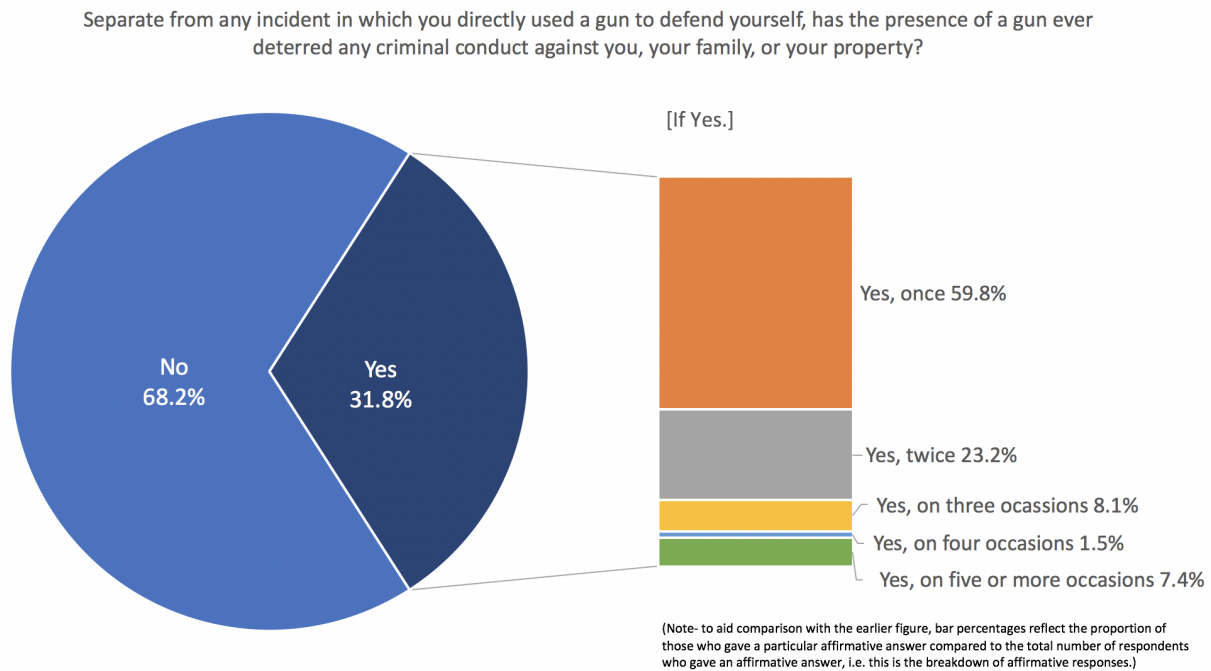


Figure 7: Frequency with which Firearms Deter Crime: 31.8% of firearms owners report that the presence of a firearm has deterred criminal conduct against them, often on more than one occasion.

in a particular situation but local rules prohibited them from doing so.

As Figure 8 illustrates, a majority of gun owners (56.2%), or about 45.8 million, indicate that there are some circumstances in which they carry a handgun for self-defense (which can include situations in which no permit is required to carry, such as on their own property); and about 35% of gun owners report carrying a handgun with some frequency (indicating that they carry “Sometimes,” “Often,” or “Always or almost always.”). Moreover, as Figure 9 summarizes, 34.9% of gun owners report that there have been instances in which they wanted to carry a handgun for self-defense, but local rules did not allow them to carry.

Assessing the number of people who carry a concealed handgun in public is complicated due, in part, to the proliferation of so-called “constitutional carry” or “permitless carry” states in recent years. These states - about 18 at the time this survey was conducted - generally allow adults in good legal standing (often restricted to those age 21 and older) to

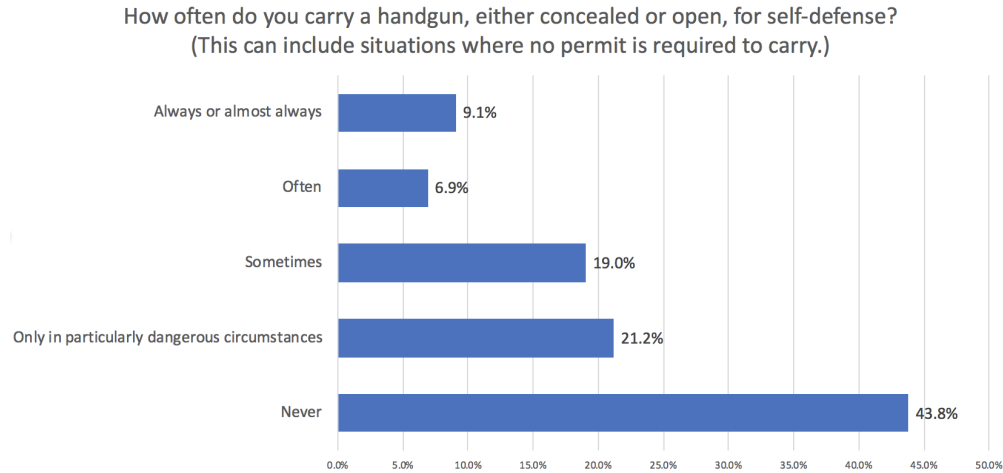


Figure 8: Frequency of Defensive Carry: Carrying a handgun for self-defense is common.

Have you ever wanted to carry a handgun for self-defense
but local rules did not allow you to carry?

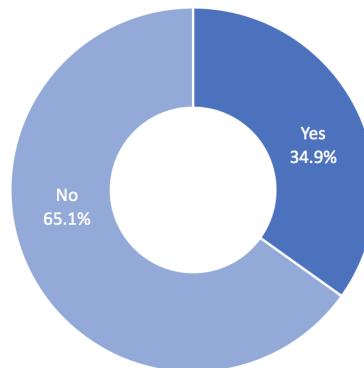


Figure 9: Prohibition of Carry: About a third of gun owners have wanted to carry a handgun for self-defense in a particular situation but local rules prohibited them from doing so.

carry a concealed weapon without a permit. Most of these states previously had a permitting process for concealed carry and required permits to be renewed at regular intervals in order to remain valid. Under constitutional carry, law abiding adults in these states are permitted to carry concealed without an official “permit.” However, most of these states continue to issue permits to residents who desire them because such permits can be useful for reciprocal carry benefits in other states. For example, a person acquiring a Utah carry permit would be entitled to carry a handgun in a number of other states such as neighboring Colorado and

Nevada.¹⁰ Thus, while basically all gun owners age 21 and over are “permitted” to carry a handgun for self-defense in constitutional carry states, many individuals may also possess a “permit,” even though it is redundant for in-state carry.

Unsurprisingly, when asked “Do you have a concealed carry permit?” gun owning residents of many constitutional carry states respond in the affirmative at high rates. Also complicating this question about concealed carry permits is the fact that many states refer to such permits by different names, the fact that the right to carry a handgun can be conferred in certain circumstances by hunting or fishing licenses in some states,¹¹ and the existence of other related permits, some of which do not license concealed carry (e.g. standard pistol permits in North Carolina or New York, eligibility certificates in Connecticut) and some of which do (most License To Carry permits required for handgun ownership in Massachusetts, state pistol permits in Connecticut, and LEOSA permits available to current and retired law enforcement officers nationwide). Finally, it is also possible for individuals to obtain concealed carry permits in states other than the one in which they reside.

In order to provide a robust but conservative estimate of those who actually carry in public, we code as “public carriers” those individuals who indicated both that they have a concealed carry permit and that they carry a handgun for self-defense at least “sometimes.” We also restrict analysis and population estimates to those age 21 and over given that most states restrict those under 21 from carrying concealed in public.

Using this simple definition, we find that 26.3% of gun owners are “public carriers,” which translates to approximately 20.7 million individuals who carry handguns in public under a concealed carry regime. Note that this could include current and former law enforcement officers who may be represented in the survey. However, the number of active law enforcement officers in the U.S. is well under a million (approximately 700,000 in 2019).¹²

¹⁰See <https://bci.utah.gov/concealed-firearm/reciprocity-with-other-states/>

¹¹For example, a number of states such as California, Georgia, and Oregon allow those with a hunting or fishing license to carry concealed while engaged in hunting or fishing or while going to or returning from an expedition. See: <https://oag.ca.gov/sites/all/files/agweb/pdfs/firearms/pdf/cfl2016.pdf>, <https://law.justia.com/codes/georgia/2010/title-16/chapter-11/article-4/part-3/16-11-126/>, <https://codes.findlaw.com/or/title-16-crimes-and-punishments/or-rev-st-sect-166-260.html>

¹²See <https://ucr.fbi.gov/crime-in-the-u.s/2019/crime-in-the-u.s.-2019/tables/table-74>

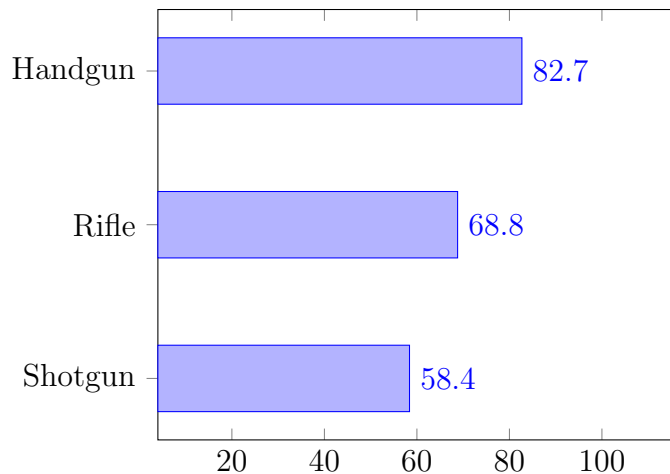
5 Types of Firearms and Magazines Owned

- 82.7% of gun owners report owning a handgun, 68.8% report owning a rifle, and 58.4% report owning a shotgun.
- The average gun owner owns about 5 firearms. The median gun owner owns 3.
- 29.0% of gun owners own only one firearm.
- 30.2% of gun owners, about 24.6 million people, have owned an AR-15 or similarly styled rifle, and up to 44 million such rifles have been owned.
- 48.0% of gun owners, about 39 million people, have owned magazines that hold over 10 rounds, and up to 542 million such magazines have been owned.
- Overall, Americans own in excess of 415 million firearms, consisting of approximately 171 million handguns, 146 million rifles, and 98 million shotguns.

5.1 Rifles, Shotguns, and Handguns

Respondents were asked to indicate the number of rifles, shotguns, and handguns that they owned. 82.7% of gun owners report owning a handgun (95% CI 82.0% - 83.3%), 68.8% reported owning a rifle (95% CI 68.1% - 69.6%), and 58.4% report owning a shotgun (95% CI 57.6% - 59.2%). Note that using survey weights based on in-survey demographics of firearms ownership has no substantive effect on these estimates: Handgun, 83.7% (82.9% - 84.4%), Rifle, 68.6% (67.7% - 69.6%), Shotgun 58.6% (57.6% - 59.6%).

Approximately 99.8% of respondents indicated owning fewer than 100 firearms of each type, and approximately 97.2% indicated owning fewer than 10 firearms of each type. In order to provide a conservative estimate of ownership rates and to ensure that average estimates are not skewed by a small number of large outliers, we exclude the 0.2% of responses that indicated owning over 100 firearms in any category in the analysis that examines average numbers of guns owned. Also, 1.5% of respondents entered zero for each category of firearms ownership. While ostensibly inconsistent with having earlier indicated ownership of a firearm, there are a number of plausible explanations for this discrepancy including a reluctance to



Percentage of gun owners reporting ownership of at least one firearm in the indicated category.

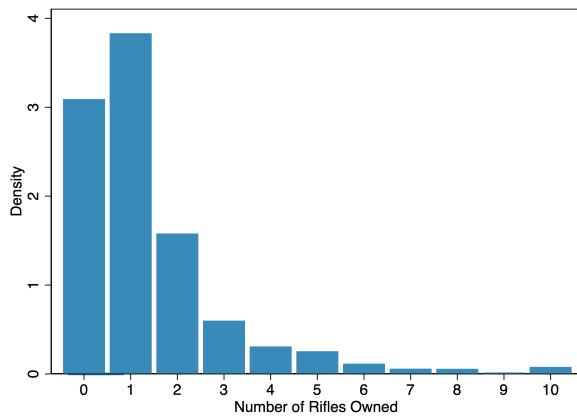
Figure 10: Percent of gun owners who own each type of firearm.

provide this level of detailed information, having use of a firearm in one's household which one does not personally own, or owning a firearm that technically does not fall into one of these three categories. We exclude these response in analyzing ownership rates below. However, including them has no significant effect on estimates.

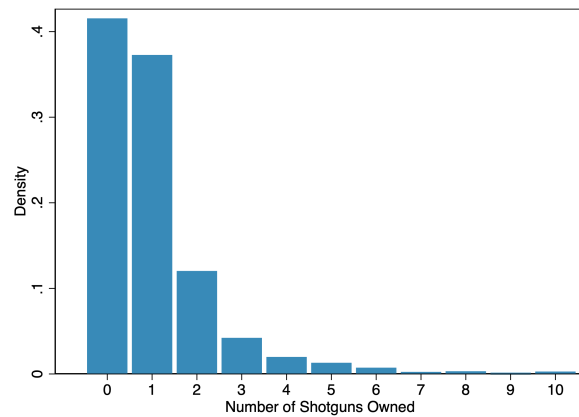
On average, gun owners owned 5.1 firearms, consisting of 1.8 rifles, 1.2 shotguns, and 2.1 handguns. Figure 11 plots histograms of the number of firearms owned by respondents. Unsurprisingly, these are skewed right, indicating that most gun owners own a small number of guns, while a smaller portion of gun owners own a large number of guns. The median gun owner owned 3 firearms. 29.0% of firearms owners owned only one firearm.¹³ Among those who only own one firearm, handguns are the most commonly owned type of gun (64.7%), followed by rifles (22.5%) and shotguns (13.3%).

Overall, these estimates imply that Americans own over 415 million firearms, consisting of approximately 171 million handguns, 146 million rifles, and 98 million shotguns.

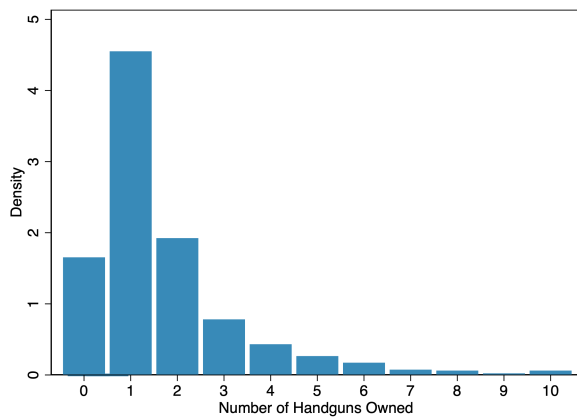
¹³An earlier draft had estimated that 21.9% of gun owners owned only one firearm, but the denominator for that calculation mistakenly included respondents who did not provide an answer to this question. The estimate of 29.0% properly incorporates all information provided by respondents.



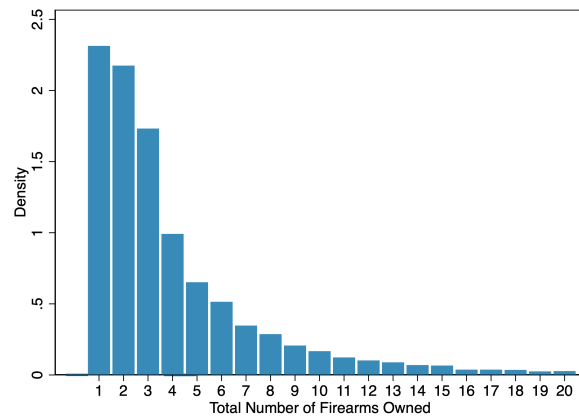
(a) Histogram of number of rifles owned



(b) Histogram of number of shotguns owned



(c) Histogram of number of handguns owned



(d) Histogram of total number of guns owned

Figure 11: Histograms showing the distributions of gun ownership.

5.2 Magazine Ownership

The survey asked respondents whether they have ever owned a magazine that holds more than 10 rounds. Those who answered in the affirmative were then asked to indicate the purposes for which they owned such magazines and to estimate how many magazines of different types they owned.

48.0% of gun owners (95% CI 47.2%-48.7%) responded yes to the question, “Have you ever owned a handgun or rifle magazine that holds more than 10 rounds? (You can count magazines that you may keep in another state if there are local restrictions against ownership.)” indicating that they had owned such magazines. Note that, again, using survey

weights based on in-survey demographics of firearms ownership has no substantive effect on this estimate (47.4%, CI 46.5%-48.4%). This suggests that approximately 39 million adults in the U.S. have owned magazines that hold more than 10 rounds.

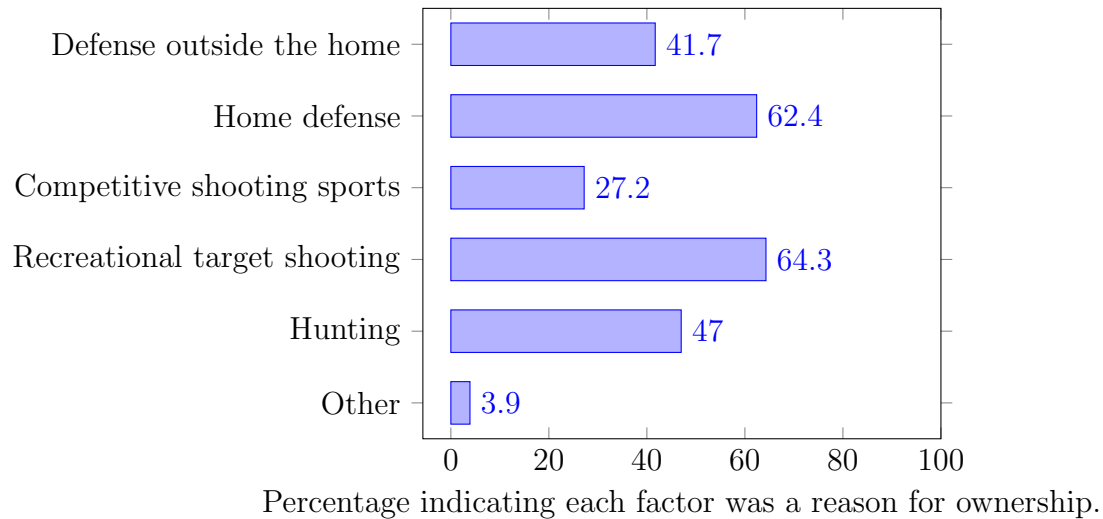


Figure 12: Purposes indicated for owning 11+ capacity magazines.

Figure 12 shows the percentage of respondents who indicated that they owned magazines that can hold more than 10 rounds for the following purposes: defense outside the home (41.7%), home defense (62.4%), competitive shooting sports (27.2%), recreational target shooting (64.3%), hunting (47.0%), and other (3.9%). Note that respondents could choose multiple purposes for which they owned such magazines. Home defense and recreational target shooting were the two most common reasons indicated for owning these magazines, with approximately two-thirds of respondents identifying each of these as a rationale for ownership.

Respondents who indicated that they had owned magazines that can hold more than 10 rounds were also asked to estimate the number of pistol and rifle magazines they owned of particular sizes. Numerical responses were unbounded. Approximately 99.8% of respondents indicated owning fewer than 100 magazines of each type, and approximately 96.5% indicated owning fewer than 10 magazines of each type. In order to provide a conservative estimate of ownership rates and to ensure that average estimates are not skewed by a small number of large outliers, we exclude the 0.2% of responses that indicated owning over 100 magazines

in a category.

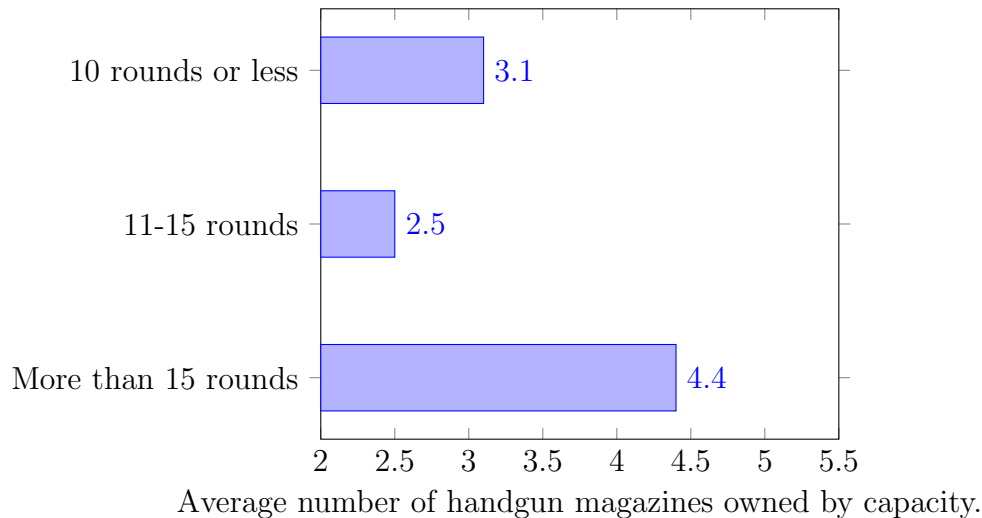


Figure 13: About how many handgun magazines of each type would you estimate you have owned?

Figure 13 shows the average number of handgun magazines of each type reported by respondents in this section: 10 rounds or less (3.1 magazines), 11-15 rounds (2.5 magazines), more than 15 rounds (4.4 magazines). In sum, the average respondent (who indicated that they have owned a magazine that holds more than 10 rounds), owns about 10 handgun magazines, and more than two-thirds of these magazines hold more than 10 rounds. Note that the question asked whether respondents have ever owned such magazines and how many such magazines they have owned, so these estimates should be interpreted as an upper bound on current ownership given that some magazines may have been resold. Building on earlier estimates, this suggests that U.S. gun owners have owned up to 269 million handgun magazines that hold over 10 rounds.

Figure 14 shows the average number of rifle magazines of each type reported by respondents in this section: 10 rounds or less (2.4 magazines), 11-15 rounds (1.8 magazines), over 15 rounds (5.4 magazines). In sum, the average respondent (who indicated that they have owned a magazine that holds more than 10 rounds), owns about 9.6 rifle magazines, and about three-quarters of these magazines hold more than 10 rounds. Building on earlier estimates, this suggests that U.S. gun owners have owned up to 273 million rifle magazines that

hold over 10 rounds.

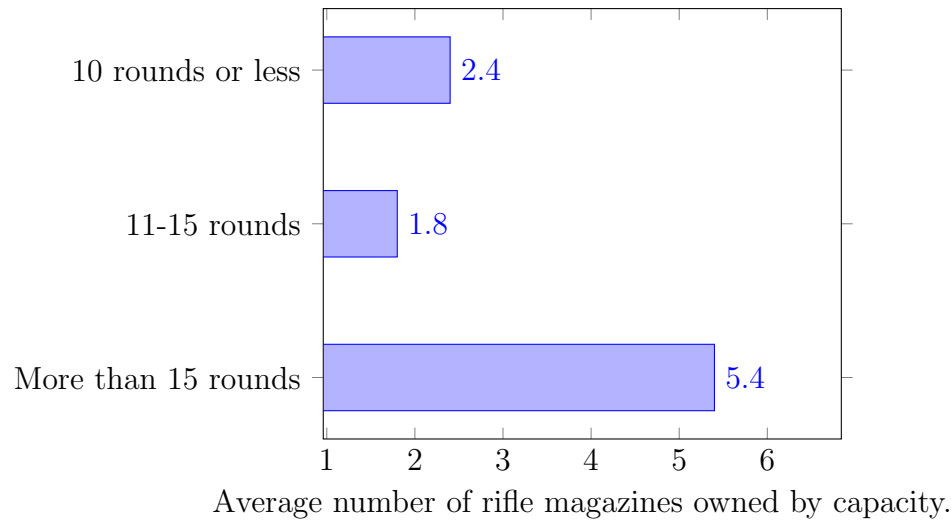


Figure 14: About how many rifle magazines of each type would you estimate you have owned?

These estimates suggest that Americans have owned some 542 million rifle and handgun magazines that hold over 10 rounds. Finally, note that these questions about the types of magazines owned were only asked of those who indicated that they had owned a magazine that holds more than 10 rounds, and thus we do not know how many magazines up to 10 rounds are owned by the 52.0% of gun owners who are not in this category.

Table 3 shows the breakdown of ownership of magazines that hold over 10 rounds across different demographic segments.

Table 4 shows the percentage of gun owners in each state who indicated that they have owned magazines that hold more than 10 rounds. Note that this question explicitly instructed respondents that “You can count magazines that you may keep in another state if there are local restrictions against ownership.” This presumably explains the relatively high rates of ownership in states that restrict the purchase or ownership of such magazines. It’s also possible that those answering in the affirmative possess magazines that were grandfathered in because they were acquired before such bans or that some respondents have gotten rid of magazines that they owned in the past.

Another dynamic that likely contributes to such differences in ownership rates derives

Demographic Group	Proportion Owned 11+ Mags	95% Confidence Interval
White	47.0%	46.1% – 47.8%
Black	55.2%	52.2% – 58.2%
Asian	50.0%	44.8 – 55.2%
Native American	52.6%	47.7% – 57.4%
Pacific Islander	59.1%	47.4% – 69.9%
Other Ethnic Ancestry	59.6%	53.3% – 65.6%
Hispanic (any ancestry)	61.6%	58.3% – 64.7%
Male	57.7%	56.7% – 58.7%
Female	34.1%	33.0% – 35.3%

Table 3: Demographics of ownership of magazines that hold more than 10 rounds.

from the fact that in states with low rates of firearms ownership, such as DC and Hawaii, those few individuals who do own guns are presumably more likely to be gun enthusiasts. Indeed, analysis of the survey data reveals that states with higher rates of firearms ownership are associated with slightly lower rates of ownership of magazines that own over 10 rounds, and this difference is statistically significant (coef = -0.36, p=.03).

Given that such a large percentage of gun owners indicated that they owned magazines that hold over ten rounds for defensive purposes, we further analyze the potential value of these magazines for defense. Recall that a majority of defensive incidents involved multiple assailants (51.2%). Presumably, it would be advantageous to have a firearm with a larger capacity magazine if one needed to engage more than one assailant, which these responses suggest is indeed common. Although in most defensive gun uses the gun was not fired (81.9%), we can further analyze the subset of incidents in which a gun was fired. In 67.8% of these cases in which a gun was fired in self defense, multiple rounds were fired.

As part of the self-defense section of the survey, respondents were invited to answer an open response question that asked: “Have you ever been in a situation (including any referenced in earlier responses) in which it would have been useful for defensive purposes

State	Owned 11+ cap. mags	95% Confidence Interval
Alabama	48.1%	42.7% – 53.6%
Alaska	52.7%	39.6% – 65.4%
Arizona	47.5%	42.3% – 52.8%
Arkansas	50.7%	44.1% – 57.3%
California	53.8%	51.0% – 56.5%
Colorado	51.4%	45.3% – 57.4%
Connecticut	42.6%	34.4% – 51.3%
Delaware	50.6%	39.8% – 61.5%
District of Columbia	69.2%	49.5% – 83.8%
Florida	46.9%	43.9% – 49.8%
Georgia	52.4%	48.7% – 56.2%
Hawaii	59.3%	40.3% – 75.8%
Idaho	45.4%	36.7% – 54.4%
Illinois	51.5%	47.3% – 55.6%
Indiana	46.5%	41.8% – 51.2%
Iowa	35.4%	28.0% – 43.6%
Kansas	42.2%	35.4% – 49.4%
Kentucky	43.7%	38.5% – 49.0%
Louisiana	47.4%	41.1% – 53.8%
Maine	37.9%	28.7% – 48.0%
Maryland	50.8%	43.7% – 57.8%
Massachusetts	53.3%	45.7% – 60.8%
Michigan	37.1%	33.2% – 41.1%
Minnesota	39.8%	34.0% – 46.0%
Mississippi	44.6%	37.3% – 52.2%
Missouri	50.6%	45.8% – 55.5%
Montana	52.6%	39.8% – 65.1%
Nebraska	45.5%	35.9% – 55.3%
Nevada	61.0%	52.8% – 68.5%
New Hampshire	43.9%	31.6% – 56.9%
New Jersey	52.2%	46.5% – 57.8%
New Mexico	49.2%	36.9% – 61.5%
New York	54.9%	51.8% – 58.0%
North Carolina	43.9%	39.9% – 47.9%
North Dakota	44.4%	24.0% – 67.0%
Ohio	42.0%	38.4% – 45.7%
Oklahoma	47.5%	41.7% – 53.4%
Oregon	49.8%	42.9% – 56.6%
Pennsylvania	39.6%	36.0% – 43.2%
Rhode Island	55.3%	39.5% – 70.1%
South Carolina	42.8%	37.7% – 48.0%
South Dakota	50.0%	40.2% – 59.8%
Tennessee	44.1%	39.5% – 48.7%
Texas	54.1%	51.3% – 56.8%
Utah	46.8%	38.2% – 55.6%
Virginia	47.5%	42.7% – 52.4%
Washington	53.1%	47.8% – 58.4%
West Virginia	44.8%	37.7% – 52.1%
Wisconsin	33.6%	28.5% – 39.0%
Wyoming	63.0%	51.4% – 73.3%

Table 4: Percent of gun owners who have indicated that they have ever owned magazines that hold over 10 rounds by state. Note that this includes magazines that an owner holds in other states if there are local ownership restrictions.

to have a firearm with a magazine capacity in excess of 10 rounds? If so, please briefly describe that situation.” Approximately 550 respondents gave a affirmative response with most sketching out details of the encounter. Examples of these responses (reported verbatim) include:

- I got jumped by multiple people in a carjacking in front of our apartments with my wife and children.
- Yes. I was robbed on a street 1 time by a group of about 6 people that at least 1 was armed and I wasn't. It took about 6 hours of emergency surgery to get my bones in face jaws and skull back in place from being beaten in the head face kicked all over. Damn near killed me.
- Yes, a man broke into our apartment, high. He was approx 6'4, 300 pounds & threw a friend of ours around the living room like a rag doll. Beat her repeatedly.
- Yes. The first incident I mentioned. Three men attempted to rob me outside my home, with the intention of entering my home thereafter. My wife and child were inside the home at the time. That was in California with a magazine that only held 7 shots. I am a great shot, prior military and other firearms training, but I hate to only have 7 shots with three people. In such a situation, very well trained people, pumped up with adrenalin can and do miss their target. Thank you.
- Yes, absolutely. I am mobility challenged and was walking my dog one day. Three men ambushed me from behind, but luckily my dog chased them away. My dog actually bit one of the men.
- On the farm, we have had mountain lions killing our calves so a larger animal could require more rounds
- When two people attacked my company's warehouse
- Yes, I was alone with my son and 3 large men were trying to break in, I was unable to reload, thank goodness they realized and left.

- I was charged by a bear. It was very scary in the moment I panicked and rattled over multiple shots. Most missed but some hit home and eventually stopped him.
- Yes. I went in but into a store and 4 thugs approached me telling me to give them money. I produced my handgun at my side and they left. If this had been a shooting with multiple bad guys with guns a 15 round magazine is best.
- When I was a teenager 4 guys did a home invasion at our house. I could easily see needing a 20 to 30 round clip would be necessary.. we didnt have weapons and my mom and dad were hurt pretty bad. Dad was stabbed 4 times and they had a gun too. Thats when I decided when I was on my own that I would have protection.
- About 20 coyotes attacked some of my livestock. It took two 30 round magazines to repel the animals and then only after killing 10 of them.
- Yes. I was surrounded by would-be assailants in a perking lot. I was able to escape unharmed, but if they had rushed me, I would most certainly had to lay down a rapid field of fire, alternately in various directions. In that scenario, I probably would have missed the targets and needed multiple, rapid follow-up shots to hit or at least dissuade the attackers from pressing forward. Only a firearm with 10 or more round magazine would offer that kind of defensive capability.
- Had several people trespass on my property doing something illegal and when I called the police said it would be a while before they could come out so when I asked the people to leave they threatened to kill me but after they seen that I was open carry the left if the situation went a different way I dont know if I would have been about to protect myself with as many of them as there was
- The time when there were 4 people in my home and I was fearful of being hurt and my concern was do I have enough rounds to protect myself what if I missed if I had to fire the weapon .
- Yes. Been stalked by a pack of coyotes while hiking with my children

- Yes when I had more than one person trying to break into my car. I live out in the country so I do not have time to wait for police to get to me I have to act fast and protect myself and my family.
- Yes, I ran into a situation where there were numerous criminals breaking the law and rioting at a public venue during an annual festival event. They were blocking my self and my friends, two of which were females, from leaving the area as well as preventing the police from reaching us. I was very glad that I had multiple magazines that had more then a 10 round capacity.
- 2 men broke into my home while I was sleeping. I woke up and heard them breaking stuff downstairs. I grabbed my gun and ran down stairs and confronted them. I pointed my gun at them and told them to get out. They ran off.
- I was stopped at a red light. Car in front of me backed up and the car behind me pulled up to my bumper. Both drivers got out and approached both sides of my car. Light turned green. I gassed it pushing the car in front of me out of the way. They had bats to break my windows. Would've robbed me I think. Was under a overpass.
- Twice it was people attempting to break into my home I was alone age 64 and 4 burly men thought no one was home as I had been napping. They learned quickly this old lady was not without protection. They saw the gun and quickly left. I called 911 and they were appended they had been robbing homes for 6 weeks in the area. Those home who had guns they left and went elsewhere. Another time people a group wanted a big party came to the wrong road half were drunk or stoned. I had small children. There was finally someone sober enough to see I had a gun and that I meant business it was the middle of the night and they wanted to party but had the wrong road. The sane person got them to all leave and they never came back. We had no phone at that time. The third time was a cougar attacking my livestock. It ran off but had killed 4 goats. We called the game warden they had a special hunt and killed it as we had been the 4th place hit it had killed livestock. We have had cougar on our property in our yard 3 times since once my son shot one stalking him and his dog the other time

it ran off before he could get his gun ready.

- yes, but not at home, we were camping in prescott arizona and several men came up and wanted to harass and steal from our family. We all felt very threatened and if another couple of people had not shown up with their guns the people would have over ran us and my family would have been hurt.
- It could have helped during a robbery at my residence where 4 intruders entered my home
- I was a small business owner before I became disabled. I would often carry large amounts of cash. On more than 1 occasion I was faced with pulling my weapon or lose my cash
- I was walking a long distance through Philadelphia to get to a restaurant and was approached by 3 men who demanded to know why I thought I could go through their neighborhood. I told them I did not want any trouble and tried to continue walking but one stood in my way and asked if I actually thought I was going to leave without answering them. I began to wonder if I was going to be robbed or assaulted when they first approached and at this point it seemed like they would prevent me from leaving. I lifted my shirt and placed my hand on a pistol I was legally able to conceal carry and said yes I would be leaving. They backed away from me but continued to yell things at me as I left the area. I never pulled the gun out, but them knowing I had it and may use it to stop them was enough to escape unharmed. Having less than 10 rounds against 3 attackers, especially if they were also armed, would have put me at a disadvantage if I was unable to accurately hit my targets initially and they continued to Pursue me.
- Yes, I was in Illinois, which does not honor Indiana concealed carry. I had to leave my firearm at home. This was truly the only time in my life I felt I needed to actually use a firearm, but almost was killed. 4 men (3 with guns displayed and 1 with a knife in his hand) were walking up to me fast in a parking lot screaming stop and give me everything you have. The parking lot was near empty, and dark outside. I was able

to unlock my car while running, start the car and speed off. Just as I got in the car, I had just enough time to lock the door before the 3 men pointed their guns at the car and the other was stabbing the window with a knife. They intended to rob and kill me. A couple rounds were fired as I sped off. I would have needed minimally 10 rounds if I had discharged given their distancing. I almost died because of Illinois law and my street smarts and luck was the only thing that saved me

- Yes An incident occurred when a man was drunk and crashed his car in front of me while I was carrying my 2 small children. A large group of his friends tried to get the drunk away before the police arrived. A fight started with them punching my elderly dad and threatened my elderly mother with violence.
- I was confronted then attacked by a group of about 12 teens when I was a teenager. They kicked me and caused a severe head injury and fractured ribs. I was defenseless. Being able to brandish a weapon with the capacity to take on a group of that size would have deterred their next step of physically assaulting me
- The two large males that attempted to break into my home. Much larger than myself. A 9mm would take several shots to slow down either and/or both.
- Yes. I am a 5'2" disabled female. I was stalked by a homeless drug addict. He was detained 4-5 times due to red behavior because he was high on methamphetamine. This person could have potentially done great harm to me. Meth addicts don't always go down easy. Sometimes it takes numerous rounds to get them down.
- My brother and I were robbed at gun point when one of the men got in the car with me after my brother got out of the car. The man had already told my brother that he wanted his money and that there were other people watching across the parking lot in case he had any problems with us. So when my brother got out, that man got in with a gun and stuck it right into my right side. He told me not to look at him and to give him all my money. With the other men standing in different positions in the parking lot my brother could have tried to shoot them (or at them) to try and scare them off

and if he could have had a larger capacity magazine he could have been able to fire more rounds at them to keep them away while we tried to get help from someone.

Finally, it is worth noting that, although a majority of these scenarios involve the prospect of defending against criminal aggression, a number involve defending against animals. The pilot survey in Vermont similarly documented a number of incidents involving animals (see Appendix A). This is a phenomenon that has been largely neglected in the scholarly literature examining the value of firearms for self-defense, and it would be helpful for future research to evaluate the frequency with which firearms are employed in defense against animal threats.

5.3 Ownership of AR-15 and similarly styled rifles

All gun owners were asked, “Have you ever owned an AR-15 or similarly styled rifle? You can include any rifles of this style that have been modified or moved to be compliant with local law.” 30.2% of gun owners, about 24.6 million people, indicated that they have owned an AR-15 or similarly styled rifle. Using survey weights based on in-survey demographics of firearms ownership has no effect on this estimate. Respondents were then asked to indicate how many of such rifles they have owned. Approximately 99.7% indicated owning under 100 and 98.4% under 10. In order to provide a conservative estimate of ownership rates and to ensure that average estimates are not skewed by a small number of large outliers, we disregard the 0.3% that indicate owning over 100 in calculating average ownership numbers. Among those who indicate having owned AR-15 and similarly styled rifles, they indicate having owned an average of 1.8, with the median owner having owned 1. This suggests that up to 44 million AR-15 styled rifles have been owned by U.S. gun owners. Note, again, that this estimate is based on a question that asks whether someone has ever owned such a rifle, so this estimate should be interpreted as an upper bound on current ownership given that some rifles may have been resold.

Figure 15 shows the percentage of respondents who indicated that they owned AR-15 styled rifles for the following purposes: defense outside the home (34.6%), home defense (61.9%), competitive shooting sports (32.1%), recreational target shooting (66.0%), hunting (50.5%), and other (5.1%). Note that respondents could choose multiple purposes for which

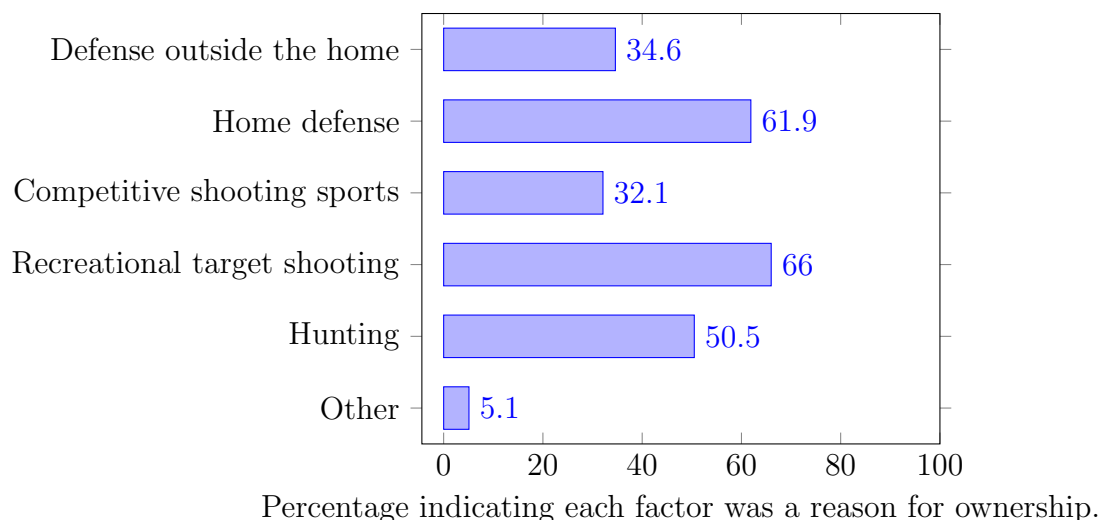


Figure 15: Purposes indicated for owning AR-15 styled rifles.

they owned such firearms. Home defense and recreational target shooting were the two most common reasons indicated for owning these magazines, with approximately two-thirds of respondents identifying each of these as a rationale for ownership.

Demographic Group	Proportion Owned AR-15 Styled Rifle	95% Confidence Interval
White	29.6%	28.9% – 30.4%
Black	34.0%	31.0% – 37.1%
Asian	29.2%	24.6% – 34.2%
Native American	35.4%	30.8% – 40.3%
Pacific Islander	48.4%	36.3% – 60.7%
Other Ethnic Ancestry	34.6%	28.8% – 41.1%
Hispanic (any ancestry)	38.3%	35.0% – 41.8%
Male	36.4%	35.5% – 37.4%
Female	21.3%	20.3% – 22.3%

Table 5: Demographics of ownership of AR-15 styled rifles.

Table 5 shows the breakdown of ownership of AR-15 styled rifles across different demographic segments. As this table demonstrates, AR-15 styled rifles are commonly owned at

high rates across many different demographic groups.

Table 6 shows the percentage of gun owners in each state who indicated that they have owned AR-15 styled rifles. Note that this question explicitly instructed respondents that “You can include any rifles of this style that have been modified or moved to be compliant with local law.” Thus, as with magazines, these answers can include firearms that are kept in other states, as well as firearms that were grandfathered in or modified to be compliant with local law, or respondents who have since sold or disposed of such guns. This presumably explains the relatively high rates of ownership in states that restrict the purchase or ownership of such firearms.

6 Conclusion

This report summarizes the main findings of the most comprehensive survey of firearms ownership and use conducted in the United States to date. While many of its estimates corroborate prior survey research in this area, it also provides unique insights that are relevant to timely public policy debates, particularly regarding the defensive use of firearms and the ownership and use of AR-15 styled rifles and magazines that hold over 10 rounds.

This survey finds firearms ownership rates slightly above those documented before the Covid-19 pandemic, which is consistent with other recent scholarly research finding a large surge in firearms purchases during the pandemic, particularly among first time buyers (Crifasi et al., 2021; Miller et al., 2022).

In sum, about 31.9% of U.S. adults, or 81.4 million Americans, own over 415 million firearms, consisting of approximately 171 million handguns, 146 million rifles, and 98 million shotguns. About 24.6 million individuals have owned a up to 44 million AR-15 and similarly styled rifles, and 39 million individuals have owned up to 542 million magazines that hold over 10 rounds. Approximately a third of gun owners (31.1%) have used a firearm to defend themselves or their property, often on more than one occasion, and guns are used defensively by firearms owners in approximately 1.67 million incidents per year. A majority of gun owners (56.2%) indicate that they carry a handgun for self- defense in at least some circumstances, and about 35% of gun owners report carrying a handgun with some frequency.

State	Owned AR-15 Style Rifle	95% Confidence Interval
Alabama	28.9%	24.1% – 34.3%
Alaska	37.0%	24.4% – 51.6%
Arizona	28.8%	24.2% – 34.0%
Arkansas	35.0%	28.7% – 41.8%
California	37.5%	34.8% – 40.2%
Colorado	33.3%	27.7% – 39.5%
Connecticut	21.8%	15.3% – 30.2%
Delaware	20.3%	12.6% – 30.9%
District of Columbia	30.0%	14.1% – 52.7%
Florida	28.1%	25.5% – 30.9%
Georgia	31.4%	27.9% – 35.1%
Hawaii	34.6%	19.1% – 54.3%
Idaho	31.0%	23.3% – 40.0%
Illinois	32.6%	28.7% – 36.7%
Indiana	30.8%	26.5% – 35.5%
Iowa	27.1%	20.4% – 35.1%
Kansas	28.4%	22.4% – 35.4%
Kentucky	29.9%	25.2% – 35.1%
Louisiana	27.5%	22.0% – 33.7%
Maine	22.0%	14.6% – 31.6%
Maryland	29.9%	23.7% – 36.9%
Massachusetts	33.8%	26.9% – 41.4%
Michigan	24.9%	21.5% – 28.6%
Minnesota	20.7%	16.1% – 26.3%
Mississippi	30.4%	23.8% – 38.0%
Missouri	28.0%	23.8% – 32.7%
Montana	26.8%	16.8% – 39.8%
Nebraska	22.4%	15.3% – 31.8%
Nevada	42.4%	34.6% – 50.6%
New Hampshire	23.2%	14.0% – 36.0%
New Jersey	30.7%	25.7% – 36.2%
New Mexico	29.5%	19.4% – 42.1%
New York	37.8%	34.8% – 41.0%
North Carolina	25.6%	22.2% – 29.4%
North Dakota	44.4%	24.0% – 67.0%
Ohio	25.9%	22.7% – 29.4%
Oklahoma	29.3%	24.1% – 35.0%
Oregon	25.6%	20.0% – 32.2%
Pennsylvania	24.4%	21.3% – 27.8%
Rhode Island	29.7%	17.3% – 46.1%
South Carolina	25.3%	21.0% – 30.2%
South Dakota	35.8%	26.8% – 45.9%
Tennessee	28.9%	24.8% – 33.3%
Texas	36.0%	33.3% – 38.7%
Utah	24.8%	17.9% – 33.2%
Virginia	26.0%	21.9% – 30.6%
Washington	35.3%	30.3% – 40.6%
West Virginia	27.4%	21.3% – 34.5%
Wisconsin	19.7%	15.6% – 24.6%
Wyoming	36.1%	25.9% – 47.8%

Table 6: Percent of gun owners who have indicated that they have ever owned an AR-15 styled rifle by state. Note that this includes rifles that an owner holds in other locations if there are local ownership restrictions and rifles modified to be compliant with local laws.

Finally, the demographics of firearms ownership and defensive use are diverse, with different demographic groups commonly owning and using firearms at substantial rates.

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Appendix A: Vermont Pilot Survey

An initial version of this survey was fielded in Vermont. We report below the top line results from the Vermont survey, which closely mirror the results of the national survey.

In sum, 572 Vermont residents were surveyed, of which 163 indicated owning firearms. The survey sample represented the demographics of Vermont well on all dimensions except gender, as women were over represented and comprised 65.2% of respondents. Thus, weights were employed for gender.

With weighting employed, we find that 30% of Vermont residents own a firearm. Given that the adult population of Vermont is approximately 486,000, this suggest that there are over 145,600 firearms owners in Vermont. 42.1% of Vermont firearms owners are estimated to be female and 57.9% male.

As Figure 16 illustrates, almost a third of gun owners (29.3%) reported having used a firearm to defend themselves or their property (not counting incidents that were due to military service, police work, or work as a security guard). In nearly half of these defensive gun uses (45.9%), respondents reported facing multiple assailants. 85.8% of all incidents were resolved without the firearm owner having to fire a shot (e.g. by simply showing a firearm or verbally threatening to use it).

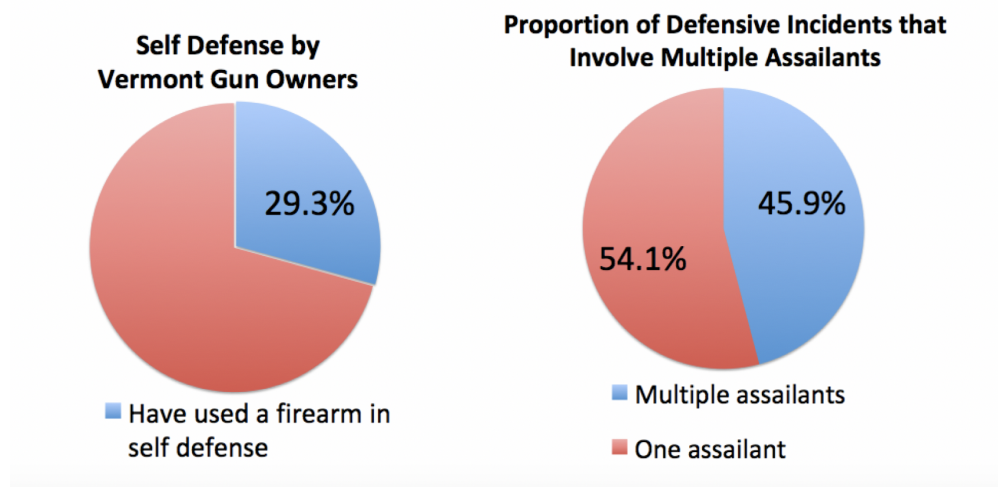


Figure 16: Proportion of gun owners in Vermont who have use a firearm in self-defense and number of assailants involved.

Sample of Vermont responses to open ended question prompt of “Have you ever been in a situation (including any referenced in earlier responses) in which it would have been useful for defensive purposes to have a firearm with a magazine capacity in excess of 10 rounds?”:

- in the first incident it was five to one. I was outnumbered. three rounds per person if needed
- The time I was assaulted by 10 individuals.
- Yes. We have bear that frequently come to our home. They’ve attempted to get into my truck, they have come onto our porch thru the dog door (XL size) they have been in our chicken coops and in our garage. They have damaged many items, destroyed gas grills and threatened my dogs and children. Sometimes a warning shot isn’t enough. And if, God forbid, the bear turned and started to attack us multiple bullets would be needed to stop him.
- About 6 individuals broke into my house one night. I locked myself in my room and they tried to break my door down. I threatened them with use of deadly force, but they kept trying. One of them was outside and broke my bedroom window and I aimed my shotgun at him and he ran off. I threatened again with the sound of charging my shotgun that they knew I wasn’t bluffing and they all fled. Had they entered with the intent to kill my family and I, then we would have been out numbered. If there was an exchange of gun fire, I wouldn’t want to have the restriction of reloading within the time I needed to protect my family and myself. Outgun the enemy or the enemy will surely outgun you. Limiting everyone’s right to weapons is not the answer, and clearly this attempt to ban high capacity magazines is just the catalyst to a government gun grab for easier totalitarian control of the population.
- Yes, i had two run ins with a mountain lion.
- We had a home invasion two times in a month
- Yes. We live in VT. Every time I fired my gun in defense of my property it was to deter bears from damaging my property. It takes more than 1 shot to scare a bear. If

it charges you or your family it'll definitely take a bunch of shots to stop the bear.

- Yes. Just because there are 10 rounds in a magazine does not mean all will be on target during a self defense incident. In 2012 while I was in college in Connecticut, I got jumped by 4 people in Hartford ct. I had nothing on me to defend myself. The men all threatened me with knives and handguns. I wish I was able to carry a firearm at that point.

Appendix B: Sampling Proportions With and Without Weights for National Survey

Gender	Initial Sample Proportions	Census Based Weighted Proportions
Male	49.32%	49.23%
Female	50.68%	50.77%

Age Range	Initial Sample Proportions	Census Based Weighted Proportions
18-20	7.89%	5.04%
21-25	8.11%	8.58%
26-30	7.30%	9.24%
31-35	11.67%	8.67%
36-40	12.66%	8.44%
41-45	8.49%	7.70%
46-50	6.46%	8.09%
51-55	6.37%	8.13%
56-60	7.39%	8.52%
61-65	7.67%	7.87%
66-70	8.03%	6.59%
71-75	5.07%	5.13%
76-80	1.94%	3.50%
Over 80	0.93%	4.49%

Annual Household Income	Initial Sample Proportions	Census Based Weighted Proportions
Less than \$10,000	8.87%	3.40%
\$10,000-20,000	8.95%	4.89%
\$20,000-30,000	9.69%	6.26%
\$30,000-40,000	8.78%	7.06%
\$40,000-50,000	7.44%	7.21%
\$50,000-60,000	7.72%	6.96%
\$60,000-70,000	6.00%	6.96%
\$70,000-80,000	6.37%	6.37%
\$80,000-90,000	4.51%	5.76%
\$90,000-100,000	5.89%	5.76%
\$100,000-150,000	17.67%	19.11%
Over \$150,000	8.12%	20.23%

State of Residence	Initial Sample Proportions	Census Based Weighted Proportions
Alabama	1.83%	1.52%
Alaska	0.39%	0.22%
Arizona	2.10%	2.16%
Arkansas	1.10%	0.91%
California	9.75%	11.95%
Colorado	1.59%	1.75%
Connecticut	1.23%	1.09%
Delaware	0.56%	0.30%
District of Columbia	0.27%	0.21%
Florida	7.29%	6.51%
Georgia	3.67%	3.24%
Hawaii	0.36%	0.44%
Idaho	0.44%	0.56%
Illinois	4.14%	3.87%
Indiana	2.13%	2.05%
Iowa	0.91%	0.96%
Kansas	0.92%	0.89%
Kentucky	1.61%	1.36%
Louisiana	1.23%	1.41%
Maine	0.51%	0.41%
Maryland	1.67%	1.87%
Massachusetts	1.88%	2.13%
Michigan	3.21%	3.05%
Minnesota	1.36%	1.73%
Mississippi	0.83%	0.90%
Missouri	1.93%	1.86%
Montana	0.25%	0.33%
Nebraska	0.53%	0.59%
Nevada	0.90%	0.94%
New Hampshire	0.40%	0.42%
New Jersey	2.97%	2.81%
New Mexico	0.36%	0.64%
New York	8.09%	6.11%
North Carolina	3.18%	3.16%
North Dakota	0.13%	0.24%
Ohio	4.13%	3.57%
Oklahoma	1.32%	1.20%
Oregon	1.05%	1.28%
Pennsylvania	4.30%	3.93%
Rhode Island	0.33%	0.33%
South Carolina	1.68%	1.55%
South Dakota	0.48%	0.27%
Tennessee	2.18%	2.09%
Texas	6.91%	8.81%
Utah	0.56%	0.99%
Virginia	2.43%	2.61%
Washington	2.03%	2.33%
West Virginia	0.71%	0.54%
Wisconsin	1.83%	1.78%
Wyoming	0.32%	0.17%

Race	Initial Sample Proportions	Census Based Weighted Proportions
White	81.26%	76.30%
Black	9.85%	13.40%
Asian	3.98%	5.90%
Native American	2.19%	1.30%
Pacific Islander	0.49%	0.20%
Other	2.22%	2.90%

EXHIBIT 50

JULY 20, 2022

COMMONLY OWNED: NSSF ANNOUNCES OVER 24 MILLION MSRS IN CIRCULATION

NEWTOWN, Conn. — NSSF®, the firearm industry trade association, updated the **industry estimate** of Modern Sporting Rifles (MSRs) in circulation in the United States to 24,446,000 since 1990. That is an increase of over 4.5 million rifles since the last estimate was released in 2020.

The estimate is derived from NSSF research, Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) Annual Firearms Manufacturing and Exportation Report (AFMER) and U.S. International Trade Commission (U.S. ITC) data, in cooperation with manufacturers, importers and exporters of MSRs, or AR-15 and AK-style rifles. This most recent estimate includes production figures current through 2020, when the industry estimates over 2,798,000 of these rifles were produced or imported. This estimate does not include MSRs that were produced and exported or imported and later exported.

R remains the most-popular selling centerfire semiautomatic rifle in the United States today. There are **more** MSRs in on today than there are Ford F-Series trucks on the road.

a truly significant figure that demonstrates – again – the popularity of this commonly-owned style of rifle,” said NSSF President and CEO Joe Bartozzi. “The firearm industry responds to market demand and this shows that during the elevated period of firearm sales that began in 2020, this particular style of rifle is the top choice for law-abiding citizens for hunting, recreational shooting and self-defense.”

The MSR’s **popularity** for lawful ownership is attributable to several factors, including accuracy, reliability, modularity and low recoil.

Estimated Modern Sporting Rifles in the United States 1990 – 2020

Year	US Production less exports of MSR/AR platform	US Import less exports of MSR/AR, AK platform	ANNUAL TOTAL
1990	43,000	31,000	74,000
1991	46,000	69,000	115,000
1992	33,000	72,000	105,000
1993	62,000	226,000	288,000
1994	103,000	171,000	274,000
1995	54,000	77,000	131,000
1996	27,000	43,000	70,000
1997	44,000	81,000	125,000
1998	70,000	75,000	145,000
1999	113,000	119,000	232,000
2000	86,000	130,000	216,000
2001	60,000	119,000	179,000
2002	97,000	145,000	242,000
2003	118,000	262,000	380,000
2004	107,000	207,000	314,000
2005	141,000	170,000	311,000
2006	196,000	202,000	398,000
2007	269,000	229,000	498,000
2008	444,000	189,000	633,000
2009	692,000	314,000	1,006,000
2010	444,000	140,000	584,000
2011	653,000	163,000	816,000
2012	1,308,000	322,000	1,630,000
2013	1,882,000	393,000	2,275,000
2014	950,000	237,000	1,187,000
2015	1,360,000	245,000	1,605,000
2016	2,217,000	230,000	2,447,000
2017	1,406,000	158,000	1,564,000
2018	1,731,000	225,000	1,956,000
2019	1,679,000	169,000	1,848,000
2020	2,466,000	222,000	2,688,000

2020	2,466,000	#9325 552,000	2,798,000
TOTALS	18,901,000	5,545,000	24,446,000

About NSSF

Source: ATF AFMER, US ITC, Industry estimates

The National Shooting Sports Foundation is the trade association for the firearm industry. Its mission is to promote, protect and preserve hunting and the shooting sports. Formed in 1961, NSSF has a membership of thousands of manufacturers, distributors, firearms retailers, shooting ranges, sportsmen's organizations and publishers nationwide. For more information, visit nssf.org.

Media contact:

Mark Oliva

202-220-1340

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EXHIBIT 51

AMERICAN ICON

Why do Americans own AR-15s?

The Washington Post and Ipsos asked nearly 400 AR-15 owners why they own the rifle

By Emily Guskin, Aadit Tambe and Jon Gerberg

March 27 at 6:12 a.m.

The AR-15 is the best-selling rifle in the United States, industry figures indicate. Almost every major gunmaker now produces its own version of the weapon, which dominates gun dealers' walls and websites.

Critics claim that the military-style gun has no legitimate civilian use — yet about 1 in 20 Americans own one. So who chooses to buy an AR-15, and why?

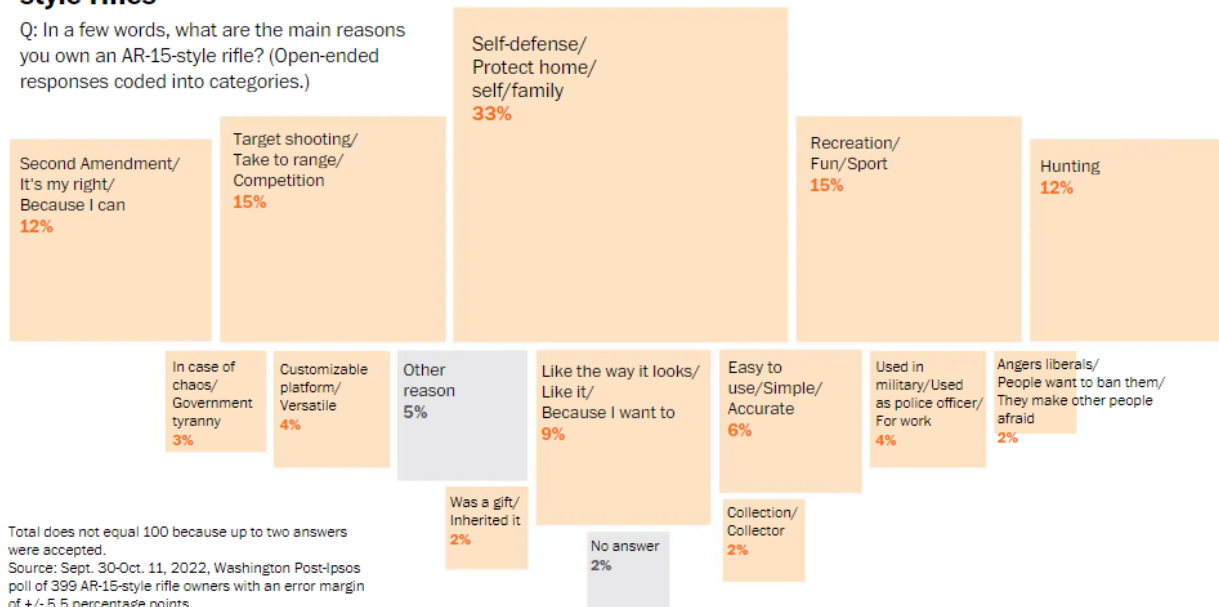
The Washington Post and Ipsos asked nearly 400 AR-15 owners to explain their reasons for having the weapon, what they use it for and how often they fire it.

The survey found that AR-15 owners come from red, blue and purple states. Compared with Americans as a whole, AR-15 owners are significantly more likely to be White, male and between the ages 40 and 65. They're also more likely to have higher incomes, to have served in the military and to be Republican. And AR-15 owners are more likely to live in states former president Donald Trump won in 2020 than adults overall.

Self-defense was the most popular reason for owning an AR-15. Other popular answers included recreation, target shooting and hunting, while some pointed to owning an AR-15 as their Second Amendment right.

Why people own AR-15-style rifles

Q: In a few words, what are the main reasons you own an AR-15-style rifle? (Open-ended responses coded into categories.)

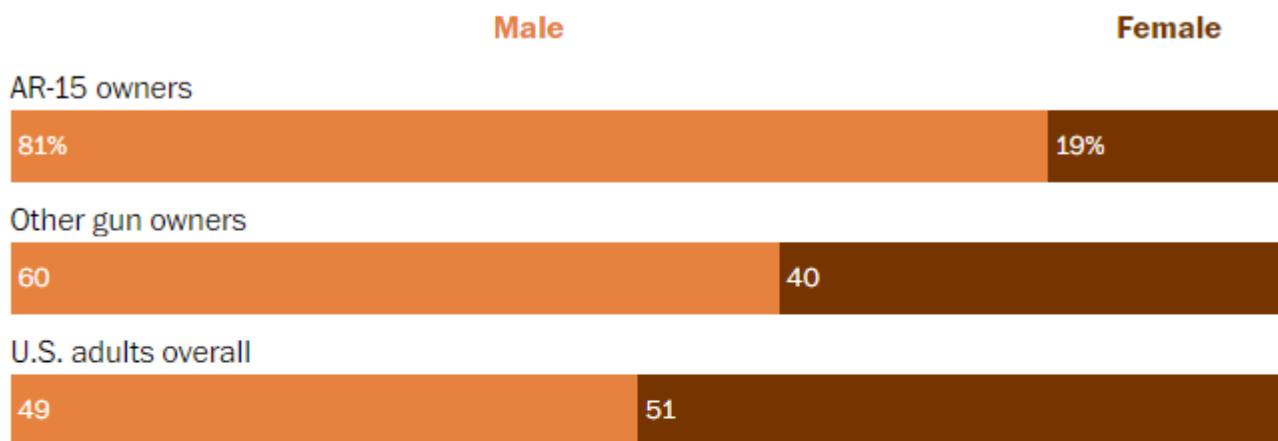


The Post-Ipsos poll is one of the most detailed nationally representative surveys to date focused on the opinions of AR-15 owners.

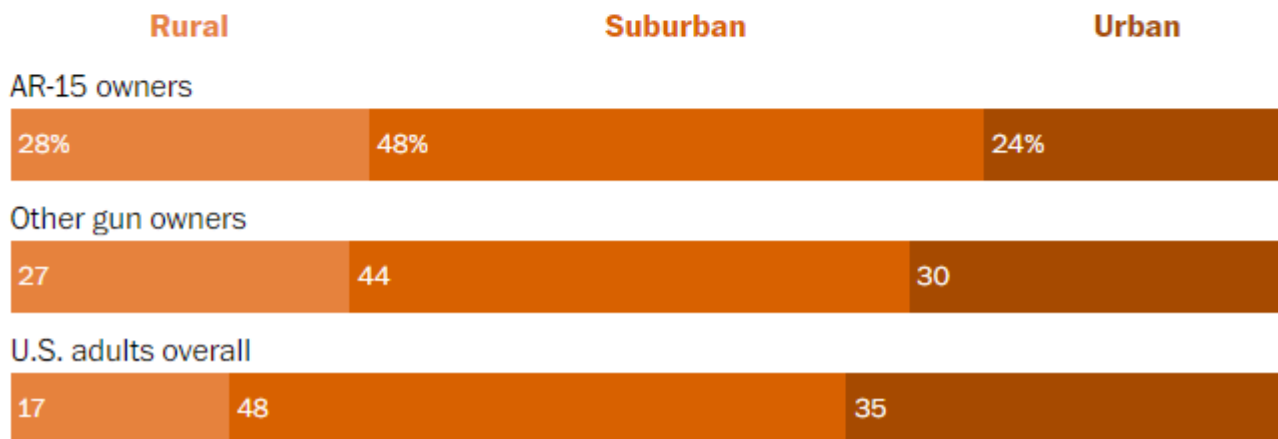
The gun industry estimates there are about 20 million AR-15s in circulation. There is no way to independently confirm that number, but polling can estimate how many Americans own them.

Demographics of AR-15 owners

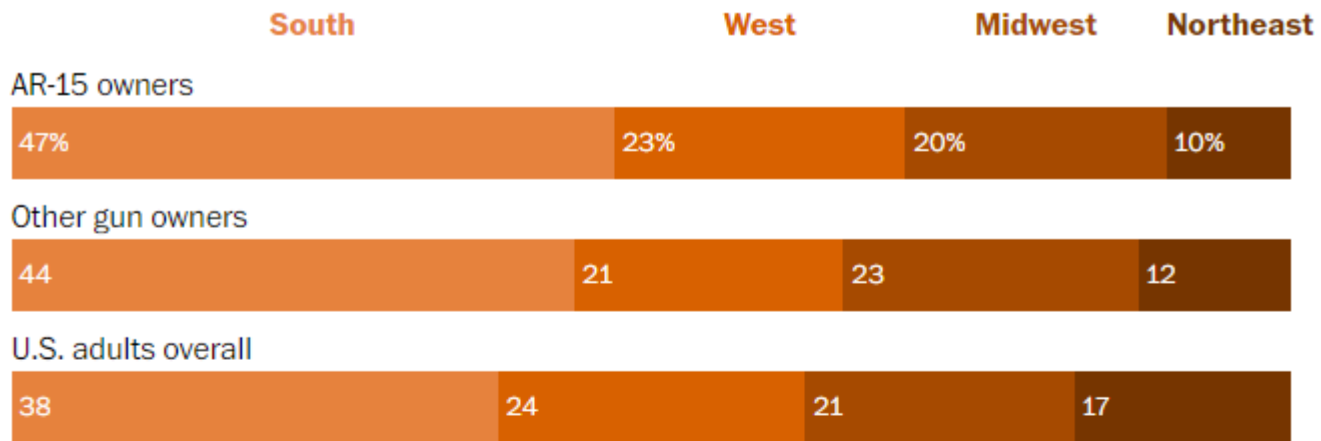
GENDER



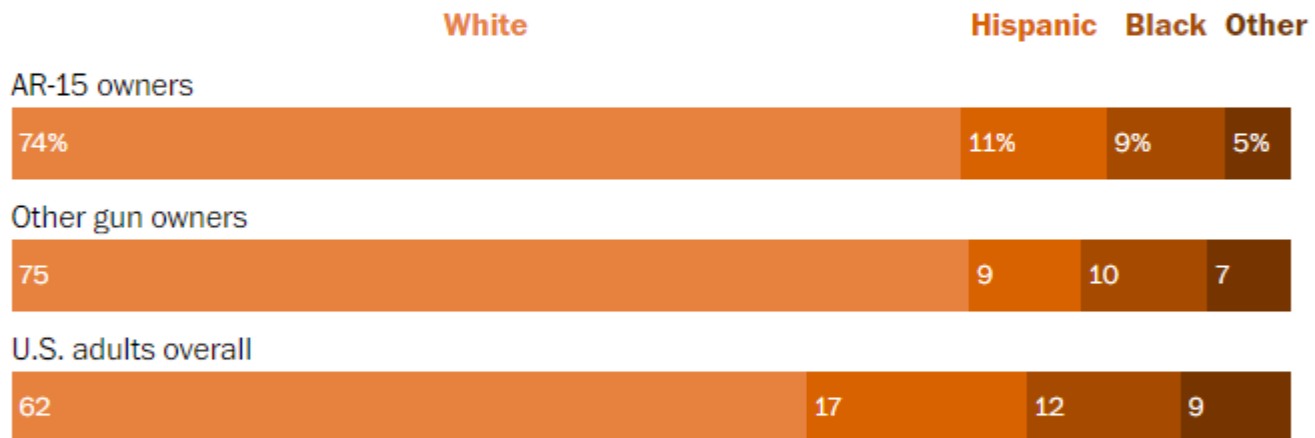
GEOGRAPHY



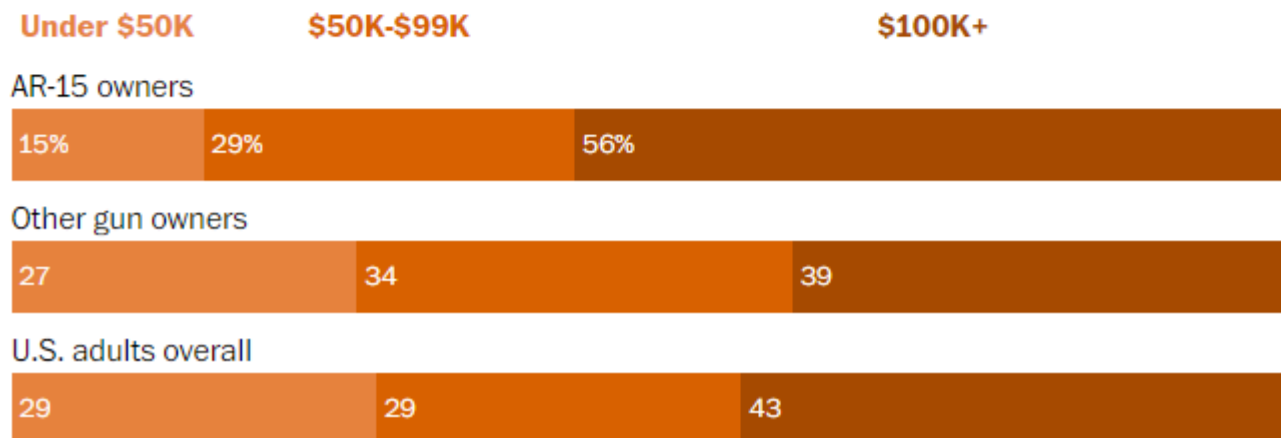
LOCATION



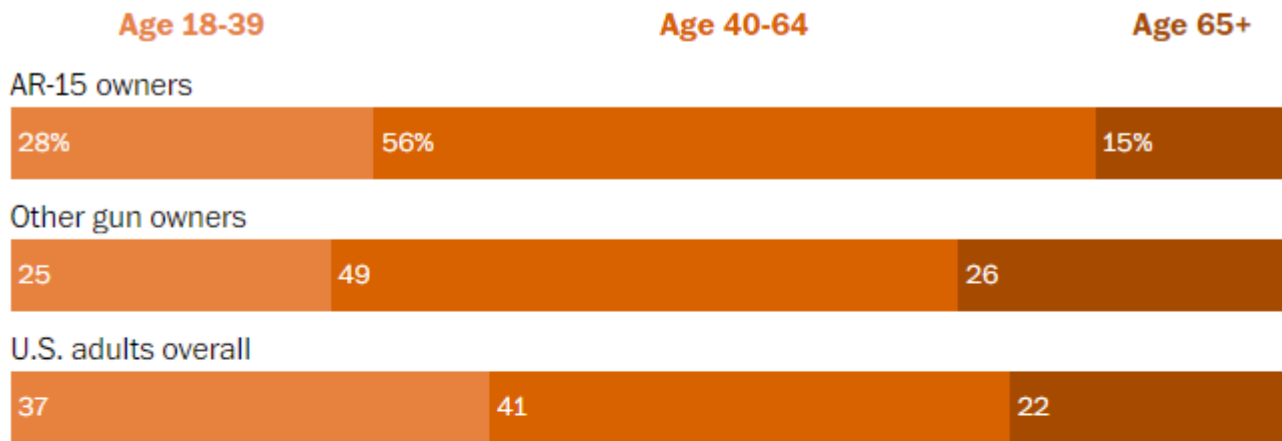
RACE



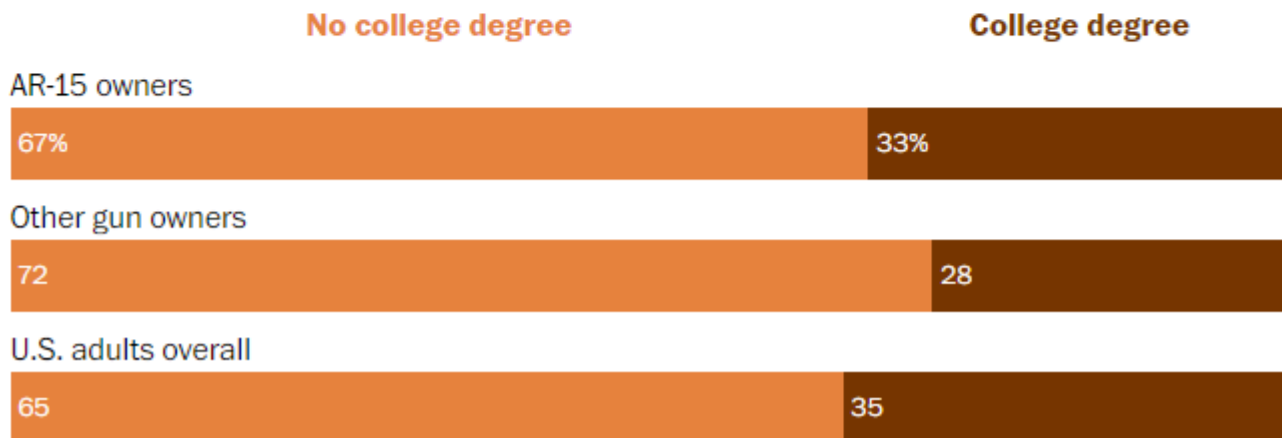
INCOME



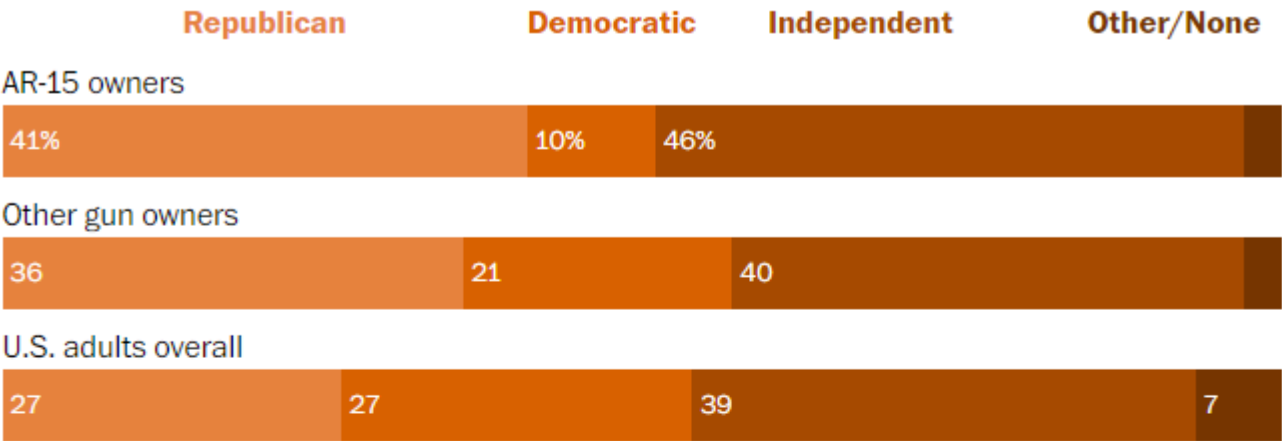
AGE



EDUCATION



POLITICAL PARTY



MILITARY SERVICE



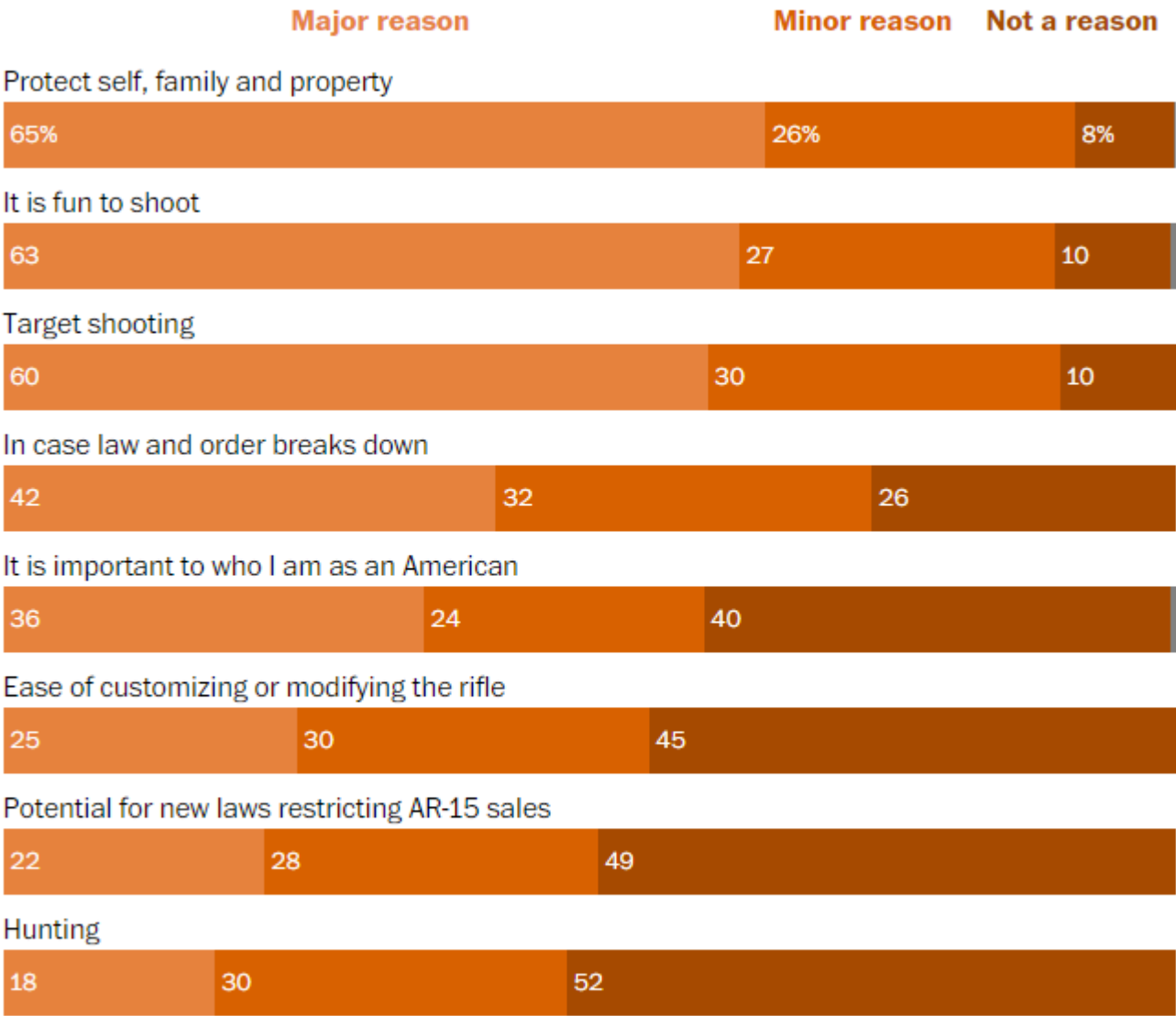
Note: Totals may not equal 100 because of rounding.

Source: Sept. 30-Oct. 11, 2022, Washington Post-Ipsos poll of 2,104 gun owners including 399 AR-15-style rifle owners with an overall error margin of +/- 2.5 percentage points and 5.5 points among AR-15 owners. Most U.S. adult demographics based on Census Bureau's 2022 Annual Social and Economic Supplement; Urban/Suburban/Rural from Ipsos KnowledgePanel estimate; party identification from November 2022 Washington Post-ABC News poll.

National surveys by Ipsos in 2022 found that 31 percent of adults own guns. The Post-Ipsos survey of AR-15 owners estimates that 20 percent of gun owners own an AR-15-style rifle. Taken together, the polls find that 6 percent of Americans own an AR-15, about 1 in 20.

The data suggests that with a U.S. population of 260.8 million adults, about 16 million Americans own an AR-15.

Is each of the following a reason why you own an AR-15?



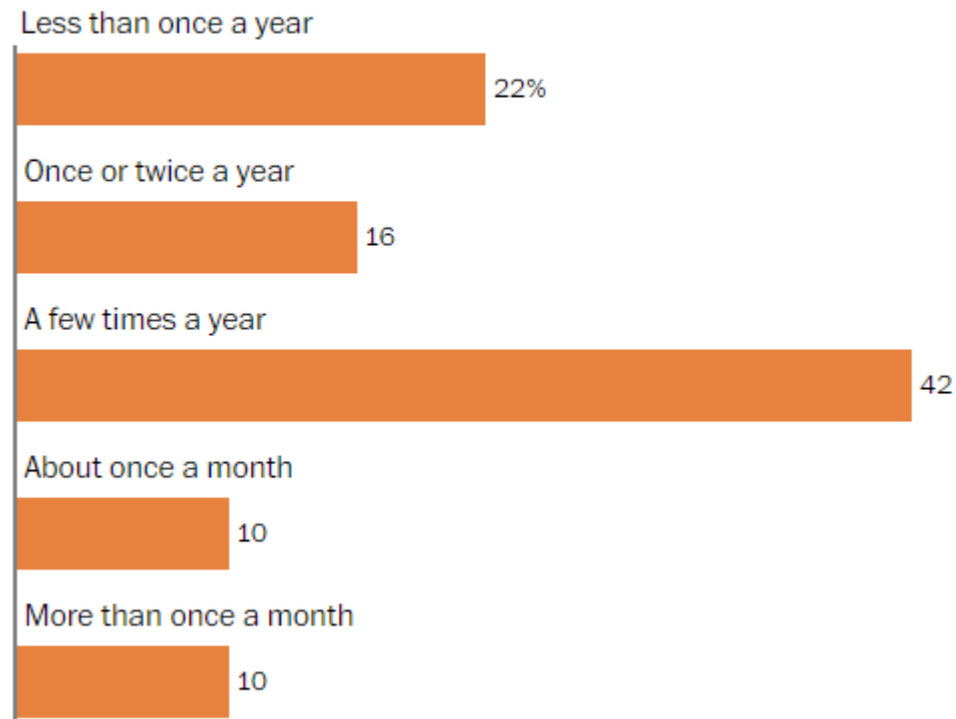
Note: "No opinion" indicated in gray. Totals may not equal 100 because of rounding.
 Source: Sept. 30-Oct. 11, 2022, Washington Post-Ipsos poll of 399 AR-15-style rifle owners with an error margin of +/- 5.5 percentage points.

“To ensure I would not be outgunned if I had to defend my family and property with the rate that society is going.”

A 52-year-old man

AR-15 owners are not firing their weapons frequently

Q: How often do you fire your AR-15(s)?



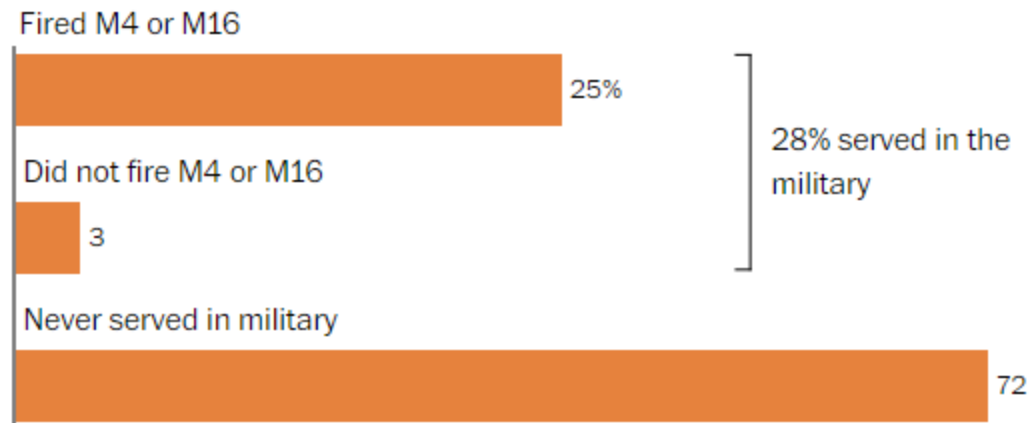
Source: Sept. 30-Oct. 11, 2022, Washington Post-Ipsos poll of 399 AR-15-style rifle owners with an error margin of +/- 5.5 percentage points.

“I own it to protect my family members.”

A 52-year-old woman

Military training and AR-15 usage

Q: In military training or combat, did you ever fire an M4 or M16?



Source: Sept. 30-Oct. 11, 2022, Washington Post-Ipsos poll of 399 AR-15-style rifle owners with an error margin of +/- 5.5 percentage points.