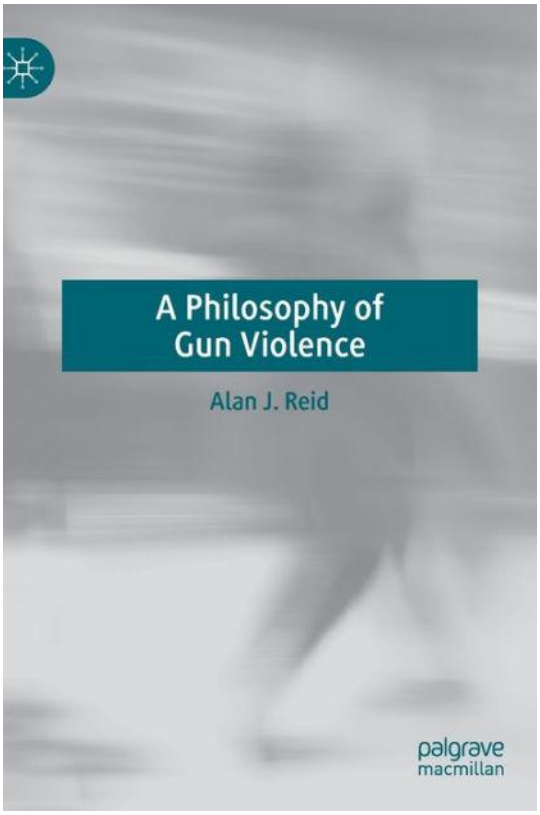
A Philosophy of Gun Violence

Alan J. Reid



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Preface

I am not anti-gun. Let me be forthright about that. I view the gun as a burdensome technology that presents complicated ethical, moral, and philosophical convictions, but I also see the gun as a technological achievement with an impressive lineage of innovation that continues to this day. I respect the tradition and the constitutional rights of modern gun owners, and I acknowledge that the vast majority of gun owners are responsible and well-intentioned. However, I do believe there should be sensible restrictions on the types and number of guns that someone can own, who should possess guns, as well as the places that guns should be permitted. In doing research for this book over the last couple of years, I spoke with numerous experts who asked me why I wanted to write a book on guns. I was cautioned on more than one occasion that this pursuit would make me more enemies than friends. However, this is not simply a book about guns; it is a book about the intersection between humanity and the technological design of artifacts. The gun is a working proxy for this relationship.

To be clear, this book is not a personal opine on guns. It is not a condemnation of gun culture, a virtue-signaling social critique on gun violence, nor a textual handwringing over the epidemic of school shootings, violent crime, armed protests, or the militarization of police forces in this country, which are all underwritten by the gun. I do address the residual effects of the gun, but I do so through a philosophical meditation on the behavioral and persuasive design of the gun and the consequences that result from its use. I am channeling technology philosophers like Don Ihde, Neil Postman, Langdon Winner, and Bruno Latour, who argued that holding a gun fundamentally changes our outward perspective on the world, as well as the way that we view ourselves. Summarily, this book extends the argument that although people are not wholly exculpable, the function of the gun follows its form; in other words, the gun begets the gunner. When holding a hammer, we look for nails. When holding a gun, we look for opportunities to use it. This book deconstructs the gun as a non-neutral technological artifact and explores how it shapes the individual reality and behaviors of the holder, and by extension, argues that the gun creates more problems than it solves. Gun apologists view the gun as both a peacemaker and a peacekeeper, but by design, the gun is the antithesis to peace.

Whether we like it or not, guns are deeply rooted in the fabric of American society, and they are here to stay. People from all backgrounds use guns for many different

reasons. Some go to the shooting range to hone their marksmanship (for sport and for self-defense purposes). Others shoot guns for therapeutic reasons, venting their frustration with something or someone that has wronged them. Some use guns to feel socially gratified and to identify with others through a shared interest, not unlike those who frequent the gym or the bar to fulfill the same human need for community and belongingness. Most claim gun ownership for self-defense purposes, though this bogeyman rarely materializes, and it is more likely that the gun fulfills its own self-prophecy of harm. Regardless of the reason for its use, the gun has been galvanized as an American institution, emblematic of freedom and autonomy, which compels us to view it as more than just a violent weapon. It is an artifact that carries with it a subtext of social, cultural, and political cache. The gun tells us a story; it is a text that is meant to be read by the user and by others.

So, why write this book now? This past year, after a school shooting incident at a local high school, the school board responded by recommending that area schools install metal detectors at every entrance, increase the presence of armed School Resources Officers (SROs) on campus, and require all students to carry clear backpacks. There is serious talk about arming teachers in the classroom and proposed legislation to incentivize teachers with additional pay to do so. This misdirection has become commonplace following gun violence. More generally, as the rate of gun ownership increases and the instances of gun violence trend upwards, gun lobbyists and organizations simultaneously push to relax gun-carrying laws in public spaces. Therefore, I feel it is worthwhile to examine how guns impact not just the carrier, but everyone around him or her. It is necessary first to understand how the non-neutrality of guns amplifies dangerous behaviors and then evaluate whether this is socially, morally, and ethically corrosive in a modern civilization. It is obvious that the typical arguments for and against gun rights do little to convince either side. So instead, this book will cite a blend of philosophical approaches, including Don Ihde's postphenomenology, Peter-Paul Verbeek's philosophy of technological artifacts, and Bruno Latour's ActorNetwork Theory as well as other theories of behavioral and persuasive design, to reveal the gun as an active force in individual use and decisionmaking. I use theoretical frameworks like Value-Sensitive Design (VSD), Responsible Innovation (RI), and Design for Wellbeing (DfW) to argue that gun manufacturers and distributors have a social and ethical responsibility to counter the gun epidemic by designing and selling a safer product. Let's cut through the typical noise that surrounds the gun debate and concentrate instead on the one thing that is common in all gun violence: the gun.

At its core, the gun is a weapon of destruction—a killing tool—that facilitates homicide, mass murder, school shootings, accidental shootings, suicide, aggravated robbery, and intimidation. Critics of this book will be quick to point out that the gun also can save a life, prevent a robbery, provide food for a family, and create a sense of personal freedom and security, and they would be right. However, it is entirely dishonest to present these two views as being equivalent. It is not my intention to argue that all guns should be confiscated or abolished. It is the goal of this book to

show the reader that guns, through their design, deliberately encourage and streamline purposeful behaviors and should be governed accordingly. Like many other technologies, guns are perceived mistakenly as neutral tools that bend to the will of their users. But the philosophy of technology shows us that guns are an inherently non-neutral and political artifact, predisposed for an intentional use: destruction. While most examine only the result of the gun use (*how* it is used), I present a nuanced interpretation of gun culture by rejecting the often-cited Value-Neutral Thesis and instrumentalist view of the gun, and instead, explain the lethality of the gun through various behavioral and psychological lenses (*why* it is used).

Chapter 1 of this book provides a survey of the current landscape on guns and gun culture in the United States, illustrating the gun epidemic that is uniquely American. Chapter 2 reviews philosophical frameworks that help explain the intersectionality of technology and culture. Chapters 3 and 4 present views on how the influence of technology might be perceived when personal choice and persuasive design collide. Chapter 5 delves into the constitutionality and politicization of gun ownership and use. Chapter 6 considers how innovation is redefining the gun as a technological object and weighs the implications for making guns even more ubiquitous and accessible in a civilized society.

Kure Beach, NC Alan J. Reid

Acknowledgments

This book was made possible by my wife, Alison, who gave me the assurance and support to write about this divisive subject, and by my four children, who I hope will thrive in a world where guns and gun violence are unfamiliar. I am thankful for those who spoke to me—on and off the record—for this book, providing a wide-ranging consortium of experts on gun culture, behavior, and design. Specifically, I wish to thank the following for their willingness to have an exchange of ideas: criminal researcher, John Lott; design guru, Don Norman; Stanford University professor, B.J. Fogg; and the French philosopher, Bruno Latour, whose work is the foundation for this book and whose words of encouragement mean the world to me.

About the Author

Alan J. Reid is Associate Professor of Writing and Instructional Technologies at Coastal Carolina University and an Evaluation Analyst and adjunct professor at Johns Hopkins University. Dr. Reid earned a PhD in Instructional Design and Technology and writes about the intersectionality of technological design and culture. His previous

book, *The Smartphone Paradox: Our Ruinous Dependency in the Device Age*, was published in 2018.

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1. The Gun Problem

On December 14, 2012, in Newtown, Connecticut, a 20-year-old gunman walked unobstructed into the halls of Sandy Hook Elementary School, where he shot and killed 20 children and 6 adults before taking his own life. Sandy Hook, or the Newtown Massacre as it is sometimes referred to, was especially tragic because most of the victims were kindergarteners aged 6—7. Then-President Barack Obama would later recall the shooting at Sandy Hook as "the worst day of [his] presidency." This day would remind us that life is fragile, and that evil knows no boundaries. It raised questions about the safety of school campuses. It fueled the conversation about a worsening mental health crisis. And it reignited the gun debate in the United States, which had seemingly gone dormant in the periods between previous shooting sprees like the Columbine school shooting in 1999 that killed 15 and the shooting at Virginia Tech University in 2007 that killed 33—the deadliest school shooting in U.S. history up to that point in time (there have been multiple mass shooting events that have since been even deadlier). The Newtown Massacre was indeed horrific, and every parent clutched their child a little tighter that night and before school drop-off the next morning. But what happened afterward was not at all unprecedented or even unpredictable, and not much has changed since.

What followed in the days after Sandy Hook was not unusual. Across the nation and the rest of the world, there was remembrance: Candlelight vigils were held for the victims and their families, there was a nationally televised ceremony in which all victims' names were read aloud with the toll of a bell, and there were widespread calls for moments of silence. An online movement, Web Goes Silent, requested that all internet users abstain from all online activity from 9:30 AM to 9:35 AM on December 21, 2012: the one-week anniversary of the massacre. And while the town, the country, and the world mourned, the executive vice-president of the National Rifle Association (NRA), Wayne LaPierre, was in Washington, DC preparing his remarks to be delivered at a press conference later that day in which he would lay out his distastefully tone-deaf argument for strengthening gun rights.

Just days after 20 kindergartners and 6 adults had been murdered senselessly, LaPierre argued that it was the media—depictions of violence in television, film, and video games—that ultimately were to blame for the sociopathic killing that took place at Sandy Hook. He said, "As parents, we do everything we can to keep our children safe. It is now time for us to assume responsibility for their safety at school. The only way to stop a monster from killing our kids is to be personally involved and invested in a plan of absolute protection. The *only* thing that stops a *bad* guy with a gun is a

good guy with a gun."[1] In this press conference, LaPierre reiterated the same solution to gun violence that he had proposed in 2007, following the mass shooting at Virginia Tech University: "Put armed police officers in every school." He would later extend this talking point even further, lobbying for a plan to train and arm schoolteachers in K-12 classrooms: "If we truly cherish our kids more than our money or our celebrities, we must give them the greatest level of protection possible and the security that is only available with a properly trained—armed—good guy." This rhetorical argument is flawed for a few reasons but none more preposterous than the notion that the solution to America's gun problem is that it simply does not have enough guns in the hands of its citizens. LaPierre's circular logic was that the only way to protect ourselves from gun violence is with more guns. We must respond to violence with more violence.

The move by the NRA to bolster support for gun rights is standard protocol in the wake of a tragedy. In 1999, Charlton Heston, the NRA President from 1998 to 2003, organized a pro-gun rally in Denver, just miles away from Columbine High School, which had been the site of the nation's deadliest school shooting only two weeks earlier. In 2012, George Zimmerman shot and killed teenager Trayvon Martin, sparking protest over the controversial stand-your-ground law in Florida, which the NRA would later describe as a "human right." The NRA would deflect away from the issue of a vigilante shooting of an unarmed Black teenager and instead blame the media networks for "manufacturing controversy."[2] In 2013, LaPierre appeared on NBC's *Meet the Press* to argue that the shooting spree at the naval yard in Washington that happened just days before, which killed 12 members of the armed services, was because "there weren't enough good guys with guns."[3] Charles Cotton, an NRA board member, explained that the 2015 shooting at the Emanuel African Methodist Episcopal Church, which killed nine people, occurred because of the political opposition to concealed carry. He wrote: "Eight of his church members who might be alive if he had expressly allowed members to carry handguns in church are dead."[4] Unironically, the pro-gun refrain has become a predictable response to gun violence, and the NRA is a central figure in the gun debate that is resurrected in the aftermath of every tragedy.

It seems there is a fundamental disagreement on the role of guns in society. Some view guns largely as a destructive force that is responsible for more harm than good. Others embrace the opposite view that guns are the only true equalizer between good and bad forces and only by infusing more guns into the hands of do-gooders can we prevent gun violence. And it is this second, misguided view of neutrality—what we

[1] https://archive.nytimes.com/www.nytimes.com/interactive/2012/12/21/us/nra-news-conference-transcript.html?ref=us.

[2] https://archive.thinkprogress.org/after-zimmerman-verdict-nra-says-stand-your-ground-is-a-human-right-8a5cb565a9d4/.

[3] https://www.nbcnews.com/news/other/nras-lapierre-calls-more-armed-personnel-after-navy-yard-shooting-f4B11225212.

[4] https://www.nbcnews.com/storyline/orlando-nightclub-massacre/how-nra-has-responded- mass-shootings-over-years-n592551.

might refer to as *instrumentalism*—which this book is intent on debunking. Whereas gun advocacy groups such as the NRA loudly proclaim slogans like "Guns don't kill people; people kill people," technology philosophers largely agree that technology is *non-neutral* and that technological objects—such as the gun—color our experiences with the surrounding world. French philosopher Bruno Latour expanded on this concept of what he called *technical mediation* to describe the ways in which objects translate their uses to us through their design and, consequently, define our existences in the world. Importantly, technological objects change us in deep and lasting ways. They can mediate our understanding of ourselves and of others. So, objects—like guns—are not merely instruments or tools for us to use in completely detached ways based solely on whether we are good or bad individuals; they do not stand by passively as gun apologists tirelessly argue.

The gun issue is a deeply sensitive and divisive subject. The gun is not just a deadly weapon; it is an identity, a political tool, a virtue signal, an asset, and a liability. For many, it is the reason they lost a loved one, either to the prison cell or to the graveyard. Guns are simultaneously nostalgic and traumatic. This is why much of the conversation around guns is irrational and plagued with personal anecdotes rather than facts. But there are some logical questions that we should ask about our complicated relationship with guns. For instance, are guns truly neutral as many gun apologists argue, or do they residually impact our perceptions and behaviors in mostly negative ways? Do guns stoke violence rather than suppress it? And if so, are guns as necessary to our daily lives as they once were, or do they pose a burden to civilized society? By extension, if guns are shown to be non-neutral and positively charged for their use, and they distort the way we perceive reality, then shouldn't this be reflected in the laws and regulation of these objects? As you have probably deduced by now, the central argument of this book is that guns do, indeed, negatively mediate our existence in the world, and this is not adequately reflected in gun policy or in much of the public's perception of guns and their commonplace in American society.

Much of the misunderstanding of guns is derived from a false premise in which we look naively upon all technology as being neutral. We apply this view to not only guns, but social media, artificial intelligence, robotics, surveillance, and even biotechnologies. The general posture is that because technology *can* be used in good and bad ways, this makes it neither one nor the other. And the conversation usually skips forward from here, after everyone nods in agreement that technology is most certainly neutral and depends entirely on the user. But let's take a step back for a moment and consider—just as many historians, critics, ethicists, and philosophers have before—that technology might be actively charged, and it is not as simple as categorizing it neatly into the "good" or "bad" column of the ledger. The First Law of Technology, as stated by historian Melvin Kranzberg, is that "[t]echnology is neither good nor bad; nor is it neutral." This is a softened approach to the idea that we shouldn't be talking about technology in terms of good or bad, positive or negative, but that technology simply

is not neutral. And this nonneutrality might compel us in the direction toward good and bad behaviors.

When we talk about famous and infamous people, we typically develop a perception of that person and assign him or her a positive or negative value. For instance, would you consider Ghandi or Martin Luther King Jr. to be a good or bad force in society? Most people would identify these two men as iconic social justice warriors who positively shaped their societies. But perhaps some might point out the questionable views that Ghandi held toward women or the infidelities of Dr. King. Undoubtedly, these men are human, and that makes them imperfectly fallible. Similarly, Adolf Hitler is not praised for his artistic ability to paint with oils on canvas. To do so would be preposterous because it overshadows his true nature of evil. People are not and cannot be neutral; they are complex. They can do both good and bad things, sometimes simultaneously. Likewise, the technologies that are designed for a specific purpose cannot be neutral. They carry with them the original intent of the designer and an undercurrent of ethical values. For example, is a medical technology such as a pacemaker, which is *designed* to regulate the heartbeat and used to save lives, equally as neutral as a gun, which is *designed* for firing bullets and used so often to take lives? Clearly, technologies prescribe positive and negative directionality.

To further complicate the discussion around the neutrality of guns, we must consider what philosopher Don Ihde calls the *multistability* of objects. His view is that because technologies can be used in different ways, this ambiguity means that we can never really understand what a technology *is* all by itself. Instead, we must think of them as "technologiesin-use," and this depends heavily on our cultural context. According to Ihde, our technologies (the gun, especially) have a "trajectory" for their use and promote their intentional design to the user. He calls this "technological intentionality."[5] And while guns lack in the multistability of their design (a gun is highly unlikely to be used as a substitute for a paperweight, a hammer, a ball, or pretty much anything else besides a tool for firing bullets), its multistability is discussed in terms of its available use. In fact, a gun can be used to both perpetrate a school shooting and prevent one. And so here we are. We have arrived at a crossroads where even the most tragic events involving guns—even ones that involve young school children—fail to convince us that guns are not neutral. LaPierre and the NRA would like to limit the conversation on guns to the most basic view: that guns can be used for both good and bad, and it is the good guys who must prevail and can only only do so with the help of guns. This is a bad faith argument, a misdirection, and a fantasy. The question is not whether guns have multistability (as every technology does), or whether guns are neutral (which every technology is not). The discourse that surrounds guns should be refocused on the overall intentionality of the gun itself and its subsequent impact on its user. We must consider the totality of the gun, which is designed to be destructive, not constructive.

[5] Paul-Verbeek, P. (2001). Don Ihde: The Technological Lifeworld. In Achterhuis, H. & R.P. Crease (Eds.), *American philosophy of technology: 'The empirical turn* (pp. 119—146). Indiana University Press.

A Brief History

When you visualize a gun, what do you see? You likely are imagining a handheld automatic pistol or a hunting rifle. Or perhaps you envision the highly militaristic-looking but widely available semi-automatic AR-15. But these are modern iterations of ancient technologies. Guns, like all technologies, have evolved substantially over time. You probably did not associate the word *gun* with the matchlock gun—the preferred weapon of colonial American minutemen—or a much earlier ancestor of the modern gun: the Chinese hand cannon from the Yuan Dynasty in the thirteenth century. So, it is appropriate that we begin our discussion of guns with language.

The terminology that surrounds guns varies significantly. Aside from the obvious distinctions in how the English word "gun" is translated across different languages ("gun" is*pistola* in Spanish and Italian, *vapen* in Norwegian, *arma de fogo* in Portuguese, *gewehr* in German), the ways in which we talk about guns might sound differently based on age, upbringing, and even our own biases toward guns, in addition to our geographic location. And as I am a native English speaker and do not have a second language, we will look at how the terminology of guns changes throughout the English language, specifically.

Rhetorically speaking, our linguistic profiles are rooted mainly in our individual, social, and cultural experiences. If you served in the military, *gun* is a highly generic expression, and its use is strongly discouraged; *weapon* or *rifle* is the preferred term instead. When talking about statistical data and research, the term *firearms* is more professional and functions as a more inclusive descriptor. For the purposes of this book, the term *gun* has been chosen deliberately because of its vagueness and overall flexibility to be applied to various contexts, but it does have its limitations. For instance, would you consider an assault rifle a gun, or does it surpass the seriousness of the word? Is *machine gun* (a particular category of firearm) more provocative than *gun*? To this point, we must understand nuances in language that might attach different connotations to words and even specific types of guns. For example, the term *pistol* or *six-shooter* connotes a slightly less dangerous object than *firearm* or even *gun*. The word *musket* sounds even less frightful likely because of its inefficiency. An *Uzi* sounds deadly, but the phrase *assault rifle* sounds even more menacing. The FN Herstal Five-seveN™ semi-automatic pistol is known colloquially as the "cop-killer" because of its armor-piercing ammunition properties. Not surprisingly, this colloquial term is not received favorably by law enforcement. Slang terms like *gat* or *piece* are synonyms, and phrases like "strapped" and "packing heat" refer to an armed person. The etymological discussion is an important one. Technology critic, Neil Postman, explained that "technology imperiously commandeers our most important terminology. It redefines 'freedom,' 'truth,' intelligence,' 'fact,',

'wisdom,' 'memory,' 'history' — all the words we live by."[6] This could not be truer for guns, which are so closely aligned with autonomy, protection, and power. The way that we talk about guns, and the words we choose to describe them is indicative of who we are and what we believe. And just as the linguistic descriptions of guns have changed over time, so too has the technology of guns.

The answer to the question, "Where did the gun originate?" is not a straightforward one. First, we must define what we mean by *gun*. The most basic definition is a device that uses a controlled explosion to fire a projectile at an intended target. Military historians and weapons experts disagree on who is responsible for pioneering gun technology, when, and where it took place. A logical place to begin is by looking at when gunpowder was first invented, as this is a prerequisite for a functioning gun. According to Claude Blair in his book, *European and American Arms*, the Chinese were proficient in their use of pyrotechnics by the eleventh century. He argues, however, that this did not necessarily translate into gunpowder for use in propellants. Instead, he presumes that the earliest example of gunpowder used as an "exploding charge" in a weapon did not take place until hundreds of years later in the fourteenth century in Western Europe.[7] More recent studies have suggested even earlier, in tenth-century China, where "fire lances" were commonly used in battle. These handheld weapons resembled more of a flamethrower than a gun, but it most certainly bears an early resemblance to the handgun.

The Chinese later developed the hand cannon (see Fig.1.1), which was a handheld device that used explosive powder and a rod to pack a single projectile (usually an iron ball) into a bronze tube. The hand cannon was a miniaturization of its predecessor—the cannon—and did not utilize a trigger or any scoping or sight technology. Rather, it relied on a manual fiery ignition through a touch hole. Although it was less destructive, the diminutive cannon was highly portable and could be operated efficiently by a single person, unlike its parent technology. Its first known use was in thirteenth-century China, and over the next two centuries, the technological ideation spread quickly through the rest of Asia and the Europe.[8] In 1970, archeologists uncovered what is generally considered the world's oldest firearm in the Heilongjiang province of China. This hand cannon is inscribed with the date of 1288, and hundreds of hand cannons from the same period have been unearthed since its discovery.

Fig. 1.1 The Chinese hand cannon is an early ancestor of the modern gun (https://www.metmuseum.org/art/collection/search/26591)

By the end of the fourteenth century, descriptions of a portable hand gonne regularly appeared in French, German, and Italian historical documents. Some historians use the term "hand gonnes" interchangeably with the hand cannon, though the hand gonne typically was mounted onto a longer stick or pole. The driving factor for this innovation

[6] Postman, N. (1992). *Technopoly: The Surrender of Culture to Technology*, Vintage Books: New York.

[7] Blair, C. (1964). *European & American arms c. 1100—1850*. London: Batsford.

[8] Chase, K.W. (2003). *Firearms: A Global History to 1700*. Cambridge University Press.

most likely was war, though fire lances and hand cannons gave Chinese warriors only a slight competitive advantage in battle because of their inefficient designs. This led to the next significant improvement in gun design: the invention of the matchlock.

In his book, *The Complete Handgun: 1300 to the Present*, Ian Hogg asserts that it was the Europeans who outfitted the hand gonne with a matchlock mechanism, which used a spring-loaded system to "thrust the match forward to make contact with the powder."[9] In doing so, the shooter could focus intently on the target and not have to monitor the lighting of the gunpowder simultaneously. This important advancement simplified shooting from a multi-tasking procedure to a single-tasking one. Several more modifications improved the design of the gun throughout the fifteenth, sixteenth, and seventeenth centuries. From the matchlock to the wheel-lock to the flintlock, each innovation favored the shooter by improving the efficiency and overall usability of the gun.

As guns became more dependable, gunsmiths began experimenting with multi-chambered guns that could fire multiple rounds of ammunition in succession. There were two main methods for this: the doublebarrel, which simply joined two barrels side by side, and the "superimposed load,"[10] in which a single barrel gun could discharge several shots without reloading. The six-barreled 0.38 caliber (1780), duck's foot pistol (late-1700s), 24-shot pepperbox (1790), and Collier five-chambered flintlock (1820) are all examples of variations of the superimposed load design. Shooters could now fire repeated rounds of ammunition with a portable pistol, essentially transforming the gun experience from a duel to a shootout.

Around 1825, Henry Deringer introduced a new brand of pistol, which quickly gained popularity as the first firearm for personal protection. Often stashed away in a pocket or in a boot, the gun reverted to a single-shot design though it was lightweight, reliable, and most importantly, concealable. Hogg writes, "Few wanted to burden themselves with the usual heavy pistol of the day, preferring to have something which they could conceal about their person, but which could be brought into play very quickly when the need arose."[11] The pistol offered personal protection but also posed a new threat. Nearly undetectable, the Deringer meant that anyone could be inconspicuously armed. This was the case on April 14, 1865, when John Wilkes Booth walked into the Ford's Theatre and assassinated President Abraham Lincoln at close range. The lone gunshot most certainly rang throughout the theater on that night and then proverbially throughout the rest of the world, but Booth's attack had signaled an important flashpoint in gun history: After many centuries of innovation and diffusion, guns had become concealable

[9] Hogg, I. V., & Batchelor, J. H. (1979). *The complete handgun, 1300 to the present*. New York: Exeter Books.

[10] Hogg, I. V., & Batchelor, J. H. (1979). *The complete handgun, 1300 to the present*. New York: Exeter Books.

[11] Hogg, I. V., & Batchelor, J. H. (1979). *The complete handgun, 1300 to the present*. New York: Exeter Books.

and effortless, and this would forever change the way we perceive and read others in public.

Gun technologies continued to make advancements over the nineteenth and twentieth centuries, but major leaps in innovations typically coincided with war efforts and often played a significant role in their outcomes. For instance, the combat that troops faced during the American Civil War (1861—1865) was changed radically by rifled weapons. Both the Union and Confederate armies adopted the rifled bore as its weapon of choice. Prior to the 1880s, guns were extremely imprecise and largely unpredictable. But a rifled gun would use spiraling grooves inside the barrel (Fig.1.2) to initiate spin on a bullet once discharged, greatly improving its accuracy and trajectory. (The rifling profile of a gun produces a unique signature for bullets; this would later prove to be extremely useful for forensic firearm examiners to match a bullet to the gun that fired it). This invention made guns more precise and, subsequently, more deadly. The rifled weapon also changed military strategy and tactics. Instead of large block formations of infantrymen facing off on an open battlefield, the rifled gun would force soldiers to take cover in trenches, a hallmark trait of World War I (1914—1918).

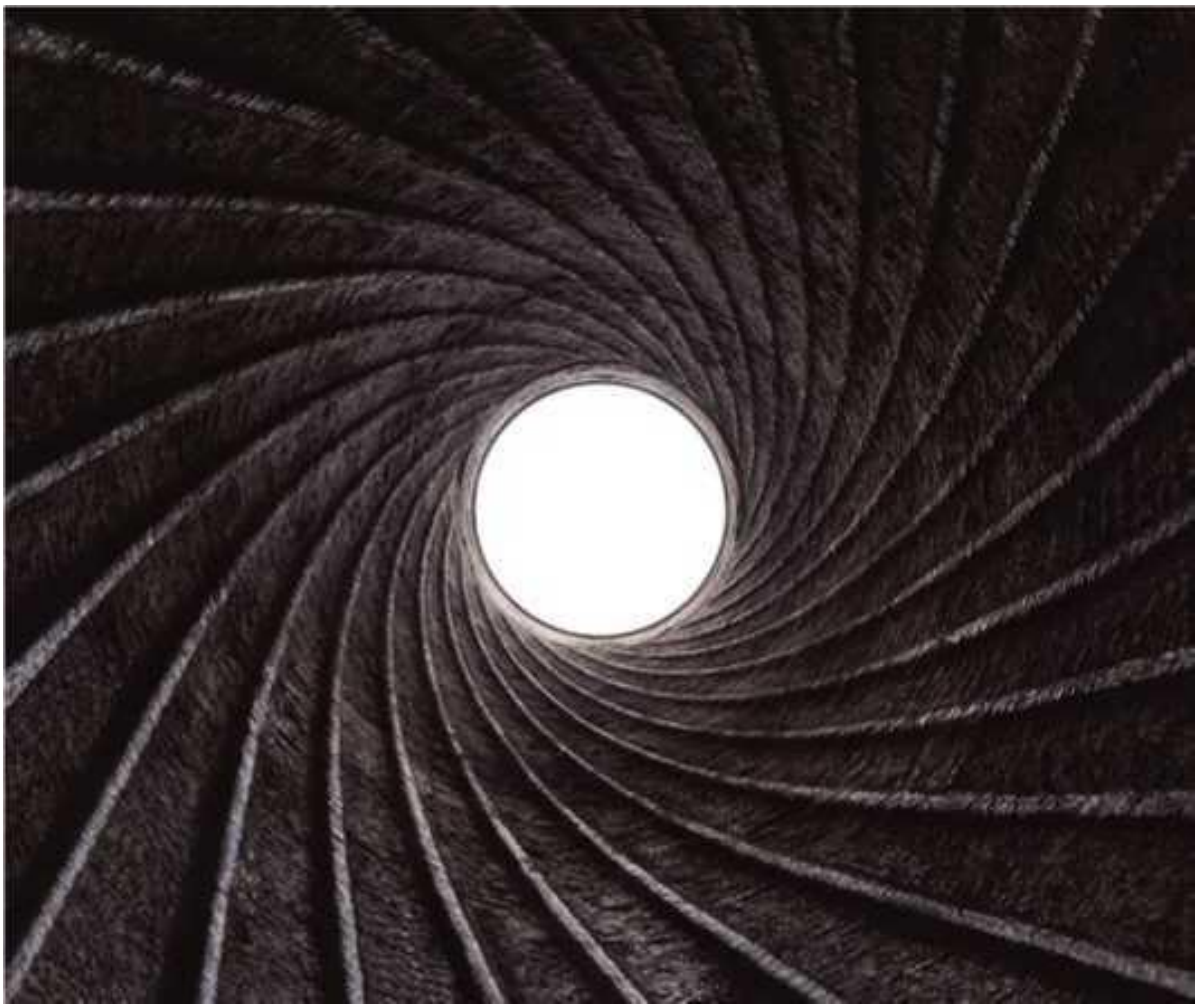
The next advancement in gun technology was focused on rapidity. A prototype for the modern machine gun emerged in the late 1880s, and it would revolutionize modern warfare from that point on. The Maxim machine gun was invented in 1884 by Hiram Stevens Maxim, and it would come to later define the first world war as "the machine gun war."[12] Today, machine gun designs copy the brilliance of Maxim's gun, which used the pressurized gas from each cartridge to power the loading, ignition, and firing of the subsequent round. This combination of gasoperated belt-fed ammunition led to a sustained firing of more than 500 rounds per minute, though it required at least two people to operate. Still, the machine gun had effectively driven enemy troops underground because of its unrelenting assault. Trench warfare, as it would become known, described how opposing soldiers would entrench themselves in hand-dug ditches to draw cover from enemy fire during World War I.

Fig. 1.2 The inside of a gun's rifled barrel (https://commons.wikimedia.org/w/index.php?search=rifling&title=Special%3ASearch&go=Go&ns0=1&ns6=1&ns12=1&ns14=1&ns100=1&ns106=1#/media/File:Rifling_of_a_cannon_(M75;_90mm;_y.1891;_Austro-Hungarian;_exposed_in_Ljubljana,_Slovenia).jpg)

Militaries found that firing long-range machine guns across the battlefield would create a problematic "no-man's-land"[13] in the middle ground. To advance on the enemy, a more portable, individualized weapon was needed to counteract the machine gun fire. U.S. gun designer John Moses Browning responding by outfitting a rifle to make it fully automatic, allowing soldiers to traverse no-man's-land while rapidly firing an entire magazine in roughly two seconds' time. And this would provide enough support for troops to breach the enemy's trenches, where they would employ the submachine gun

[12] https://www.britannica.com/technology/Maxim-machine-gun.

[13] https://www.library.ucdavis.edu/exhibit/firearms-history-and-the-technology-of-gun-violence/.



that would become a favorite of mobsters and gangsters: the Tommy gun. The designer of the Tommy gun, John T. Thompson, referred to the gun as "the trench broom"[14] because of its ability to for quick bursts of close-range firing that swept out entrenched enemy forces. The gun had become even more deadly and even more mobile.

The M1 Rifle, also known as the Garand rifle, was the standard issue weapon for U.S. troops during World War II and the Korean War, but it remained popular globally for decades afterward. Designed by John Cantius Garand, the M1 rifle played a critical role on the Eastern Front of WWII. This practical, durable, semi-automatic weapon could endure the harsh conditions of Eastern Europe and was easy to disassemble, clean, and reassemble. Moreover, it was regarded as the most accurate rifle of its time. Competitive shooters would continue using the M1 throughout the 1950s.

The semi-automatic M1 Rifle was usurped by the assault rifle. The Sturmgewehr 44 is recognized as the first assault rifle, coming to fruition around 1944, but its successor persists today. The AK-47 (Automat Kalashnikov-1947) is not a precision weapon known for its accuracy, but it is extremely lightweight, impervious to harsh weather conditions, and capable of carrying a lot of ammunition. This menacing gun reigned throughout the Cold War and is one of the most ubiquitous automatic weapon types to exist today. Some estimates suggest that the AK-47 makes up about one-fifth of the world's total number of guns in circulation,[15] and "[n]o weapon has been responsible for more deaths than the AK-47."[16] Unlike the guns discussed previously in this chapter, the AK-47 bridges the battlefield and the boulevard. Its accessibility on the free marketplace makes this weapon more of a personal vice than a military armament. Today, a simple internet search yields a multitude of AK-47s available for purchase for around $1000. But in recent years, popularity has surged with the new generation of the military-style weapon: the AR-15.

The ArmaLite Rifle (AR-15) is a semi-automatic weapon that evolved out of the M-16 Rifle—the standard issue automatic weapon for U.S. troops in Vietnam. The AR-15 is believed to be the most popular style of semi-automatic weapon in the United States, but it has a troubling history of use. The term "AR-15" is actually a generic term used to described AR-style weapons that many different gun manufacturers offer, and not, in fact, an acronym for "Assault Rifle" as many assume. This style of weapon has been used in many high-profile mass shootings, including, but not limited to, the Las Vegas Massacre (61 dead), Pulse Nightclub Shooting (49 dead), Newtown Massacre (27 dead), and Sutherland Springs (26 dead). This has prompted strong opposition to the commercial sale of AR-15s for civilian use. In the wake of the Marjory Stoneman Douglas High School shooting in Parkland, FL in 2018 (17 dead), several large retailers banned the sale of AR-style weapons in their stores, while others either discontinued the sale of ammunition from their shelves or raised the minimum age to

[14] https://www.brown.edu/Departments/Joukowsky_Institute/courses/13things/7060.html.
[15] https://www.npr.org/templates/story/story.php?storyId=130493013.
[16] https://www.theguardian.com/books/2011/jan/29/gun-kalashnikov-cj-chivers-review.

legally purchase ammunition. At the time of this writing, there are ongoing legislative efforts to ban assault-style weapons such as the AK-47 and AR-15 in the United States, but these attempts have been unsuccessful since the Federal Assault Weapons Ban, a ten-year provision that criminalized the sale and possession of assault weapons and large capacity ammunition magazines, lapsed in 2004 under the Bush administration.

Throughout history, the evolution of the gun has been driven predominantly by war efforts. Whether by hand cannons or fully automatic assault weapons, the militaries that were equipped with the best firearm technologies often emerged victorious. And so, it was a matter of national security and prosperity that firearms were necessitated. But more recently, advanced weaponry such as the AK-47 and the AR-15 have become more symbolic than practical. More identity than self-preservation. More militaristic than patriotic. The only country in the world to feature a modern firearm on its national flag is Mozambique, which features an AK-47 as a symbol for defense, though many in the country view it as a hostile reminder of the country's struggle with civil war.[17]

The AK-47 and AR-15 have become iconographic among gun enthusiasts, who use the image of the weapons as a credo for freedom, individualism, and autonomy. In the United States, the phrase "Come and Take It" can be seen printed on t-shirts, hats, flags, and bumper stickers on vehicles. The slogan usually features the silhouette of an assault weapon and is reminiscent of the popular saying by the former NRA president, Charlton Heston, who warned others that they could have his firearms only if they take them "From my cold, dead hands." The catchphrase likely was adapted from an earlier slogan popularized by the NRA: "I Will Give Up My Gun When They Peel My Cold Dead Fingers From Around It."[18] Similarly, the saying "Come and Take It" has been appropriated from its many uses throughout history. Its roots can be traced back to ancient Greece and the Battle of Thermopylae, in which the Spartan commander Leonidas refused to give up arms, saying "MOAQN AABE" ("Come and take them"). The phrase, roughly translated to *Molon labe*, has been a consistent refrain from gun apologists who perceive gun control measures as a threat to their personal liberties. "Come and Take It" appeared in numerous wars as America materialized, including the American Revolutionary War (1775—1783), and the Texas Revolution of 1835, and it is this deep connection to heroic revolutionaries and their arms that fuel the misguided "Come and Take It" movement of today. But modern gun apologists who invoke this phrase on the clothes they wear, the vehicles they drive, and the flags they fly, are not championing a noble cause as their forefathers once did; they are imposters who are

[17] http://www.mozambique.co.za/About_Mozambique-travel/mozambique-flag.html.

[18] United States. Congress. Senate. Committee on the Judiciary. Subcommittee to Investigate Juvenile Delinquency. (1976). Handgun crime control, 1975—1976: hearings before the Subcommittee to Investigate Juvenile Delinquency of the Committee on the Judiciary, United States Senate, Ninety-fourth Congress, first session, pursuant to S. Res. 72, section 12 ... oversight of 1968 Gun control act ... Washington: U.S. Govt. Print. Off Retrieved from https://babel. hathitrust.org/cgi/pt?id=umn.31951002823164k&view=1up&seq=9.

only coddling a juvenile defiance to social progress. They are pseudopatriots who feel otherwise impotent without their weapons. They are not freedom fighters; they are slaves to the gun and the culture of violence that it creates.

Over time, the gun has transgressed from a mechanical marvel that fought and won wars to a hollow symbol of individualism and freedom.

In our modern technological age, the gun is not as necessary to our flourishment as it once was. Wars are fought in cyberspace, not in trenches. Hunting is a sport, not a means for survival. Ironically now, guns do more to create and foment the very threat that they supposedly eliminate.

An Epidemic

Every day in the United States, an average of 100 people die from gun violence.[19] To put that into perspective, this figure is roughly the same number of players on both sidelines of an NFL regular season game. Or approximately five K-12 classrooms. Or about the same number of musicians in a full-scale symphony orchestra. But quantifying gun-related violence and even gun ownership can be tricky, and at times, deceptive. Numbers vary widely on basic measurements such as the number of guns in circulation, the rate of gun ownership, and deaths-by-gun-related violence. As a result, the problem of establishing good and reliable data plagues the gun conversation; anti-gun and pro-gun advocates will often cherry-pick the most convenient data to support their arguments. Reports sometimes fail to disclose the criteria for inclusion of data, too. For instance, when talking about the number of guns in circulation, it would be most helpful to differentiate between military, law enforcement, and civilian gun owners, as there are obvious differences in motives for gun possession among these groups. Furthermore, statistics on the number of deaths by gun most certainly need to make a distinction between the types of death—suicide, homicide, accidental—and should clearly acknowledge whether the figure is a total number or per capita. The figure I cited at the beginning of this paragraph—100 gun deaths per day in the United States—includes intentional (homicide and suicide by gun) and unintentional or accidental shootings and is averaged from dividing the total population by the total number of annual gun-related deaths.

Keeping accurate data on gun violence and gun ownership is critical to public perception toward guns. John Lott is an economist who wrote the influential book *More Guns, Less Crime* (1998), which made numerous pro-gun arguments that he claimed to support with data. These claims persist today, including his denial of the link between gun ownership and suicide, that gun-free zones invite mass shootings, that unintentional shootings of children rarely involve other children, and perhaps the

[19] Centers for Disease Control and Prevention. Web-Based Injury Statistics Query System, "Fatality Injury Reports". https://www.cdc.gov/injury/wisqars. Figures represent an average of the five years of most recently available data: 2015—2019.

biggest lie of all, that "right-to-carry" laws reduce violent crime. Lott's claims have been debunked repeatedly by researchers over the years, and his own methodology was rooted in bad statistical modeling choices, yet his writing has been perpetuated by pro-gun organizations like the NRA with impunity. The "more guns, less crime" hypothesis may have been flatly discredited by scholars, but it has been fruitful for Lott, who was appointed to the Department of Justice in the waning days of the Trump administration as a senior advisor at the Office of Justice Programs where he oversaw $5 billion in grant funding into crime research. A spokesperson for the Everytown for Gun Safety organization likened this federal appointment to "putting an arsonist in charge of the fire department."[20]

Data that surround the gun conversation are sensitive. Numerous variables can misrepresent statistical data, such as the prevalence of gang or illicit drug-related activity in a specific region, socioeconomic conditions, and accessibility to guns, to name a few. And there is always the possibility that confirmation bias steers our interpretation of data toward a desired outcome. Despite all these external variables and discrepancies in statistical reporting, however, there are some truisms that cannot be ignored. For example, gun violence affects women, people of color, and other marginalized communities disproportionately, and where there is easier access to guns, there is more gun violence.[21] In other words: more guns, more crime.

The Small Arms Survey was established in 1999 to provide governments and lawmakers with reliable, impartial data on global firearms. Its strategic goal is to "maintain its role as a global centre of excellence on small arms, light weapons, and armed violence" and to "catalyse change through knowledge building and expertise."[22] In its most recent annual report (2018), the researchers wrote that "civilians possess more than 80 per cent of the one billion-plus firearms in global circulation."[23] The report noted a significant upward trend in the number of guns in global circulation, from 875 million in 2006 to more than 1 billion in 2017 and attributed this gain largely due to civilian purchases. Currently, there is a significant stockpile of guns in the hands of civilians all around the world.

Unquestionably, the country with the most guns and civilian gun owners is the United States. (Note the use of *civilian* gun owner here; countries like Finland and Switzerland have compulsory military service and thus outfit all men over the age of 18 with a military-issued weapon, thereby skewing the per capita data on gun ownership). The Small Arms Survey reported that there were 393 million American civilians who possessed a gun: twice as many as the next four countries combined (India, 71.1m civilian gun owners; China, 49.7m; Pakistan, 43.9m). However, the United States falls fifth in line for the number of law enforcement and military holdings behind European

[20] https://www.everytown.org/press/everytown-statement-on-trump-justice-department-hiring-widely-discredited-anti-gun-safety-researcher-to-key-position/.

[21] https://www.amnesty.org/en/what-we-do/arms-control/gun-violence/.

[22] http://www.smallarmssurvey.org/fileadmin/docs/M-files/SAS-Annual-Report-2018.pdf.

[23] http://www.smallarmssurvey.org/fileadmin/docs/M-files/SAS-Annual-Report-2018.pdf.

and Asian countries. The United States has more guns than people, averaging 120.5 firearms per 100 legal residents, and the vast majority of guns are owned by civilians.[24] Or, to put it another way, the United States has 5% of the world's population and 46% of the world's civilian-owned guns.[25]

By contrast, peer countries of the United States have only a fraction of the number of civilian gun owners. The following chart represents civilian gun ownership in each of the 11 countries that are members of the G10, a cohort of countries that are like the United States in terms of socioeconomic development. Data presented in Fig.1.3 is from the most recent, complete year of data reported from each country.

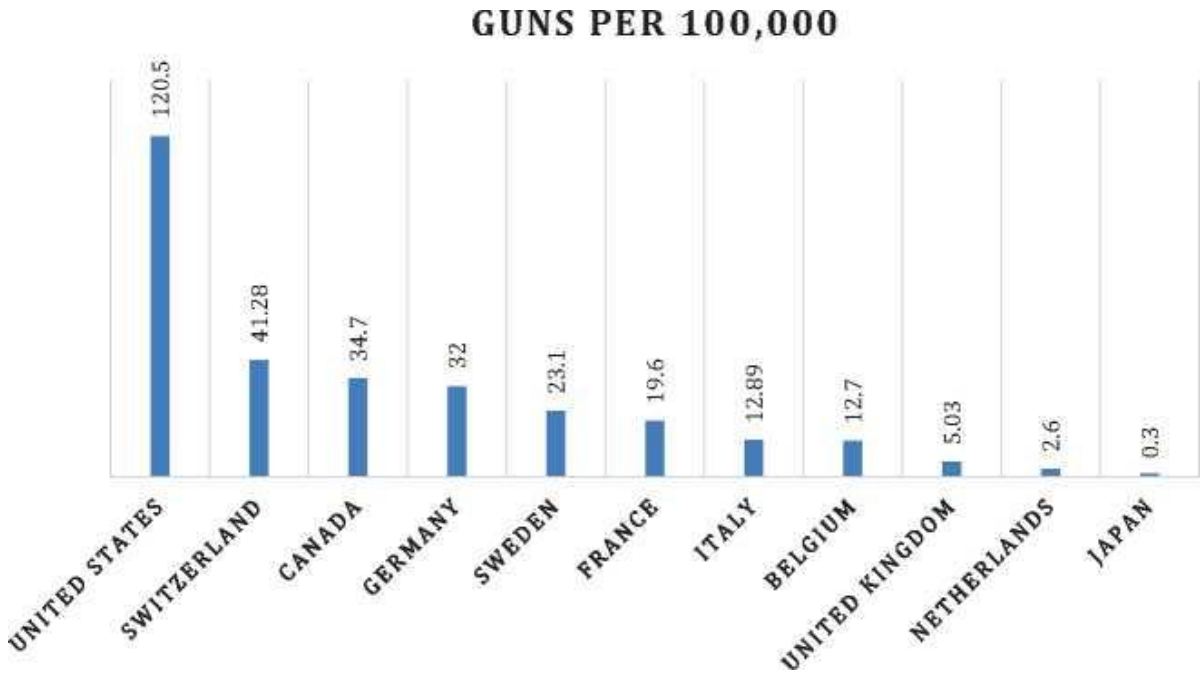


Fig. 1.3 Rate of civilian gun ownership per 100,000 people in each of the G10 countries (Alpers, P. & Picard, M. (2021). Guns in the United States: Total Number of Gun Deaths. Sydney School of Public Health, The University of Sydney. GunPolicy. org, February 22. Accessed March 12, 2021. at: https://www.gunpolicy.org/firearms/compare/194/rate_of_civilian_firearm_possession/18,31,66,69,88,91,125,177,178,192)

Currently, 2016 is the most complete year on record for statistical reporting of global gun-related deaths. Although numbers vary, it is estimated that between 195,000 and 276,000 deaths occurred globally in 2016 by firearms, and this estimation represents an overall decrease in global gun-related deaths since 1990.[26] However, the parameters of the gun-related death are significant. If we are looking at the total number of deaths by

[24] https://www.bbc.com/news/world-us-canada-41488081.

[25] https://www.cfr.org/backgrounder/us-gun-policy-global-comparisons.

[26] The Global Burden of Disease 2016 Injury Collaborators. (2018). Global Mortality from Firearms, 1990-2016. *JAMA, 320*(8), 792-814.

country, Brazil led all others with 43,200 fatalities in 2016. The United States came next with 37,200 lives lost to gun-related violence in that same year. However, if we parse the data by the per capita rate, then Brazil falls to eighth on the list; United States ranks 20th. In 2016, El Salvador saw a staggering 39.2 deaths by gun per 100,000 people (compared to the U.S. rate of 10.6/100,000), but researchers attribute these figures to the violent drug trade in this region, as well as in the next three deadliest countries: Venezuela, Guatemala, and Colombia. As such, the following chart depicts the rate of gun deaths per 100,000 people for each of the countries that belong to the G10, presumably all of which are peer countries of the United States (Fig.1.4).

Fig. 1.4 Rate of gun deaths per 100,000 people in each of the G10 countries (Alpers, P. & Picard, M. (2021). Guns in the United States: Total Number of Gun Deaths. Sydney School of Public Health, The University of Sydney. GunPolicy.org, February 22. Accessed March 12, 2021. at: https://www.gunpolicy.org/firearms/compare/194/total_number_of_gun_deaths/18,31,66,69,88,91,125,177,178,192)

This data can be unpacked even further. Although the United States significantly overshadows its peer countries in terms of ownership and gun-related fatalities, the majority of deaths can be attributed to suicide by firearm and not homicide. In fact, as of 2019, suicide contributes the most to the total number of gun deaths in the United States annually (7.29 per 100,000 people). Homicide by gun occurred at a rate of 4.38/100,000 people and unintentional or accidental shootings accounted for 0.15/100,000 people. In raw numbers, 2019 had a total of 23,941 suicides by gun, 14,389 homicides, and 486 gun deaths by accident. Although the United States does not have the most egregious gun-related fatality rate on the world stage, it does warrant special attention compared to its peer countries. It also should be pointed out that the medical care for gun wounds is far superior in the United States than in lessdeveloped countries, and this helps mitigate the number of gun fatalities. In this context, the United States has more guns and more deaths by gun]]by an inordinate amount, and this provides a strong justification to understand why guns represent the worst in American exceptionalism.

Another uniquely American aspect of the gun problem is the number and frequency of mass shootings that occur. Data on this subject is heavily disputed by groups on both sides of the gun issue, as there is no consensus on the terminology used to describe mass shooting events. *Mother Jones*, which is self-described as "America's longest-established investigative news organization,"[27] displays an active database of mass shootings that have taken place in the United States since 1982,[28] though they categorize a mass shooting event as having three or more fatalities. By contrast, organizations such as the Gun Violence Archive qualify a mass shooting where four or more people, excluding the gunman, are shot (but not necessarily killed). The FBI does not necessarily acknowledge mass shootings as a unit of measurement, but it does describe *mass murder* events, which are "described as a number of murders (four or more) occurring

[27] https://www.motherjones.com/about/.

[28] https://www.motherjones.com/politics/2012/12/mass-shootings-mother-jones-full-data/.

during the same incident, with no distinctive time period between the murders. These events typically involved a single location, where the killer murdered a number of victims in an ongoing incident."[29] A mass murderer might include an arsonist or bomber, which clearly are different from mass shooters. In a 2019 report, the FBI referred to a *mass killing* as having three or more fatalities in a single incident, and this number excludes the shooter.[30] Referencing a shooter, specifically, implies that a mass killing hinges on a gunman, but this explicit language remains absent from official government records.

In fact, there are many other criteria that delineate the types of mass shootings that occur; since most mass shootings (killings of four or more) take place in private settings and among family members and domestic partners, we might differentiate between a mass shooting and a mass *public* shooting, such as the Virginia Tech University and Las Vegas shootings, which killed 33 and 61 people, respectively. Some shootings are discounted as a mass shooting event simply because the gunman wounded or maimed others but did not kill them. Events in which at least four victims were wounded but not killed also should qualify as mass shootings since this was the shooter's intent. Using this measurement, the Gun Violence Archive reported 417 mass shooting events in the United States in 2019 where at least four people were shot (but not necessarily killed). In other words, by this definition, the United States averages a mass shooting event every day.

Still, using the most limited yet commonly relied upon definition of a mass shooting (four deaths in a single incident, excluding the shooter), the United States experiences 19 mass shootings each year.[31] And, a study conducted by researchers at the Harvard University School of Public Health, which analyzed data collected by the FBI, found that mass public shootings are occurring more frequently.[32] As the number of guns in circulation grows and as the world's population increases, it is important to offer a contextualized view of these data. So, how does the United States compare to other countries? This question is difficult to answer, again, because of the inconsistencies in language and definitions. A country experiencing cultural conflicts might report a mass shooting as genocide; a country with political unrest might report a mass shooting as a political or terrorist attack. For these reasons and more, it is difficult to compare countries one-to-one. Even with the most conservative tabulations, however, the United States has an appreciably higher rate of mass shootings than other countries, though this does not seem to yield any real change in public opinion or in legislation.

In addition to the sheer number and frequency of mass shooting events, the United States emerges in stark contrast to its peer countries with its collective response to these events. Studies have shown that largescale mass shooting tragedies prompt an increase

[29] https://www.fbi.gov/stats-services/publications/serial-murder#two.

[30] https://www.justice.gov/usao-mdpa/page/file/1272096/download.

[31] https://maps.everytownresearch.org/massshootingsreports/mass-shootings-in-america- 2009-2019/.

[32] https://www.motherjones.com/politics/2014/10/mass-shootings-increasing-harvard-research/.

in the sale of firearms, depending on the degree to which the event is covered in the media.[33] In addition, gun sales increase nearly any time legislation is introduced that would infringe on gun owners' rights.[34] In 2019, a lone gunman opened fire in a crowded Walmart store in El Paso, Texas, killing 23 people and injuring 23 others. The weapon of choice was the WASR-10, an AK-47style semi-automatic that is marketed for civilian use. Months later at the 2020 Democratic presidential debates, U.S. Representative Beto O'Rourke—who hails from El Paso—was asked to respond to the issue of banning certain models of guns, particularly those used in the El Paso Massacre. He responded, "Hell yes, we're going to take your AR-15, your AK-47 ... We're not going to allow it to be used against our fellow Americans anymore." This statement not only derailed his presidential bid but also outraged gun enthusiasts. Later that week, the NRA proclaimed O'Rourke the "AR-15 Salesman of the Month . possibly even of the year."[35] This reaction might seem counterintuitive to other developed countries, which have taken meaningful actions in response to mass shooting events.

In 1996, following the Port Arthur Massacre, where a lone gunman used an AR-10 semi-automatic rifle to murder 35 people in Tasmania, Australia, Prime Minister John Howard quickly introduced sweeping legislation that would forever change the country's firearm laws and make Australia the de facto case study on how gun control can reduce gun violence. The National Firearms Agreement (NFA) strengthened the licensing system for gun ownership and required applicants to have a "genuine reason" for owning a firearm; personal protection did not qualify as a justification for gun ownership. Automatic and semi-automatic weapons were banned completely. Prime Minister Howard also initiated a gun buyback program that decommissioned 650,000 firearms. Ultimately, intentional firearm-related deaths (both homicide and suicide) declined in Australia since the NFA was enacted, but new research suggests that downward trend of firearm deaths in Australia can be attributed to multiple legislative acts that occurred in the late 1980s and early

1990s and not just the NFA.[36] Regardless, Howard had successfully capitalized on a national tragedy to legislate guns. Twenty years later, the Deputy Prime Minister, Tim Fischer, reflected on Port Arthur after the Sandy Hook Massacre. He told a reporter,

[33] Liu, G., & Wiebe, D. J. (2019). A time-series analysis of firearm purchasing after mass shooting events in the United States. *JAMA Network Open, 2*(4), e191736. https://doi.org/10.1001/ jamanetworkopen.2019.1736.

[34] Callcut, R. A., Robles, A. M., Kornblith, L. Z., Plevin, R. E., & Mell, M. W. (2019). Effect of mass shootings on gun sales—A 20-year perspective. *Journal of Trauma and Acute Care Surgery, 87*(3), 531-540.

[35] https://twitter.com/NRA/status/1174641064294137857.

[36] Gilmour, S., Wattanakamolkul, K., & Sugai, M.K. (2018). The effect of the Australian National Firearms Agreement on suicide and homicide mortality, 1978—2015. *American Journal of Public Health 108*, 1511-1516.

"Port Arthur was our Sandy Hook. Port Arthur we acted on. The USA is not prepared to act on their tragedies."[37]

Earlier that same year, 1996, the Dunblane Massacre took place at a primary school in Scotland. In this shooting, the gunman used legally obtained handguns—not assault weapons—to kill 18 people. Like the Sandy Hook Massacre, most of the victims were young children aged 5-6. What resulted was the Snowdrop Campaign: a citizen-led grassroots petition for the banning of all handguns. (The Snowdrop was the only flower in bloom at the time of the massacre). Prime Minister introduced The Firearms Amendment Act of 1997, which extended the 1968 legislative act to ban "certain small firearms."[38] Prime Minister Tony Blair later reinforced the amendment with the Firearms (Amendment) (No. 2) Act, which closed the loopholes for the types of lower-caliber handguns that could be legally owned, effectively banning all private ownership of handguns in the United Kingdom. In 2003, the Anti-Social Behaviour Act further clarified these laws, reclassifying air weapons and pellet guns, helping to clarify the data on gun-related incidents. Just as in Australia, the rate of firearm-related deaths and injuries has steadily declined in the United Kingdom, and most attribute this to the forceful regulation of guns.

More recently, in 2019, an active shooter killed 51 and injured 40 others in a terrorist attack on a mosque in Christchurch, New Zealand. Prime Minister Jacinda Ardern immediately sprang into action, declaring in a news conference: "There will be changes to our gun laws."[39] Indeed, the New Zealand government passed legislation within weeks of the massacre that outlawed all semi-automatic firearms. A second wave of legislation in 2020 tightened requirements for firearm license holders, requiring gun owners to document every sale or purchase of a firearm. Just as in Australia and Britain, a gun buyback program also was implemented. In a stark opposition to American gun culture, Prime Minister Ardern justified these regulations, saying that "[o]wning a firearm is a privilege, not a right."[40]

Each of these cases represents empirical evidence that countries can take meaningful action in response to a mass shooting event and that these legislative efforts yield observable effects on decreasing gun violence. But this simply has not been the case in the United States. Rather, the American response to a high-profile shooting is a familiar one: There is widespread media coverage of the event that sparks national debate between proand anti-gun advocates, which only further entrenches each side in their own arguments. Politicians and activists call for gun reform; groups like the NRA hold rallies. Support for any legislative effort to curb gun violence slowly fades until the next mass shooting event, which in the United States, occurs every month

[37] https://www.theguardian.com/world/2016/mar/15/it-took-one-massacre-how-australia-made-gun-control-happen-after-port-arthur.

[38] https://www.legislation.gov.uk/ukpga/1997/5/contents.

[39] https://www.nytimes.com/2019/03/17/world/asia/new-zealand-shooting.html.

[40] https://www.reuters.com/article/us-newzealand-shooting/new-zealands-pm-ardern-acts-to-tighten-gun-laws-further-six-months-after-attack-idUSKCN1VY092.

or every day, depending on how you define a mass shooting.[41] This pattern of tragedy, sensationalized media, politicization, and atrophy always ends in a stalemate and has been aptly described as the "shooting cycle."[42] Until this cycle is broken, there is a preventable epidemic that persists, and it starts with the gun.

Portrait of a Gun Owner

We cannot know for sure how many people own guns or how many guns are in circulation. To know this, there would have to be a well-kept federal database—or a registry—of gun owners in the United States. However, a government-based system of tracking gun owners spooks many gun enthusiasts who claim to own guns, in part, to defend against a tyrannical government that has overstepped its authority. To some, a federal gun registry is the first step on a slippery slope to authoritarianism. To others, a federal registry for guns would be no different than the one that currently exists for owning a vehicle. And even with such a system in place, this would not account for an underground marketplace that it would surely create. Regardless, the absence of a federal registry means that we must rely on self-report survey data to gauge current figures on gun ownership and demographics. Credible, unbiased organizations such as Pew Research Center, Gallup, and Quinnipiac University routinely poll randomized samples of Americans on basic demographic background and attitudinal questions about guns and proposed gun legislation. Researchers often take this data and extrapolate it to the entirety of the American public, but a major methodological limitation of these surveys is that they typically sample only a few thousand respondents. Federal agencies like the Bureau of Alcohol, Tobacco, and Firearms and Explosives (ATF) provide more accurate reporting on retrospective data like the number of firearms licenses issued and import/export data for U.S.-based firearm manufacturers but do not collect attitudinal data. When all these data sources are cobbled together, an abstract view of gun ownership in the United States begins to emerge, but it is far from a complete picture. We can, however, synthesize multiple data sources and look at historical trends to better understand the seemingly basic question of "Who owns guns?"

It is extremely likely that either you grew up with a gun in the home, you currently live in a home with a gun, or you know someone who does. A 2017 Pew Research Center poll found that 42% of respondents indicated that they live in a home with a gun (of this percentage, 30% reported owning a gun).[43] This figure is slightly lower than the percentage of respondents who indicated that they had previously grown up in a home with a gun (48%). This may not be that surprising, considering gun ownership

[41] https://maps.everytownresearch.org/massshootingsreports/mass-shootings-in-america-2009-2019/.

[42] Blackman, J. & Baird, S. (2018). The shooting cycle. *Connecticut Law Review, 46.*

[43] https://www.pewresearch.org/social-trends/2017/06/22/americas-complex-relationship-with-guns/.

in the United States has been on the decline in recent years.[44] But a declining level of ownership does not equate to fewer guns. In fact, there are more guns in the United States than people. It is more common than not for a gun owner to possess multiple firearms; the Pew poll also found that two-thirds of respondents who owned a gun owned more than one, and nearly one-third of respondents reported owning five or more guns. People who like guns tend to *really* like them.

There are many reasons why someone chooses to own a gun. By far, though, gun owners cite self-protection as the primary motivator for keeping a firearm in the home.[45] A 2019 Gallup poll found that men and women were just as likely to identify protection (both self-protection and the protection of loved ones) as the most prominent reason for gun ownership, but ironically, research has shown that the presence of a firearm in a household may actually increase the likelihood of killing a domestic partner.[46] Aside from protection, the next most common reasons given for owning a gun include hunting (40%), recreation and sport (11%), and that the gun was passed down to them as a family heirloom (6%).

This question of "Who owns guns?" is nuanced, and the answers that I try to provide here are not generalizable to all individuals and populations. Indeed, there are many contributing factors that determine whether or not someone will own a gun, or whether this even was a conscious choice that was made (e.g., the recipient of a gun as a family heirloom). To be clear, gun ownership spans all ages, races, ethnicities, socioeconomic backgrounds, and intelligences, but there are some variables that strongly influence whether someone will own a gun.

Gun ownership in adulthood often hinges on one's childhood upbringing and previous socialization with guns. Gun owners, according to one study, were more likely to have grown up in rural areas where guns were prevalent or had attended a summer camp where shooting guns had been a recreational activity.[47] Moreover, these gun owners were more likely than non-owners to provide their children with guns, thereby perpetuating the cycle of ownership. In fact, guns are often bestowed upon younger generations through the passing down of family heirlooms.

Modern laws govern the minimum age for gun ownership, which varies by state and by gun type. Most states limit the purchase of a handgun until age 18, with some states postponing until age 21. The purchase of a long gun is less regulated by age, with fewer states imposing minimum age requirements to own. There are 30 states in which a person under the age of 18 can legally own a long gun (shotgun or rifle). The rationale behind these minimum age requirements takes into account the majority of suicides—by far—are committed with a gun, and that minors, specifically, have

[44] https://www.press.umich.edu/pdf/0472115103-ch3.pdf.

[45] https://www.pewresearch.org/fact-tank/2021/05/11/key-facts-about-americans-and-guns/.

[46] https://www.sciencedaily.com/releases/2019/07/190722085828.htm.

[47] Diener, E., & Kerber, K. W. (1979). Personality characteristics of American gun-owners. *Journal of Social Psychology*, *107*(2), 227. https://doi.org/10.1080/00224545.1979.9922703.

seen an 82% increase in gun-related suicides between the years of 2009 and 2018.[48] Although minors in most states are prohibited from legally purchasing and owning a handgun, federal law makes an exception to these regulations when there is "temporary possession" of the gun for directed activities such as target practice and hunting.[49] And, restricting the age limit to purchase and own a firearm is not the same as having access to a firearm. A 2015 study found that one-third of adolescent respondents lived in a home with a firearm that was loaded and unlocked, and 41% of adolescent respondents indicated that they had "easy access" and "the ability to shoot" the firearm.[50] Certainly, childhood experiences help shape attitudes toward guns later in life.

Alternatively, there is no upper limit to the age of someone who can own a gun. The Center for Disease Control and Prevention reports that men aged 65 and older are the group at highest risk of gun-related suicide, followed by men and women aged 85 or older. Because elderly adults experience these higher rates of suicide, and because suicide is most commonly gun-related, there is a growing concern about a population of aging gun owners in the United States who have dementia or who are experiencing bouts of loneliness and depression and who have easy access to a gun. Research on persons with dementia, or PWD, found that 60% of PWDs live in a household with a firearm, and this number is expected to increase.[51] According to a 2017 paper titled "Armed and Aging: Dementia and Firearms Do Not Mix," the authors point out that it is this potentially disastrous cocktail of cognitive decline, firearm accessibility, and the "prospect of loss of autonomy and becoming a burden upon relatives" that threatens this demographic, specifically.[52]

Gender also can predetermine the likelihood of owning a gun. According to the Pew Research Center, males are far more likely to have grown up participating in gun-related activities such as hunting and range-shooting than females,[53] and men typically receive their first gun at an earlier age than women.[54] These are strong predictors of future gun ownership. The gun experience for adolescent males seems almost a rite of passage; males generally participate in gun-related behaviors from an early age,

[48] Centers for Disease Control and Prevention, Web-based Injury Statistics Query and Reporting System (WISQARS), "Fatal Injury Reports," last accessed June 26, 2020, https://www.cdc.gov/ injury/ wisqars. Calculations include children ages 10—17.

[49] https://giffords.org/lawcenter/gun-laws/policy-areas/who-can-have-a-gun/minimum-age/#:~:text=Minimum%20Age%20for%20Gun%20Possession,under%20the%20age%20of%2018.&text=Federal%20law%20provides%20no%20minimum,guns%20or%20long%20gun%20ammunition.

[50] https://www.rand.org/research/gun-policy/analysis/minimum-age.html.

[51] Betz, M. E. et al. (2018). Firearms and dementia. *Annals of Internal Medicine, 169*(10), 740. https://doi.org/10.7326/L18-0523.

[52] Cirpriani, G. et al. (2017). Armed and aging: Dementia and firearms do not mix. *Journal of Gerontological Social Work, 60*(8), 647—660.

[53] https://www.pewresearch.org/social-trends/2017/06/22/the-demographics-of-gun- ownership/ #two-thirds-of-gun-owners-cite-protection-as-a-major-reason-for-owning-a-gun.

[54] https://www.pewresearch.org/social-trends/2017/06/22/the-demographics-of-gun- ownership/ #two-thirds-of-gun-owners-cite-protection-as-a-major-reason-for-owning-a-gun.

including air soft guns, BB and pellet guns, and paintball. A quick walk through the toy aisles of a department store will confirm this stark difference between our cultivation of adolescent male and female proclivities. My son, who is nine years old at the time of this writing, has been the recipient of countless Nerf guns and ammunition as birthday presents from his friends and extended family members. His classmates regularly hold birthday parties at a popular local venue named Crossfire, which doubles as both an indoor paintball and a Nerf gun facility. The old storage warehouse now resembles a military-style tactical training course for urban warfare. Young children run rampant throughout the indoor space, wearing protective glasses, sniping one another with either paint or foam-based ammunition. The only rule is to not shoot each other above the neck, which is abandoned almost immediately after the timer begins. All is fair in love and Nerf war. Young males are born into a gun culture. In fact, I have two sons and two daughters, and I have yet to see either of my daughters receive a Nerf gun for a present or be invited to a gun-themed party venue. Women comprise only about a fifth of all gun owners.[55]

Although both men and women cite protection as the primary reason for owning a gun, women are far more likely to cite protection as the *only* reason.[56] Broadly speaking, women tend to be more pragmatic about gun ownership than men, seeing the gun as a means of self-defense. However, men identify gun ownership as being essential to their identity and to their personal sense of freedom.[57] Take, for example, bestselling author and editor-in-chief of the NRA's magazine, Frank Miniter, who in addition to his books titled *Ultimate Man's Survival Guide* and *The Politically Incorrect Guide to Hunting*, wrote *The Future of the Gun*, which fetishizes guns and gun culture. In it, he fantasizes about how guns liberate women:

Imagine a woman walking alone, at midnight. Under a streetlight's glare are two men watching her. She doesn't pause ... She is alone, sure ... But tight behind her belt is something small, but powerful. She has a gun of the future, a small, light, but deadly equalizer that takes fear from the night .

She lives in a free society, a city that gives her the ability to be equal to anyone. So she only shifts her eyes at the idle men as she passes. They've seen her before. She isn't afraid. They nod respect. She's free. Truly free. Truly equal . She knows the ultimate freedom is freedom from predation. That is the future of the gun. It is the future of freedom.[58]

Setting aside the gross misunderstanding that Miniter has about what it means to be "truly free" in this scenario, his view of guns is that they are the truest equalizer. That

[55] https://www.pewresearch.org/fact-tank/2017/06/29/how-male-and-female-gun-owners- in-the-u-s-compare/.

[56] https://www.pewresearch.org/fact-tank/2017/06/29/how-male-and-female-gun- owners-in-the-u-s-compare/.

[57] https://www.pewresearch.org/fact-tank/2017/06/29/how-male-and-female-gun-owners- in-the-u-s-compare/.

[58] Miniter, F. (2014). *The Future of the Gun.* Washington, DC: Regnery Publishing.

only by virtue of packing heat is this woman equal to these men. And notwithstanding the obvious Freudian interpretation of the gun as a phallic symbol here, this sentiment goes far beyond the boundaries of self-defense, and instead reinforces a chauvinistic view of women and their vulnerability. She is a damsel in distress, and only the gun can save her. The feminist perspective of gun ownership is slightly different. In the 2017 article titled "Gendering the 2[nd] Amendment," the authors ask: "By exercising their Second Amendment rights, are they becoming more equal and empowered citizens, or are they acquiescing to a hyper-masculine culture that their reform-minded sisters have long sought to tame?"[59]

The Well Armed Woman, LLC (TWAW) is a website dedicated to educating, equipping, and empowering women gun owners. Founder Carrie Lightfoot describes her abusive relationship with her ex-husband as the motivation for creating the site. She notes the great divide between "women's interest in guns and the male-dominated 'camo and ammo' firearm industry."[60] Lightfoot understands that a relatively untapped corner of the gun market is the woman who feels a gun will make her safer; her online store features fashionably chic products like molded ear plugs, slim carrying holsters, concealed carry totes and clutches, concealed carry leggings and corsets, pink magazine loaders, jewelry forged out of spent ammunition, and a hat that reads "Fearless and Free." It seems more fearful than fearless to walk around with a concealed handgun, in constant anticipation that you will be attacked, harassed, or predated at any moment. Yet, like Miniter, Lightfoot's hat suggests that the gun shall set women free.

Not everyone shares in this freedom around guns. What of the "idle men" that Miniter describes in the above scenario? I wonder if they would feel free knowing that a female passerby nearly riddled them with bullets because she felt threatened. And, I wonder if this perceived threat would be impacted by the race of the men. More than any other racial group, Black adults view gun violence as a "very big problem"—more than twice as much as do Whites.[61] In fact, gun ownership is a very privileged position that benefits Whites. A study published by Cambridge University Press asked White Americans about their support for gun availability among White women and among Black men. They found that "priming white Americans with the thought of a Black man decreases support for gun availability, whereas priming the thought of a white woman increases support for gun availability."[62] Deep racial biases affect how gun ownership is perceived but also govern how criminal offenders are prosecuted. According to the United States Sentencing Commission (USSC), the sentencing for firearm offenses disproportionately affect Blacks more than any other group. Black offenders are convicted at a higher rate compared to all others, are convicted more

[59] Carlson, J., & Goss, K. A. (2017). Gendering the second amendment. *Law & Contemporary Problems, 80*(2), 103-128.

[60] https://thewellarmedwoman.com/about-us/.

[61] https://www.pewresearch.org/fact-tank/2021/05/11/key-facts-about-americans-and-guns/.

[62] Hayes, M., Fortunato, D., & Hibbing, M. (2020). Race-gender bias in white Americans' preferences for gun availability. *Journal of Public Policy*, 1-17. doi:10.1017/S0143814X20000288.

often on multiple counts of gunrelated charges and receive longer sentences on average for firearm offenses.[63] Gun ownership is a White institution that is rooted in systemic oppression and racism, from colonization to slavery, the Black Codes to the Jim Crow Laws, the suppression of Civil Rights to the inequitable application of the law today.

The racial makeup of gun ownership is exacerbated further by geographic location. The Pew Research Center reported that 46% of respondents who lived in a rural area own a gun, compared to only 28% of those who live in suburbs and 19% who live in urban areas.[64] Rural America is largely White; racial and ethnic minorities make up only about 22% of the U.S. rural population but 43% of urban areas.[65] Gun ownership is most prevalent in western, rural states. The top three states with the highest rate of household firearm ownership, by order of magnitude, are 1. Montana, 2. Wyoming, and 3. Alaska. The U.S. Census Bureau cites Montana and Wyoming as having more than 90% of residents who identify as White; Alaska has a lower percentage of Whites (65%) but the nation's highest population of Alaskan Natives, which accounts for 15% of the state's residents.[66] The northeastern region of the United States— Massachusetts, New Jersey, and Rhode Island—account for the lowest rate of household firearms. Further, views on gun rights are congruous with locality. Rural Americans largely oppose restrictions placed on guns, whereas urban and suburban Americans support tighter gun laws.[67] Guns mean something different for rural and urban Americans, just as they do for White and Black Americans.

Perhaps the easiest distillation of gun ownership in the United States is by political affiliation. It is mostly accurate to say that support for guns and gun rights typically falls along party lines. According to a Pew Research Center survey, Democrats showed more support than Republicans for banning high-capacity magazines and assault-style weapons. An even greater disparity exists between the two parties regarding legislation that would allow concealed carry without a permit and in more places. In contrast to their political counterparts, the majority of Democrat respondents opposed legislation to allow K-12 teachers and officials to carry guns in school.[68] Furthermore, Democrats support a federal database to track gun sales, which Republicans fervently oppose. Clearly, political affiliations are one way to delineate attitudes toward guns, but this is not universally true.

Members of both political parties can find common ground on some gun control issues. Both Republicans and Democrats largely agree on legislation that would prevent

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[63] https://www.ussc.gov/research/research-reports/mandatory-minimum-penalties-firearms-offenses-federal-system.

[64] https://www.pewresearch.org/social-trends/2017/06/22/americas-complex-relationship- with-guns/.

[65] https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=99538.

[66] https://www.census.gov/quickfacts/fact/table/RI,NJ,MA,US/PST045219.

[67] https://www.pewresearch.org/fact-tank/2021/05/11/key-facts-about-americans-and-guns/.

[68] https://www.pewresearch.org/politics/2018/10/18/gun-policy-remains-divisive-but-several-proposals-still-draw-bipartisan-support/.

people with mental illness to purchase guns legally. And, there is consensus between the two parties that people on federal watch lists also should be unable to legally purchase guns. Although support for guns and gun rights is a central tenet of Republicanism, it is not an exclusively Republican behavior. A 2020 Gallup poll reported that 45% of respondents who identified as "Liberal" either lived in a home with a gun (45%) or personally owned a gun (15%). For Moderates, this figure was much higher; 70% of total respondents lived in a home with a gun or personally owned a gun.[69]

Gun ownership is not exclusively Republican. The Liberal Gun Club, founded in 2007, seeks to "provide a voice for gun-owning liberals and moderates in the national conversation on gun rights, gun legislation, firearms safety, and shooting sports"[70] and has a Facebook Group with 15k+ members. There are high-profile celebrities who openly advocate for gun ownership; Bill Maher—a left-leaning talk show host who is deeply critical of most Republican ideologies—said on his HBO show, *Real Time with Bill Maher*, that he owns a gun "for [an] emergency, like an antibiotic." Hollywood actor Vince Vaughn disclosed in an interview with *GQ Magazine*: "I support people having a gun in public full stop, not just in your home."[71] On an episode of *The View*, which has long been criticized for its left-leaning biases, co-host Whoopi Goldberg admitted that she is a member of the NRA, and when the guest asked if she was "packing," she replied, "You don't want to find out." Moreover, gun reform propositions are not unique to the Left; several Republican lawmakers have backed legislation that would tighten gun laws. Rep. Adam Kinzinger (RIL) said of a 2020 bill that would strengthen background checks on firearm purchases, "in order to curb evildoers from having access to firearms, we have to be willing to make some changes for the greater good."[72] Proposed legislation on gun reform often sees a smattering of congressional lawmakers defecting from their party's typical stance on gun rights. During his presidency, Donald Trump supported Extreme Risk Protection Orders (ERPOs), which gives law enforcement the ability to confiscate guns (with a court order) from those who are perceived to be a threat to themselves or others. Trump also called for a ban on bump stocks—a device that, when added to a semi-automatic weapon, increases the rate of fire—though state and federal courts would later overturn this ban, challenging the designation of machine gun, however. And, in a meeting with lawmakers, Trump said of dangerous people with guns, "take the guns first, go through due process second."[73] While it is true that support or opposition for guns and gun rights usually aligns with political party affiliation, it is a much more complex issue that cannot be summed up by one's voting record.

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[69] https://news.gallup.com/poll/264932/percentage-americans-own-guns.aspx.

[70] https://www.facebook.com/LiberalGunClub/.

[71] https://www.gq-magazine.co.uk/article/vince-vaughn-covers-july-issue-british-gq.

[72] https://thehill.com/homenews/house/542773-the-eight-republicans-who-voted-to-tighten-background-checks-on-guns.

[73] https://www.washingtonpost.com/video/politics/trump-take-the-guns-first-go-through-due-process-second/2018/02/28/4f767df6-1cec-11e8-98f5-ceecfa8741b6_video.html.

The statistics on gun ownership suggest that some people are simply more predisposed to owning a gun than others and that there are many reasons for why someone would own a gun. The most likely portrait of a gun owner is a ruralized, White male between the ages of 25 and 65 who handled guns during his childhood. But the portrait of gun ownership has many different faces. It is the NRA. It is a criminal. It is a deer hunter. It is a young female walking to her car late at night. It is a churchgoing grandmother, and it is a hardened gangster. It is a police officer and a mass shooter. The gun is Black and White, male and female, old and young, rural and urban. The gun is for survival, for pure entertainment, and for coldblooded killing. The gun is universal, but it is not neutral.

2. A Philosophy of Technology

To discuss a philosophy of technology, we must take a step back and try to define what I mean by *philosophy*. This in and of itself is not an easy thing to define. Graham Priest, a Distinguished Professor of Philosophy at The Graduate Center, City University of New York, likens this question to trying to understand what *breathing* is.[1] Although some of us can describe the process of breathing in an anatomical way, we come to understand it through abstraction more than its concrete, medical explanation. By virtue of being alive, we have an empirical understanding—a firsthand account—of breathing. We understand breathing to mean life. We also gloss over that this miraculously choreographed routine is repeated about 20,000 times per day, and without breathing, we would cease to be. So breathing is essential for living, but it is rarely the subject of our thoughts.

Similarly, we might not be able to articulate a scholarly dissertation on the roots of classical, traditional, or transcendentalist philosophies, nor the views of their major thinkers, but you might associate the idea of *philosophy* with a way of thinking, perceiving, or reflecting on the things that surround us. But rather than taking a deliberate step back from these things to construct a personal philosophy, we begin crafting our

philosophies the moment we are delivered into this world. German existentialist, Martin Heidegger, referred to the individual human existence as *Dasein* and argued that we have relationships with things and objects even before we become conscious of them and their usefulness. We are born into an environment surrounded by things and objects, and this ongoing lived experience and familiarity with things informs our views and our philosophies on them. The same is true for our interactions with technologies.

The Philosophy Foundation attempts to define philosophy as: "rigorous, structured, sequential conversation (with others or oneself) that is both collaborative and oppositional, that attempts to explore, explain and justify the structure and content of our thoughts in response to perceived problems and puzzles about reality, knowledge, value and meaning."[2] Philosophy is our attempt at making sense of the world around us, which we are refining constantly. But others play an important role in the shaping of our identities and our philosophies. Heidegger writes of the concept of *das Man*, which roughly translated, means "They" or "Anyone." *das Man* "refers to a totality of interconnected relations; customs, occupations, practices and cultural institutions as

[1] Priest, G. (2006). What is philosophy? *Philosophy, 81*(316), 189—207.

[2] https://www.philosophy-foundation.org/what-is-philosophy.

embodied in gestures, artifacts, monuments, and so forth."[3] Our philosophies are contextualized and positioned within our surroundings, which includes others and their philosophies. Meindert E. Peters, a cultural studies researcher, reckons that "because I am part of *das Man*, that I also already understand the actions, and thoughts in the actions, of other people. Their gestures are my gestures; our embodied existence is a shared one."[4] The increasing omnipresence of guns in public (either openly or by concealed carry) redefines *das Man* and commands that we re-evaluate each other and our surrounding environments. One's philosophy toward guns is imposed on everyone, not just the holder.

If *philosophy* is an exploration of our thoughts and actions, then the *philosophy of technology* is a way of measuring our thinking about our relationship with different technologies, others' relationships with technologies, and the ways in which technologies reveal our Being, both individually and collectively. Andrew Feenberg, an American philosopher, describes technology as "more like a religion" that impacts your "way of life."[5] He says, "Technology is thus not simply instrumental to whatever values you hold. It carries with it certain values that have the same exclusive character as religious belief. But technology is even more persuasive than religion since it requires no belief to recognize its existence and to follow its commands."[6] Just as a religious person sees the world through the lens of their faith, gun-carriers see their world through the sight of a gun. To further underscore Feenberg's point about technology, guns are indeed like a religion; you don't have to own or use a gun to be affected by it, just as you do not have to be a religious person to see the effects of religion on society. And the barrier to entry into the religion of guns is extremely low. Martin Heidegger knew this as well. In his final interview, the technological determinist took a theological posture in his lament over our inability to control our obsession with technology, saying "Only a god can save us."[7] But to have this salvation, we must want to be saved from ourselves first.

Both guns and religion make a promise. Guns promise that we will be safe; religion promises that we will be saved. Both require a blind investment of faith that each will be true. So, it should be no surprise that the religious constituency views guns

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[3] Aho, K. A. (2009). *Heidegger's neglect of the body.* Albany: State University of New York Press.

[4] Peters, M.E. (2019). Heidegger's embodied others: On critiques of the body and 'intersubjectivity' in *Being and Time. Phenomenology and the Cognitive Sciences, 18,* 441—458. https://doi.org/10.1007/s11097-018-9580-0.

[5] Feenberg, A. (2003, June). *What is philosophy of technology?* [Speech] . Retrieved from https://www. sfu.ca/~andrewf/books/What_is_Philosophy_of_Technology.pdf.

[6] Feenberg, A. (2003, June). *What is philosophy of technology?* [Speech] . Retrieved from https://www. sfu.ca/~andrewf/books/What_is_Philosophy_of_Technology.pdf.

[7] Heidegger, M. (1981). Only a god can save us: The Spiegel interview (1966). In Thomas Sheehan (ed.), *Heidegger: The Man and the Thinker.* Transaction Publishers.

more favorably than the non-religious.[89] There is no greater example of this than the Sanctuary Church in Pennsylvania. This religious organization is derived from the Unification Church, which has a worldwide congregation of approximately 3 million followers, or "Moonies" as they are called. The Unification Church was founded in Seoul, South Korea in 1954 by Sun Myung Moon; one of his sons, Hyung Jin Sean Moon, now rules over the Sanctuary Church. Moon claims to be descendant from a line of kings and identifies as the second coming of Jesus Christ. In his Sanctuary Church, there is a special emphasis on guns—specifically, the AR-15—because of Moon's interpretation of a biblical phrase that describes how Christ will rule his kingdom with "a rod of iron." The Church received media attention in 2018 when hundreds of armed members of the congregation gathered for a ceremony in which Pastor Moon blessed their AR-15s. The event was especially controversial because it took place just two weeks after the deadly school shooting in Parkland, FL, which killed 17. Moon proclaimed: "Our rights don't come from government ... from some bureaucracy. They come from Almighty God and that's why they're inalienable."[10] This progun sentiment is embraced widely across religious groups. Benjamin Boyd, an attorney for the Alabama Supreme Court, wrote an article for the *Liberty University Law Review* in which he advised church leadership: "[I]nstruct your flock to take their guns to church . Your life-and the life of your family members and your brothers and sisters in Christ-may depend upon it." He continued, "If you cannot do so, it may be high time to find another church family, one where the pastors and leaders do not disarm the flock of God and thus make them the prey of wicked men."[11] The gun is not just political; it is religious.

The fallacy of the philosophy of the gun is that it will protect and save its constituents. It promises identity, safety, peace of mind, and selfpreservation. But the gun is not the Word of God. It was concocted by man and enshrined by man-made laws. The gun is not righteous, but it is revealing of one's Being and true nature, which is rooted in myopic selfcenteredness. The narcissism of the gun owner is that gun violence will inevitably find him or her, despite the research showing otherwise; the FBI reports that the rate of home burglary has decreased significantly over time. The rate of home burglarizing in 2019 was 340 per 100,000 residents, or 0.34%.[12] The probability of being involved in a mass shooting event is even lower: 1 in 50 million.[13] Yet, most gun owners cite selfprotection as the primary reason for owning and storing a gun in

[8] Merino, S. (2018). God and guns: Examining religious influences on gun control attitudes in the United States. *Religions, 9,* 189—202.

[9] Whitehead, A. L., Schnabel, L., & Perry, S. L. (2018). Gun control in the crosshairs: Christian nationalismandoppositiontostrictergunlaws. *Socius.* https://doi.org/10.1177/2378023118790189.

[10] "Guns for God: The church of the AR-15" Retrieved from https://www.youtube.com/watch?v=ArfGyo6HQ_E.

[11] Boyd, B. (2014). Take your guns to church: The second amendment and church autonomy. *Liberty University Law Review, 8*(3), 653—714. Retrieved from: https://digitalcommons.liberty.edu/lu_law_review/vol8/iss3/7.

[12] https://ucr.fbi.gov/crime-in-the-u.s/2019/crime-in-the-u.s.-2019/topic-pages/tables/table-1.

[13] https://www.rand.org/research/gun-policy/analysis/essays/mass-shootings.html.

the home. Nearly four in ten gun owners keep a loaded gun within easy reach.[14] For many, the assumption that you will be attacked or that you will save others from an attack is irrationally improbable and highly narcissistic, but this is our *das Man*.

An optimism bias also plagues gun owners. This is a cognitive disassociation between a person's expectation of an event and the outcome that follows. In general, humans tend to "overestimate the likelihood of positive events and underestimate the likelihood of negative events."[15] For gun owners, the optimism bias is that the gun will save them from a harrowing situation like a home burglary, rather than create its own danger, such as an unintentional or accidental shooting. Instead, research shows that access to guns in the home is "the most significant hazard" and has not found any evidence of a deterrent effect for firearms, "or that a gun in the home reduces the likelihood or severity of injury" during a home break-in.[16] There is an unwarranted optimism for the presence of guns, and the irony is that guns are more likely to create a problem than to prevent one.

The philosophies of guns and religion are similar. We look to each to provide comfort against the unknown. In 2018, while on the presidential campaign trail, Sen. Barack Obama gave a speech in which he remarked that the American people "cling to guns or religion ... to explain their frustrations." He was talking specifically about how lowerto middleclass, blue-collar workers in Pennsylvania—the very same demographic as Pastor Moon's congregation in the Sanctuary Church in Newfoundland, PA—tend to vote against their self-interests. His thesis was that this type of voter has been "anesthetized into believing that more guns and more

God would solve their problems."[17] His opponent, Sen. Hillary Clinton, characterized the comment as being "elitist" and "out of touch,"[18] but Obama's analysis was an insightful one. We are born into *das Man*, and our philosophies are the direct product of our environment and extremely difficult to revise, even when it is in our own best interest to do so.

Guns are everywhere and owned by all types of people. I am not proposing that gun owners are morally reprehensible by nature of owning a gun; rather, I am asserting that guns warp our morals. Like all technologies, guns are non-neutral tools that embody design characteristics that exert an active force on users, thereby presenting fixed opportunities for their use, at minimum, and at maximum, shaping a user's behaviors and affecting the decision-making process. In turn, the gun bifurcates us into good and bad, victim and criminal, armed and unarmed. Furthermore, we are vulnerable to our

[14] https://www.pewresearch.org/social-trends/2017/06/22/americas-complex-relationship- with-guns/.

[15] Sharot, T. (2011). The optimism bias. *Current Biology, 21* (23), R941—R945.

[16] Hemenway, D. (2011). Risks and benefits of a gun in the home. *American Journal of Lifestyle Medicine, 5*(6), 502-511.

[17] https://www.washingtonpost.com/news/the-fix/wp/2015/12/21/obama-dusts-off-his- cling-to-guns-or-religion-idea-for-donald-trump/.

[18] https://www.theguardian.com/world/2008/apr/14/barackobama.uselections2008.

technologies if we do not have a clear philosophy for their use. Guns have a particularly consequential use whether you have been directly impacted by them or not. You may be a survivor of gun violence or know someone who is. Or you may have been required to participate in an active shooter training at your school or workplace, or you have children, nieces, or nephews who have endured this training. Undoubtedly, you have seen news coverage of gun-related violence. The gun permeates our thoughts and, by extension, our entire existence. Our *das Man.*

Technological Embodiment

Langdon Winner is a political philosopher who questions why the philosophy of technology is not discussed more often. Technologies, after all, are the underlying foundation of modern society. But it is this obviousness, specifically, that Winner suggests is the reason why we do not seriously reflect on how technologies shape our reality and support human activity. Winner calls this phenomenon "technological somnambulism." *Somnambulism* literally means sleepwalking, but here, it is used to refers to any subconscious activity that takes place without much thought or planning. Technological somnambulism, then, is the general oblivion with which we use technologies without forethought or meditation on how we might be affected by them or how others might be impacted by our use of said technology. This engagement becomes "automatic or internalized, and we do not attend to the goal, the motivation, or the habit-relevant action itself even as we perform it."[19] These somnambulist habits are virtually harmless when we use a technological aid such as a calculator or a thermometer but extremely consequential when talking about the concealed carry of a handgun. We are so intertwined with our technological artifacts that they become part of who we are, and we rarely take the time to re-evaluate the implications of their presence and their use. Heidegger describes this as "the hidden distress of *no-distress-at-all.*"[20] Perhaps the most frightening thing about guns is not their firepower, or even their ubiquity, but the apathy we have for how guns and gun violence are creeping into the normalcy of our everyday lives.

In her book *Rhetorical AccessAbility*, Lisa Meloncon articulates a theory of *technological embodiment* in which we are more like a hybrid race of techno-selves than humans who simply use technological tools. Our technologies are baked into the fabric of our lives, inseparable from who we are and what we do. She states that, "We can no longer ask the basic question, how will the user interact with thing X? Rather, the question needs to be, how does this technologically embodied user imagine thing X as

[19] Trivigno, F.V. (2013). Guns and virtue: The virtue ethical case against gun carrying. *Public Affairs Quarterly, 27(4),* 289-310.

[20] Contributions to Philosophy (From Enowning), translated by P. Emad and K. Maly, Bloomington: Indiana University Press, 1999.

part of himself or herself and what does it mean to all of us?"[21] Like many people, I enjoy the features of a smart home; I lock/unlock my doors, open/close my garage doors, control my indoor/outdoor lighting, and regulate the home heating/cooling from my phone. My Nest thermostat sends me an email reminder when it is time to change the air filter. The Wi-Fi camera in my children's bedroom uses facial recognition technology to identify and record any unusual movement throughout the night. Our iRobot vacuums the floors in our house daily. The creeping featurism of the smart home is one example of the ways in which we have become unnecessarily ensnared in a network of internet connectivity among billions of physical objects, known collectively as the Internet of Things (IoT), which is growing exponentially. Technologies like the ones found in a smart home often are marketed and justified as tools of convenience; all these things will make your life easier. But as famed media theorist Marshall McLuhan understood well, all technologies both extend and amputate our abilities, whether we are talking about a robot vacuum cleaner or a Smith & Wesson.

In Science and Technology Studies (STS), the term *embodiment* has a layered meaning. In essence, embodiment refers to the degree to which technology mediates a user's experience. A popular example of embodiment, and one that has fueled many successful film and TV franchises, is the concept of the technology-enhanced human, or the cyborg. Famous cyborgs include RoboCop, the Six Million Dollar Man, Darth Vader, and the Terminator. But all of us are entangled with technologies that enhance our physical capabilities, not just these fictional movie characters. Social media platforms amplify connection and communication; virtual and augmented reality tools generate digital landscapes that simulate corporal experiences; wearable technologies like the Fitbit and Apple Watch quantify our every movement, translating our daily lives into heaps of data. Technology is inextricable from our environment, co-shaping our interactions with everything and everyone. By virtue of owning a smartphone, you are embodied with technology in many ways, including the ability to connect instantly with others regardless of geographic boundaries, ondemand access to information (and misinformation) on the internet, real-time navigational tools, and streaming entertainment. And when we lose our phone or if it becomes inoperable, we quickly become aware of our detachment, or *disembodiment*, from those technologies. Even the clothes that you wear signify the relationship you have with culture, your socioeconomic status, and your personal taste.

We are figuratively and literally wrapped in our technologies. They define who we are, how we behave, and how we are perceived by others, and the gun is no exception. Because our technologies can shape-shift to fit our need in that moment (a knife most certainly can be used to stab someone or to make a PB&J sandwich), we discount their primary intent and mistake them for neutral instruments instead. But a closer

[21] Meloncon, L. (2013). Toward a theory of technological embodiment. In L. Meloncon (Ed.), *Rhetorical accessability: At the intersection of technical communication and disability studies.* (pp. 67—81). Baywood Publishing Co. https://doi.org/10.2190/RAAC3.

look reveals that technologies—such as the gun—possess a "complex moral relationship between designers, artifacts, and users" and that "each design decision ... changes the nature of the moral relationship between the artifact and the user."[22] Our technologies not only facilitate our actions, but also embody our morality, and in doing so, they come alive. Langdon Winner even goes as far as referring to technologies as "forms of life."

It is important to reiterate here that guns serve different functions depending on the context. To law enforcement, a sidearm is an essential part of the uniform (this is not the case in other developed countries, however). To the hunter, the type of gun or rifle that is used depends on the game being hunted and how much firepower is required; squirrelhunting and bear-hunting require drastically different ammunition. To the woman walking alone at night, a concealed handgun in her purse might give her a sense of protection. To the bank robber, the gun is used for intimidation and to demand compliance from the bank teller. The gun means different things to different people in different contexts. But just because a technology has versatility—or multistability—this does not mean it is neutral. The *Stanford Encyclopedia of Philosophy* explains that "technological artifacts by definition have certain functions, so that they can be used for certain goals but not, or far more difficulty or less effectively, for other goals. This conceptual connection between technological artifacts, functions and goals makes it hard to maintain that technology is value-neutral."[23] Instead, we should recognize technologies as being value-laden. Whether a gun is used for goodor ill-intention, that does not change its fundamental design, or its *materiality.* To better understand how technologies actively shape and mediate the world around us, it is important to recognize that the purpose of an object and its use are fluid but not neutral. Because of the expansive range of functions and uses, it might be prudent to explore this materiality of guns. Let's begin by defining whether guns are things, objects, technological artifacts, or some combination thereof. First, we must clearly differentiate the three, and second, we must understand why this distinction is necessary.

What is the difference between things, objects, and artifacts? A *thing* is merely an item that is detached from all cultural and interpretation. It is something that is completely foreign; we do not yet understand it through the lens of social conditioning. Imagining an item's "thingness"[24] is difficult because it takes into account only the physical properties of an item and ignores context or presupposition. Importantly, a thing is often a natural occurrence that "come[s] into being without human inter-

[22] Millar, J. (2015). Technology as moral proxy: Autonomy and paternalism by design. *IEEE Technology and Society Magazine*, *34*(2), 47—55. doi: 10.1109/MTS.2015.2425612.

[23] Franssen, M., Gert-Jan L., & van de Poel, I. (2018). "Philosophy of Technology", *The Stanford Encyclopedia of Philosophy* (Fall 2018 Edition), Edward N. Zalta (ed.). Retrieved from https://plato.stanford.edu/archives/fall2018/entries/technology/.

[24] Glaveanu, V P. (2016). 'Things. In V. P Glaveanu, L. Tanggaard, & C. Wegener (Eds.), *Creativity: A new vocabulary* (pp. 164—171). Palgrave Macmillan. Palgrave Studies in Creativity and Culture. https://doi.org/10.1057/9781137511805_20.

vention."[25] Things can be all shapes and sizes. For example, envision a steep, craggy mountainside. This natural feature might be the result of millions of years of geologic activity where two tectonic plates have collided, and convection currents forced the less dense material upward. We might observe this mountainside in awe and wonderment for its sheer size and beauty. But a rock climber might interpret this same mountainside as a challenge to climb. At this point, the mountainside becomes an object for the rock climber. The *thing* extends into an *object* when it can serve a purpose. Once the rock climber has inserted cams, or chocks, into the rock face, it becomes more easily scalable for other mountaineers; the holds make it easier and safer for subsequent climbers to follow the established climbing route and ascend the mountainside. By virtue of installing climbing holds into the rock crevices, the mountainside now invites climbing more explicitly. Keep in mind, however, that the placement of these chocks set a predetermined route for subsequent climbers, and in doing so, the original climber has left an indelible mark on the climb. In essence, an *object* is the "*what for* of things."[26] Its materiality and purpose are communicated to the user through its design. We are surrounded more by objects than things in our daily lives simply because of our familiarity with them and our ability to deduce what something might be used for.

Objects and *artifacts* are very similar. Both objects and artifacts assume a human-engineered, purposeful design that can be understood by the user, and both are open to this interpretation. But an *object* graduates to an *artifact* when it takes on additional meaning and when it becomes representative of something larger than the object itself. According to Daniel Miller, an anthropologist, "Artefacts are a means by which we give form to, and come to an understanding of, ourselves, others or abstractions such as the nation or the modern. It is in this broad sense that their very materiality becomes problematic."[27] The mountainside that was transformed from a natural thing into a usable object can also become an artifact with historical and cultural significance. For instance, between the years 1927 and 1941, a granite mountainside in the Black Hills of South Dakota was sculpted into the profiles of four U.S. Presidents. This is one of the most popular tourist destinations for national monuments in the United States. Similarly, the world's largest bas-relief sculpture resides in the side of a 15-million-year-old mountain in Stone Mountain, Georgia, and features three confederate leaders on horseback. While this monument is not recognized as a national landmark, it does fetch many tourists each year. But because of its deep ties to the Ku Klux Klan and its glorification of a bygone southern confederacy movement, there also has been an increase in demand for the removal of the engraving. Stacey Abrams, the

[25] Baker, L. R. (2008). The shrinking difference between artifacts and natural objects. *American Philosophical Association Newsletter on Philosophy and Computers* 7(2), 2—5.

[26] Glaveanu, V P (2016). 'Things. In V P Glaveanu, L. Tanggaard, & C. Wegener (Eds.), *Creativity: A new vocabulary* (pp. 164—171). Palgrave Macmillan. Palgrave Studies in Creativity and Culture. https://doi.org/10.1057/9781137511805_20.

[27] Miller, D. (2002). Artefacts and the meaning of things. In T. Ingold (Ed.), *Companion Encyclopedia of Anthropology.* Routledge.

state's first African American woman to run for democratic governor, has called for the total erasure of the monument, citing "[T]he monument had no purpose other than celebration of racism, terror & division when carved in 1915."[28] The mountainside is no longer just a craggy rock. *Things* and *objects* become *artifacts* when they extend beyond materiality and assume complex meaning, representation, and interpretation. The very same mountainside is transformed from a beautiful landscape (thing) to a rock climber's challenge (object), to a racially insensitive monument (artifact). But why is it necessary that we make this distinction among things, objects, and artifacts?

When we better understand things, objects, and artifacts, we better understand ourselves. Vlad Petre Glaveanu, a researcher and Professor of Psychology and Behavioral Science, writes: "It is virtually impossible—or in any case, reductionist—to consider the relation between individuals and their material surroundings ... without understanding how things become, through (inter)action, objects, and ultimately, artefacts."[29] It is indeed quite necessary to consider whether a gun is a *thing*, an *object*, or an *artifact* because this can help explain our relationship with the gun and with the role that the gun plays in our self-identity, or as Daniel Miller articulates, "Things make us as much as we make things."[30] Miller goes even further, saying that it is imperative that we "understand the manner by which persons come to identify with objects or even to become undifferentiated from them."[31] This is exemplified in the U.S. Marine Corps, where it has been tradition since 1942 that cadets recite the Rifleman's Creed, which states:

My rifle is human, even as I, because it is my life. Thus, I will learn it as a brother. I will learn its weaknesses, its strength, its parts, its accessories, its sights and its barrel. I will ever guard it against the ravages of weather and damage as I will ever guard my legs, my arms, my eyes and my heart against damage. I will keep my rifle clean and ready. We will become part of each other.[32]

The gun assumes is personified for the Marine. It is not just a thing or an object for use; it is an artifact with patriotic duty, as stated in the creed: "My rifle and myself are the defenders of my country." When we carry a gun, it blends into our being and becomes inseparable from who we are, and this absorption of becoming "part of" the gun is a clear embodiment of technology. The creed goes on further to say: "My rifle, without me, is useless. Without my rifle, I am useless."

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[28] https://twitter.com/staceyabrams/status/897417114180616192.

[29] Glaveanu, V. P. (2016). Things. In V. P. Glaveanu, L. Tanggaard, & C. Wegener (Eds.), *Creativity: A new vocabulary* (pp. 164—171). Palgrave Macmillan. Palgrave Studies in Creativity and Culture. https://doi.org/10.1057/9781137511805_20.

[30] Miller, D. (2010). *Stuff*. Cambridge: Polity Press.

[31] Miller, D. (2002). Artefacts and the meaning of things. In T. Ingold (Ed.), *Companion Encyclopedia of Anthropology*. Routledge.

[32] https://www.usmcu.edu/Research/Marine-Corps-History-Division/Frequently-Requested- Topics/Marines-Rifle-Creed/.

A gun is not simply a *thing* because it has been pre-designed and precisely crafted for a specific use: to be fired. So, if a gun is not a *thing*, then is it an *object*? Certainly, a gun serves a purpose; it can make someone a hero, a murderer, a collector, a hunter, and much more. The gun is multidimensional and purposeful, so it is no doubt an *object*. Making the leap from an *object* to an *artifact* requires the gun to possess an underlying subtext that is meant to be read. Scholars have suggested that technologies should be seen as "texts" that are "'written' (i.e., configured in certain ways) by their developers, producers, and marketers, and have to be 'read' (i.e., interpreted) by their users and consumers."[33] Make no mistake, guns not only signify meaning to the holder but also communicate messages to others both explicitly and implicitly, and there is legal precedent to support this. In 1986, the United States Supreme Court ruled on a federal armed robbery case where the defense argued for a lesser sentence of the defendant, who had brandished his gun during a bank robbery. The logic of the argument was that because the gun was not loaded during the robbery, it could not be considered a "dangerous weapon." The Supreme Court unanimously disagreed, ruling instead that an unloaded gun is dangerous since "the display of a gun instills fear in the average citizen."[34] This ruling is an important revelation for how we read and interpret the subtext of guns, and this underscores how guns are much more than just a neutral object; guns are dynamic technological artifacts that are meant to be read by the holder and by others.

At the time of this writing, the state of Texas has enacted new legislation that allows for the permitless carry of handguns in public without the background check or training that had been previously required by the state (Senate Bill 1927). The law went into effect on September 1, 2021, despite most Texan voters opposing the measure. SB1927 not only tests the boundaries of the second amendment but will most likely infuse more guns into public spaces. Ray Hunt, Executive Director of the Houston Police Officers' Union, expressed grave concerns from members of law enforcement over the new legislation, saying, "We're just concerned because anytime there's more guns, there's a problem."[35] The effect of guns usually is explained through quantifiable and observable measures such as the violent crime rate, the number of shooting incidents, and weapons violations charges. But aside from this supposition that more guns will yield a statistically higher likelihood of gun-related incidents, there's a deeper philosophical impact that must be explored here. How do gun-carrying laws metamorphosize average people into what Bruno Latour refers to as "gun-citizens"?[36] How might the permitless open-carrying of guns affect the identity of individuals and their relationship with others?

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[33] Hutchby, I. (2001). Technologies, texts, and affordances. *Sociology, 35*(2), 441—456.

[34] *McLaughlin v. United States*, 476 U.S. 16, 17 (1986).

[35] https://www.texastribune.org/2021/08/16/texas-permitless-carry-gun-law/.

[36] Latour, B. (1999). *Pandora's hope: Essays on the reality of science studies.* Cambridge, Mass: Harvard University Press.

Let's first distinguish between open carry (carrying a handgun that is publicly visible, e.g., in a hip holster) and concealed carry (inconspicuously carrying a handgun on the body or in an accessory such as a purse so that it is not visible by others). The difference is meaningful, as open carry includes a behavioral performance aspect in which the semiotic nature of a gun is overtly broadcast to others. This messaging can be for an array of purposes including intimidation, patriotic duty, antigovernment posture, or machoism. Regardless of the purpose, open carrying a gun creates a power structure where the gun holder is emboldened, and others become disadvantaged. Concealment of a gun also creates this hierarchy, of which others are unaware, but the gun holder is secretly privileged. Concealed carry is quite literally a physical embodiment of the gun as it is absorbed into the body, effectively transforming the holder as the gun becomes an extension of the hand. The gun, therefore, alters the person both in terms of their physical capability and in their self-identity.

In his paper "Gun Concealment, Display, and Other Magical Habits of the Body," Charles Fruehling Springwood begs the question, "How are gun owners transformed by the corporeal relationships they have with their weapons? Moreover, how is this relationship a mode of affective embodiment, in which the gun so easily merges with its owner, forming and conforming to the body, dissolving into one's person unconsciously, much like but much differently than a cell phone?"[37] Springwood describes gun concealment as a "magical" habit that creates the perception of an "enchanted assemblage of performance control, omnipotence, pleasure, and fear." Gun-citizens who open carry and conceal weapons often cite vigilantism as their rationale; they see themselves as a potential hero waiting in the wings. But ironically, it is the presence of the gun that escalates and worsens the scenario more often than it saves the day. When we view the world through the gun, and when we invite the gun to become a part of our identity (and literally part of our person), we hyperbolize the behaviors of others. We see others as either pre-criminals or as pre-victims.

Gun apologists conveniently see the gun as a mere *thing*, when in fact, it is a complex technological artifact that embodies humanistic qualities and that converses in a language that is meaning-making. This language is native to everyone, and it is baked into the design of the gun from the moment of its conception. Carrying and concealing this artifact on our body has a powerful effect that changes us and our reality.

Poiesis, or the Activity of Making

Right now, a middle-aged Pakistani man sits in a discreet, windowless building on the outskirts of Peshawar where he heats a block of stainless steel to thousands of degrees before placing it into a forging press. By exerting hundreds of pounds of force,

[37] Springwood, C. F. (2014). Gun concealment, display, and other magical habits of the body. *Critique of Anthropology, 34*(4), 450—471. https://doi.org/10.1177/0308275X14543394.

the stainless-steel blank is slowly molded into the frame of a handgun. Roughly 3000 miles away in Austria, a factory worker is repeatedly heating and cooling a

similar-looking handgun frame in a process known as *annealing*, which is done to relieve internal stresses in metals and glasses. Elsewhere, a worker in Croatia uses a computer-controlled lathe to mill, drill, and tap various components of the gun down to a thousandth of an inch precision, and another in Brazil is in the final stages of applying the protective coating onto a gun—a process known as *blueing*. Guns are manufactured much like automobiles, where the project build is broken down into numerous individualized processes. In fact, gun manufacturing is divided into four subsystems: the Frame Group, the Cylinder, Extractor, and Crane Group, the Barrel and Sight Group, and the Trigger, Timing Hand, and Hammer Group.[38] All groups work together to achieve the final product, but it is uncommon that the gun is fully realized under one roof. Just like automobile manufacturers, these individual parts and manufacturing processes often are outsourced to foreign companies who specialize in them. This is true for firearm brands such as Remington, Smith & Wesson, and Springfield Armory—companies who trade on their patriotic identity but whose products would be impossible without their obscured foreign partners.

Like the American flag that is handsewn in China and then shipped to the shelves of the local Walmart, it is ironic that the gun—a deeply patriotic symbol of American individualism—relies so heavily on foreign entrepreneurship and labor to arm our citizens. According to the Bureau of Alcohol, Tobacco, and Firearms and Explosives (ATF), handguns are the most imported type of gun, followed by shotguns and then rifles.[39] Austria is the chief exporter of handguns to the United States, and roughly three out of every ten firearms sold in the United States are imports.[40] Although statistics on firearm imports show a slight decline over the last few years, the total number of imports has seen a 400% increase since the metric was first recorded in 1986. Many of the most recognizable firearm brands are foreign; even the largest police departments in the United States issue foreign-based sidearms to their officers. New York City Police Department (which has the nation's largest police force of 36,000) and

Chicago Police Department (the second-largest police force) overwhelmingly choose variations of the Glock (made in Austria). The Los Angeles Police Department gives its officers the choice between Glock (Austria) and Beretta (Italy), and the Dallas Police Department issues the SIG Sauer (Germany) to its officers.[41] European companies that are based in countries that have stricter laws and regulations on the sale and possession of firearms exploit the American wantonness for guns as well as the police departments that preserve order among their armed constituencies. Although gun ownership is a uniquely American trait, the gun itself is truly a global product and fuels an international economy.

[38] http://www.madehow.com/Volume-1/Revolver.html.
[39] https://www.atf.gov/file/149886/download.
[40] https://www.bloomberg.com/graphics/2018-us-gun-imports/.
[41] https://www.tactical-life.com/firearms/handguns/largest-departments-police-sidearms/.

The products and technologies that are developed tell us a lot about the people who designed, created, and used them. In his book *What Things Do: Philosophical Reflections on Technology, Agency, and Design*, Peter-Paul Verbeek writes that "technologies interactively co-shape society."[42] Whereas a classical view of the philosophy of technology asserted that technologies alienate us from one another, the modern postphenomenological view emphasizes "a philosophy of technology from a perspective of things," arguing that technologies clearly mediate the relationship between humans and the world. Moreover, technological artifacts are more than translators; they facilitate our actions. By extension, then, our technologies help us to express ourselves through our desired actions, and so we become our technologies. Surrounded by aggressive, homicidal technologies, we become aggressively homicidal. One needs to look no further than the correlation between the presence of guns and gun violence to make this observation. Yet because of the nuanced way in which technologies manifest their influences on their users—indeed, not all gun owners are homicidal maniacs—this leaves space for skeptics who make bad-faith arguments that proliferate the myth that guns make us all safer. The normalization of guns in society affects not only the gun owner but also those around him or her. Verbeek argues that "technologies do change people's existence and their relationships with the world, but in a much more subtle and differentiated way."[43] The diffusion of a particular technology can have profound impacts on our daily lives in both direct and indirect ways, but the residual impact is sometimes hard to articulate and observe.

We might look to the past to better understand how technologies that we welcome into our lives can come to define an entire civilization. (Just as we make inferences about cultures that experience a sharp decline in the use of technologies, such as the abandonment of guns in sixteenth century Japan, which I will describe later.) In particular, the weapons of a civilization can give us insightful clues about its priorities and need. The prevalence of ancient weaponry such as spears and arrows suggest that there was an overwhelming need for long-range striking capabilities to ward off attackers (human and animal) and to hunt game from a safe distance early in our anthropologic development. In ancient Roman times, the proliferation of hand-held arsenals such as daggers, tridents, and spike-laced leather wraps for fists served a different purpose—closerange combat—which was used by gladiators to entertain the masses. Two thousand years later, during World War I, the sophistication of German U-boats changed the face of modern warfare with a highly destructive underwater military campaign, sinking more than 5000 ships in a four-year period.[44] And later, during World War II, the nuclear bomb was detonated twice, instantly killing 80,000

[42] Verbeek, P.-P. (2005). *What things do: Philosophical reflections on technology, agency, and design.* University Park, Pa: Pennsylvania State University Press.

[43] Verbeek, P.-P. (2005). *What things do: Philosophical reflections on technology, agency, and design.* University Park, Pa: Pennsylvania State University Press.

[44] https://www.wired.com/2014/09/wwis-u-boats-launched-age-unrestricted-warfare/.

in Hiroshima and 45,000 in Nagasaki.[45] Undoubtedly, weapons technology has become more sophisticated, but each of these developments was in response to a specific need of that time and place in history. Regardless of their rationale for innovation and use, civilizations and their peoples are defined summarily by their technological artifacts. So, then, what of our society? Based on the disproportionately high levels of gun ownership and gun-related deaths in the United States compared to other developed countries, what might future generations conclude about us? That we were particularly violent? Defensive? Fearful?

Classical philosophers seemed to understand that our technologies represented more than just their function; they embody our identity. *Techne* is the etymological root for the modern word *technology,* and it is derived from the ancient Greeks. Plato, Socrates, and Aristotle all had slightly different interpretations of the concept of techne, but in essence, it is the practice of an art (dance, medicine, oration, etc.) or the production of an artifact (e.g., a shipbuilder builds a ship, a blacksmith forges a sword, a carpenter frames a house). The process or activity of making is referred to as *poiesis.* The difference between the two is that techne causes something to appear and poiesis "produces or leads things into presence."[46] Poiesis is more of an unveiling of the maker and of the world in which that maker resides. In gun manufacturing, there is both techne and poiesis that can be interpreted to tell us more about ourselves.

Techne includes the concrete knowledge that is required to build an object, such as a complex technology like the gun. Because the gun manufacturing process is highly compartmentalized, it might be unfair to assume that someone who is working on the frame of the gun will be familiar with how the trigger is constructed. Indeed, a complete understanding of the gun manufacturing process is not required to perform within a particular department. Similarly, an automobile worker who applies the final coating on the vehicle is not required to have an intimate understanding of the internal combustion engine. Andrew Feenberg, a Professor of Philosophy of Technology, writes: "Although artifacts depend on human activity, the knowledge contained in the technai is no matter of opinion or subjective intention. Even the purposes of things made share in this objectivity insofar as they are defined by the technai."[47] A gun, whether good or ill-intentioned, is designed to fire a bullet, and it must be assumed that the manufacturers of guns have this general awareness, just as the automobile worker understands that the vehicle will be driven one day. There are obvious ethical questions that can be raised here, such as the degree to which gun manufacturers bear accountability for gun-related deaths.

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[45] https://www.theatlantic.com/magazine/archive/1946/12/if-the-atomic-bomb-had-not- been-used/376238/.

[46] Whitehead, D. (2003). Poiesis and art-making: A way of letting-be. *Contemporary Aesthetics, 1.* Retrieved from https://quod.lib.umich.edu/c/ca/7523862.0001.005/%2D%2Dpoiesis-and-artmaking-a-way-of-letting-be?rgn=main;view=fulltext.

[47] Feenberg, A. (2003). "What is Philosophy of Technology?" Retrieved from https://www.sfu. ca/~andrewf/books/What_is_Philosophy_of_Technology.pdf.

Societally, we value some types of activity-making more so than others. A line cook who flips burgers at McDonald's is known simply as a "crew member,"[48] yet a restaurant worker at a Subway who has comparable job duties is referred to as a "Sandwich Artist[®]."[49] Is making a footlong sub a more artisanal process than making a Big Mac? Not really—this is just a difference in semantics, which is a clever marketing strategy. And maybe it works; the public perception is that Subway is a higher-quality and healthier restaurant than McDonald's, despite the two having similar menus in terms of their nutritional value. In fact, studies have shown people to significantly underestimate the calories in Subway meals compared to McDonald's, specifically.[50][51] This illustrates how activity-making and its processes can be branded by social and cultural perception instead of objective reality. Certainly, not all processes and activity-making are equal, but we accept Subway's rhetorical use of the title "Sandwich Artist[®]" because it aligns with our heightened view of the restaurant and because we are led to believe that their sandwich-making is more of a craft than flipping burgers.

Similarly, the poiesis of gun-making is regarded as more of an art than a trade; gunmakers are viewed more as artists than manufacturers. Perhaps this is because guns are uniquely value-laden artifacts. Unlike a cheeseburger or a sub sandwich, there is a special gravity attached to the construction of a gun, possibly because its use can have a heavy consequence. Guns are loaded artifacts, both figuratively and literally. They are weapons of war, tools for self-defense, a source of self-reliance, and sometimes, guns are art. They rarely lose value; guns often become family heirlooms, passed down through generations, at some point becoming more sentimental than functional. Much like a Samurai's sword, guns don't just appear; they are led into presence by their creators. Or perhaps the poiesis of guns has a unique gravitas because it has become intertwined with another powerful societal influence: religion.

There is the relentless defense of gun ownership as a "God-given right,"[52] which is a generous interpretation of biblical verses that speak in vague generalities about weapons of warfare and swords. Regardless, many Christians believe that gun rights are bestowed upon us by our Creator. But many have pointed out the hypocrisy between the Christian faith and the affinity for guns. Even the leader of the Catholic church, Pope Francis, has denounced weapons manufacturers publicly, calling them duplicitous.[53] Yet gun manufacturers trade on the idea that a gun makes you a protector of the weak. The 2015 film *American Sniper* popularized the theory that there

[48] https://careers.mcdonalds.com/main/jobs.

[49] https://apply.mysubwaycareer.com/us/en/career-path/.

[50] Downs, J. (2013). Does "healthy" fast food exist? The gap between perceptions and behavior. *Journal of Adolescent Health, 53*(4), 429—430.

[51] Block et al. (2013). Consumers' estimation of calorie content at fast food restaurants: cross sectional observational study. *BMJ.* doi: https://doi.org/10.1136/bmj.f2907.

[52] https://www.politico.com/magazine/story/2019/09/04/yes-gun-ownership-is-a-god- given-right-228034.

[53] https://www.theguardian.com/world/2015/jun/22/pope-francis-says-those-in-weapons-industry-cant-call-themselves-christian.

are three types of people: sheep, wolves, and sheepdogs. Sheep have "no capacity for violence," making them a vulnerable population. Wolves do have this violent streak, and this makes them sociopathic. The sheepdog, however, has a "capacity for violence and a deep love for fellow citizens ..," making him or her "a warrior, someone who is walking the hero's path. Someone who can walk into the heart of darkness, into the universal human phobia, and walk out unscathed."[54] The sheepdog analogy has been adopted by many gun owners who see themselves not as aggressors but as guardians of others. By this logic, guns fulfill the righteous duty to save lives, even if that means taking another. A Florida gun manufacturer, Spike Tactical, even sells a Christian Assault Rifle named the Crusader that features a Bible verse engraved on its frame and which has three safety settings: Peace (safety engaged), War (single round), and God Wills It (fully automatic).[55] A gun makes you more than a sheepdog; it makes you a god.

Gun manufacturers exploit this savior complex. Although the description varies widely today, a *gunsmith* might be employed by a firearm manufacturer, an outdoorsman retail store, or a specialty gun boutique that specializes in restoration, engraving, or machining. There are a number of community colleges and technical schools that offer gunsmithing career programs as well as professional organizations dedicated to gunmakers. The American Custom Gunmakers Guild (ACGG) is one organization that seeks to preserve this reverence for gunsmiths and their craft. The group describes itself as "the preeminent entity in the United States for custom sporting firearms knowledge, skill, craftsmanship and artisanship" and whose members are the "world's finest craftspeople."[56] The inspired process of gunsmithing transcends that of a blacksmith or a metalworker. It is the guided evolution of an object that anoints its holder as a legislator of life and death. While gunsmithing does require the technai of a skilled craftsman, this should not overshadow the residual effect of the final product. Comparatively, no one admires the fine artisanship of the atomic bomb. Its aesthetic value is eclipsed by its capability for mass casualty. Instead of glorifying the scientific achievement of the brilliant scientists who worked on the Manhattan Project, we give pause to the thought of the atomic bomb because of its devastating lethality and the existential threat that it poses to humanity. We are deferential to the bomb for what it is and not distracted by its handiwork, its constitutionality, or the ethical dilemma it presents.

Even the director of the Manhattan Project, J. Robert Oppenheimer, expressed his hesitancy over the role that he played in bringing forth the atomic creation. The following excerpt is from a 1955 television interview that Oppenheimer gave to the *Ed Murrow Series* on CBS in which he described his reaction to seeing a successful test of the nuclear bomb:

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[54] Grossman, D. & Christensen, L., (2004). *On Combat: The Psychology and Physiology of Deadly Conflict in War and in Peace*. WSG Research Publications.

[55] https://www.businessinsider.com/you-can-buy-christian-assault-rifle-2015-9.

[56] https://www.acgg.org/index.php/about-acgg/the-guild.html.

I saw a huge ball of fire, bright yellow rising in the direction of the wall was filled with strange violet light. We knew the world would not be the same. Few people laughed few people cried. Most people were silent. I remembered the line from the Hindu scripture the *Bhagavad-Gita*; Vishnu is trying to persuade the prince that he should do his duty and to impress him takes on his multi-armed form and says, "Now I am become death the destroyer of worlds." I suppose we all thought that one way or another.[57]

If the poiesis of the gunsmith brings forth a non-neutral instrument designed for destruction, then the gunsmith is a purveyor of death, not an artisan to be celebrated for his craftsmanship. Verbeek says that technological artifacts "are not neutral intermediaries, but actively co-shape people's being in the world: their perceptions and actions, experience and existence" and that "it is necessary to investigate the translation of engagement that technologies bring about. This translation appears to have a structure of 'invitation' and 'inhibition.'"[58] As gunsmiths and gun manufacturers bring more guns into the world, they shape our world and, as a result, define who we are and how we live. Langdon Winner writes, "As we 'make things work,' what kind of *world* are we making? This suggests that we pay attention not only to the making of physical instruments and processes, although that certainly remains important, but also to the production of any significant technical change."[59] Manufacturing guns and accessories for guns that are faster, easier to use, more destructive, and more easily concealed qualify as significant technical change. Winner rightly concludes: "Through technological creation and many other ways as well, we make a world for each other to live in." Gunsmiths don't just make guns; they shape a world in which everyone must live.

A single gun might not be a "destroyer of worlds," but it certainly can destroy lives. Henri Bergson, a French philosopher, argued that an object cannot be separated from its poiesis—that this is the "active inert"[60] contained within every material object. I can't help but wonder if firearm dealers, gun manufacturers, or the workers who participate in the gunmaking process ever contemplate whether the artifact that they are creating and selling will be used in a school shooting, a violent robbery, a domestic dispute, a suicide. Or perhaps they choose to willfully ignore a simple fact: The gun destroys. And if we find ourselves in our artifacts, such as guns, and we know that guns are at the center of a killing epidemic, then gun owners must answer to the ethical questions that are raised by having and using guns.

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[57] Murrow, E. R., Friendly, F. W., Oppenheimer, J. R., & Miscellaneous Collection (Library of Congress). (1955). *Murrow-Oppenheimer interview*. United States: Association Films.

[58] Verbeek, P.-P. (2005). *What things do: Philosophical reflections on technology, agency, and design*. University Park, Pa: Pennsylvania State University Press.

[59] Winner, L. (1986). *The Whale and the Reactor*. The University of Chicago Press. Chicago, IL.

[60] Goulthorpe, M., & dECOi Architects. (1998). The Active Inert: Notes on Technic Praxis. *AA Files, 37*, 40-47.

A Moral Proxy

Technologies don't just appear out of the ether. They build on a foundation of experimentations, discoveries, and prototypes. Much like the gun, the origin of the modern car emerged slowly over time, so it is difficult to say exactly who *invented* the automobile. Many credit Karl Friedrich Benz of Germany as the innovator of the first gas-powered vehicle to use a combustible engine, for which he was granted a patent in 1886.[61] However, earlier models included an electric-powered carriage designed in Scotland and a steam-powered military vehicle developed nearly 100 years earlier in France.[62] The story of the automobile is not unlike all other technologies; over time, pragmatic and incremental improvements build upon one another and propel the design through an inspired evolution that is never finished.

Of the many upgrades that the automobile has adopted over time is its safety features. Early models did not prioritize (let alone consider) driver safety over its main objective—transportation. And although seat belts first appeared in vehicles in the 1930s, primary seat belt use for drivers did not become a state law until the 1980s and 1990s, depending on the state. Several states, such as New Hampshire, still do not have primary or secondary seat belt enforcement laws for drivers and passengers.[63] Still, the U.S. Department of Transportation (USDOT) estimates the national rate of seat belt use by adult front-seat passengers to be 90.3% in 2020, up 9% from 2006.[64] This progress is important because the USDOT also reports that seat belt use reduces the risk of fatality by 45%. Seat belts were responsible for saving more than 15,000 lives in 2017 alone.[65] One study found that there is also an economic benefit for seat belt wearing, as they help subsidize healthcare expenses of patients involved in vehiclerelated accidents that would have otherwise burdened the healthcare system.[66] Other technologies like anti-lock brakes, front and side air bags, and electronic stability control benefit the driver and passenger, and exterior features such as the makeup of the bumpers, hood, and windshield are designed to minimize injuries to pedestrians struck by the vehicle. All these design modifications are modern improvements to the

[61] https://www.daimler.com/company/tradition/company-history/1885-1886.html.

[62] https://www.loc.gov/everyday-mysteries/item/who-invented-the-automobile/.

[63] https://www.cdc.gov/motorvehiclesafety/calculator/factsheet/seatbelt.html.

[64] National Center for Statistics and Analysis. (2021, February). Seat belt use in 2020—Overall results (Traffic Safety Facts Research Note. Report No. DOT HS 813 072). National Highway Traffic Safety Administration.

[65] National Center for Statistics and Analysis. (2019, March). Lives saved in 2017 by restraint use and minimum drinking-age laws (Traffic Safety Facts Crash Stats. Report No. DOT HS 812 683). National Highway Traffic Safety Administration.

[66] Han, G.-M., Newmyer, A., & Qu, M. (2017). Seatbelt use to save money: Impact on hospital costs of occupants who are involved in motor vehicle crashes. *International Emergency Nursing*, *31*, 2-8. https://doi.Org/10.1016/j.ienj.2016.04.004.

automobile and work harmoniously to significantly reduce traffic-related fatalities.[67] Over time, car designers and manufacturers recognized the dangerousness of vehicles and responded through design to help mitigate the loss of life.

Despite the overwhelming evidence that seat belts save lives and reduce the economic cost of public health, some drivers still resist seat belt use in the name of personal freedom and choice. Concurrently, regulatory government agencies have mandated that certain safety features be included in modern vehicles, stripping away the freedom of the manufacturer and the consumer to decide whether safety should be prioritized. But the effort to regulate safety standards for automobiles in the 1980s was viewed as an attack on freedom by some at the time. William J. Holdorf wrote a 1987 op-ed article published in *The Chicago Tribune*, which compared the Illinois state mandate for seat belt use to Prohibition in the 1920s and argued that "saving freedom is more important than trying to regulate lives through regulation." Holdorf capped off his editorial adding, "Safety imposed is freedom lost."[68] This tagline perfectly encapsulates the stubborn rhetoric that invokes "freedom" as a substitute for common sense and creates an impasse for progress.

Another op-ed in *The New York Times* published in 1984 used a similar framework to make the argument against efforts to criminalize impaired driving. In his piece titled, "Long Island Opinion: Drinking and Driving Can Mix," Philip B. Linker boasted about his habitual drunken driving and how "nearly all of [his] friends ... invariably drive home safely without incident, accident or arrest—just as [he does]."[69] In the same year that this piece ran in *The New York Times*, there were more than 18,000 fatalities in alcohol-related crashes where the blood-alcohol concentration (BAC) of the driver was greater than the legal limit (0.08).[70] Regardless, the thesis of Linker's article was that we should let personal responsibility—not laws—govern our inhibition. We should preserve the personal freedom to drive drunk, and instead, let parents educate their children about "irresponsible misuse," which is preferable to a "lost liberty." It is here, that I suppose you, a smart reader, are already anticipating the analogy that I am about to make between seat belts, drunk-driving, and guns.

In 2017, gun deaths surpassed vehicle-related deaths for the first time.[71] The same level of regulation that was enacted to save lives with seat belts has remained notably absent from the gun industry, where safety requirements remain largely inconsistent for gun designers and manufacturers, despite the staggering number of gun-related injuries and deaths. Although all modern guns have internal safety mechanisms (e.g.,

[67] Bhalla, K., & Gleason, K. (2020). Effects of vehicle safety design on road traffic deaths, injuries, and public health burden in the Latin American region: A modelling study. *The Lancet. Global Health*, *8*(6), e819-e828. https://doi.org/10.1016/S2214-109X(20)30102-9.

[68] https://www.chicagotribune.com/news/ct-xpm-1987-02-05-8701090791-story.html.

[69] https://www.nytimes.com/1984/06/03/nyregion/long-island-opinion-drinking-and-driving- can-mix.html.

[70] https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/810942.

[71] https://www.vox.com/future-perfect/2018/12/11/18135976/gun-deaths-us-2017-suicide.

magazine disconnects, firing pin blocks, and a drop safety, which prevents the gun from being discharged by impact such as being dropped on the ground), not all guns are required by law to be equipped with something as simple as an external safety, which would provide a basic preventive safety measure. One example is the Glock, which lacks an external safety device and is designed for quick-draw-use by pulling the trigger without reservation. One unfortunate phenomenon that has resulted from this design, though, is what is known colloquially as "Glock leg," where a shooter engages the trigger before fully removing the gun from its holster, effectively self-inflicting a gunshot wound in the leg. Online discussion forums are quick to deny this as being a design flaw, and instead, attribute "Glock leg" solely to operator error. I'm willing to bet, however, that people who have had the misfortune of shooting themselves in the leg by pulling the trigger prematurely would have appreciated a regulatory law that requires an external safety feature on all guns, including the Glock.

Many unintentional shootings and gun deaths can be prevented through basic design. For instance, smart guns—which require the gun owner's fingerprint identification before disengaging the safety—could virtually eradicate all accidental deaths that result from a gun. Likewise, previous research has shown that the number of unintentional firearm deaths results from the number of guns available[72] and from the unsafe storage of firearms.[73] A 2018 study found that more than half of gun owners do not store their firearms safely.[74] Sadly, the majority of those killed accidentally by firearms are youths.[75] The Gun Violence Archive reports there were 1837 unintentional shootings in 2019; 692 children (aged 0-11) and 3068 teenagers (aged 12-17) were killed or injured by firearm that same year.[76] Unintentional firearm deaths of children increased by nearly one-third from 2019 to 2020, and researchers attribute this to the heightened numbers of children at home due to the pandemic with access to guns not properly stored. To put it plainly, having more guns that are easily accessible increases the likelihood of an accidental shooting, and youths are the most vulnerable population. All of this could be prevented through design modifications imposed upon firearms and their storage systems. But what are the ethical implications of mandating—and even regulating—how guns are used and stored on an individual level?

The ethical posture of gun use is highly complex. We first must agree that there is inherent risk involved with the use of a gun, which in essence, is a tool specifically designed to spark a combustion that fires a projectile at high speed. (As previously

[72] Miller, M., Azrael, D., & Hemenway, D. (2001). Firearm availability and unintentional firearm deaths. *Accident Analysis and Prevention*, *33*, 477-484.

[73] Miller, M., Azrael, D., Hemenway, D., & Vriniotis, M. (2005). Firearm storage practices and rates of unintentional firearm deaths in the United States. *Accident Analysis and Prevention*, *37*, 661-667.

[74] Cassandra K. C., Doucette, M., McGinty, E., Webster, D., & Barry, C. (2018). Storage practices of US gun owners in 2016. *American Journal of Public Health*, *108*(4), 532-537.

[75] Hemenway, D., Barber, C., & Miller, M. (2010). Unintentional firearm deaths: a comparison of other-inflicted and self-inflicted shootings. *Accident Analysis & Prevention, 42*, 1184-1188.

[76] https://www.gunviolencearchive.org/.

noted, lots of things travel at high speed and can pose danger: cars, airplanes, baseball bats, golf balls. The difference is that this is not the primary, intended use of these objects as it is for the gun.) Next, we should acknowledge that this risk of personal injury fluctuates according to variables such as the type, age, condition of the gun and its ammunition; an assault weapon with a high-capacity magazine and a bump stock is riskier than a derringer pistol. Similarly, risk changes with the gunner; a gun becomes riskier in the hands of a toddler than in the hands of a trained adult shooter. It is riskier in the hands of someone with mental health issues or with a tendency toward aggressiveness or violence than in the hands of well-trained law enforcement. Still more, the emotional and psychological mood of the shooter—fearful, angry, vengeful, confused—might override this training with firearms. Taking all of this into consideration, gun ownership and use ultimately comes down to a personal risk assessment. Perhaps a gun owner does not acknowledge the personal risk associated with gun use, and so to him or her, this assessment is an easy one. The ethical dilemma, then, hinges on the point at which this risk assessment becomes irrational and poses an immediate threat to the individual and to others. This leaves us with the question: What is the balance between the weight that we give to governmental paternalism and individual freedom? In particular, the freedom to decide the kinds of risk to take on oneself?[77] At what point is it ethically justifiable to step in and regulate an individual's behavior (or inability to assess risk)? Whether it be seat belt use, drunk-driving, vaccinations, or guns, this freedom of personal risk assessment is voided when it puts the health and safety of others at risk.

The ownership and use of guns require a shared responsibility between the gun owner and society, but there is a third player that is often overlooked: the gun itself. Theorists have long suggested that product designers should envelop a sense of social responsibility. One example is Victor Papanek, who in the 1970s proposed that architectural and environmental designs should hinge on social responsibility rather than on market demands.[78] This do-the-right-thing approach to architectural design was morally and ethically noble, but developers sided with cost-saving measures instead. Eventually, the emergence of environmentally friendly and green-building practices became profitable and were no longer distinguishable from the voluntary, socially responsible thing to do. Indeed, corporate social responsibility remains largely elusive, especially when social responsibility comes at the expense of profit. We can probably all agree that designers and manufacturers *should* behave ethically, but to expect them to do so voluntarily is naive.

Lorraine Gamman is a Professor of Design and the Director of the Design Against Crime Research Center at the University of the Arts London, which focuses on designing products for social impact. Gamman rejects the fairytale notion that technologies

[77] Giubilini, A., & Savulescu, J. (2019). Vaccination, Risks, and Freedom: The Seat Belt Analogy. Public Health Ethics, 12(3), 237—249. https://doi.org/10.1093/phe/phz014.

[78] Papanek, V. J. (1985). *Design for the real world: human ecology and social change*. London, Thames and Hudson.

should be designed with social responsibility in mind and instead argues for embracing socially *responsive* design, which "requires designers and other actors in the (co-) design process to be responsive to the context in which the design activity takes place."[79] Being responsible for design simply is not practical in a world that values shareholders and the bottom line. Rather, as Gamman argues, designers and manufacturers should "be *responsive* rather than ultimately responsible ... and that this is *good enough*." A *good-enough designer* will respond and adapt to societal challenges facing their product, thereby achieving a balance between the financial health of the company and the social quality[80] of the lives of individuals who interact with the product (whether by their own choice or not). Failure to engage in a socially responsive design process is selfish, short-sighted, and potentially criminally negligent. With respect to guns, many states have successfully challenged the 2005 Protection of Lawful Commerce in Arms Act (PLCAA), which provides legal immunity to gun manufacturers and dealers, and there is federal support for repealing the law altogether. Stripping gun manufacturers of their liability protections would force social responsiveness and even responsibility in some cases; the Remington Arms company filed for bankruptcy in 2019 after offering more than $1 billion in punitive damages and wrongful death settlements to the families of Sandy Hook victims.[81] The American gun manufacturer's defiance toward social responsiveness ultimately resulted in its legal and financial culpability.

Gun manufacturers remain loyal to their shareholders and customers and often fail to self-regulate their ethical responsibility to society at large. Let's consider the Utah-based gun manufacturer, Culper Precision, which specializes in custom builds and firearm modifications. The company received international media coverage in 2021 for the sale of its Block19. The custom design uses a Gen 3 or Gen 4 Glock19 and includes a Lego kit with specially modified Lego blocks that can be applied to the outer polymer frame and costs roughly $1350. The result is a functioning gun that resembles a child's toy. Naturally, there was public outrage over the design, and Culper Precision ultimately decided to pull the gun from its inventory in part because of the negative social backlash but mostly because of the cease and desist that it received from the Lego company.

I spoke with Brandon Scott, the owner of Culper Precision and designer of the Block19, who is unapologetic about his Lego-inspired gun. Scott feels that his design project was represented unfairly by the media for the sake of their own agenda and sees no issue with merging a deadly weapon with a popular toy. I asked Mr. Scott if the design of his Block19 gun contributes to its use in any way, but his response was contradictory. He replied, "Of course the design of a gun contributes to its use. That

[79] Thorpe, A., & Gamman, L. (2011). Design with society: Why socially responsive design is good enough. *CoDesign, 7*(3—4), 217—230.

[80] Morelli, N. (2003). Design for social responsibility and market oriented design: Convergences and divergences. In Calvera, Anna (ed.) (Ed.), *Techne: The Design Wisdom.* University of Barcelona.

[81] https://www.npr.org/2021/07/28/1022035192/gun-maker-offers-sandy-hook-families-33-million-heres-what-they-may-be-consideri.

is my whole business—taking a blocky, relatively uncomfortable firearm and improving ergonomics and usefulness of it to enhance the shooter's control, proficiency, and effectiveness with it."[82] Later, Scott accused me of "laying a trap of semantics" and disagreed with the notion that the design of a gun could influence its use, saying: "A firearm is an inanimate object. It does not have thoughts or feelings of the ability to communicate and thus persuade a person one way or another." This cognitive dissonance is problematic. We largely acknowledge that the design of a gun can enhance its use, but we fail to extend the argument that the enhancement paves the way to pulling the trigger. Ultimately, the outrage over the design and sale of the Block19 was not fueled by the idea of adults firing a "playful" Lego block gun at the shooting range as Scott had intended; the public outrage was a response to the lack of the social awareness exhibited by Culper Precision.

The company later posted a press release statement on its website (that has since been deleted) that read, "People have the right to customize their property to make it look like whatever they want."[83] The issue with the Block19 was never whether it had a legal right to exist (aside from its obvious infringement on the Lego design). The issue is that the design of the gun prioritized the values of the shooter and dismissed the values and wellbeing of a more vulnerable population: curious children who can easily mistake the gun for a toy. Legal justification does not make something ethically or morally conscionable. Just because something *can be* doesn't mean it *should be*. It is ethically justifiable to override individual freedom for the greater good.

Some theoretical design frameworks corroborate the need for designers to be socially cognizant and that this is an ethical obligation. The Designfor-Wellbeing (DfW) approach was developed by Marc Steen, an expert in human-centered design, and he states that technologies should find a balance between the interests of the company and the consumer to "bring about positive social change and to promote people's wellbeing."[84] This is a nice sentiment and represents what a good-enough designer *ought* to do, but designing for wellbeing is subjective. The wellbeing of one person can come at the cost of another. Steen uses the example of riding a jet ski in the ocean surf, which can be enjoyable for the rider but an annoyance for others on the beach.[85] Similarly, carrying an AR-15 into a grocery store might be legally allowable in some states and make *you* feel more comfortable, but this takes away the comfortability of others around you.

Wellbeing-ness is a shared contract with others in society, not a blindly narcissistic pursuit.

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[82] Personal correspondence.

[83] https://culperprecision.com/.

[84] Steen, M. (2016). Organizing Design-for-Wellbeing projects: Using the capability approach. *Design Issues, 32*(4), 4—15. https://doi.org/10.1162/DESI_a_00412.

[85] Steen, M. (2016). Organizing Design-for-Wellbeing projects: Using the capability approach. *Design Issues, 32*(4), 4—15.

The design and use of technologies are an unspoken expression of our ethics and our personal values. Another theoretical design framework, Value-Sensitive Design (VSD), proposes that all technologies are valueladen. Implicitly or explicitly, accidentally or deliberately, these values are baked into the technological artifact during the planning and design phases. In the case of the gun, the values favor the shooter who will be made to feel protected and who will benefit most from the use of the gun. But designing a gun solely for the shooter ignores the values (and wellbeing) of others, who might not share these same views. For example, the gun manufacturer Ideal Conceal sells the "Cellphone Pistol" (see Fig.2.1). This gun is designed to look like a smartphone to "blend in with today's environment" and "be virtually undetectable because it hides in plain sight."[86]

Fig. 2.1 A Cellphone Pistol is designed for concealment. Used with permission (https://www.idealconceal.com/wp-content/uploads/2021/05/IC9mm-Photo-3500x500-1.jpeg)

Langdon Winner defines "values" as an all-encompassing term for our cares, commitments, responsibilities, preferences, tastes, religious convictions, personal aspirations, and so forth."[87] Values, undeniably, are subjective. The values of one person can dif-

[86] https://www.idealconceal.com/.

[87] Winner, L. (1986). *The Whale and the Reactor*. The University of Chicago Press. Chicago, IL.

fer substantially from another and this can be reflected in the design process, where there can be multiple correct answers to any single design problem, depending on the perspective of the designer. A value-sensitive design could be one that promotes the values of gun manufacturers (such as profitability) or the values of gun owners (safety) over the values of a third party (those who are in the immediate presence of someone possessing a gun). Values are interpretive and contextual, so the value-sensitive design framework only works when the "right" values are applied. It's not that technologies don't embody values or sensitivity—it's that we don't always agree on whose values and sensitivity matter most, and this is the crux of the gun issue. If your moral authority is the NRA, then you will approve of a smartphoneshaped or Lego block gun or for more relaxed gun-carrying laws. If your moral authorities are gun reform groups like Everytown and Moms Demand Action, then you will advocate for public safety and stricter regulations instead.

Although ethics and values can be interpretive, we must let common sense prevail; we must reject the idea that guns have a place in our everyday lives and that they are representatives for our individual freedoms. The best argument for this is that gun ownership—and more specifically, gun-carrying—poses not only a risk to physical injury but "the risk of harm to one's character" and contributes to social distrust and the dehumanization of others.[88] This creates a moral depravity in which carrying a gun is more like an exercise of self-entitlement in which we coddle our own pleasures and comfortability with total disregard for the values and morals of others. The gun is a selfish moral proxy that not only threatens public health, but robs our entire society of basic decency and blinds us to the wellbeing of others.

[88] Trivigno, F.V. (2013). Guns and virtue: The virtue ethical case against gun carrying. *Public Affairs Quarterly, 27(4), 289-310.*

3. Chekhov's Gun

Anton Chekhov was a nineteenth-century Russian playwright and short story author. His most celebrated works include *The Seagull*, *The Three Sisters*, and *Uncle Vanya*, but he is perhaps most notable for a dramatic principle that he perfected in his storytelling. "Chekhov's Gun" is a foreshadowing technique similar to the "plant and payoff" literary device, in which something is introduced early in a story (planted) and then is later revisited by the end in a meaningful way (payoff). This technique can be used in reference to an object, a character, a trait, or a piece of dialogue. For Chekhov, his trademark usage of this principle included a gun in the play, *The Seagull*. In Act II, the main character, Konstantin Treplyev, kills a seagull with a rifle and presents it to his love, Nina Zarechnaya, signaling his indifference for the sanctity of life. By the end of Act III, Treplyev has committed suicide with the same rifle after becoming estranged from his love. This storytelling mechanism is evident in today's films, too. In Christopher Nolan's film *Inception*, each character possesses a unique "totem"—a small, personal item such as a loaded die or a spinning top. Totems play a crucial role in the film, helping the characters determine when they are in the real world and when they are experiencing a simulated reality in a dream state. Throughout the film, the main character, Cobb, repeatedly spins the top to see if it will fall over (indicating reality) or continue spinning indefinitely (indicating that he is inside a dream).

The film concludes with Cobb sitting at a table, watching his spinning top, but as it begins to wobble, the screen goes black, leaving the audience wondering if Cobb had indeed become awakened or if the entire story had taken place in an endless dream loop.

Chekhov's Gun differs from basic literary foreshadowing because of its intense focus on the object. The similar technique of foreshadowing introduces objects early in a story, but their significance does not become evident until later. Chekhov's Gun instead emphasizes the object early in the story, giving it agency, and its usefulness is realized later. The playwright spoke often in his letters to friends about the need to remove unnecessary elements of his writing and to avoid misleading the audience with red herrings. He wrote, "If you say in the first chapter that there is a rifle hanging on the wall, in the second or third chapter it absolutely must go off. If it's not going to be fired, it shouldn't be hanging there."[1] In another letter, he advises, "One must never place a loaded rifle on the stage if it isn't going to go off. It's wrong to make

[1] Bill, V. T. (1987). *Chekhov—the silent voice of freedom.* New York: Philos. Library.

promises you don't mean to keep."[2] The promise that Chekhov is referring to here is the singular use of the gun, which everyone can understand. It possesses an agency and an intentionality, which then becomes another character in the story.

For this dramatic principle to work, we, the audience, must also interpret the gun as an object or even as an artifact differently than we interpret other objects. The gun is a perfect vehicle for this because it communicates a unique subtext and creates a sense that it is predisposed for use. The same cannot be said for all objects in a scene; a bouquet of flowers in a vase positioned in the center of a dining room table does not necessarily foreshadow anything meaningful. But an antique vase that is placed precariously on a ledge nearby a clumsy character may foreshadow an accident involving that vase. The difference between our expectations in the two scenarios is rooted in our cultural and personal experiences and hinges on *consequence*. We might have seen the broken vase schtick used before, and we are expecting it here. But there is little consequence attached to the vase holding flowers on the table but an implied consequence for the antique vase, which is presumed to be valuable, falling off the ledge and breaking. The gun hanging on the wall presents an even greater consequence—life and death—which deputizes the gun as a significant character that looms over all others in the scene. A suicidal character sitting in a room where a rifle is prominently displayed on the wall overhead presents the expectation for its use. Chekhov considered it disingenuous to introduce but not engage with the gun because he understood that when the viewer sees a gun, he expects interaction. In other words, the "promise" of the gun is that it will be used.

Objects speak to us. Through their universal language of design, they reveal their use. Every so often, we encounter an object with which we have had no previous interaction, and which is entirely novel and completely decontextualized, yet we are able to translate its use. How can this be possible? German psychologist Kurt Koffka explained that all objects possess a *demand character*. Specifically, he used the example of the postbox (or what we would refer to as a mailbox), suggesting that it "invites" the letter through its design.[3] Of course, some objects have a more obvious demand character than others. As the design of an object improves, so does the interpretability of its demand character. In short, a welldesigned object is one that communicates its intended use to the user in unspoken and assumed ways (we will refer to this as the *usability* of an object). Additionally, usability becomes clearer depending on our familiarity with the object; we have either experienced it before or observed someone using it, and this contributes to our understanding of its functionality, such as in the example of the gun hanging on the wall in a Chekhov play. You don't have to be a gun owner to understand how a gun is used and what consequences arise from its use.

Interpreting an object's usability is just the first stage in our relationship with its use. We also feel compelled to use that object. For example, we see a bucket and want

[2] Rayfield, D. (2000). *Anton Chekhov: A life*. Evanston, Ill: Northwestern University Press.
[3] Koffka, K. (1935). *Principles of gestalt psychology*. Harcourt, Brace and Company.

it to be filled. We see a kite and want to fly it. We see a guitar and want to strum it. Through their demand character, we recognize that objects have specific purposes, and we want that purpose to be realized. But a gun that has been fired is much more impactful than a filled bucket, a flying kite, or a strummed guitar. If the objects around us are designed for an intentional use, and we are motivated, inclined, compelled, or even persuaded to fulfill their purpose, then this negates the argument that our tools are neutral. A gun does not pull its own trigger, nor does it force anyone to pick it up and fire it. But we understand and speak the language of the gun and what it invites us to do.

The Actor-Network Theory (ANT) seeks to further explain the agency of objects on our behaviors. Bruno Latour engineered ANT to decode our social associations with objects and their role as "participants in the course of action."[4] This theory is controversial among social scientists, however, who tend to oversimplify this complex view as nothing more than "causal" behavior. But as Latour insists, objects (or actants) do not determine or cause behaviors; they facilitate. In his work *Reassembling the Social: An Introduction to Actor-Network Theory*, he clarifies:

ANT is not the empty claim that objects do things "instead" of human actors: it simply says that no science of the social can even begin if the question of who and what participates in the action is not first of all thoroughly explored, even though it might mean letting elements in which, for lack of a better term, we would call *non-humans.*

Latour vehemently argues that objects (non-humans) are immersed in the social (with the term *social* here meaning *association* rather than conviviality). This view is in direct contradiction to the social sciences, where "objects have such poor and constricted roles." In fact, he appeals to sociologists that every course of action "zig-zags" between human-to-human and object-to-object connections, weaving an intricate network where objects play an integral role in our behaviors. No doubt this theory is undisputed when we talk about the handle of an entry door or the strings of a guitar. In both scenarios, users interpret the object and execute their intended use of opening the door or strumming the guitar. Likewise, neither behavior would be made possible without the existence of the handle or the strings. But when we apply ANT to more complex technologies like the gun, which has deep ethical, political, and moral layers, this theory is dismissed with claims of technological neutrality and instrumentalism. However, it is impossible to detangle the gun from its social context and associations.

Actor-Network Theory is applied even in archeological studies, where found artifacts are used to interpret the human behaviors of previous civilizations. In the article "Lost in Things: An Archaeologist's Perspective on the Epistemological Potential of Objects," Philipp Stockhammer describes Latour as "of great importance to archaeology since he allows us to lower the role of intentionality in the context of practices with things

[4] Latour, B. (2005). *Reassembling the Social: An Introduction to Actor-Network-Theory.* OUP Oxford.

from an epistemological perspective without denying the important of intentionality."[5] The archeologist is in a unique position to translate the "thingness" of an object into its demand character and subsequent use, much like the audience member constructs a sketch of how the object in a scene might influence the behavior of a character.

The human actor is missing from archeological studies, so the challenge for the archeologist is to reconstruct past human behavior through the things that they used. Stockhammer acknowledges that while it is easy to infer meaning from the materiality of a found object such as a tool or a utensil, it is much more difficult to explain the "human-thing entanglement," which he describes as the *Wandelbarkeit* of the object, or "its function and meaning." To do this, broader archeological contexts must be considered, such as the spatial distribution and usage characteristics of the objects. When an object is found, it is contextualized not only by its physical surroundings but also by its "use-wear and residues." For instance, Stockhammer gives the example of a stone tool being analyzed for its usewear to determine whether it was used to cut meat or plant fibers. A cup might be examined for residues to determine whether it was filled with milk or wine. These answers would yield insightful data into the dietary practices of the locals. But this does not necessarily explain the Wandelbarkeit of the object; consider the symbolic difference between drinking from a cup at a meal and drinking from a cup in a religious ceremony. While the demand character of an object largely remains consistent throughout time, the physical attributes can deteriorate and meaning become lost. A cup unearthed in an archeological dig still communicates its basic usability to us (to drink), but it likely has begun to decay physically and its original meaning and significance now irretrievable. In ANT, time is a significant actant.

As with all technologies, the function and meaning of the gun—its Wandelbarkeit—has shifted over time. Functionally, the gun has maintained its lethality but is no longer a necessary tool for survival, as it once was. Symbolically, the gun has become more like a virtue signal for some other combatant of modernity. But the demand character of the gun has remained the same. Whether it is a Chinese hand cannon, a musket, or an AR-15, future archeologists certainly will comprehend the intent of the design. But more importantly, as Chekhov and Latour understood well, the gun does more than simply fire a projectile. It implies its use.

Persuasive Use

The thing about the NRA's favorite slogan "Guns don't kill people. People kill people" is that it is not entirely wrong. Indeed, guns do not act alone or according to their own volition. Like all technologies, the gun requires input from a user. But as I have argued thus far, the gun is a non-neutral instrument that is actively charged for

[5] Stockhammer, P. (2015). Lost in things: An archaeologist's perspective on the epistemological potential of objects. *Nature and Culture, 10*(3), 269—283.

its use (to be fired) and communicates this message to its user (and to bystanders) through a subtext of semiotics and situational context. There is a symbiosis between the gun and the user, each dependent upon one another. The question becomes, then, what is this ratio of power between the gun and the user? Is it 50/50? Likely not. Is it 80/20? 90/10? The answer depends largely on your philosophy of technology, but we can discount the idea that either the user or the gun is 100% responsible for its use. The gun is an important co-participant.

Technology philosophers have long argued over the extent to which our technologies govern us. Martin Heidegger, for instance, embraced the view that technology is manipulative and inescapable. This approach, referred to as *technological determinism*, asserts that technologies are autonomous of human activity and drive social change; we are enslaved to technological evolution. Notable determinists include Karl Marx, Marshall McLuhan, Ted Kaczynski (the Unabomber), and Henry David Thoreau, who all insisted that technology determines our behaviors and overrides our individual freewill. Thoreau famously wrote, "We do not ride upon the railroad; it rides upon us." Marx felt: "The hand-mill gives you society with the feudal lord, the steam-mill, society with the industrial capitalist." And Kaczynski's manifesto *Industrial Society and Its Future* foretells that "technological progress marches in only one direction; it can never be reversed." While it is undeniable that technology plays an important role in social progress, the hard deterministic view is an unreasonable perspective to adopt for several reasons, predominantly because it generalizes all technologies (which all clearly have different effects in different contexts and to varying degrees) but also because it can easily be disproved by identifying examples of failed technologies that did not spark social change. Technologies often fail to have socio-cultural as well as individual impacts, and the mere existence of a technology does not guarantee its use. We are not prisoners of our technologies, as determinists would like to suggest, in so much as we are extremely susceptible to falling prey to their design.

The *technological imperative* is a flawed concept espoused by determinists, which states that the use of any technology is inevitable and that once a technology is in place, it is irreversible. That is, if a technology is developed, then it will eventually be used and cannot be abandoned. Gun apologists lean heavily on this imperative, refusing to acquiesce any type of firearm technologies—even those that are particularly heinous and unnecessary, such as military-grade personal weaponry, bump stocks, and armor-piercing ammunition, which have no reasonable application for civilian use. A common refrain is the slippery slope argument that gun reformists will take away all guns if given the opportunity. This would not only would be virtually impossible to accomplish (there are more than 400 million guns in the United States) but unconstitutional as well. The technological imperative of guns is the wrongful assumption that because these weapons exist, we have no choice but to accept their place in society and we mustn't regulate them in the slightest, for this would be an infringement upon our rights.

Contrary to the determinist's view, however, is that we do in fact have dominion over our technologies. In his book *Giving Up the Gun*, Noel Perrin gives a detailed account of the sixteenth-century Japanese, who nearly abandoned all guns in their society. By this time in history, firearms were nearly ubiquitous throughout the modern world. The warrior class of Japan, however, saw long-range guns as cowardly and shameful weapons; firearms were more efficient than swords, but they "overshadow[ed] the men who use them."[6] Honor is an essential component of Japanese warrior culture, and at least for a short period of time, the use of firearms was relegated to lower-class soldiers only. Upper-class nobility and the samurai fought with swords and spears in hand-to-hand combat. Swordplay was regarded as a "danger-laden ballet, while a scene of extended gunplay comes out as raw violence." Despite this virtuous resistance to firearms, the Japanese did not abandon guns entirely. By the end of the sixteenth century, invasions mounted by Korea and China reintroduced firearms back into circulation so that Japan could remain competitive on the battlefield and stave off its enemies. Afterward, guns remained highly regulated in Japan, with manufacturing only permitted by special licensure from the government. In some ways, Japan had been able to nearly quit firearms altogether, but they were dragged back into gun culture because of the need for self-preservation. Perrin closes his book by saying, "This is to talk as if progress—however one defines that elusive concept—were something semidivine, an inexorable force outside of human control. And of course, it isn't. It is something we can guide, and direct, and even stop. Men can choose to remember; they can also choose to forget." Still today, Japan often ranks lowest compared to other countries in terms of firearm-related deaths, and guns remain mostly irrelevant in Asian countries.

Like the principle of Chekhov's Gun, if we are introduced to a gun, the technological imperative supposes that it is only a matter of time before we use it. Neil Postman, a media theorist and noted determinist, extends this view in his book *Technopoly: The Surrender of Culture to Technology*, reasoning that "technology creates its own imperatives and, at the same time, creates a wide-ranging social system to reinforce its imperatives."[7] But sometimes, we are the ones who create the imperative—not the technology. The most common reason given for owning a gun is to protect oneself against others with guns; this feedback loop of gun ownership creates a social system where guns are used to prevent the very problem that they pose. We have become a dog chasing its own tail.

Gun apologists challenge the notion that guns possess demand characteristics that could potentially influence violent behaviors. They wrongly conclude that because they personally have not used a gun in a violent way, guns must be neutral by default. This is a naive, oversimplification that wholly dismisses the influential design of artifacts and their politics. In his remarks at the 1983 Annual Members Banquet of the National

[6] Perrin, N. (1988). *Giving up the gun: Japans reversion to the sword, 1543—1879.* Boston: D.R. Godine.

[7] Postman, N. (1992). *Technopoly: The surrender of culture to technology.* New York: Knopf.

Rifle Association, President Ronald Reagan said: "Guns don't make criminals. Hardcore criminals use guns."[8] But while this logical fallacy makes a good sound bite, it falls prey to circular reasoning; if criminals use guns, then it is, in fact, the gun that makes someone a criminal, thereby negating the first half of the statement. In other words, the gun and the shooter have reciprocity and become co-participators. In his celebrated work *Pandora's Hope*, Bruno Latour writes: "Humans are no longer *by themselves*."[9] We are embodied by our technologies and our technologies are embodied by the ghosts of our past. He describes technologies as "delegates" that are "full of engineers and chancellors and lawmakers, commingling their wills and their story lines."[10] This view, which we will refer to as *substantivism*, is not readily accepted by all, especially those who view technologies as mere instruments that indiscriminately carry out the will of the user. This view is instead described by Latour as *moralist*, in which "what matters is what you are, not what you have." By far, the moralist view is expressed by gun apologists, who defend instrumentalism and ignore the demand character of guns, as evidenced by Reagan's statement to the NRA. Conversely, a *materialist* view holds that our technologies transform us. Latour writes:

No materialist would really claim that guns kill by themselves. What the materialist claims, more exactly, is that the good citizen is *transformed* by carrying the gun ... Materialists thus make the intriguing suggestion that our qualities as subjects, our competences, our personalities, depend on what we hold in our hands. Reversing the dogma of moralism, the materialists insist that we are what we have—what we have in our hands, at least.[11]

It is accurate to say that guns simply do not dictate or overrule the freewill of the shooter, and they are not directive or preordained for use. This is an exaggerated caricature that is heaped onto supporters of gun control measures. But the line of reasoning for gun apologists is that the shooter is driven solely by his violent intent, and the gun happens to be the chosen instrument used to carry out these homicidal tendencies; because the gun itself does not play a role in the shooting, the gun should not be regulated. In fact, the argument is often made that a violent criminal would carry out homicide by any means necessary, even if the gun was not available. This supposition completely ignores the violence-laced demand character of the gun.

There are numerous examples of violent attacks involving objects other than guns. Gun apologists often point to instances of violence not involving firearms as concrete evidence that guns are just tools that happen to be selected for use by a criminal. An

[8] https://www.reaganlibrary.gov/archives/speech/remarks-annual-members-banquet-national-rifle- association-phoenix-arizona.

[9] Latour, B. (1999). *Pandora's hope: Essays on the reality of science studies.* Cambridge, Mass: Harvard University Press.

[10] Latour, B. (1999). *Pandora's hope: Essays on the reality of science studies.* Cambridge, Mass: Harvard University Press.

[11] Latour, B. (1999). *Pandora's hope: Essays on the reality of science studies.* Cambridge, Mass: Harvard University Press.

article on Reason.com titled "Weapons Are Just Tools. It's People Who Are Dangerous" uses the examples of the Oklahoma City bombing (168 killed), the 9/11 attacks (2977 killed), and the deadly rampages involving the use of a vehicle in Nice, France (84 killed) and Toronto, Canada (10 killed) to support the thesis that "[n]othing is more dangerous than evil people who can turn anything at hand to bad intent."[12] While it is obviously true that not all violence involves the use of a gun, this certainly is more of an exception than the rule. In the United States in 2019, firearms accounted for 73.7% of homicides. Lesser used methods for committing murder included knives (10.6%), unknown or "other" dangerous weapons (11.4%) and personal weapons, including hands, fists, and feet (4.3%).[13] If the gun is truly as value neutral as gun apologists insist, then there would be a more balanced distribution of the types of weapons used in violent crimes, especially since a knife or a blunt object is more easily attainable than a gun. If a gun were only a neutral instrument, then it would not be such an overwhelmingly selected weapon of choice among violent offenders. A gun is a high-efficiency killing tool. The use of a gun is not random; it is an inspired choice that expedites the will of the user in deadlier ways than other objects that are not designed for the explicit intention to harm. Latour's central assertion is that we are *transformed* by the gun; "we are what we have—what we have in our hands, at least." Are we transformed every time we hold a knife in the kitchen or get behind the wheel of a car? We are most certainly changed in the sense that our abilities are extended by the primary use of those objects (we can cut more precisely with a knife, and we can travel faster in a vehicle), just as when we are changed by an object that has the primary use of discharging ammunition. When we hold a gun, we become aware of its lethality, and we are changed by it.

The gun is an active agent that creates the possibility for its use, which is revealed to the shooter through its demand character. B. J. Fogg is a professor at Stanford University where he founded the Behavior Design Lab. I consulted with Dr. Fogg for this book because of his expertise on behavioral and persuasive technologies, and although his background focuses mainly on computing technologies, we spoke at length about how guns are indeed persuasive tools that can influence behavior. Importantly, Fogg differentiates between *persuasion*, which requires an openness to engaging in a particular behavior, and *coercion*, which is a forced behavior. (For context, a hard determinist would view technology as being coercive rather than persuasive, but a more reasonable assumption is that technology presents its options to us and invites rather than drives its use.) In essence, the gun elicits persuasive qualities on both the macro and micro levels. On the macro level, which Fogg refers to as *macrosuasion*, guns appeal to a broader sense of protection, toughness, patriotism, and machoism. Gun owners and carriers find community in this social identity. On the micro level, or *microsuasion*, the features of the gun itself are indicative of its use. The ergonomic contour lines of

[12] https://reason.com/2018/04/24/weapons-are-just-tools/.

[13] https://ucr.fbi.gov/crime-in-the-u.s/2019/crime-in-the-u.s.-2019/tables/expanded-homicide-data-table-7.xls.

the frame of a handgun, the concave shoulder butt of a rifle, the telescopicpowered eyepiece of the sight, and the spring-loaded action of the trigger are all tailored to the user and his body. Collectively, these individual design features present a singular choice to the gunner. Or, as suggested by researcher Leonard Berkowitz, "The finger pulls the trigger, but the trigger may also be pulling the finger."[14] The gun does not pre-determine the behavior of the gunner, nor is the gun fully responsible for killing, but it certainly can seduce, tempt, persuade, and even provoke the gunner to use it.

Gun use is not pre-determined. Importantly, arguing that the demand character of a gun has a persuasive nature must be distinguishable from the technological determinist belief, which is limiting and easily challenged. This nuanced view of technology requires a bit of mental gymnastics, which both allows for the idea that an object can compel us toward its intended use but dismisses the idea that we are coerced into that use. The gun sets the stage for its use through a combination of macrosuasion and microsuasion. But even still, you can lead a horse to the trough, but you cannot force the horse to drink the water. Unfortunately, this intricate understanding of technological artifacts and their influence on behavior is not easily distilled into a catchy phrase or slogan. It doesn't make a good sound bite or a bumper sticker. Perhaps a more accurate rephrasing of the argument that "Guns don't kill people. People kill people" might be that "People kill people ... with guns."[15] But even this statement is misleading and reductionist.

To unpack this complex view of technology, we might refer again to Latour, who explains non-human artifacts as being "entangled" with human actions. Technologies, according to the philosopher, mediate— not govern—our existence, and guns are a prime example of this. To Latour, the gun simply is a "monster born in our midst which has already devoured its unwitting midwives."[16] But rather than arguing whether guns or people are responsible for killing, a more sophisticated way of looking at our relationship with guns is through the concept of technical mediation. In other words, how might our technologies influence our behaviors? Here, Latour describes four different meanings of technical mediation, all of which contribute to the general theory that we have an invisible relationship with our artifacts:

- ***Interference*** reframes the relationship between human and gun as actor-actant instead of subject-object. Firing a gun is neither entirely the fault of the human nor of the gun. There is a shared responsibility that is implied between the two.

- ***Composition*** is the assertion that "action" is not something that humans do; action is the result of an "association of actants." In other words, it is not human

[14] Berkowitz, L. (1968). Impulse, aggression, and the gun. *Psychology Today, 2*, 19—22.

[15] Pierre, J.M. (2019). The psychology of guns: risk, fear, and motivated reasoning. *Palgrave Communications, 5,* 159. https://doi.org/10.1057/s41599-019-0373-z.

[16] Latour, B. (1999). *Pandora's hope: Essays on the reality of science studies.* Cambridge, Mass: Harvard University Press.

"action" to fire a gun, it is the residual effect of a human and a gun colliding in space.

- ***Time and Space*** refers to the physical makeup of technical artifact and its individual parts, which Latour calls "black boxes." Every artifact can be deconstructed into individual materials that can be traced back millions of years. Thus, there is no demarcation in which the sum of the black boxes suddenly exert control over us. We were born into our technologies, with which we co-exist and co-participate. The gun does not master us, nor do we master the gun.

- ***Signs and Things*** is considered by Latour to be the most important meaning of technical mediation. It is here that he argues that objects "shift" activities of the user in various ways. The shooting of a gun can make someone a hero or a murderer, though this is not an argument for neutrality. Whether his intention is to save someone or kill someone, the actant translates his activities through an object: the gun. Additionally, the mere presence of the gun is an expression, or a sign, of one's character. But the gun was brought forth into existence (poiesis) by the designer and the manufacturer, both of whom are physically absent from the moment when the gun is in the hands of the shooter.

Their influence remains, however, in the form of "meaningful articulation," which is baked into its design. Through its design, it is clear to the holder that the gun is intended for one use—to be fired—and it is almost irrelevant whom the gun is fired toward.

The question isn't whether guns kill people or people kill people. The question should be "How do guns promote dangerous behaviors?" By asking this question, we must first acknowledge that the intentional design of the gun influences its use and that its mere presence alters reality through its affordances, or potential actions. Look no further than the spike in accidental shooting deaths of children during the 2020 COVID-19 pandemic. At a time when more children were at home, surrounded by more guns, there was a 30% increase in the number of deaths compared to the year before. This is the real-life promise of Chekhov's Gun—that when a gun is introduced into any environment, it becomes an influential force, sometimes leading to its use but always distorting our view of reality. Yet despite the sobering facts surrounding gun violence, the United States will never abandon its toxic relationship with guns. In a country with more guns than people, it is untenable for anyone to advocate for a complete disarmament—a feat that the sixteenthcentury Japanese nearly accomplished. Instead, we must find ways to pump the brakes on the growing stockpile of guns, the increased access to these guns, and the introduction of guns into public spaces. We must reconcile the deregulation of gun-carrying laws with the rights and safety of all American citizens. We must make data-driven decisions, not irrational decisions, regarding sensible gun reform measures. To do these things, we must begin with a critical, unbiased approach to understanding how guns affect our perception of reality

and our behaviors. We must debunk the notions that guns are either fully responsible for gun violence (materialism) or fully immune to how and why they are used in violent ways (instrumentalism). And this ought to lead to informed legislation on who should have guns, what types, how many, and where they should be permitted to be carried.

Scripted Behavior

It should not be argued that technology predetermines our behaviors for us, nor should it be suggested that evil or inappropriate actions with technology should be excused because of technological design. Ultimately, it is the user who assumes liability for his or her interactions with technologies and their subsequent outcomes. However, the previous chapter has argued that it is reasonable to assert that technologies may possess a persuasive design (deliberately or otherwise) that appeals to our human responsiveness and that sometimes can nudge us toward an intended action or behavior. In light of this, we might rethink the role that design plays in our interactions with our technological artifacts.

If at this point in the book you still subscribe to the instrumentalist perspective that technologies are inactive and neutral, here's a simple thought exercise: Consider how you react to the sound of an incoming text message on your smartphone. When your phone "dings" with this notification, do you instinctively reach for it? This is usually the case for most smartphone users. In fact, the majority of smartphone owners have checked their devices upon hearing a text message notification or feeling the vibration of their smartphone in their pocket only to find that no such message was delivered. (This is extremely common, and the research term for this is Phantom Vibration Syndrome.) Now, did that smartphone *cause* you to check the text message? In other words, did that device determine your]]behavior for you? Whereas a technological determinist might argue that, yes, the smartphone directly produced this outcome, a softer, more nuanced perspective might merely concede that the smartphone has been designed to alert and notify the user, and that the user might then involuntarily respond to this notification, but that the choice ultimately resides with the user. Certainly, the device suggested, persuaded, and even nudged the user into the behavior, but this is not the same as pre-determining that behavior for the user. (A notable concern here, of course, is that this example highlights our complacency with technological mediations, a concept known as *technological somnambulism*, which was described earlier in Chap.2.) A more reasonable view is that the smartphone does not override our freewill; rather, this handheld device is an example of how tech designers expertly capitalize on a foundational principle of psychology known as *classical conditioning*.

As sentient beings, we are conditioned to lean toward and anticipate certain behaviors given a particular context. This disposition originates from a combination of the surrounding environment, the objects within that environment, and our perception of the situation. Ivan Pavlov first articulated this phenomenon in his 1897 text

The Work of the Digestive Glands. He observed that his dogs began to salivate not at the sight of food but at the sight of the handler who was responsible for feeding them. Although he was intending to study digestion, Pavlov had stumbled upon one of the most important tenets of psychology studies: stimulus and response. Essentially, humans and animals begin to exhibit anticipatory, and even predictive, behavior once they have established an associative connection between a stimulus and the response. In Pavlov's studies, the presence of the handler (stimuli) evoked salivation of the dogs (response) because they had come to associate the handler with what typically came next: food. It is important to reiterate here that the conditioned response of the dogs was activated by the observed behavior of the handler and not the dog food itself. Likewise, the sporadic inclination to reach for the smartphone upon hearing the text message notification is a learned behavior that is constantly reinforced every time we react to this notification sound. And in doing so, we form an associative connection between the sound of the text message notification and an instinctive reach for the device. This is the actor-actant interference described by Latour. Similarly, a person who sleeps with a handgun on his nightstand might develop a conditioned response to reach for the gun if he hears what he perceives to be an intruder in his home, regardless of whether an intruder has ever entered the home previously. (The FBI reports that property crimes such as forcible entry into homes are rare and have been on the decline year after year.)[17] And once the artifact is in a person's grasp, whether it be a smartphone or a gun, the object communicates a set of properties, which French philosopher Bruno Latour describes as a *script*.

A script is a set of actionable code that every artifact possesses. Much like software code is programmed to generate a specific output for a computer program, technological artifacts are programmed with a set of instructions that are prescribed for, communicated to, and subsequently implied by the user. Instead of a computer program code, which consists of a combination of 1s and 0s, the script of a technological artifact resides in the various features of its design. Every artifact is designed, or coded, for its primary objective: use. Latour writes that "the designer of a technology thus works with an inscribed user in mind, to whom he prescribes properties and behaviour."[18] The success of an artifact is defined by its usability. The ergonomically shaped grip of a handgun, the finger-inspired contour of its trigger, and the sight on the end of its barrel are all features of the product script which, taken together, leads the user to the final act of use: discharging the weapon. Perhaps an obvious, yet highly important feature here is that this script intends for the gun to be fired *away* from the shooter's body. Figure3.1 demonstrates how a reversal of the script redefines the perceived use of the gun and its intended outcome.

[17] https://ucr.fbi.gov/crime-in-the-u.s/2019/crime-in-the-u.s.-2019/topic-pages/cius-summary.

[18] Latour, B. (1992). "Where Are the Missing Masses? The Sociology of a Few Mundane Artifacts." In *Shaping Technology/Building Society*, ed. W. E. Bijker and J. Law. Cambridge, Mass.: MIT Press.

Fig. 3.1 A reversal of the script of the gun changes its perceived use (https://imgflip.com/memetemplate/47264806/Backwards-Gun)

This design doesn't make sense unless the primary objective of this gun is to self-inflict pain. The ergonomic shape of the frame and trigger remain the same, but the barrel now points toward the shooter. Because we all speak the language of design, we can read this new script and— hopefully—recognize that it is not in our best interest to execute it.

But sometimes, we purposefully deviate from an artifact's script. This is more commonly known as a *hack*. Conduct a quick internet search using the term "life hack," and you will find thousands of pages of results for DIY examples of how to reprogram the scripts of everyday objects. Use toothpaste to remove permanent marker stains; a pencil eraser can double as an earring back; a Lego figure is the perfect USB charging cable holder. Hacking the script of an artifact feels subversive because its use is counterintuitive to its design. We can override the script of an artifact and reassign the prescribed uses of an object to fulfill some other purpose, which can be wellor ill-intentioned. Pointing a gun toward oneself and pulling the trigger is a clear violation of its script, but this does not preclude it from happening. A 2017 report from the Center for Disease Control (CDC) shows that more than half of all suicide deaths involve a gun and that gun-related suicides account for the majority of gun-related deaths in

the United States.[19] Suicide by gun is a sad reality of the multistability of the gun and reminds us that while an object's script compels the user toward a specific action, it does not confine the user to that action.

Often, we perform the script of our objects without much thought. Indeed, a well-designed product, regardless of the user's level of familiarity with it, guides him or her toward its intended use, even if that user is non-human. In April 2019, Bhagavan "Doc" Antle, founder and director of The Institute of Greatly Endangered and Rare Species (T.I.G.E.R.S.), posted a video on Instagram showing a female chimpanzee named Sugriva using a smartphone to casually scroll through an Instagram feed. Sugriva easily swipes between photos and videos of other primates for her amusement.[20] This viral video garnered plenty of attention and criticism for its exploitation of chimps for sheer entertainment value. Renowned primatologist, Dr. Jane Goodall, issued a written statement in response to the video: "Portraying chimpanzees in this way on social media is also perpetuating the illegal pet trade in great apes, and as they cannot be domesticated, interactions with humans as displayed by this video are highly dangerous, as well as harmful to the well-being of the chimpanzee."[21] But what was lost in the virality of the video and its aftermath was not the supposition that chimpanzees are intelligent but that the design of technology can be nearly invisible to the point that even a non-human can understand and execute its script. The video of Sugriva effortlessly manipulating a smartphone shows us that all artifacts embody a set of guiding principles that can be implicitly understood based off various visual cues, and when designed well, these principles lead users to a specific action— even chimps. Sugriva was not instructed on how to use the smartphone, and she is not a technological prodigy; she interpreted the script of the smartphone.

Invisible design is a term used by product designers that describes how the interface should be integrated seamlessly and unobtrusively into the use of the product. According to Jeremiah Lam, a UIUX designer, invisible design is a "form of design is not meant to be attractive as it's meant to be used, not looked at. Its main purpose is to allow users to complete their objectives, with minimal effort required."[22] In other words, the aim of a well-designed product is to go unnoticed while the user follows its script. But objects also possess a materiality that exists independently of the user and his intentions.

In James J. Gibson's groundbreaking work *The Ecological Approach to Visual Perception* (1979), he describes in detail how our perception of objects informs their use. In his own words, "The *affordances* of the environment are what it *offers* the animal, what it *provides* or *furnishes*, either for good or ill. The verb to afford is found in

[19] https://www.pewresearch.org/fact-tank/2019/08/16/what-the-data-says-about-gun-deaths- in-the-u-s/.

[20] https://www.instagram.com/p/BwhdZ2IB-LL/?utm_source=ig_embed.

[21] https://news.janegoodall.org/2019/04/25/inappropriate-videos-on-social-media-are-hurting-chimpanzees/.

[22] https://uxdesign.cc/the-3-levels-of-invisible-design-62c00d97b478.

the dictionary, but the noun affordance is not. I have made it up."[23] In design studies, there are two distinct classifications of affordances: artifact-artifact (AAA) and artifact-user (AUA).[24] The former (AAA) posits that affordances are properties of an object that exist whether or not they are perceived by a user. A ball is primed to roll or bounce, regardless of whether someone is there to execute its script. Indeed, affordances have always resided in objects, as they are elements that exist independently of the observer. Rather, this text is focused on the latter classification type, artifact-user affordances (AUA), which explains artifacts in terms of their potential usefulness for user behaviors. In this sense, a ball is poised to be thrown, bounced, and rolled by a user because of its affordances but also because of its communicative properties to the user. The individual makeup of the object, such as its composite material and weight, can determine its affordances; for instance, a rubber ball will bounce, whereas a metal ball will not. A baseball can be thrown far, whereas a bowling ball cannot. A solid wood toy gun will not fire a bullet from its chamber, but a loaded metal gun will. These structural elements dictate the affordances of the object, which in turn, lead us to a scripted behavior (see Fig.3.2). Or, as Gibson puts it, "affordances are functional and relational aspects which frame, while not determining, the possibilities for agentic action in relation to an object."[25] An affordance of an object is a potential use, not necessarily an observed one. A chair affords sitting; a window affords a view; a shovel affords digging, regardless of whether the user sits, views, or digs.

Fig. 3.2 An object's structural makeup determines its affordances, which suggests behaviors

Just as the individual properties and elements of an object (i.e., materials, weight, size, color, etc.) remain constant in an object, its affordances are always retained in that object, whether they are perceived by the user or not. Gibson argues that "an affordance is not bestowed upon an object by a need of an observer and his act of perceiving it. The object offers what it does because it is what it is."[26] Perhaps Gibson's entire theory of affordances can be distilled down to that single phrase: *it is what it is*. Gibson goes on to say that "the affordance of something does not change as the need of the observer changes. The observer may or may not perceive or attend to the affordance, according to his needs, but the affordance, being invariant, is always there to be perceived."[27] It is the user who activates these affordances. Whether you are a conscientious, responsible gun owner or not, this does not change the affordances of the gun.

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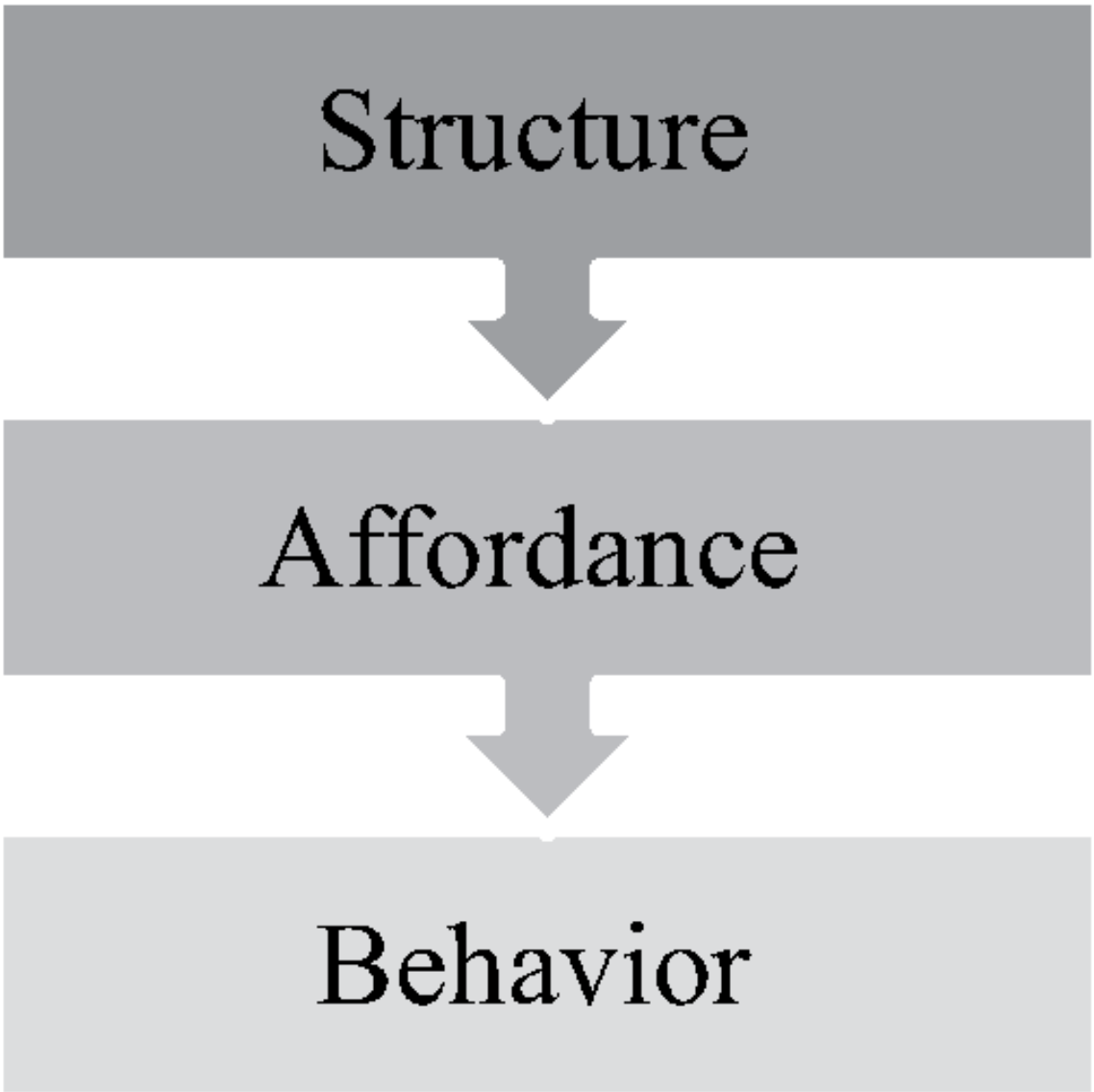
[23] Gibson, J. J. (1979). *The ecological approach to visual perception.* Boston: Houghton Mifflin.

[24] Maier, J.R.A. & Fadel, G.M. (2009). An affordance-based approach to architectural theory, design, and practice. *Design Studies, 30,* 393—414.

[25] Hutchby, I. (2001). Technologies, texts, and affordances. *Sociology, 35*(2), 441—456.

[26] Gibson, J. J. (1979). *The ecological approach to visual perception.* Boston: Houghton Mifflin.

[27] Gibson, J. J. (1986). *The ecological approach to visual perception.* Hillsdale, NJ: Lawrence Erlbaum.


Structure
Affordance
Behavior

Gibson acknowledged that his writings on affordances were inspired by earlier theoretical work. Perhaps most influential was Gestaltism, which is central to the psychology of perception. Its derivative root word, *gestalt*, is a German word meaning "unified whole." German psychologists Max Wertheimer, Kurt Koffka, and Wolfgang Kohler first drafted the Gestalt Principles in the 1920s, which is a set of heuristics that assert the human mind first perceives then processes the individual elements of an object, then forms a composite understanding of the whole object, which signals its potential uses. Gibson's theory of affordances relies heavily on Gestalt theorists, namely, Kurt Koffka, who argues in his book *Principles of Gestalt Psychology* (1935) that things "tell us what to do with them."[28] These are the demand characteristics of things.

Importantly, we must distinguish between *affordances* and *perceived affordances*, with the former being an objective truth of all objects and the latter being critically dependent upon cultural relativity and the understanding of social norms and conventions. A key figure in modern psychology is Don Norman: a self-described cognitive designer and author of several bestselling books, most notably, *The Design of Everyday Things* and *The Psychology of Everyday Things*. In his writings, Norman warns:

Please don't confuse affordance with perceived affordances. Don't confuse affordances with conventions. Affordances reflect the possible relationships among actors and objects: they are properties of the world. Conventions, on the other hand, are arbitrary, artificial and learned.[29]

Every object possesses a set of affordances, perceived or not, yet all conceivable uses of an object are not equally prioritized. Vlad Petre Glaveanu is the Head of the Department of Psychology at Webster University in Geneva, Switzerland and has written extensively about creativity and the intersectionality of human interaction and objects. He further describes Gibson's theory of affordances as *action potential*.[30] Earlier, I used the example that a chair affords the potential action of sitting. But Don Ihde's concept of multistability points out that a chair might also afford the needed height advantage to change a lightbulb, the ability to fend off an intruder, prop open a door, or to break a window to escape a room on fire. Further, children might even view objects more imaginatively, seeing a chair as affording a key structural element of a play fort, or a stage for their puppet show. (This type of creativity is known as *divergent thinking* and often equated with intelligence.) In this sense, we might ask whether the affordances of an object change based upon context rather than object materiality. Indeed, Gibson says in his 1986 text *The Ecological Approach to Visual Perception*, "An affordance points both ways, to the environment and to the observer." But this is not to suggest that affordances are beholden to circumstance and environment or even that they change according to the situation. A gun is a gun, whether it is being used

[28] Koffka, K. (1935). *Principles of gestalt psychology*. Harcourt, Brace and Company.

[29] Norman, D. (1999). Affordances, Conventions, and Design. *Interactions, 1,* 38—43.

[30] Glaveanu V.P. (2016) Affordance. In: Glaveanu VP, Tanggaard L., Wegener C. (eds) *Creativity—A New Vocabulary*. Palgrave Studies in Creativity and Culture. Palgrave Macmillan, London.

to rob a bank or stop a bank robber. Indeed, *it is what it is*—as Gibson explains—but also, *it does what it is intended to do.*

A critical flaw in our perception of guns is that because they can possess both good and bad affordances, or action potentials, they are inherently neutral and depend entirely upon the circumstances of their environment. In other words, the gun doesn't kill people; it only responds to the person holding it. However, this flawed logic takes into account only the possibilities for use and ignores the intentional design and script of the object itself, which is deliberately biased toward its use. All things considered, having a gun at your disposal means that you are susceptible to a perfect storm that is the persuasive design of the gun, its intended script, and our human conditioning. A gun is built to persuade its use, and we are prone to leaning into that use.

Gripping theGun

Gun enthusiasts often will talk about "trigger discipline"—which, according to the U.S. Concealed Carry Association, is a "state of mind" where the finger is pressed against the frame of the gun, just above the trigger area of the gun, until ready to fire the weapon.[31] This technique is considered essential for safe firearm handling and is meant to prevent reactionary and accidental discharges. Promoting trigger discipline then insinuates that a finger on the trigger creates an urge to pull it. In fact, a popular Facebook Group named "Loaded Guns Pointed at Penis" features images and videos of men pointing a loaded gun at their genitals, presumably demonstrating their impressive self-restraint to not pull the trigger. In 2020, the *New York Daily News* reported on a story of a San Diego man who was a member of the group, who accidentally shot himself in the genitals; the bullet traveled through his pubic region and exited out his backside, resulting in excruciatingly painful but non-life-threatening injuries.[32] The very idea that trigger discipline is taught as one of the four universal rules for safe firearm handling reinforces that there is an invisible inertia created once the finger is placed on the trigger.

The twentieth-century German philosopher Martin Heidegger (1889-1976) described the existential and revelatory relationship that we have with our technological artifacts. In his 1962 text *Being and Time*, Heidegger introduced one of his signature contributions: the phenomenological categories of *ready-to-hand* and *present-at-hand*.[33] These two ideas explain our attitudes toward objects and would inform Gibson on his affordance theory that would emerge many years later. Both of these phenomena, ready-to-hand and present-at-hand, can be used to describe our generally low-grade mindfulness of our interactions with objects. Consider the last time you picked up a pen to write

[31] https://www.usconcealedcarry.com/resources/terminology/general-terms/trigger-discipline/.

[32] https://www.vice.com/en/article/y3zeew/gun-enthusiasts-celebrate-man-who-shot-himself-in-the-balls-as-their-king.

[33] Heidegger, M., Macquarrie, J., & Robinson, E. S. (1962). *Being and time.* New York: Harper.

something. It is doubtful that you took deep consideration of this object before writing. Maybe you grabbed it hastily to jot down something quickly onto a piece of paper. But did you assess its level of ink prior to using it? The brand name or model of the pen? Whether it was a micro, fine, or bold tip? Fountain, brush, or gel? Surely you did not consult the website https:// unsharpen.com/ to read the latest review of this pen before you used it. It would be unrealistic and unnecessary to do so, even. In fact, it is absurd to suggest that we approach every interaction with every object throughout the course of the day with this degree of mindfulness. We simply do not possess the cognitive capacity to do so. Rather, the pen is merely a tool that we are using to achieve a broader objective that we are seeking: to write something down. We are engaged in a task—writing—and we "see through"[34] the pen in pursuit of this task. What is of significant interest, however, is that we identified the pen as a writing utensil, perceived its affordance to produce ink, gripped it appropriately, and expected for the ink to transfer on to a piece of paper so that we might write something. And we did so mindlessly with relatively little effort or thought. If we unpack this interaction between the human actor and the pen, there is a lot to dissect. What color ink did we expect to show up on the paper? What kind of line thickness did we anticipate? If there was a cap on the pen, or if it was a click pen, how did we know how to work around this? This is Heidegger's readiness-to-hand at work. Objects are subliminally understood, based on a lifetime of firsthand and secondhand experiences, and we come to expect specific results from their use.

Now let's say that when we begin to write with the pen, it does not produce anything on the paper. The ready-to-hand consciousness has been disrupted, causing an *unreadiness-to-hand*. This transition from ready to unready suddenly awakens our mindfulness with the object and refocuses our attention. Our first inclination might be to scribble on an unimportant area of the paper to try and extract some ink from the pen. We have now moved into the troubleshooting phase and cannot proceed until the problem has been resolved. The object is the subject of our thoughts. Below is another example that illustrates Heidegger's concept:

When you are smoothly coping with a hammer that is ready-to-hand, the ready-to-hand hammer recedes in your experience, and your focus is on the task you are completing. Your experience of the hammer is no different than the experience of the hand with which you are wielding it ... When a tool malfunctions, however, and becomes unready-to-hand, it becomes the object of primary concern; it is no longer part of the extended cognitive system, rather it is the thing that that the cognitive system is concerned with.[35]

Heidegger describes this sudden awareness with objects as becoming *present-to-hand*. An object becomes present-to-hand when it fails to perform as anticipated, forcing a

[34] Dotov, D. G., Nie, L., & Chemero, A. (2010). A demonstration of the transition from ready-tohand to unready-to-hand. *PloS one*, *5*(3), e9433. https://doi.org/10.1371/journal.pone.0009433.

[35] Dotov, D. G., Lin Nie, & Chemero, A. (2010). A demonstration of the transition from ready-tohand to unready-to-hand. *PLoS ONE, 5*(3), 1—9.

cognitive shift in focus, redirecting away from the intended use and onto the object itself, breaking the invisible design of its interface and, ultimately, interrupting its script. Picking up a pen or a hammer only to find that it is out of ink or broken, breaks its spell by repositioning the object at the forefront of our consciousness.

Guns are easier to use than ever before. It requires little effort, strength, or even wherewithal to pull the trigger. Because it is easy to become complacent with gun use, shooters are constantly being reminded to always maintain focus on the weapon and practice trigger discipline. The Firearm Industry Trade Association cites the most basic safety rule is to "always keep the muzzle pointed in a safe direction." Furthermore, the group advises users what to do when a gun fails: "If your gun fails to fire when the trigger is pulled, handle with care!"[36] From the moment a user picks up a gun, the presumption is that the gun will perform as anticipated: the pulling of the trigger will result in a bullet fired from the chamber (a perceived affordance). We might even brace ourselves for a forceful recoil and a loud noise. This presumption is based on our perceived use of the gun, which has been informed by our collective individual, cultural, and societal experiences (or, what Norman describes as *cultural constraints*). Yet if this expectation is not met (e.g., the gun is not loaded, or it "jams" and fails to discharge), the user suddenly refocuses his attention on the gun, and becomes more hyper-aware of the object. It is in this moment that self-reflection might also occur, and regret instantly sets in. This spontaneous transition from ready-to-hand to unready-to-hand might even spark a moment of clarity, briefly awakening the user from the action and providing room for reconsideration and reevaluation. A dramatic scene from the film *Man on Fire* (2004) illustrates just this. Denzel Washington's character, Creasy, is a despondent bodyguard, alone in his room, holding a handgun and contemplating suicide. His loneliness, depression, and bout with substance abuse all work together to accelerate his decision to kill himself with the gun, which seems to be beckoning him to use it. The following is an excerpt from the film's script:

INT. CREASY'S ROOM - NIGHT

As the song repeats, Creasy chambers yet another round. Feels like he misses a beat as he loads one shell into the chamber. Pinta sings along oblivious. Suddenly the barrel is at his forehead and the trigger has been pulled. No gun shot. A click. Hammer against shell. Creasy is confused. He ejects the shell and catches it in the palm of his hand. Macro photograph / a small dimple on the back of the shell is the only evidence of his actions.

[Creasy phones a close friend, Rayburn]

CREASY

I said, have you ever had a nine-millimeter round that just didn't go off?

RAYBURN

You mean a misfire?

CREASY

[36] https://www.nssf.org/safety/rules-firearms-safety/.

I mean nothing. The hammer came down and nothing happened. Dimple on the primer.

RAYBURN
I've heard of it. Never happened to me though. Maybe the firing pin's off.
CREASY
Maybe ...
RAYBURN
It's like we always used to say: a bullet always tells the truth. What were you shooting at?
[Creasy doesn't answer. He holds the bullet up, looks at it.][37]

In this dramatic scene, the gun does not perform as expected, and it causes Creasy to rethink his suicide attempt. The bullet, which was anonymous and ready-to-hand, now suddenly becomes present-at-hand and the center of Creasy's reflection. Whether or not this was some divine intervention, as suggested by his friend, or simply a faulty gun, is open to the viewer's interpretation, but undeniably, the action would have been a regrettable one if not for a brief moment of forced contemplation. We know that Creasy had a change of heart and decided to live instead because he did not attempt to fire a second shot. In this case, the gun was ironically lifesaving, but that is not often the case.

We might partially explain accidental or unintentional shootings through Heidegger's ready-to-hand concept. If a gun holder believes the safety is engaged or that the gun is not loaded with real bullets, then the dangerousness of the weapon "recedes" into the experience of holding it. Tragically, prop guns used on film sets have been responsible for several deaths. Actor Jon-Erik Hexum died on the set of the television show *Cover Up* (1984) after playfully firing a gun at his own head to simulate playing the game of Russian roulette. Brandon Lee, son of famous martial artist Bruce Lee, was killed on the set of *The Crow* (1993) when the prop gun fired a 0.44-caliber bullet that was unknowingly lodged in the barrel of the gun into his spine. And Halyna Hutchins was killed on the set of *Rust* (2021) when actor Alec Baldwin fired a prop gun on set. In all three instances, the gun holders believed the gun to contain harmless "blanks" or shell cartridges that are packed with gunpowder but do not have a projectile (bullet) at the tip. A blank bullet creates the same audiovisual effect of firing a real bullet but without its typical deadly effect—or at least that is the intention. Blank bullets still pose a threat at close range because of their high-velocity impact. These unfortunate deaths resulted because of a lack of supervision and carelessness on the film set but also because the gun was perceived to be safe by the holder. In fact, researchers estimate that about 17% of unintentional firearm fatalities result from the wrongful

[37] https://www.dailyscript.com/scripts/manonfire.pdf.

assumption that the gun is not loaded, and more than a quarter (28%) are due to the holder "playing with the gun."[38]

Undoubtedly, a contributing factor to the vast number of shooting deaths is the readiness-to-hand that the modern gun flaunts. Once a gun is in the hand, there are relatively few barriers to using it, which is by design. By contrast, earlier models of firearms took significantly longer to load and reload and were more likely to falter than modern guns. After an exhaustive search of articles, websites, and discussion forums, it seems there is little agreement on the length of time that it took to pack and reload historical weapons such as the colonial musket. Of course, this depends on a number of factors, such as the age of the musket, its country of origin, and the user, but it is safe to say that a typical gun owner in the seventeenth century would have needed a minimum of thirty seconds to reload his musket between shots. Contrast this with today's semiand full-automatic weapons and their aftermarket modifications such as bump stocks, which are "devices that allow a semiautomatic firearm to shoot more than one shot with a single pull of the trigger,"[39] and it becomes evident; as the technology of the gun advanced, so too did its readiness-to-hand. We have become more destructive with less thought. A logical theory, then, is that as firearms have increased in their efficiency, so too has their killing potential. So, then, it may be worth asking the question: How many shooters would have reconsidered their decision to fire a bullet if the gun had failed and, instead, they were awakened to the consequences of gun use in that moment?

On the evening of September 6, 2018, an off-duty Dallas policewoman, Amber Guyger, approached what she thought was her apartment door only to find it slightly ajar and a Black male eating a bowl of ice cream in the living room. Fearing that he was an intruder, the 31-yearold fired two bullets into 26-year-old Botham Jean, fatally wounding him. In fact, Guyger had not entered her apartment; she was on the fourth floor of the apartment complex instead of the third, where she resided. She had mistakenly entered her neighbor's apartment, shot, and killed him. In the months following, racially charged discussions dominated the narrative: a White policewoman senselessly killed an unarmed black man. This incident had reaffirmed what prior researchers have already shown; under high-stress, emotional-laden situations where there is a gun involved, African American subjects are more often mistakenly targeted as threat-inducing, compared to their White counterparts. In short, this emotionally based response had exposed a pervasive undercurrent of racial stereotyping that exists in the social consciousness.

But this tragic case extends beyond racial profiling. In her own words, Guyger testified that "[t]his is not about hate. It's about being scared." And she was partly right. The unfortunate series of events was a deadly confluence of three ingredients:

[38] Solnick, S.J., Hemenway, D. (2019). Unintentional firearm deaths in the United States 2005—2015. *Injury. Epidemiology, 6*(42). https://doi.org/10.1186/s40621-019-0220-0.

[39] https://www.atf.gov/rules-and-regulations/bump-stocks.

(1) racial profiling, which according to her legal defense team, had been built through the negative interactions she had encountered with Black men while in the line of duty; (2) her own fear; and (3) a loaded gun. A recipe for killing, no doubt. During her trial, many questions were raised about her racial biases (the prosecution had introduced racially insensitive text messages into evidence) and the degree to which a law enforcement officer is protected under the law if a "reasonable" threat to safety is perceived. But what was never discussed was the third ingredient for killing: the loaded gun. After all, if Guyger had not been armed, she would not have accidentally shot an innocent person, nor would she have been sentenced to ten years in prison for manslaughter. Her own defense team contended that an exhausted Guyger was suffering from "inattentional blindness"[40] at the time of the shooting and that she had pulled the trigger while on "autopilot."[41]

Essentially, her defense team was making a Heideggerian argument that the readiness-to-hand properties of the gun had been a key factor in their defendant's misconduct.

Though it did not directly cause Jean's death, the presence of the gun had indeed shaped Guyger's behavior. In his article "The Philosophy of the Technology of the Gun," philosopher Evan Selinger states, "To someone with a gun, the world readily takes on a distinct shape. It not only offers people, animals, and things to interact with, but also potential targets. Furthermore, gun possession makes it easy to be bold, even hotheaded."[42] This most certainly was the case with Guyger, though she was likely more fearful than hotheaded (which, by the way, is an important legal distinction that I will cover later). Regardless, she was overcome with this powerful emotion—fear—and her reflexive action was to reach for her gun, aim, and pull the trigger. The readiness-to-hand overshadowed logic. I wonder if that gun had jammed in that moment, just as it did for Creasy, Guyger would have emerged from the gun-induced brain fog, allowing her to briefly re-calibrate the situation and override her fearful instinct. Instead, she viewed the situation through the sights of her gun and pulled the trigger.

Amber Guyger entered the wrong apartment confused and scared, and the readiness-to-hand of her holstered gun led to an impulsive and unnecessary murder. It is not criminal that she had an emotional response to an unexpected scene; it is criminal that we refuse to acknowledge how the gun amplified the irrationality that killed Jean. Guyger reaching for the gun was a natural reflex for her because it had become absorbed by her person; it was an extension of her body. Her defense team argued that Jean's death was an unfortunate byproduct of inattentional blindness—a momentary

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[40] https://nymag.com/intelligencer/2019/10/amber-guyger-testimony.html.

[41] https://www.washingtonpost.com/nation/2019/09/28/i-shot-an-innocent-man-says- former-officer-trial-murder/.

[42] https://www.theatlantic.com/technology/archive/2012/07/the-philosophy-of-the-technology– of-the-gun/260220/#:~:text=To%20someone%20with%20a%20gun,to%20be%20bold%2C%20even%20hotheaded.

lapse of judgment—but gun use affects us on a deeper level. Indeed, Bruno Latour makes the case that the gun fundamentally *changes* us and our view of reality:

You are different with a gun in your hand; the gun is different with you holding it. You are another subject because you hold the gun; the gun is another object because it has entered into a relationship with you. The gun is no longer the gun-in-the-armory or the gun-in-the-drawer or the gunin-the-pocket, but the gun-in-your-hand, aimed at someone who is screaming ... *A* good citizen becomes a criminal, a bad guy becomes a worse guy;

a silent gun becomes a fired gun.[43]

Essentially, we view the objects around us through the lens of their perceived affordances, shaping our subjective reality of what is possible, and by extension, what is required of us. To the person carrying a loaded weapon into Walmart, he self-actualizes as a protector against a virtually non-existent threat. To the person brandishing assault rifles at a peaceful protest, he fancies himself a peacekeeper. And while carrying a gun might be comforting for the gun-wielding individual, it negatively affects others and escalates the dangerousness of every situation. Gun-carrying primes the gun holder for overreaction. It is imperative that we resist a society of armed somnambulists quick to draw and who are looking for opportunities to solve any dispute with gunplay. Instead, we must acknowledge that holding a gun in our hands distorts our perception of reality and of others. Effectively, when we grip the gun, the gun grips us.

[43] Latour, B. (1999). *Pandora's hope: Essays on the reality of science studies.* Cambridge, Mass: Harvard University Press.

4. A Violent Nudge

Our technologies influence our behaviors, but we have the final say in our actions. Ultimately, we make the choice of whether and how to use an object. But this choice is not entirely pure; things, objects, and artifacts are designed specifically to carry out the will of the designer and compel us toward specific actions. *Nudge theory* proposes that choices can be influenced through suggestions in design. Whether through the physical, ergonomic design of an object (such as a chair) or a rhetorical messaging design (such as an anti-smoking campaign), users can be *nudged* toward or away from a desired behavior (such as sitting in a chair or smoking cessation). The design at the user level capitalizes on principles of cognitive psychology and the human condition to lead users toward specific actions; this is referred to as the "inner design."[1] For example, the physical ergonomics of a handgun are directed at the user, specifically, to guide him or her toward pulling the trigger; broader social structures like the NRA and its messaging campaigns foster an environment that glorifies and promotes gun ownership. In this sense, decision-making is influenced through an "outer design"[2] and is sometimes referred to as *choice architecture*. Every day, we wade through a sea comprised of inner and outer designs that are engineered to nudge our behaviors, perceptions, beliefs, and attitudes. As free individuals, we make choices, but they are confined to what has been presented to us through the architecture of choice.

Choice architecture is also applied literally in architectural studies to describe how architects employ tactical designs to encourage, or nudge, users in their decision-making. Take a moment and look around. Whether you are reading this book at home, in a cafe, a library, a park, or somewhere else, you are surrounded by architectural elements that have been designed thoughtfully and with your interaction in mind. Sometimes, this interaction is functional, such as in the design of a walkway, a door, or a piece of furniture. In these cases, the architectural design of things suggests, and even dictates, your behavior. Christopher Alexander's *The Timeless Way of Building* is an essential text for architectural studies (and which was recommended to me by a philosopher, Evan Selinger). It asserts that when combined, architectural elements possess a "pattern of events" that its users will adopt and that this pattern is culturally relative. He uses the example of a sidewalk; the mere existence of formed concrete alone does not cause its users' behavior. Rather, this behavior is shaped by the design

[1] Camelia, G. (2020). Ergonomics of human choice. *Studies in Business & Economics*, *15*(3), 261-268. https://doi.org/10.2478/sbe-2020-0057.

[2] Camelia, G. (2020). Ergonomics of human choice. *Studies in Business & Economics*, *15*(3), 261-268. https://doi.org/10.2478/sbe-2020-0057.

elements of the sidewalk (e.g., a wide, smooth sidewalk might promote an activity like skateboarding, whereas a narrow, rough sidewalk would be a deterrent for such activity, and may in fact have been designed for the explicit purpose to discourage it) and by the cultural mindset of the user; Alexander points out that a sidewalk in New York City might serve the hustling commuter, but a sidewalk in India is a place of congregation used for sitting, talking, and playing music. Though the materiality and design of the sidewalk remains the same in both contexts, its use is shaped by culture. Certainly, the gun means something different in America than it does in, say, Japan.

However, Alexander's view of the extent to which these patterns dictate behavior is complex. He emphatically states that *space*—the place where these patterns of events are manifested, such as in a sidewalk, a library, or a courtyard—does not limit the user to a pattern of events. That is, the sidewalk does not *cause* a pedestrian to walk down it. Yet, he acknowledges that "these elements associate themselves with definite and quite specific patterns of events" and recognizes that the two are "connected."[3] This connection between space and events is not unlike the thesis of this book. A gun does not cause its user to shoot it, but its design elements along with individual, social, and cultural influencers nudge the user toward its use. The gun is not responsible for firing the bullet, but its design drives the user to the brink of a specific use; the sidewalk does not create pedestrians, but it certainly facilitates walking to a specific place. Indeed, Alexander talks about the "close connection between patterns of events and space" as a "stream." Just as we do not separate the rushing water from its bed of the stream, its underwater plants, or its marine life, we cannot distinguish between the design of the space or the object and its resulting pattern of event, or action. So, Alexander's view that architectural and natural spaces and objects both do and do not cause behavior is a well-crafted balancing act.

This is the fundamental contradiction that lies in this philosophy of technology—that things, objects, artifacts, and spaces most certainly can *suggest* an interaction, but one cannot responsibly argue that they *cause* the interaction. Alexander arrives at the conclusion that "there is a fundamental inner connection between each pattern of events, and the pattern of space in which it happens. For the pattern in the space is, precisely, the precondition, the requirement, which allows the pattern of events to happen." Perhaps we might relate this to the inner and outer designs of nudge theory. Through its materiality, perceived affordances, and cultural interpretations, the gun brings with it a set of preconditions and implied understanding for individual use (inner design), while pro-gun sentiments manufactured by the NRA and spread by like-minded influencers such as NRA-endorsed politicians create a framework that stokes fear and provides people with a rationale for gun ownership and carrying (outer design). Of course, whether or not an individual acts on these designs is another matter. Gibson's affordance theory downplays the individual's role in the user-artifact interac-

[3] Alexander, C. (1979). *The Timeless Way of Building*. New York: Oxford University Press.

tion, whereas modern philosophers see the user's background and intention as being integral to choice architecture.

The Lyon 25 is a wide concrete and brick staircase located in Lyon, France. The rise from the first to last step is 14 feet, and the total run of the staircase is 22 feet. This obstacle has been enshrined in skateboarding lore since the early 2000s when Ali Boulala attempted and failed to ollie down the 25-step death trap. It would be another 12 years before the trick was attempted again. In 2014, Aaron "Jaws" Homoki made the jump but crashed at the bottom, tearing his MCL and halting his skateboarding career for six months. The following year, Jaws successfully landed the jump. For most, the Lyon 25 is a thigh-burning climb from the bottom of a French plaza to the top and nothing more. For a few, like Boulala and Jaws, the steps inspire daredevil stunts. Depending on the individual, this architecture affords something quite different.

Architecture provides us with concrete examples (no pun intended) of how designs can nudge us toward specific behaviors; buildings, walkways, doorways, and handrails are all visible manifestations of nudges that guide us toward (or away from) a desired movement. In his text *Nudge: Improving Decisions About Health, Wealth, and Happiness*, Richard Thaler also uses the architectural metaphor to explain the larger concept of nudging: "There are many parallels between choice architecture and more traditional forms of architecture. A crucial parallel is that there is no such thing as a 'neutral' design.'"[4] In other words, architecture shows us that the design of things, objects, and artifacts is inspired and alive. Rudolf Arnheim is a famed perceptual psychologist whose work is rooted in Gestaltism. His text *The Dynamics of Architectural Form* builds on Alexander's concept of architectural "pattern of events," describing buildings as possessing a "configuration of forces," which comes to defines us. He writes:

Buildings have a large share in determining to what extent every one of us is an individual or a member of a group, and to what extent we act out of freely made decisions or in obedience to spatial boundaries. All these conditions amount to configurations of forces. Only because the building itself is experienced as a configuration of forces, namely, as a particular pattern of constraints, dimensions of Freedom, attractions and repulsions, can the architectural setting serve as a part of the dynamic that constitutes our lives.[5]

Similarly, as more people own and carry guns in public spaces, the gun is quickly becoming another dynamic that "constitutes our lives." As is the case with architecture, there is not just one aspect of the gun that persuades its users to engage with it. It is a confluence of design features, both inner and outer, that create a multi-tiered ecosystem of choices that favor the gun-citizen. It is not just the palm-shaped grip of the gun or the curvature of the trigger that nudges the user to grip the gun and pull the trigger. It is a configuration of forces: the ergonomic features of the gun combined

[4] Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving decisions about health, wealth, and happiness*. New Haven, Conn: Yale University Press.

[5] Arnheim, R. (1977). *The dynamics of architectural form*. Berkeley: University of California Press.

with a fear-based cultural context that celebrates gun owners as defenders of personal freedom who are simply exercising their constitutional right.

Choice architecture and nudge theory do not always result in action. It might be the will of the designer to invoke a specific feeling or emotion in the user rather than to elicit a behavior. Architectural design can be purely ornamental, such as in the faux balconies on the exterior of a home (known as "Juliet Balconies") or the decorative columns of a courthouse (often a nod to the earliest democracies in Greece and Rome). The design of these architectural elements does not impact your interaction in any way, but they can inspire a visceral and emotional reaction, which is translated into perceptions of wealth and authority.

Other times, the functional design of objects serves an alternative purpose that comment on something beyond the traditional use of the object. Robert Rosenberger is an associate professor of philosophy and prolific author on postphenomenology and human-technology interactions. His book *Callous Objects: Designs Against the Homeless* examines urban landscapes and the structures within. Rosenberger writes of "hostile design," which he defines as:

objects within public spaces that have the effect of targeting vulnerable groups, and which have garnered criticism (or should be criticised) for this hostility. Thus, the designation of something as "hostile" is not an objective or innocent description; it is an allegation. As such, it raises questions about what should constitute public space, who should count as a vulnerable group and whether particular allegations of hostility are justified.[6]

Examples of hostile architecture include window ledges with spikes on them to prevent someone from sitting, anti-sleep benches with dividers to prevent someone from lying down, and skatestopper curbs and handrails, which use metal fixtures to prevent skaters from sliding their boards along the surface. (In fact, the infamous Lyon 25 staircase has been retrofitted with skatestopping spikes at the top step to prevent any future attempts to jump it). Note that these designs are not particularly "hostile" to the shop owner with a storefront window ledge, or the city officials who wish to assuage homelessness or skateboarding. To them, these designs are highly effective. But Rosenberger points out that these designs often are disadvantageous to marginalized and vulnerable populations.

The gun is hostile by design. Moreover, it impacts specific groups of people differently. Gun violence disproportionately affects women (specifically those in abusive relationships)[7] and Black men (specifically those who live in underserved communities).[8]

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[6] Rosenberger, R. (2020). On hostile design: Theoretical and empirical prospects. *Urban Studies, 57*(4), 883-893. https://doi.org/10.1177/0042098019853778.

[7] Grinshteyn, E. & Hemenway, D. (2019). Violent death rates in the US compared to those of the other high-income countries, 2015. *Preventive Medicine, 123,* 20—26.

[8] Centers for Disease Control and Prevention, Web-based Injury Statistics Query and Reporting System (WISQARS), "Fatal Injury Reports," last accessed Mar. 20, 2020, https://www.cdc.gov/ injury/ wisqars. Figures represent an average of the five years of most recently available data: 2014 to 2018.

Baked into the choice architecture of owning, carrying, and using a gun conveniently ignores these societal inequities. Rosenberger suggests that the idea of "technological guilt," typically reserved for our own feelings of regret for over-indulging in technology, now expands to "our society's systems of law, representation, economics, and criminal justice."[9] Or to put it another way, the anti-sleep bench is no longer just a bench. It is a "moral and political flashpoint"[10] that extends into an anti-homelessness sentiment. We might now see an anti-sleep bench and internalize the guilt of its moral design. Likewise, a gun is not just a gun. It is a hostile embodiment of moral, ethical, and political design.

Design is not one-size-fits-all; the design of things affects each one of us on different levels. There is the interactive, inner design, which is guided by Gibsonian affordances, nudges, and scripts. Then there is the more perceptual, outer design, which is formed by our psychological, emotional, and social makeups. The architecture of choice presents multiple pathways for use and depends on both inner and outer design. It shows us that technology is neither neutral nor innocent, and in the case of guns, they give us a gentle nudge toward violence.

Emotional Design

So far in this book, I have fixated on the gun as a technological object whose design primes its use. I've made the argument that the gun is an actant that shapes the perceptions and behaviors of everyone in its proximity. But we also should try to understand why people own, carry, and use guns in the first place. This inquiry relies on an important but highly contextualized factor: personal emotion.

Design evokes emotion, and in fact, the two are inseparable. Returning momentarily to the metaphor of architectural design, we react differently to the Taj Mahal, the Guggenheim, and Westminster Abbey than we do to a nameless office building in an industrial park. We are awe-inspired by some buildings and anesthetized to others. In these famous architectural examples, emotional response is not just a byproduct of their design; it is the intent. The absence of architecture also can ignite emotion. For example, the National September 11 Memorial in New York City consists of two reflecting pools that retreat into the ground where the bases of the twin towers once stood. Indeed, great design appeals to our emotions that run deeper than the materiality of the object or structure.

Often, we assign gravitas to objects because of their historical significance. The FN-Browning M1910 is the model of gun used by]]Gavrilo Princip to assassinate Austria-Hungary's archduke Franz Ferdinand. The pocket pistol is on display at the

[9] Rosernberger, R. (2017). *Callous Objects: Designs Against the Homeless.* Minneapolis, MN: University of Minnesota Press.

[10] Rosernberger, R. (2017). *Callous Objects: Designs Against the Homeless.* Minneapolis, MN: University of Minnesota Press.

Museum of Military History in Vienna and regularly travels the museum exhibition circuit so that people might ogle the weapon that set the events of World War I into motion. Likewise, the rifle that was used by Lee Harvey Oswald to assassinate President John F. Kennedy in 1963 is housed in the National Archives building in College Park, Maryland. Interestingly, a private citizen named John J. King originally purchased the rifle from Oswald's wife after the government concluded its investigation in 1965. Ultimately, however, the U.S. government seized the rifle from King, citing that Oswald had purchased it illegally. King sued the government over the forfeiture but lost. The court found that his attempt to procure the rifle was "unconscionable" and was "based on some projected market value which could only arise from the fact that these are curiosities which derive their character as such from the assassination and which can be exhibited on a profit basis."[11] The court saw "no demonstrable market for these particular objects." Today, a replica of the rifle is encased next to the sixth-floor window in the Texas School Book Depository building where Oswald fired his fatal shot. The building is now home to The Sixth Floor Museum at Dealey Plaza, which sees more than 350,000 visitors each year who each pay an admission charge of $18.[12] It turns out that there is most certainly a profitable market for this object and the emotional turmoil that resulted from its use.

And then there is what I would call *specialness*, or the emotional attachment that we have with objects because of their personal significance. The gun manufacturer Winchester shares such a story on the blog section of its website. A guest contributor, Melissa Bachman, writes: "In my family, guns are one of the most sacred heirlooms passed on through generations. These aren't just any gun or guns; but guns with stories, a history, and something to be remembered."[13] She reflects on the significance of the Winchester 30/30 rifle that once belonged to her beloved grandfather. The rifle conjures personal memories of hunting expeditions with her father and her brother. Now, Bachman produces and hosts the show *Winchester Deadly Passion*, which airs on The Sportsman Channel. For Bachman, and many others like her, the gun is a memento of family nostalgia.

Emotional design is a tenet of design studies that was developed by Don Norman in his book *Emotional Design: Why We Love (or Hate) Everyday*

Things (2003). Norman departs from the Gibsonian view of affordances, which emphasizes the design of objects, and instead asserts that the meaning of objects is squarely dependent on perception and on cultural factors and that affordances may change according to each user. Fundamentally, Norman is not simply talking about Ihde's multistability (or, multifunctionality) of objects. Here, he differentiates between affect and emotion, where affect refers to an instinctual "judgmental system" and emo-

[11] https://www.anylaw.com/case/king-v-united-states/d-colorado/11-07-1968/kIw3QWYBTlTomsSB_89D.

[12] https://www.jfk.org/the-assassination/history-of-the-texas-school-book-depository/.

[13] https://winchester.com/Blog/2017/08/hunting-with-your-family-heirloom-rifle.

tion is the "conscious experience of affect."[14] In other words, we experience life just as our evolutionary ancestors did—subconsciously processing everything around us in terms of being good or bad, safe or harmful. Our emotions translate our instinctual judgments into feelings, which subsequently impact our decision-making. Importantly, not everyone is proficient at regulating their emotions, and instead, act on impulsivity. Norman proposes three levels of this emotional system, each more complex than the other, which I will explain through the lens of guns.

Visceral

The first level of emotion, described by Norman, is visceral. This level appeals to our primitive, innate response to the aesthetic of objects. In 2021, Kyle Rittenhouse was tried for the killing of two protestors at a Black Lives Matter event in Kenosha, WI. During his highly publicized trial, the prosecution asked Rittenhouse why he had illegally purchased the assault rifle. The 17-year-old replied that he had not bought the rifle for home protection or for hunting but because he "thought it looked cool."[15] Simply looking at a gun might render feelings of excitement for some and danger for others. Consider how holding a gun might make someone feel safe and protected. But for someone else who has lost a loved one to gun violence, holding a gun might stimulate feelings of anger, resentment, and sadness.

This visceral response occurs even when we merely view an object but not actually interact with it; a 2019 study found that when people encounter an image of a gun—even prohibitive images such as a sign depicting a gun with a strike through it to indicate "No Guns Allowed"— they become primed with hostile thoughts.[16] The researchers concluded that "prosocial" signs such as ones that indicate guns are not allowed on the premises, might actually have the opposite effect. The image of the gun stokes a visceral reaction, whatever that might mean for the individual.

There is evidence that we have evolved over time to detect guns as a perceived threat. A 2007 study examined the "fear module"[17] of participants by presenting them threat-based stimuli of both ancient origin (snakes) and modern origin (guns). Their results supported the "threat superiority effect," which posits that humans respond more quickly to negative, threat-related objects because they are perceived as being dangerous. In other words, humans are supremely efficient at visually scanning an area, detecting threat, and then prioritizing this threat to confront it or to avoid it

[14] Norman, D. A. (2003). *Emotional design: Why we love (or hate) everyday things.* New York: Basic Books.

[15] https://www.cnn.com/us/live-news/kyle-rittenhouse-trial-11-10-21/index.html.

[16] Benjamin A.J. & Crosby, M. (2019) A case of unintended cognitive consequences: Guns prohibited images prime aggressive thoughts. *Journal of Mental Health and Social Behaviour, 1*(103).

[17] Fox, E., Griggs, L., & Mouchlianitis, E. (2007). The detection of fear-relevant stimuli: are guns noticed as quickly as snakes? *Emotion (Washington, D.C.), 7*(4), 691—696. https://doi. org/10.1037/1528-3542.7.4.691.

altogether. And as our early ancestors relied on this fear module for survival, we now recognize guns as a heightened threat to our personal safety. Indeed, we are primed to recognize this specific threat.

The *weapon focus effect* is a psychological phenomenon, which states that people tend to focus more on weapons than on neutral objects.[18] This visceral response to seeing guns might also be explained by the *gun embodiment effect*, which contests that people are more likely to report seeing a gun when they are holding a gun themselves.[19][20] A 2013 study supported this effect, reporting that "armed individuals view the world in terms of the affordances that result from wielding a gun, just as unarmed individuals view the world in terms of affordances available at that time."[21] Simply put, you perceive and process information differently depending on whether or not you are holding a gun—just as Latour had asserted.

Researchers also have correlated the gun embodiment effect with cognitive control, meaning that the gun doesn't just influence the way we process information, it also informs our reaction to it. The most frequently cited example of this effect is the tragic number of unarmed individuals killed by police. The example of Dallas policewoman Amber Guyger certainly fits this trend of police officers shooting first and asking questions later and could be considered a textbook case of "emotion guided threat detection."[22] Still, I would argue that this is less of an indictment on the prejudices of law enforcement and more about the permissibility we give police officers to roam around locked and loaded onand off-duty, vigilantly on the prowl for criminals. This is the gun embodiment effect on law enforcement. For various political reasons, there are major discrepancies in the actual number of police killings reported by law enforcement agencies and by other entities, but *The Washington Post* reports that 918 people have been shot and killed by police in 2021, many of them unarmed.[23] In fact, over a two-year period, *The Washington Post* attributes 86 deaths to police who mistook a non-lethal object for a gun.[24] The gun enables us to act on our instincts in spontaneous

[18] Loftus, E. F., Loftus, G. R., & Messo, J. (1987). Some facts about 'weapon focus'. *Law and Human Behaviour, 1*, 55—62.

[19] Witt, J.K. & Brockmole, J.R. (2012). Action alters object identification: Wielding a gun increases the bias to see guns. *Journal of Experimental Psychology: Human Perception and Performance, 38*(5), 1159-1167.

[20] Witt, J. K., Parnes, J. E., & Tenhundfeld, N. L. (2020). Wielding a gun increases judgments of others as holding guns: A randomized controlled trial. *Cognitive Research: Principles and Implications, 5.*

[21] Biggs, A.T., Brockmole, J.R., & Witt, J.K. (2013). Armed and attentive: Holding a weapon can bias attentional priorities in scene viewing. *Attention Perception & Psychophysics, 75,* 1715—1724.

[22] Baumann, J., & DeSteno, D. (2010). Emotion guided threat detection: Expecting guns where there are none. *Journal of Personality and Social Psychology, 99*(4), 595—610. https://doi.org/10.1037/a0020665.

[23] https://www.washingtonpost.com/graphics/investigations/police-shootings-database/.

[24] https://www.washingtonpost.com/investigations/in-two-years-police-killed-86-people-brandishing-guns-that-look-real%2D%2Dbut-arent/2016/12/18/ec005c3a-b025-11e6-be1c-8cec35b1ad25_story.html.

and visceral ways, and it quickens our emotional response to stimuli. It galvanizes our decision-making, which often can be wrong.

Behavioral

The second level of Norman's emotional design is behavioral, which he describes as the pleasure that is derived from the use of an object. Here, Norman leans on the work of academics Lionel Tiger and Patrick Jordan, who linked pleasure to the design of products. Specifically, the authors outline four types of pleasure that cab be derived from an object and from its use:

- *Physio-pleasure*: bodily pleasures involving the five senses
- *Socio-pleasure*: social pleasures derived from interaction with others
- *Ideo-pleasure*: an appreciation of the object's aesthetic and the "statement they make" to others
- *Psycho-pleasure*: the psychological state and reaction to the use of an object

Certainly, the gun is pleasurable in each of these ways, and many people derive pleasure from owning, carrying, and firing a gun. Firing a gun is a total physical experience that engages all five senses. The gun embraces both socioand ideo-pleasures because of the identity and sense of community that it provides its user and because of the statement that it makes to others. And, the gun gives us psycho-pleasure because it affects psychologically. American author and *The New York Times* bestseller Tanehisi Coates writes: "Once you become serious about guns and shooting, you do start to think a lot about them ... the adrenaline and the focus required in shooting, even just at a simple range, are physiologically and psychologically powerful forces."[25] An article on GunsMagazine.com encourages its readers to "Go ahead and spoil yourself while you still can" by purchasing a "pleasure plinker."[26] This is a gun that provides the owner with pleasure, even if it doesn't actually function, such as one model, shaped by Tyler Gun Works, which is adorned with mastodon tusks. This concoction of pleasure might be summed up with the words from a 2018 study titled "Learning to Need a Gun," which concluded that "the 'need' to have and carry a gun is experienced not simply cognitively, but also physically."[27]

The gun provides a variety of pleasures but let us not mistake pleasure for goodness. Indeed, there are many things that are pleasurable and not good. Furthermore, studies show that pleasure—specifically in reference to gun ownership—is not synonymous

[25] https://www.theatlantic.com/national/archive/2013/02/liberals-with-guns/273002/.

[26] https://gunsmagazine.com/gear/you-deserve-a-pleasure-plinker/.

[27] Shapira, & Simon, S. J. (2018). Learning to need a gun. *Qualitative Sociology*, *41* (1), 1—20. https://doi.org/10.1007/s11133-018-9374-2.

with happiness.[28] In his book *Pleasure and the Good Life: Plato, Aristotle, and the Neoplatonists*, author Paul van Riel gives an in-depth look at how classical philosophers differed among their definitions of pleasure. Ultimately, he summarizes this view "our life is constantly subject to lack and replenishment. The ultimate aim of every replenishment is a state of perfect harmony ... Of course, we can partially fulfill our needs, but these fulfilments will always be thwarted by a new lack."[29] Like a drug addict, the gun-citizen is always chasing the next instance of gun use, which will always be temporary and fleeting. Moreover, van Riel argues that "true pleasure is a pleasure that occurs without our expecting its arrival, without our being 'fixated' on it." Instead, the gun gives us an inauthentic pleasure to the extent that it is a contrived, planned activity. The gun is an indulgence in momentary pleasure that compromises others.

Reflective

The final, most complex, level of emotional processing is reflective. In this realm, a person's self-image and identity is shaped by the objects they own and use. Like *ideo-pleasures*, reflective design capitalizes on the personal satisfaction, self-image, and memories that result from the use of objects.

The artifacts that we choose to welcome into our lives define our selfimage. According to Norman, "Your choice of products, or where and how you live, travel, and behave are often powerful statements of self, whether intended or not, conscious or subconscious."[30] The gun is no exception. The decision to own, carry, or use a gun is not a whimsical choice; it is the culmination of a socially shaped view of the world and of the object itself. There is no neutrality here; viewing a gun as a neutral tool or showing indifference to it is a tacit positivity toward guns in and of itself. Likewise, the gun is not restricted to the functions that it performs. It serves a greater purpose in defining the identity of the guncitizen. For Norman, "products can be more ... Their real value can be in fulfilling people's emotional needs, and one of the most important needs of all is to establish one's self-image and one's place in the world."

For many gun-citizens, simply owning a gun does not fully satisfy their emotional need; they need to advertise to others that they are gun-lovers, often in brash ways. Driving down the road, I can't help but notice an increase in the number of bumper stickers, decals, and flags that broadcast another driver's fanaticism for guns. It has become routine to see vehicles that display decals and stickers that read "Assault

[28] Hill, Dowd-Arrow, B., Davis, A. P., & Burdette, A. M. (2020). Happiness is a warm gun? Gun ownership and happiness in the United States (1973—2018). *SSM—Population Health, 10*, 100536-100536. https://doi.org/10.1016/j.ssmph.2020.100536.

[29] van Riel, P. (2000). *Pleasure and the Good Life: Plato, Aristotle, and the Neoplatonists*. Brill.

[30] Norman, D. A. (2003). *Emotional design: Why we love (or hate) everyday things*. New York: Basic Books.

Life" and "I lubricate my guns with Liberal tears." The gun family decals (Fig.4.1) are another wry attempt at gun humor.

The gun-citizen is fulfilled emotionally not just by the gun but by virtue-signaling to others. The gun has molded the identity of the individual but also metastasized to the rest of the family in the same way that children might inherit the fandom of the New York Yankees or Pittsburgh Steelers. This behavior is part emotional fulfillment and part performative for others to see. It is tribal.

Advertisers and marketers also understand how "emotional branding" appeals to consumers, and Norman contends that "[b]rands are signifiers of our emotional responses."[31] One such product is The Border Patrol[®]—a specific model of a long gun advertised by Wilson Combat, who boasts that the "US Border Patrol uses thousands for daily service, in some of the harshest conditions a firearm may encounter."[32] The gun manufacturer also offers the Urban Super Sniper®, which is described as "a pleasure to operate."[33] It remains unclear why a private citizen would need the firepower of either of these weapons, but their product names are a not-sosubtle dog whistle that connotes vigilantism at the border and in urban areas, both of which are home to historically marginalized groups of people affected greatly by gun violence. Purchasing either of these weapons says more about a person's morality than of his appreciation for artisan gunsmithing or a love of competitive shooting.

Fig. 4.1 Car decal depicting the gun family (https://www.flickr.com/photos/bryanalexander/40598428541/in/photostream/)

The emotional attachment to guns also is deeply rooted in nostalgia. Consider the volumes of books, television shows, movies, and country-Western songs that fetishize gun play and romanticize the gun fever of the American Wild West. For many, guns represent a return to a bygone time, such as the Wild West of the 1800s, when guns played a crucial role in daily life. And many would like to return to this model of living where disputes are settled by way of duels in the center of town and crime is assuaged by the constant presence of guns. But we misremember the true Wild West, which had notoriously strict gun laws and restrictions, with most towns prohibiting guns within its limits. Indeed, our nostalgia is often blurry and revisionist.

Many gun-citizens romanticize their own gun play as a youthful rite of passage from boyhood to manhood. In an article titled "Happiness is a Warm Gun," which appeared in the May 1968 issue of *American Rifleman*, author Warren W. Herlihy reminisced about giving his seven-year-old son, John, his first gun. He recalled: "I remember those grand times we had over the years, father and son, each as enthusiastic about guns as the other."[34] Herlihy continued, "[W]e still keep those 'little' guns because they stand

[31] Norman, D. A. (2003). *Emotional design: Why we love (or hate) everyday things.* New York: Basic Books.

[32] https://www.wilsoncombat.com/border-patrol/.

[33] https://www.wilsoncombat.com/223-wylde-urban-super-sniper/.

[34] https://www.beatlesbible.com/gallery/miscellany/american-rifleman-happiness-is-a-warm-gun_01-2/.


YOU HAVE YOUR FAMILY
I HAVE MINE

for something. To me, they stand for the comradeship and good times a father and son can have when they share a love of guns." That same year, John Lennon composed a song of the same title that would appear on *The White Album* (1968), and many interpreted the song to be about drug use. But Lennon later clarified that "Happiness is a Warm Gun" was in response to the *American Rifleman* article, saying: "They said it was about shooting up drugs. But they were advertising guns and I thought it was so crazy that I made a song out of it."[35] To Lennon, the gun was antithetical to happiness. Sadly, 12 years later, he would die at the hands of a crazed fan with a handgun.

We are highly emotional beings, prone to error and misjudgment. The gun not only stirs up emotions but also is the conduit through which our emotions run. The gun speaks to us on visceral, behavioral, and reflective levels of processing emotions and changes us at our very core. And sometimes, it enables violence-based reactions that bypass rationality and reason.

An Increased Aggression

As it has already been established by numerous studies and polls, the primary reason cited for gun ownership is protection: both self-protection and the protection of loved ones. But this should not be interpreted as though gun owners are fearful people. This view is called the *symptom perspective* and argues that gun ownership stems from heightened levels of fear—either fear of a specific phobia such as animals, strangers, or zombies, or fear of being victimized, as in robbery, murder, or mass shootings. A 2019 study examined this perspective along with its opposite view: the *palliative perspective*, which asserts that gun ownership reduces levels of fear in gun owners. The findings of this study supported the palliative perspective, saying "people who own guns tend to exhibit lower levels of fear than non-gun owners."[36] Conversely, other studies have stressed a sharp correlation between gun ownership and fear,[37] but that in many cases, fear may be defined by "cultural anxieties," such as the changing demographics of one's country, instead of a fear for one's individual safety.[38]

Other survey data suggest that gun owners and non-gun owners equate gun ownership with a perceived sense of empowerment, as defined by feeling safe, respected, and in control.[39] This distinction is important because of this cognitive dissonance: gun owners cite protection as the reason for owning guns while simultaneously viewing the

[35] *The Beatles anthology.* (2000). San Francisco: Chronicle Books.

[36] Dowd-Arrow, B., Hill, T. D., & Burdette, A. M. (2019). Gun ownership and fear. *SSM—population health, 8*, 100463. https://doi.org/10.1016/j.ssmph.2019.100463.

[37] Pierre, J.M. (2019). The psychology of guns: risk, fear, and motivated reasoning. *Palgrave Communications, 5*, 159. https://doi.org/10.1057/s41599-019-0373-z.

[38] Warner, T. (2020). Fear, anxiety, and expectation: Gender differences in openness to future gun ownership. *Violence and Gender, 7*(1), 11—18.

[39] Warner, T. (2020). Fear, anxiety, and expectation: Gender differences in openness to future gun ownership. *Violence and Gender, 7*(1), 11—18.

world to be less dangerous compared to the views of non-gun owners. In other words, gun owners want guns for protection, but see less of a need for that protection. This means that guns do not simply provide a layer of protection for concerned individuals, as gun apologists will assert. Rather, guns embolden gun-citizens to feel in control and to reclaim their individual power as promised to them by the U.S. Constitution.[40] It can be argued, then, that instances of gun violence often are framed by an individual's overly aggressive worldview, created by a perfect storm of empowerment, perceived threat, emotional response, hyperactive anxiety, and the inability to self-regulate all the above.

Residually, the presence of a gun elicits aggressive thoughts and actions, and for someone who has an aggressive predisposition, the gun amplifies these traits. To be clear, owning a gun does not turn someone into an aggressor. Studies even have shown that activities like belonging to a shooting association do not necessarily prime aggression in gun-citizens.[41] And, familiarity with guns also determines the behavioral response to them; one study found that while non-hunters exhibited slightly higher levels of antisocial behavior, they also "have a different understanding of how guns are used than do other people."[42] Admittedly, a person's reaction to a gun depends heavily on their individual context. But there is a link between guns and aggression. Leonard Berkowitz was an emeritus psychology professor at the University of Wisconsin—Madison, where his scholarly work focused on aggression. Berkowitz published numerous peer-reviewed studies on the weapons effect, which posited that "guns not only permit violence, they can stimulate it as well."[43] His landmark 1967 study with co-researcher Anthony LePage concluded that the mere presence of a gun elicits an aggressive-based response. They concluded:

The presence of the weapon might have elicited an intense aggressive reaction from the person with the gun, assuming his inhibitions against aggression were relatively weak at the moment ... [M]any hostile acts which supposedly stem from unconscious motivation really arise because of the operation of aggressive cues.[44]

This finding would be the origin of the weapons effect, which has been challenged in the literature ever since. Often, this research gets simplified into saying that the gun fuels aggressive behavior. But this is derivative; instead, it should be clarified that the gun does not *create* the aggressive behavior, but it is an "aggressive cue" that primes a person's thoughts and feelings, which could skew toward violence, depending on the

[40] Mencken, F.C. & Froese, P (2019). Gun culture in action. *Social Problems, 66*(1), 3—27.

[41] Nagtegaal, Rassin, E., & Muris, P. E. H. (2009). Do members of shooting associations display higher levels of aggression? *Psychology, Crime & Law*, *15*(4), 313—325. https://doi. org/10.1080/10683160802241682.

[42] Bartholow, B.D., Anderson, C.A., Carnagey, N.L., Benjamin, A.J. (2005). Interactive effects of life experience and situational cues on aggression: The weapons priming effect in hunters and nonhunters. *Journal of Experimental Social Psychology, 41* (1), 48—60.

[43] Berkowitz, L. (1968). Impulse, aggression, and the gun. *Psychology Today, 2*, 19—22.

[44] Berkowitz, L., & Lepage, A. (1967). Weapons as aggression-eliciting stimuli. *Journal of Personality and Social Psychology, 7*(2, Pt.1), 202—207. https://doi.org/10.1037/h0025008.

person's individual state and the situational context. Even Berkowitz distinguished the effects of guns on people within different constructs, such as hunters and non-hunters.[45] In other words, we cannot draw a straight line from guns to aggressive behavior; there are simply too many confounding variables. We can, however, argue that the gun (whether by holding or by proximity) does influence the internal state of a person, and this can produce a violent behavior. Putting a gun into the hands of an angry or fearful person is like pouring kerosene onto a fire.

The weapons effect produced by the gun has various shades of outcomes. For example, a gun could prime aggressive thoughts in an individual, but it also could prime aggressive behavior, depending on the context. Of course, there is a big difference between having a thought (thinking) and acting on that thought (behavior). In one study, participants registered their aggressive thoughts in response to someone holding a gun, whether that person was a "good guy" (such as a police officer) or a "bad guy" (such as a criminal).[46] There was no difference between the two. Other research has identified specific groups that are more vulnerable to these aggressions. For instance, gun-carrying among pre-teen and teenage males is more probabilistic because of a complex network of factors such as peer influence, heightened sense of self, and the desire for affiliation with other gun-carriers, and gun play has been shown to increase levels of testosterone and lead to more aggressive behavior in males.[47][48] And, studies show that gun use at a younger age correlates to aggressiveness and more violent reaction to being frustrated.[49] Evidence for the weapons effect is most pronounced in males and at younger ages.

Researchers also have studied the weapons effect on "aggressive appraisal," which is a hostile-based interpretation of situations.[50] Summarily, the presence of a gun can lead people to assess others as being hostile and can cause them to respond aggressively.[51] Marine Lieutenant Colonel Jeff Cooper, who is considered the father of the modern

[45] Berkowitz, L. (1993). *Aggression: Its causes, consequences, and control.* New York: McGraw-Hill.

[46] Bushman, B. J. (2018). Guns automatically prime aggressive thoughts, regardless of whether a "good guy" or "bad guy" holds the gun. *Social Psychological and Personality Science*, *9*(6), 727—733. https://doi.org/10.1177/1948550617722202.

[47] Dijkstra, J.K., Lindenberg, S., Veenstra, R., Steglich, C., Isaacs, J., Card, N.A., & Hodges, E.V.E. (2010). Influence and selection processes in weapon carrying during adolescence: the roles of status, aggression, and vulnerability. *Criminology (Beverly Hills), 48*(1), 187—220. https://doi. org/10.1111/j.1745-9125.2010.00183.x.

[48] Klinesmith J., Kasser T., McAndrew F.T. (2006). Guns, testosterone, and aggression: an experimental test of a mediational hypothesis. *Psychological Science, 17*(7), 568—571. doi: 10.1111/j.1467-9280.2006.01745.x. PMID: 16866740.

[49] Ding, C.S., Nelson., E. A., & Lassonde, C. T. (2002). Correlates of gun involvement and aggressiveness among adolescents. *Youth & Society*, *34*(2), 195—213. https://doi. org/10.1177/004411802237863.

[50] Benjamin, A.J., & Bushman, B.J. (2016). The weapons priming effect. *Current Opinion in Psychology*, *12*, 45 48. https://doi.org/10.1016/j.copsyc.2016.05.003.

[51] Benjamin, K.S. & Bushman, B.J. (2018). Effects of weapons on aggressive thoughts, angry feelings, hostile appraisals, and aggressive behavior: A meta-analytic review of the weapons ef-

technique of handgun shooting, devised a Color Code System of Awareness in his book *Principles of Personal Defense* (2006). The purpose of this color-coded system is to distinguish between states of awareness of threat assessment. For example, the lowest level is Condition White, in which people are the least aware of their surroundings and the least prepared to take on an attacker. Conditions Yellow and Orange precede the highest threat level, Condition Red, which is being in the state of readiness to kill. And so, the system is ordered in the conditions of White, Yellow, Orange, and Red.

Col. Cooper explains that his Color Code System of Awareness "does not have to do with danger, but rather with readiness to take decisive, remedial action. These are not the same." In other words, the system is meant to identify a gun-citizen's "readiness to surmount a difficult psychological barrier."[52] He claims that victims of violent acts almost always die in Condition White and that we should exist in a constant state of Condition Yellow, where we are continuously assessing the danger levels of every person. This results in assuming a default position of hostile appraisal in nearly all moments. In an essay titled "The Good Man Shooting Well: Authoritarian Submission and Aggression in the 'GunCitizen,'" Daniel Cryer points out that

> [i]n Condition Yellow, [gun] carriers have moved from caring for the gunobject to submitting to its deadly materiality, not in the sense that all thoughts are about the gun, but that all thoughts filter through the gun, from the momentous to the mundane.[53]

In addition to living in a constant state of threat assessment, the Color Code is designed to mentally prepare the gun-citizen for violence. Cooper writes, "The color code is not a means of assessing danger or formulating a tactical solution. It is rather a psychological means of overcoming your innate reluctance to shoot a man down. [It] enables you to change your state of mind."[54] The Color Code is heralded across online gun forums, message boards, and blogs. The website GunGoddess.com, which sells gun-themed products for women, advises its customers to "liv[e] in Cooper Condition Yellow. Remaining constantly within the yellow level and moving easily into and out of the orange level is simply a state of mental awareness that must be practiced until it becomes second nature."[55] Owning and carrying a gun is not without consequence; it concocts a false reality where danger is imminent and gun use is considered inevitable.

Of course, it is true that violence will always exist, regardless of the types of tools available, so it may be pollyannish to not be prepared, or at least aware of potential

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fect literature. *Personality and Social Psychology Review*, *22*(4), 347—377. https://doi. org/10.1177/1088868317725419.

[52] Cooper, J. (2006). *Principles of personal defense*. Boulder, Colo: Paladin Press.

[53] Cryer, D.A. (2020) The good man shooting well: Authoritarian submission and aggression in the gun-citizen. *Rhetoric Society Quarterly, 50(4),* 254—267.

[54] http://www.dvc.org.uk/jeff/jeff6.pdf.

[55] https://www.gungoddess.com/blogs/situational-awareness/combat-mindset-the- cooper-color-code.

threats, to some extent. However, Col. Cooper advocates for us to view our surroundings as a battlefield, and he would like for us all to always be battle-ready. But this outlook is distorted; we are citizens—not soldiers. We occupy neighborhoods, schools, churches, and malls—not war zones. Cooper says that "[v]iolent crime is only feasible if its victims are cowards."[56] This underscores the thesis of his highly circulated book, which is that the only solution to violence is to respond with greater violence. Indeed, Cooper's third principle for gun-citizens is "Aggressiveness," and his plea to readers is to "Be indignant. Be angry. Be aggressive." Guns certainly accomplish this but do so unreasonably. There is no doubt that gun ownership is associated with an increased risk of gun violence.[57] So, to curb an epidemic of gun violence, perhaps we should refocus our attention toward the gun, which intensifies aggressive thoughts, appraisals, and behaviors instead of appropriating Cooper's Color Code into a militarism of daily life. Preparedness has become synonymous with poised violence.

Stand Your Ground Laws

More than half of states have enacted aggressive self-defense laws, known broadly as Stand Your Ground (SYG) laws. There are no federal SYG laws, and the specific policies vary by state. Stand Your Ground laws extend from the Castle Doctrine, which is a long-standing common law that dates back to early Britain.[58] Castle laws protect the right to selfdefense within the home when there is a need for the use of lethal force. Common self-defense laws require that a defendant must face "imminent risk of death or serious injury"[59] and must "reasonably" believe that deadly force is necessary *only if* the option to retreat is not available. By contrast, Stand Your Grand laws are an expansion of the Castle Doctrine, which removes this requirement to retreat if possible and extends this right to use lethal force when a defendant is in fear for his life to any public place. This is the dangerousness of SYG. Typical self-defense cases review whether an individual attempted to de-escalate a conflict before resorting to weapon use; failing to do so would constitute an illegal action. Under traditional self-defense court procedures, individuals must demonstrate this avoidance of violent conflict if this is a viable and safe option. Conversely, Stand Your Ground favors the gun-citizen and

[56] Cooper, J. (2006). *Principles of personal defense*. Boulder, Colo: Paladin Press.

[57] Pierre, J.M. (2019). The psychology of guns: risk, fear, and motivated reasoning. *Palgrave Communications, 5*, 159. https://doi.org/10.1057/s41599-019-0373-z.

[58] Ferraro, & Ghatak, S. (2019). Expanding the castle: Explaining Stand Your Ground legislation in American states, 2005—2012. *Sociological Perspectives, 62*(6), 907—928. https://doi. org/10.1177/0731121419845877.

[59] Burris, S. (2021). Civilian use of deadly force in self-defense: Public health, Stand Your Ground. *American Journal of Public Health (1971)*, *111* (4), 559—561. https://doi.org/10.2105/AJPH.2021.306173.

endorses a "shoot first, ask questions later"[60] mentality and offers legal protection for those who invoke it in their legal defense.

Together, the National Rifle Association (NRA) and American Legislative Exchange Council (ALEC) lobbied for the original SYG legislation in Florida in 2005. Proponents of the laws argued that SYG would serve as a deterrent for crime (the same argument, by the way, used by proponents of conceal carry laws). Since then, data on states with SYG laws indicate that there is no evidence to suggest that crime is deterred by this legal protection.[6162] Instead, states with SYG laws saw a significant increase in firearm injuries, hospitalizations, and deaths[6364] and had a significantly higher rate of homicide compared to non-SYG states.[65]

Moreover, there is growing evidence that SYG laws are especially destructive in communities of color. In the article "Civilian Use of Deadly Force in Self-defense: Public Health, Stand Your Ground" Scott Burris, a Professor of Law at Temple University, argues that SYG is not just a legal issue but a public health concern that affects vulnerable populations disproportionately. In states with SYG laws, such as Florida, "people who kill Blacks and claim SYG are more likely to succeed than people who kill Whites."[66] A 2013 U.S. Department of Justice homicide report stated that "race plays a significant factor in justifiable homicide rulings, and that this effect increases in States with stand your ground laws."[67] The report found that the likelihood that a White-on-Black homicide is found justifiable is 281% greater than a White-on-White homicide and that "the presence of a stand your ground law was associated with a statistically significant increase in the likelihood that these homicides would be ruled justified."[68] Stand Your Ground laws worsen the racial disparities in the legal process and promote vigilantism because they redistribute the law into the hands of those who are untrained and potentially racially biased.

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[60] https://everytownresearch.org/report/stand-your-ground-laws-are-a-license-to-kill/.

[61] https://www.nber.org/papers/w18134.

[62] Cheng, C., Hoekstra, M. (2013). Does strengthening self-defense law deter crime or escalate violence? Evidence from expansions to Castle Doctrine. *Journal of Human Resources 48,* 821—54.

[63] McClellan, C. & Erdal T. (2017). Stand Your Ground laws, homicides, and injuries. *Journal of Human Resources 52*(3), 621—653.

[64] Cheng, C. & Hoekstra, M. (2013). Does strengthening self-defense law deter crime or escalate violence? Evidence from expansions to Castle Doctrine. *Journal of Human Resources, 48*(3), 821-854.

[65] Levy, M., Alvarez, W., Vagelakos, L., Yore, M., & Khallouq, B. B. (2020). Stand Your Ground: Policy and trends in firearm-related justifiable homicide and homicide in the US. *Journal ofthe American College ofSurgeons*, *230*(1), 161-167.e4. https://doi.org/10.1016/j.jamcollsurg.2019.11.003.

[66] Burris, S. (2021). Civilian use of deadly force in self-defense: Public health, Stand Your Ground. *American Journal of Public Health (1971), 111* (4), 559—561. https://doi.org/10.2105/AJPH.2021.306173.

[67] https://www.ojp.gov/ncjrs/virtual-library/abstracts/race-justifiable-homicide-and-stand-your-ground-laws-analysis-fbi.

[68] https://www.ojp.gov/ncjrs/virtual-library/abstracts/race-justifiable-homicide-and-stand-your-ground-laws-analysis-fbi.

When gun culture clashes with racial fears, which are legally endorsed through Stand Your Ground and open and concealed carry laws, the result is a fragmented, trigger-happy society in which the old guard fetishizes guns as a moral substitute for accepting a changing society. This dystopia is perfectly illustrated in the 2008 film *Gran Torino*, directed and produced by Clint Eastwood. Near the beginning of the film, the main character, Walt Kowalski, a Korean war veteran played by Eastwood, confronts a gang of six dark-skinned teenagers who are trespassing on his front yard. Kowalski steps outside, points a high-powered rifle at the teens, grits his teeth, and warns in his gravelly voice, "Get off my lawn." When one of the teens tells him that he's crazy and to go back inside the house, the veteran replies, "Yeah, I blow a hole in your face and then I go in the house, and I sleep like a baby. We used to stack fucks like you five feet high in Korea. Use you for sandbags." In the background, the American flag on his front porch is well-lit, and the musical score resembles the drumbeat of a marching platoon. And for the racist xenophobe, pride swells. By the conclusion of the film, Kowalski has befriended one of the young teens but is tragically gunned down in a standoff with the other gang members. The film is a transparent fictionalization of the delusion that many gun apologists hold—that we must have and use guns to maintain order, for if we do not, we will be overrun by others. And it is this notion of "othering" groups of people who are unlike us that is so dangerous, especially as the racial and ethnic makeup of the United States changes. The old guard feels left behind, yearning for the good old days when America was "great," and confronts social progress with a gun in hand, in hopes of making America great again.

Perhaps the most publicized invocation of SYG laws was the trial of George Zimmerman for the killing of Trayvon Martin. On February 26, 2012, Zimmerman was patrolling his gated residential neighborhood in Sanford, FL as a voluntary patrolman. Martin, a 17-year-old unarmed Black male, was walking to his father's girlfriend's home—where he was staying temporarily—when Zimmerman called 911 and confronted Martin for looking suspicious. A short chase on foot ensued, resulting in a physical confrontation where the two grappled with each other on the ground. Zimmerman shot and killed Martin with a 9mm handgun. Zimmerman's defense team cited Florida's SYG law, despite his provocation of the incident, and he was acquitted of all charges. The U.S. Justice Department ultimately decided not to prosecute Zimmerman with a federal crime. The killing of Trayvon Martin is widely viewed as the impetus for the Black Lives Matter movement and called SYG laws into question.

Knowing there is legal protection through SYG is a strong motivator for the gun-citizen, who only must convince a jury of his peers that a lethal shooting was necessary because he feared for his life—something that is easier to prove when the other person is dead. The popular HBO show *Last Week Tonight with John Oliver* dedicated an hour-long episode to SYG laws and their residual effects. Oliver summarized the true nature of SYG laws by saying, "vigilantes with guns feel they have the right to decide what is safety, who is a threat, and what the punishment should be. They have turbo-charged everything." In a society where guns are ubiquitous and gun-citizens are told that they

should constantly assess threat, it's inevitable that the gun becomes the first step toward conflict resolution. Further, the legal system favors reckless and spontaneous impropriety with guns, as long as it is rooted in a vaguely defined and highly subjective reptilian emotion of fear.

Gun Residue

At the heart of the gun debate is the perceived reality that guns are innocuously neutral things and that their use is a side effect of the gun holder's intentions. But as I have laboriously detailed in this book, technological artifacts are not neutral; they embody their designers and the designers that have come before them (poiesis). Artifacts intentionally capitalize on human psychology to encourage their use. Why else would they exist if not to be used or acknowledged? Still, it seems apparent to me that the fundamental disagreement on how we legislate guns and gun-carrying centers on the competing ideas of neutrality.

According to the philosopher David R. Morrow, the Value-Neutrality Thesis is the argument that all technologies are "intentionless" and that their misuse is derived solely from a "moral failure on the user's part."[69] This thesis puts a finer point on the instrumentalist perspective, which asserts that technological artifacts are inanimate things and do not persuade, influence, or nudge their users in any way, because it specifically cites immorality and ignorance as the drivers of use. In other words, the Value-Neutrality Thesis asserts that the gun is neutral, and misuse of the gun is the user's "inability to resist wrongdoing" and a "moral weakness."[70] The thesis completely contradicts Gibson's Theory of Affordances and Latour's Actor-Network Theory, not to mention the consensus among Science and Technology Studies (STS) scholars and technology philosophers like Winner, Postman, Verbeek, Ihde, and others. In fact, I conversed with Don Norman about his thoughts on value-neutrality, specifically regarding guns. His response was plainly simple: "Guns were designed for killing … *so* I agree with you. Guns are not neutral."[71] This value-neutrality discussion often gets diluted into arguing whether guns are *good* or *bad*, and this conversation leads nowhere.

We must add context to the notion of whether guns are *bad*. Of course, we can all think of examples where guns have a positive use. In *The Moral Status of Technical Artefacts*, Martin Franssen cautions us to not valuejudge artifacts based on their side effects of use; because of their multistability, nearly all artifacts can be used in a detrimental way. Therefore, if we simply characterize artifacts as either good or bad based upon their side effects of use, then we might find a way to claim that every

[69] Morrow, D. R. (2014). When technologies make good people do bad things: Another argument against the value-neutrality of technologies. *Science and Engineering Ethics*, *20*(2), 329—343.

[70] Morrow, D. R. (2014). When technologies make good people do bad things: Another argument against the value-neutrality of technologies. *Science and Engineering Ethics*, *20*(2), 329—343.

[71] Personal correspondence.

artifact is bad. Franssen proposes that we think of artifacts in terms of their *goodness* and *badness*, though he clarifies that these are entirely subjective terms; an instrument used for torture might perform well and to the satisfaction of the torturer (which is *goodness*) but is designed explicitly to inflict pain on another person (which is *badness*). Instead of focusing on how the artifact is *used* to determine its value, Franssen stresses that it is the *design* of artifacts—and not their use—that is important. Similarly, this book is asking you to consider the ways in which guns embody what Franssen describes as a "badness by design" rather than engage in the simplistic view that guns are either good or bad (or neutral for that matter). Franssen cautions us not to conclude that any artifact can be considered good or bad; rather, we ought to examine the morality of the artifact itself. He says, "If an artefact is morally good, one has a reason to use it when the corresponding need occurs, because the way its presence makes our lives go better is through the possibility we have of using it." My question to gun apologists would be whether they feel the gun "makes our lives go better," but I suspect many would answer yes. Perhaps a better litmus test would be to ask whether guns should be placed into the hands of our children. But shockingly, some support this idea, too.

On his show *Who Is America?* prankster Sascha Baron Cohen poses as Colonel Erran Morad, an anti-terror expert with the nickname "The Terrorist Terminator," who tries to garner support for his "KinderGuardians" program, which would preemptively arm preschoolers with guns to ward off school shooters. Cohen sits down in character with Philip Van Cleave, a popular gun rights activist, to produce an infomercial aimed at three-year-olds that markets "Gunimals"—various types of handguns and assault rifles disguised as stuffed animals. Van Cleave enthusiastically complies. Cohen then meets with Larry Pratt, Executive Director of Gun Owners of America, who is also an active gun lobbyist. When Cohen tells Pratt, "The only thing that can stop a bad man with a gun is a good boy with a gun," Pratt adds, "even a good toddler." The segment exposes several more politicians who support Cohen's fictional KinderGuardians program, including South Carolina Congressman Joe Wilson, who says, "Our founding fathers did not put an age limit on the Second Amendment."[72] To be fair, Cohen's satirical KinderGuardians program likely would not gain wide support with the public, but its message is not a complete exaggeration of how we already indoctrinate our children into gun culture. The NRA even founded the Eddie Eagle Gunsafe[®] Program in 1988, which uses a cartoon eagle mascot and his Wing Team to teach kids what to do when they encounter a gun—a strong likelihood given that roughly one-third of households with children also have a gun that is not stored securely.[73]

[72] https://www.youtube.com/watch?time_continue=624&v=QkXeMoBPSDk&feature=emb_logo.

[73] Johns Hopkins Bloomberg School of Public Health (JHBSPH). 2018. 'Survey: More Than Half of U.S. Gun Owners Do Not Safely Store Their Guns." Baltimore, MD: JHBSPH. https://www. jhsph.edu/news/news-releases/2018/survey-more-than-half-of-u-s-gun-owners-do-not-safely- store-their-guns.html.

The absurdity of pandering gun culture to children knows no bounds. On December 3, 2021, the Sheriff's Department in El Paso, TX tweeted a photo of a man dressed as Santa sitting across a desk from a woman, with the caption "Guess who came in to receive his Concealed Handgun Permit today?"[74] The tweet surfaced virally on the same day as a candlelight vigil was being held at Oxford High School in Michigan, where a 15-year-old gunman shot and killed four people and injured seven others just three days earlier. The incident marked the 27th mass shooting (4 or more deaths) that year in the United States through November of 2021.[75] Faced with public scrutiny, the El Paso County Sheriff's Office declined to remove the tweet and instead replied to the original tweet: "EPSO intended to highlight our staff in the Concealed Handgun Permit Office, not to be insensitive. Santa correlates to the month of December and we thought he would help to recognize our hard working staff."

There is a growing trend portraying jolly old Saint Nick as a gun apologist. In December 2021, U.S. Representative Thomas Massie (R-KY) posted a picture of his family of seven posing in front of their Christmas tree, each family member holding a different assault rifle. The caption reads, "Merry Christmas! p.s. Santa, please bring ammo."[76] Massie's photo prompted a similar one from U.S. Representative Lauren Boebert (R-CO), whose tweet featured a photo of her and her four adolescent boys proudly brandishing firearms.[77] One year earlier, a mall Santa in the Harlem Irving Plaza in Norridge, IL denied a four-year-old's request for a toy Nerf gun. A cellphone video captured the mall Santa telling the child that he did not deliver toy guns to children, adding, "If your dad wants to get it for you that's fine, but I can't bring it to you. What else would you like? Lots of other toys. Legos. There's bicycles. There's cars and trucks. What do you think?"[78] The video went viral on Facebook and branded the man as "Woke Santa," leading to a series of television appearances for the boy and his parents, after which they received a number of charitable Nerf gun donations compliments of the NRA and Fox News. The mall Santa—a symbol of peace and noel—was making a moral judgment to not provide the young child with a toy that simulates gunplay, much like he would do so if the child requested a bag of heroin or a subscription to *Playboy*. For added context, the Harlem Irving Plaza is in Cook County, IL, a suburb of Chicago with a notoriously high rate of gun violence; in the same year that the "Woke Santa" refused the young child his toy gun, Cook County tallied 875 gun-related homicides, the highest in over 25 years.[79] Will giving a child

[74] https://twitter.com/EPCSheriff/status/1466845021995421698.

[75] https://www.gunviolencearchive.org/reports/mass-murders.

[76] https://twitter.com/RepThomasMassie/status/1467197523127422979?ref_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E1467197523127422979%7Ctwgr%5E%7Ctwcon%5Es1_&ref_url=https%3A%2F%2Fwww.indiatoday.in%2Fworld%2Fstory%2Fsanta-pleasebring-ammo-us-congressman-family-christmas-picture-guns-1884242-2021-12-05.

[77] https://twitter.com/laurenboebert/status/1468411381653323777?lang=en.

[78] https://www.foxnews.com/us/politically-correct-santa-nerf-gun.

[79] https://www.cookcountyil.gov/news/cook-county-medical-examiners-office-registers-record-number-gun-related-homicides-2020.

a Nerf gun lead to more serious gunplay? Not necessarily. Is spreading your family's holiday cheer by posing with AR-15s just days after a deadly school shooting a classy move? Not really. The greater concern is the blase normalization of guns in everyday life, especially when we know that guns sometimes do lead to violence and almost always transform us.

Everytown Research and Policy reports that there were 149 incidents of gunfire on school grounds in 2021. In total, there were 32 deaths and 94 injuries. Primarily, these incidents took place on K-12 campuses and were homicidal/assault-based in nature. Unintentional shootings were the next common cause of a gunfire incident on school grounds.[80] Between the years 2013 and 2019, there were 549 total incidents of gunfire on school grounds, yet only 1% of those instances fit the description of a mass shooting (where *mass shooting* is defined as four or more people killed). This equates to a statistically minimal likelihood of witnessing or being killed on school grounds by an active shooter, as in the high-profile examples of Columbine High School (1999), Sandy Hook Elementary (2012), and Marjory Stoneman Douglas High School (2018). While school shootings of any magnitude are tragic, they are extremely rare. The Bureau of Justice Statistics puts these odds of a child being killed at school at less than one in a million.[81] The real epidemic here is the access to guns outside of school. Most school shootings (75%) are facilitated by kids having access to unsecured and/or unsupervised guns at home.[82] And, the CDC reports that in 2019, the most recent year of complete data on gunrelated fatalities, there were 2541 deaths of children and teens (aged 1-18).[83] This translates to about seven deaths per day, or one death about every 3.5 hours. Children and teenagers find themselves in a world saturated with guns, yet they are more likely to die from a firearm in their own home than in their school.

Roughly 92% of all K-12 schools in the United States implement active shooter drills.[84] These drills differ from lockdown drills and vary widely in their format, with many schools taking the extreme approach of initiating unannounced drills that simulate an active shooter, sometimes dressed in tactical gear, who may fire rubber pellets or blanks. ALICE drills, which stands for *alert, lockdown, inform, counter,* and *evacuate*, are the product of the controversial ALICE Training Institute, which was founded in 2000 by a law enforcement officer, Gary Crane, and his wife, Lisa, in response to the Columbine school shootings. According to Crane, "ALICE Training is the first program in the country to use option-based, proactive, survival strategies to prepare for

[80] https://everytownresearch.org/maps/gunfire-on-school-grounds/.

[81] https://bjs.ojp.gov/content/pub/pdf/iscs15.pdf.

[82] https://brady-static.s3.amazonaws.com/resources/EFF-InformationalBrochure.pdf.

[83] https://wisqars.cdc.gov/data/explore-data/explore/.

[84] Musu, L., et al. (2019). Indicators of school crime and safety: 2018 (NCES 2019-047/NCJ 252571) National center for education statistics, U.S. Department of Education, and Bureau of Justice statistics, Office of Justice Programs, U.S. Department of Justice, Washington, DC. Retrieved from https://nces.ed.gov/pubs2019/2019047.pdf.

active shooter events."[85] The ALICE Training method even hocks a children's book for its youngest participants. The book, titled *I'm Not Scared, I'm Prepared!*, relays the story of a cartoon ant whose classroom teacher teaches the class a new drill called "The Sheep, The Shepherd, and The Wolf" and is reminiscent of the rhetoric used by gun apologists to describe people as being either sheep, sheepdogs, or wolves (refer to Chap. 2). The story tells its young audience: "The 'C' stands for 'Counter'. If the wolf sees us, we must do things to ruin his day." Those critical of the training point out that countering the assailant often means sacrificing your life for your peers. This heroism was true of Riley Howell (UNCCharlotte), Kendrick Castillo (STEM School), and Tate Myre (Oakland High School), who each rushed an active school shooter and lost their lives in doing so. While these are noble deaths, we should strive to ensure that schools do not become battlefields that sacrifice students as martyrs. Unlike the traditional *Run, Hide, Fight* model, which is federally endorsed by the Department of Homeland Security and discourages engaging with the aggressor, ALICE Training encourages students to fight back against an active shooter. In an interview with *The New York Times*, ALICE founder Gary Crane said: "It's never been a question of whether kids can do it. It's just I think with predominantly more training on responses to violent events going on all over, yes, we would expect to see hopefully more of this."[86]

Many have questioned the need for such aggressive drills, especially since there is no clear evidence for their effectiveness.[87] Instead, there is support that active shooter drills in schools have a negative impact on students' emotional well-being[88] and even trigger past traumas.[8990] Studies have found an association between active shooter drills and feelings of sadness, helplessness, fear, inflated perceptions of risk, and a decrease in perceptions of school safety.[919293] One study measured an increase in students' physiological stress markers such as blood flow and saliva production as a direct result

[85] https://www.alicetraining.com/about-us/.

[86] https://www.nytimes.com/2019/05/09/us/school-shooting-student-safety.html.

[87] Jonson, C.J. (2017). Preventing school shootings: The effectiveness of safety measures. *Victims & Offenders, 6*(12), 956-73.

[88] *Moore-Petinak, N., Waselewski, M., Patterson, B. A., & Chang, T. (2020). Active shooter drills in the United States: A national study of youth experiences and perceptions. Journal of Adolescent Health, 67(4), 509-513. https://doi.org/10.1016/j.jadohealth.2020.06.015.*

[89] *https://www.reuters.com/article/us-usa-education-active-shooter/report-questions-effectiveness-of-active-shooter-drills-in-schools-idUSKBN2052UH.*

[90] *https://www.npr.org/2019/11/10/778015261/experts-worry-active-shooter-drills-in-schools-could-be-traumatic-for-students.*

[91] *Moore-Petinak, N., Waselewski, M., Patterson, B. A., & Chang, T. (2020). Active shooter drills in the United States: A national study of youth experiences and perceptions. Journal of Adolescent Health, 67(4), 509-513. https://doi.org/10.1016/j.jadohealth.2020.06.015.*

[92] *Huskey, M. G., & Connell, N. M. (2021). Preparation or provocation? Student perceptions of active shooter drills. Criminal Justice Policy Review, 32(1), 3-26. https://doi. org/10.1177/0887403419900316.*

[93] *Schildkraut, J., et al. (2019). Locks, lights, out of sight: assessing students' perceptions of emergency preparedness across multiple lockdown drills. Journal of School Violence, 19(1), 93-106.*

of participating in active shooter drills.[94] In fact, researchers have found preliminary evidence that showing adolescents weapons such as guns elicits higher aggressiveness in some.[95] Absent from the body of research is the long term effects of active shooter drills. The cost-benefit analysis of simulating active shooters in schools is clear; it is untenable to implement such a drastic response to a statistically unlikely event, and in doing so, more harm is generated than prevented.

According to Shannon Watts, founder of Moms Demand Action for Gun Sense in America, "The best way to make school safer is to focus on proven policies and programs instead of extreme drills that rob children of their belief that schools are in fact extremely safe places."[96] Active shooter drills in schools promote fear—not preparedness—in our nation's youth, and this is evident in public perception. A 2018 Pew Research poll found that the majority of teen students and their parents feared an active shooter event in their own school.[97] The response to such an unlikely but tragic event has been disproportionate and hysterical.

Alice in Wonderland Syndrome (AIWS) is a rare neurological condition linked to severe migraines. Sufferers of AIWS experience random episodes of hallucination, where their perception of reality becomes heavily distorted.[98] AIWS patients can become disoriented and perceive bodily changes such as the extreme elongation of appendages like their neck, arms or legs, or they may perceive a distortion of the size of surrounding objects, creating a feeling of being a giant inside of a dollhouse. The episodes are temporary, and there are no known clinical side effects of AIWS, nor is there a treatment. The likelihood of an AIWS diagnosis is more common than being killed in a school shooting, yet we do not treat the general population for such rare diseases. In fact, it would be preposterous to suggest that we train young people how to respond to these hallucinogenic episodes, should they occur. You probably see where I am going with this. While there would be no real discernable drawback to training our youth on how to withstand a hallucination where they are giant-sized people who converse with rabbits (other than a loss of time for everyone involved), there are clear ramifications for training adolescents on how to survive a school shooter. So why do we do this?

Aside from the obvious legal culpability that could arise from the deaths of students, there is a mass hysteria that surrounds school shootings, which becomes reinvigorated every time this type of tragedy occurs. *Moral panic* is defined as when

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[94] McAllister, M. J., Martaindale, M. H., & Renteria, L. I. (2020). Active shooter training drill increases blood and salivary markers of stress. *International Journal of Environmental Research and Public Health*, *17*(14), 5042. doi:10.3390/ijerph17145042.

[95] Zhang, Q., Tian, J., Cao, J., Zhang, D.-J., & Rodkin, P. (2016). Exposure to weapon pictures and subsequent aggression during adolescence. *Personality and Individual Differences*, *90*, 113-118.

[96] https://www.nytimes.com/2019/09/04/us/politics/active-shooter-drills-schools.html.

[97] https://www.pewresearch.org/fact-tank/2018/04/18/a-majority-of-u-s-teens-fear-a-shooting-could-happen-at-their-school-and-most-parents-share-their-concern/.

[98] Blom J. D. (2016). Alice in Wonderland syndrome: A systematic review. *Neurology. Clinical practice, 6*(3), 259-270. https://doi.org/10.1212/CPJ.0000000000000251.

a condition, episode, person or group of persons emerges to become defined as a threat to societal values and interests; its nature is presented in a stylized and stereotypical fashion by the mass media ... Sometimes the object of the panic is quite novel and at other times it is something which has been in existence long enough, but suddenly appears in the limelight.[99]

The constant stream of media coverage after every school shooting stokes public fear and moral panic. Columbine was the first school shooting to receive unprecedented media coverage that was accompanied by surveillance footage of the "trench coat mafia" roaming the school grounds. Since 1999, the news media has been scrutinized for its framing of mass shootings like the one in Columbine. In fact, there is a growing movement called "Don't Name Them," which discourages journalists and news outlets from speaking or writing the name of the shooter. The organization claims that "by encouraging the media to focus less on the suspects and more on the victims, it is hoped that future events can be prevented."[100] This phenomenon is known more widely as the contagion effect, where media coverage of an attack spawns similar, copycat attacks by others. Research is thin on the contagion effect as it relates to mass shootings, but some evidence suggests that news media and social media coverage of a school shooting correlates to a clustering of similar events.[101][102] Or, as one researcher explains, "The bigger the event and resulting curiosity and voyeurism, the higher the likelihood of the contagion effect."[103]

Despite the statistical insignificance of the occurrence of a school shooting, the adverse emotional effects of school shooting drills, and the dangerous media attention that we give to school shootings that only fuel moral panic, we continue to entertain the idea that guns should be present in K-12 schools. This mentality, as described by one school principal, is that "99% of the time, it's nothing, but you only have to be wrong once, you know, so it's better to overreact than under-react."[104] In addition to school and district-wide trainings, schools have boasted efforts to increase the presence of armed School Resource Officers (SROs) on campus, to promote the use of bulletproof backpacks and white boards, and to arm classroom teachers. Each of these measures pre-criminalizes and pre-victimizes innocent students. And this is the residue of the gun. It not only kills, but it leaves its mark on our mental health, feelings of security,

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[99] Cohen, S. (2002). *Folk devils and moral panics: The creation of the mods and rockers.* New York: Routledge.

[100] https://www.dontnamethem.org/.

[101] Garcia-Bernardo, J., Qi, H., Shultz, J. M., Cohen, A. M., Johnson, N. F., & Dodds, P. S. (2015). Social media affects the timing, location, and severity of school shootings. arXiv preprint, arXiv:1506.06305.

[102] Towers, S., Gomez-Leviano, A., Khan, M., Mubavi, A., & Castillo-Chavez, C. (2015). Contagion in mass killings and school shootings. *PLoS ONE 10*(7): e0117259. DOI:10.1371/ journal.pone.0117259.

[103] Pescara-Kovach, L., & Raleigh, M.-J. (2017). The contagion effect as it relates to public mass shootings and suicides. *Journal of Campus Behavioral Intervention (J-BIT)*, *5*, 35—45.

[104] Madfis, E. (2016). It's better to overreact: School officials' fear and perceived risk of rampage attacks and the criminalization of American public schools. *Crit Crim 24,* 39—55.

and perception of others. The gun leaves a residual film of potential violence on every surface it touches.

5. Liberty and Guns

The title of the 1998 bestselling book *More Guns, Less Crime* succinctly articulates the ethos of the gun apologist, whose head-scratching circular reasoning argues that guns are the solution to the problem of gun violence. The author, John R. Lott, Jr., provides anecdotal data and statistical analysis of city, county, state, and national data related to firearm fatalities, crime, and deterrence, and ultimately arrives at the conclusion that allowing law-abiding citizens to carry concealed handguns in everyday life will save lives. More than two decades after the book was published, Lott persists as a prominent figure in gun rights advocacy, regularly appearing on conservative television networks like FOX News and One America News Network (OAN) and writing online op-eds and blog posts. During the Trump administration, Lott served as the Senior Advisor for Research and Statistics in the Office of Justice Programs. Currently, Lott serves as the President of the Crime Prevention Research Center (CPRC), which he founded. The CPRC employs a staff of economists, professors, and former law enforcement officers who openly espouse extremely biased views against the Left. The considerably unbalanced for-profit CPRC aims to conduct "academic quality research on the relationship between laws regulating the ownership or use of guns, crime, and public safety." Not surprisingly, the CPRC features self-published research and ignores the broader literature from the scholarly community. Lott is a prolific writer and lecturer, though he is most often associated with his gun rights advocacy.

Lott's book came at an opportune time for gun apologists. In the early 1990s, there was an increase in the number of peer-reviewed studies published on the epidemic of gun violence; collectively, the research pointed to guns as the problem. In 1993, Kellerman et al. published their findings that gun ownership was correlated with an increased risk of a gun-related fatality. The Center for Disease Control (CDC) had restructured its violence prevention division to focus on reducing deaths and injuries, which entailed gun violence.[1] In 1994, Congress passed the Violence Crime Control and Law Enforcement Act, often referred to as the 1994 Crime Bill because of its sweeping changes proposed to law enforcement, federal sentencing guidelines, and the definition of new crime laws. But the most often discussed section is the Federal Assault Weapons Ban (AWB), which prohibited civilian ownership and use of certain types of semi-automatic firearms.[2] In response, the NRA lobbied members of Congress to add a provision to the 1996 spending bill, which prohibited federally funded agencies like

[1] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5993413/.

[2] Several studies have since shown that the AWB did not have a direct impact on firearm homicides, though there were many loopholes and exceptions to the law, such as the "grandfather clause" and the

the CDC from studying the effects of gun violence. The language in the bill proclaimed that "[n]one of the funds made available in this title may be used, in whole or in part, to advocate or promote gun control."[3] The Dickey Amendment, as it is known for its main signatory Congressman Jay Dickey from Arkansas, was extended in 2011 to include the National Institutes of Health (NIH), and still exists today, though it has been weakened. In a 2015 interview with NPR, Dickey expressed regret that the 1996 amendment prevented federal research from addressing the problem of gun violence.[4] So, when Lott's book arrived in 1998, his message went largely unchallenged because he was presenting the most comprehensive and exhaustive review of firearm data to that point. His background as an economist and his work with reputable academic institutions and publications earned him a great deal of credibility with the public. And his message—guns make us all safer—resonated with gun apologists and reaffirmed their preexisting beliefs.

I'm not going to spend too much time here poking holes into Lott's research and methodology, as numerous scholars have already done this. For years, Lott has been accused repeatedly of manipulating and misrepresenting the data on gun violence. The Brennan Center for Justice calls Lott's research on gun policy "controversial" and claims that "Lott's statistical analysis includes far too many variables and controls—a tell-tale sign of statistical chicanery."[5] The fact-checking website Snopes.com states that Lott's research uses "inappropriate statistical methods" and that his conclusions are "extremely misleading."[6] In a book review of *More Guns, Less Crime*, Stephanie Hunter wrote in the *Harvard Journal on Legislation*:

Even if one accepts all of Lott's data as accurate, it may still be interpreted in a variety of ways. Because Lott is unable to collect data on all the necessary independent variables, he may only be able to prove correlation, rather than causation ... Lott's study was not able to account for all potentially contributing factors, such as the use of home security systems, and that such oversights raise doubts as to whether he truly established a causal relationship between concealed handguns and crime.[7]

Hunter goes on to point out the Lott dismisses all other "costs to society" that guns create, such as accidental and unintentional firearm deaths and suicides, and points out that carrying concealed handguns "has psychological, social, and normative bases that

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numerous exemptions for types of firearms. The Bush administration allowed the AWB to expire, via its sunset provision, in 2004 despite attempts by Democrats and their allies to renew the ban.

[3] Omnibus Consolidated Appropriations Act, Pub. L. No. 104-208 (1996).

[4] https://www.npr.org/2015/10/09/447098666/ex-rep-dickey-regrets-restrictive-law-on-gun-violence-research.

[5] https://www.brennancenter.org/our-work/analysis-opinion/fraud-commission-should- ignore-fuzzy-math.

[6] https://www.snopes.com/fact-check/united-states-lower-death-shootings/.

[7] Hunter, S. (2000). More guns, less crime: Understanding crime and gun-control laws. *Harvard Journal on Legislation, 37*(2), 293—306.

cannot be overlooked."[8] In another book review of *More Guns, Less Crime*, Professor of Economics at the University of Maryland Dennis Coats concludes, "I find much about this book to be troubling."[9]

I spoke with John Lott for this book. Mainly, I avoided questions about the validity of his research, and instead, we discussed the impact of the intersectionality of guns and culture. From the outset, Lott took a value-neutrality posture, saying "Guns make it easier for bad things to happen, but they also make it easier for people to prevent bad things from happening." While we can all agree with this basic view, Lott is more concerned with the "net impact on crime" from guns and says that "I think that more guns in the right hands can help," specifically, women, the elderly, and "poor blacks who live in high crime areas." His more recent research asserts that defensive gun use (DGU) goes underreported and therefore supports his claim that gun-carrying saves lives. Lott includes "brandishing a gun" as a DGU and tells me that "[s]urveys of defensive gun use find that 95% of the time that people use guns defensively they merely have to brandish the gun to stop a crime." The survey that Lott provides for citation is a self-published article on the Real Clear Investigations website.[10] Lott concluded our discussion by saying, "If simply carrying a gun made it likely or even slightly likely that people would use it, we would be seeing a lot of shootings by those legally carrying guns and that is not what we see." Yet, this statement is controversial in and of itself, since there is ample research to show that an increased access to guns leads to detrimental effects like violence, homicide, and suicide. And residually, as I have written in previous chapters, there are other psychological and emotional effects from brandishing a gun that do not include violence and death and are not as easily measured. Most recently, Lott has been discredited further for presenting his unpublished research on the 2020 presidential election, which alleges voter fraud. His research is criticized for using similar methodological tactics seen in his gun policy research, yet gun apologists lean heavily on the Lott's findings to support their right to bear arms without much restraint. But Lott has had an even greater impact on the gun debate; he has shown how data can be used to tell any story you want it to.

In the early afternoon of November 30, 2021, 15-year-old Ethan Crumbley used his 9mm Sig Sauer pistol—purchased for him by his parents only days earlier as an early Christmas present—to shoot and kill three people and injure eight others in his Oakland, Michigan high school. The shooting prompted important questions about the negligence of the parents and their potential criminal liability for manslaughter. But while the country was reeling from the heartbreaking news of yet another school

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[8] Hunter, S. (2000). More guns, less crime: Understanding crime and gun-control laws. *Harvard Journal on Legislation, 37*(2), 293—306.

[9] Coates, D., & Lott, J. R. (2005). [Review of *The Bias against Guns: Why Almost Everything You've Heard about Gun Control Is Wron^. Public Choice, 125*(3/4), 477—480. http://www.jstor.org/stable/30026746.

[10] https://www.realclearinvestigations.com/articles/2021/09/22/there_are_far_more_defensive_gun_uses_than_murders_in_america_heres_why_you_rarely_hear_of_them_794461.html.

shooting that took the lives of innocent youths, the official Twitter account of the NRA (@NRA) tweeted an infographic with the caption: "This is proof that the CRIMINAL IS THE PROBLEM. Not the inanimate object."[11] Unfortunately, the Media Relations department at the NRA did not approve my request to reprint the infographic in this book, citing my "anti-gun stance" as their rationale. So instead, I have recreated the chart in Fig.5.1.

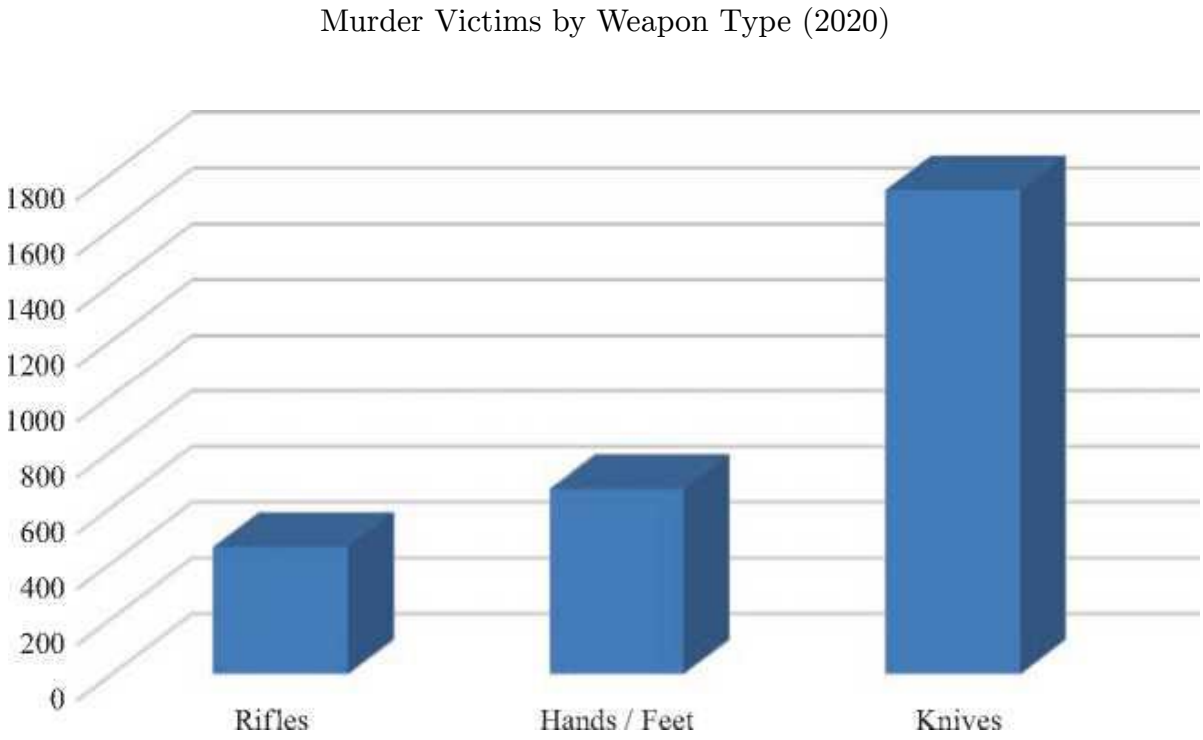

Fig. 5.1 A highly distorted set of data as shared by the official NRA Twitter account (https://twitter.com/NRA/status/1465831902904995845)

The infographic effectively minimizes the threat of "rifles" by comparing it to the number of deaths that result from knives and hands/feet. The NRA tweet cites a highly credible source of data: the FBI Crime Report. And, while no one disputes the data presented, the graphic conveniently omits some key figures, specifically handguns and other types of firearms not categorized as rifles. According to the FBI Crime Data Explorer,[12] the number of murder victims by firearms (type not stated) in 2020 was 4863. The number of murder victims by handgun were 8029. In fact, a more accurate display of this data, which includes handguns and firearms, looks like Fig.5.2.

The conscious decision by the NRA to cherry-pick data to support a warped perspective on gun ownership is disgraceful; to do so only hours after a school shooting is

[11] https://twitter.com/NRA/status/1465831902904995845.
[12] https://crime-data-explorer.app.cloud.gov/pages/explorer/crime/shr.

callous and insensitive but predictable. Perhaps even more insidious is the rhetorical move to omit key data that supports the thesis that guns indeed are a problem.

There is a tendency of gun apologists to downplay guns as everyday objects, rather than to consider their primary use, which is violent by design. In Lott's book, he notes that children die every year from

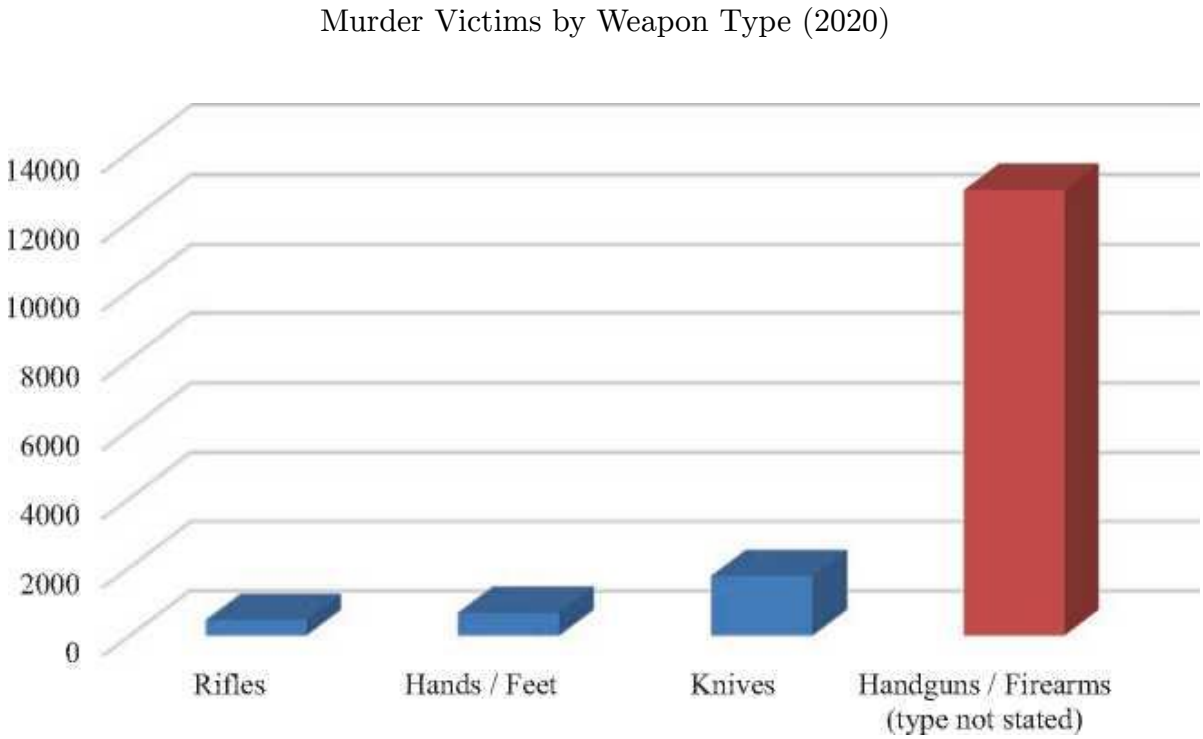

Fig. 5.2 Murder victims by weapon type (2020). Source: FBI Crime Data Explorer

drowning in bathtubs and in five-gallon buckets. He also identifies swimming pools and bicycles as potential causes of death for children and queries why we don't ban either in an effort to save lives. Lott wonders "why so much more attention is given to guns when so many other risks pose a greater threat to our children is not immediately obvious to me."[13] This flat argument ignores the demand characteristic of the gun, which has very limited multistability. Of course, nearly *anything* can be used to kill someone or used incorrectly and result in accidental death, but few things are intentionally designed to do so. When a gun kills, it is successfully executing its script. As a matter of being alive, we must assume a certain degree of risk in everything that we do and encounter, which we then assess based on its dangerousness in relation to its perceived benefits. For comparison, we think nothing of a home that has a bathtub in it, despite the potential for an accidental drowning. We would, however, have serious questions for someone who leaves an open bear trap in the middle of their living room.

[13] Lott, J. R. (1998). *More guns, less crime: Understanding crime and gun-control laws.* Chicago: University of Chicago Press.

The bear trap is *intended* to maim; the bathtub is not. Still, this false equivalency between utilitarian objects and deadly weapons persists.

So far in this book, we have talked about how technologies are revealed through their making, and how morality and values are baked into the design of things. We have explored how we embody our technologies and how those technologies shape and distort our views of reality and create non-existent threat. We saw how technologies are designed in ways to motivate and prescribe their use in specific ways that render them coparticipants in human action. The result is a worsening epidemic of gun violence. There was a significant increase in the number of guns purchased in 2020, which is a direct response to a confluence of events: the COVID-19 pandemic, the highly publicized footage of police brutality involving the deaths of George Floyd, Ahmaud Arbery, and others, and the social and political unrest that resulted, and the stoking of fears related to the waves of political refugees and caravans of immigrants that approached our borders. Many Americans responded by purchasing more guns. To protect themselves from their perceived evils in the world, they opened their homes to a different kind of evil. It is no surprise, then, that 2020 was also a significantly more deadly year than the previous five had been. Nevertheless, gun ownership is a right that shall not be infringed upon.

A Limited Freedom

The Second Amendment, as it is written in the amendments to the U.S. Constitution, reads: "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."[14] The language of this amendment is the subject of considerable debate because of its broad interpretations. In fact, legal scholars employ an array of constitutional interpretation modes, with the two most prominent being Originalism (Original Meaning) and Living Constitutionalism—each of which arrives at very different readings of the guaranteed rights of American citizens.

An originalist interpretation of the Constitution considers the intent of the authors at the time the document was written. That is, "Originalists believe that the constitutional text ought to be given the original public meaning that it would have had at the time that it became law."[15] Originalists use contemporary references such as public debates, legal documents, and books to contextualize the law, *as it was written at that time*. A similar mode of interpretation, Textualism, removes the societal context from the law, as it is written, and reads the plain meaning of the Constitution objectively and literally. In both modes of interpretation, the sanctity of the document and the intent of its authors override any social progress or change in public sentiment. An orig-

[14] https://constitution.congress.gov/constitution/amendment-2/.

[15] https://constitutioncenter.org/interactive-constitution/white-papers/on-originalism-in-constitutional-interpretation.

inalist interpretation of the Constitution, and specifically of the Second Amendment, is highly problematic, as suggested by Law Professor Nelson Lund: "[N]obody thinks that the term 'arms' in the Second Amendment should be interpreted to mean the upper limbs of the human body."[16] Originalism is a narrow and misguided interpretation of what the Founding Fathers intended because of its modern irrelevancy.

By contrast, Living Constitutionalism, or *Loose Constitutionalism*, argues for a more flexible interpretation of the text. In this view, the Constitution changes over time in accordance with social attitudes. For example, a Living Constitutionalist would view racial segregation as a violation of individual rights today, but not during the period in which slavery was legal. In other words, this view holds that the Constitution evolves alongside society. Or, as President Woodrow Wilson argued in 1912, "All that progressives ask or desire is permission ... to interpret the Constitution according to the Darwinian principle; all they ask is recognition of the fact that a nation is a living thing and not a machine."[17] The brilliance of the U.S. Constitution is that it is still applicable more than 230 years after it was written; legal scholars at the University of Chicago point out that constitutions generally do not last long. Around the world, the average lifespan of a constitution since 1789—the year that the U.S. Constitution was ratified—is only 17 years.[18] In order to survive, a constitution must be adaptable to the changing needs of a society. Gun apologists refuse to apply Living Constitutionalism to the Second Amendment, and instead argue for a literal, originalist interpretation of the guaranteed right to bear "arms," which to an originalist, is an allinclusive term that has not evolved alongside the technological advancements of modern weaponry. Ironically, though, other language in the Amendment has been interpreted in favor of gun apologists. *District of Columbia v. Heller* (2008) expanded its interpretation of the Second Amendment by establishing that the right extends to all "able-bodied" individuals and not just those serving in a "well-regulated militia" and that the "security of a free state" refers not to a specific state but to the national identity, thereby expanding gun rights to all individuals in all states, with only limited exceptions.[19]

Yet another mode of constitutional interpretation is *Moral Reasoning*. Under this approach, the constitution is viewed through the "ethos of the law" and argues that the Constitution is underscored by morality, and as such, changes with moral progressivism. The danger of this interpretation, of course, is that moralism is highly subjective; for instance, where a judge might find same-sex marriage as a morally acceptable, another might disagree, and each will interpret the language in the Constitution to support

[16] Lund, N. R. (2009). The Second Amendment, Heller, and originalist jurisprudence. *UCLA Law Review, 56*(5), 1343-1376.

[17] Wilson, W., & Leuchtenburg, W. E. (1961). *The new freedom: A call for the emancipation of the generous energies of a people.*

[18] https://www.law.uchicago.edu/news/lifespan-written-constitutions.

[19] https://constitution.congress.gov/browse/essay/amdt2-1/ALDE_00000408/.

this opinion. Applying moral reasoning to the Constitution depends heavily on the members of the Court for whom "moral choices are unavoidable."[20]

A 2003 article published in the journal *Social Theory and Practice* presents the argument that individuals have a *prima facie* right to owning a gun, which is "in favor of liberty"[21] and central to the American experience. Its author, Michael Huemer, leans heavily on John Lott's contemporary research to perpetuate the misguided argument that guns do not lead to an increase in gun violence. He acknowledges, however, that gun rights are *prima facie*—or those rights that are susceptible to "moral deliberations" and "prevailing considerations"—and not guaranteed to the democratic individual, as are *absolute rights*, which are guaranteed without exception. In other words, gun ownership is a privileged right, not an absolute right. For instance, we lack a *prima facie* right when we engage in activities that

- explicitly *harm others*,
- impose *high risks* on others, or
- *reasonably appear* to intimidate others.

Using this definition, gun ownership and use are not categorically protected by law; it is highly dependent upon situational context and conditions. Legal provisions of gun ownership hinge on the "weight" of this individual right. Huemer argues that gun rights are both *fundamental* and *derivative*. That is, a fundamental right has a "force that is independent of other rights," whereas derivative rights lean on these fundamental rights. In Huemer's view, a fundamental right is the constitutionally guaranteed right to own a gun; the derivative right that guns may be owned and used to protect or enforce this fundamental right. This idea is challenged in philosopher Firmin DeBrabander's *Do Guns Make Us Free?*—which examines the question of gun ownership with regard to constitutionality, original intent, and personal liberty. He sums up the gun rights position that "the Second Amendment is the single most important condition and guarantee of our freedom—including free speech and free expression. It is that one freedom without which all the others are lost." The right to own a gun is stipulated in the constitution, however ambiguous, and this right is often viewed as being limitless and purely untouchable.

A common defense for unfettered gun ownership is the interpretation of the Second Amendment, which reads that gun ownership is a defense mechanism that protects citizens from a tyrannical government. Gun apologists often cite their reverence for the constitution and its guarantees of individualism but conveniently overlook the irony of obeying a document that embodies government paternalism. The most disputed

[20] Den Otter, R. C. (2004). The place of moral judgment in constitutional interpretation. *Indiana Law Review, 37*(2), 375-416.

[21] Huemer, M. (2003). Is there a right to own a gun? *Social Theory and Practice: An International and Interdisciplinary Journal of Social Philosophy, 29*(2), 297-324.

aspect of the Second Amendment is whether the right is guaranteed to members of a well-regulated militia only or extends to all U.S. citizens. Although there is legal precedent for both interpretations, the constitution expressly stipulates the right to a well-regulated militia as being necessary to the security of a free state. However, the notion that heavily armed individuals can compete with the modern American military is comical. DeBrabander points out that guns "hardly give citizens any hope of balancing government power" and that "tyrannical governments hardly fear rifles, handguns, even assault weapons in the hands of citizens." For perspective, the budget authorization for the Department of Defense in 2021 was $753.5 billion.[22] This rationalization for gun ownership, therefore, is willfully ignorant. Certainly, there are extremist gun owners who naively believe they can outgun the American government, but this has never been successful. Standoffs between individuals or militia groups and the government often end peacefully (e.g., Alcatraz Island, 1969; Mount Rushmore, 1971; Bureau of Indian Affairs, 1972; Montana Freemen, 1996; Bundy Ranch, 2014), but lethal force has been used on several occasions (Wounded Knee, 1973; Ruby Ridge, 1992; Waco, 1993; Burns, Oregon, 2016).[23] Gun procurement is an unrealistic deterrent from a tyrannical government, so this constitutional interpretation is unreasonable; the government simply is more resourceful than any militia, domestic group, or individual.

Our constitutional rights are not absolute, nor are they entirely pure. Philosopher Christopher Riddle proposes that there are two distinct types of freedoms: those that are "intrinsically good," such as the freedom to be free of violent assault and those that are "instrumentally good" or those that only satisfy our individual preferences.[24] Given the clear association between guns and violence, aggression, and harm, one might argue that the right to bear arms is only instrumentally good because it serves the individual's desire to own and use a gun, rather than intrinsically good, which would yield undeniably positive outcomes. To be clear, instrumentally good freedoms are not entirely useless; it is a luxury of a civilized democracy that we are able to enjoy the right to a pursuit of happiness. But when this pursuit infringes upon the quality of life for others, prima facie rights may be checked.

Look no further than the anti-smoking movement, the criminalization of drunk driving, the campaign for car manufacturers to equip vehicles with safety measures such as seatbelts and air bags, vaccine mandates, or state and local laws banning the ownership of certain breeds of dogs like pit bulls and rottweilers to understand that instrumentally good freedoms most certainly can be overridden by intrinsically good freedoms. In fact, freedoms are routinely limited and sacrificed for the greater good, including the right to free speech. The classic example of yelling *Fire!* in a crowded theater often is used to illustrate this point, but also consider

[22] https://comptroller.defense.gov/Budget-Materials/Budget2021/.

[23] https://www.washingtonpost.com/news/the-fix/wp/2016/01/04/a-look-at-10-other-government-stand-offs-like-the-one-in-oregon-most-of-which-ended-peacefully/.

[24] Riddle, C. (2015). On risk & responsibility: Gun control and the ethics of hunting. *Essays in Philosophy, 16*(2), 217-231. https://doi.org/10.7710/1526-0569.1533.

how libel, defamation, and slander laws provide legal justification for the censorship of speech in some cases. Riddle argues that "it is impermissible to make a choice or choices to satisfy mere preferences that subject other people to grave bodily injury" and concludes that "freedom, when properly conceptualized, might not involve the freedom *to* guns, but instead, a freedom *from* guns."[25] Indeed, the constitution is not a magic genie that grants sweeping, unrestricted rights, and the gun is no exception.

Aside from the protection guaranteed by the constitution, some have argued that individuals have a "moral right" to gun ownership. David DeGrazia, a Professor of Philosophy at George Washington University, defines moral rights as valid moral claims that protect important interests and ordinarily trump appeals to the general welfare."[26] In other words, moral rights are concerned more often with the individual than with the common good. A 2015 article published in *Public Affairs Quarterly* argues, "The moral right to keep and bear arms is entailed by the moral right of self-defense"[27] and that this extends to all firearm types, even military-style assault weapons. Gun apologists usually cite self-defense as the rationale for gun ownership and carrying, but they ignore the greater harm that guns inflict upon the rest of society. However, DeGrazia notes that a moral right to gun ownership may be "justifiably overridden" because it tramples the basic rights of others. He asserts that "a moral right to gun ownership, if it exists, is a negative, nonabsolute, derivative moral right whose existence in a particular society at a particular time depends on its role in enabling the realization of one or more basic rights."[28] While it may be true that guns *can* be used for self-defense, this does not outweigh the carnage that results from the largely permissive gun laws in the United States. Admittedly, restricting gun ownership and carrying may impose on the moral rights of some gun owners, who may wish to own guns for justifiable purposes such as hunting and competitive shooting, but this is a tradeoff for participating in modern society. Similarly, one month after the attacks on 9/11, the Bush administration formed the Transportation Security Administration (TSA), which stipulated new requirements for air travelers, including enhanced security screening and the restriction of liquid containers and carrying other potentially dangerous items on board. Sweeping changes were made to the design of the airplanes and to general airport procedures. In response to tragedy, we gave up some of our personal luxuries for the greater good. We must ask ourselves whether guns are morally justifiable in a country where more than 300 Americans are killed or injured by firearms every day,[29] whether this warrants the view

[25] Riddle, C. (2015). Philosophy & gun control: Introduction. *Essays in Philosophy, 16*(2), 149—153. https://doi.org/10.7710/1526-0569.1529.

[26] DeGrazia, D. (2016). Handguns, moral rights, and physical security. *Journal of Moral Philosophy: An International Journal of Moral, Political and Legal Philosophy, 13*(1), 56—76.

[27] Bernstein, C., Hsiao, T., & Palumbo, M. (2015). The moral right to keep and bear firearms. *Public Affairs Quarterly, 29*(4), 345—363.

[28] DeGrazia, D. (2016). Handguns, moral rights, and physical Security. *Journal ofMoral Philosophy: An International Journal of Moral, Political and Legal Philosophy, 13*(1), 56—76.

[29] Centers for Disease Control and Prevention, National Center for Health Statistics, WONDER Online Database, Underlying Cause of Death.

that guns have become a public health issue, and whether this is sufficient reason for government intervention.

Gun apologists often will cite the permissive gun laws of other countries to support their claims that guns do more good than harm. Most commonly, Switzerland and Israel are proffered as examples of gunfriendly societies with high rates of gun ownership and low rates of gunrelated violence and homicide. While this argument discounts numerous other countries who have implemented gun reform successfully, let's examine this talking point more closely. First, it is accurate to say that the gun ownership rates of both Switzerland and Israel are uncommonly high, though it is extremely important to note the vast discrepancy between population sizes (Switzerland: 8.6m; Israel: 9.2m; United States: 329m, as of 2020). This is a somewhat misleading observation, given that military service is compulsory in both countries, and in Switzerland, nearly half of all firearms are military-issued.[30] Typically, when reporting gun ownership rates in the United States, military and law enforcementissued weapons are not tallied. Still, the gun ownership rate per capita in the United States remains significantly higher than either of the other two gun utopias.

Both Switzerland and Israel also have more restrictive gun laws than the United States, requiring more frequent permit renewals, limiting the number of handguns, and denying altogether gun permits for certain offenders. In Switzerland, more public spaces are deemed gun-free zones, and concealed carry of firearms is prohibited, except when proof of "genuine need and terrible danger" is provided.[31] Also, automatic firearms and armor-piercing ammunition are prohibited. In Israel, law stipulates that a detailed registry of all private gun possessions and sales be maintained, that ammunition is limited per gun (most often at 50 bullets), and that the right to private gun ownership is not guaranteed.[32] Both Switzerland and Israel have extensive preconditions that must be met to be granted a firearm license and to have that license renewed. So, while it is common to cite these two countries as evidence that a harmonious balance between gun ownership and crime is possible, it is not necessarily truthful.

Despite their above-average rates of gun ownership (compared to other European and Asian nations), Switzerland and Israel have relatively low rates of violence. Gun apologists interpret this as proof that guns deter crime. But aside from the glaring example of the United States, which has a much larger sample size of gun owners, gun-related violence, homicide, and suicide that are most certainly associated with access to guns, Switzerland and Israel do in fact register fewer gun-related homicides per capita. Suicide-by-firearm, however, has been shown to be inordinately higher in countries with more guns, and this is the case for the United, States, Switzerland,

[30] Balestra, S. (2018). Gun prevalence and suicide. *Journal of Health Economics, 61,* 163—177. https://doi.org/10.1016/j.jhealeco.2018.08.003.

[31] https://www.gunpolicy.org/firearms/region/switzerland.

[32] https://www.gov.il/en/Departments/General/firearm-licensing-information.

and Israel.[33][34][35][36] Many attribute the low rates of violence in Switzerland and Israel not only to the regulatory gun laws of those two countries but also to differences in cultural traits and societal beliefs.[37] In both countries, the gun is a mandatory part of conscription, which explains the high rate of gun ownership without the side effect of violence; in the United States, the gun is a deliberate choice for those who anticipate the need for self-defense. Contrary to the popular belief that countries like Switzerland and Israel exemplify a gun lover's paradise, it is simply not true. The motive for gun ownership in these countries differs significantly from the United States, as do the laws that place tighter restrictions on gun ownership, storage, and carrying in public places.

Constitutional rights are not limitless, yet gun apologists treasure the Second Amendment and insist that the Constitution guarantees an unchecked power to own and carry guns, even when there is indisputable evidence that suggests guns are the catalyst for violent behavior and death. NRA spokesman Charlton Heston once declared at a shareholder's meeting, which took place two weeks after the tragic Columbine school shooting in a convention center only miles away from the site of the massacre, that the Second Amendment is the "most rare, hard-won human right in history."[38] And it is this twisted mentality that keeps gun apologists fighting for their right to keep and bear arms, no matter the cost. But as philosopher Michael Kocsis reminds us, "The discussion doesn't end with invocations of the Second Amendment; all rights are subject to adjustment of their scope and consideration of their social impact."[39] As firearms have become exponentially deadlier and more accessible than what the Founding Fathers had envisioned while authoring the Constitution, it is worth considering an intrinsically good, Living Constitutionalist perspective toward the Second Amendment, just as we have toward all other inalienable rights.

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[33] Balestra, S. (2018). Gun prevalence and suicide. *Journal of Health Economics, 61,* 163—177. https://doi.org/10.1016/j.jhealeco.2018.08.003.

[34] Ajdacic-Gross, V., Killias, M., Hepp, U., Haymoz, S., Bopp, M., Gutzwiller, E, & Rossler, W. (2010). Firearm suicides and availability of firearms: The Swiss experience. *European Psychiatry: The Journal of the Association of European Psychiatrists, 25*(7), 432—434. https://doi.Org/10.1016/j. eurpsy.2010.04.006.

[35] Siegel, M., & Rothman, E.F. (2016). Firearm ownership and suicide rates among US men and women, 1981—2013. *American Journal of Public Health, 106*(7), 1316—1322.

[36] Miller, M., Azrael, D., & Hemenway, D. Firearms and violence death in the United States. In: Webster DW, Vernick JS, eds. *Reducing Gun Violence in America.* Baltimore MD: Johns Hopkins University Press, 2013.

[37] Rosenbaum. (2012). Gun Utopias? Firearm access and ownership in Israel and Switzerland. *Journal of Public Health Policy, 33*(1), 46—58. https://doi.org/10.1057/jphp.2011.56.

[38] https://www.msnbc.com/all-in/watch/gun-country-the-nra-s-radical-path-from-columbine-to-rittenhouse-125923397821.

[39] Kocsis, M. (2015). Gun ownership and gun culture in the United States of America. *Essays in Philosophy*, *16*(2), 154-179. https://doi.org/10.7710/1526-0569.1530.

The Politics of Artifacts

Contrary to the social determinist view that technologies are neutral and their use dependent entirely upon the context of the individual and society, our technological artifacts do not exist lifelessly in a vacuum. A gun in your hand is not just a gun. Its materiality was forged through a process of social and economic forces, the like of which benefitted some and disadvantaged others. Like all technologies, the gun is *political*. I mean this in the broader sense where *politics* refers to the struggle of power between entities and technological agents or artifacts. Political philosopher Langdon Winner describes the term politics as "arrangements of power and authority in human associations as well as the activities that take place within those arrangements."[40] Winner has also developed a theory of technological politics, which argues that technologies assume a form of life upon their conception and, as a result, fundamentally transform their human users.

Guns themselves are inherently political tools. By the nature of their instrumental value, guns exert power over others; a gun-citizen resembles more of a soldier than a civilian, thereby creating a hierarchical structure that pits the armed against the unarmed. By extension, gun laws (specifically, open and concealed carry and Stand Your Ground laws) further endow gun-citizens with an imbalance of power. It is important to note, however, that the political nature of technologies is not always intentional or explicit, nor is the hierarchy that it creates or strengthens. Technologies developed for workforce automation on manufacturing assembly lines, grocery self-checkout areas, and agricultural harvesting, for example, consolidate power for management and eliminate the need for human labor in these areas. Once might argue that this is an unintentional effect of automation and not a deliberate sabotage of the proletariat. However, some technologies are designed specifically with political purposes in mind.

Winner uses the example of Robert Moses, a prolific civil engineer in New York City during the 1920s, to demonstrate the politics of artifacts. According to his biography, Moses intentionally designed the city's roads, parkways, and overpasses to accommodate automobile owners (who, at the time, were predominantly middle and upper-class Whites) and to discriminate against mass public transit vehicles like buses, which were used mostly by minority groups. In doing so, Moses effectively steered travelers to different metropolitan areas according to their racial makeup. In fact, historical transportation planning is widely viewed as being rooted in racial discrimination, known as spatial racism.[41] In fact, an article in the *Vanderbilt Law Review* asserts that there is racial inequity engrained in the current interstate highway system that runs throughout the United States.[42] The complex network of roads, bridges, and

[40] Winner, L. (1986). *The Whale and the Reactor*. The University of Chicago Press. Chicago, IL.

[41] Cook, L. D., Logan, T. D., & Parman, J. M. (2018). Rural segregation and racial violence: Historical effects of spatial racism. *American Journal of Economics and Sociology, 77*(3—4), 821—847.

[42] Archer, D. N. (2020). "White Men's Roads Through Black Men's Homes": Advancing racial equity through highway reconstruction. *Vanderbilt Law Review, 73*(5), 1259—1330.

tunnels was funded by the Federal Aid Highway Act of 1956 and often runs directly through Black neighborhoods and communities. In response, the Biden administration has proposed a sweeping infrastructure plan that would "reconnect neighborhoods cut off by historic investments."[43] Whether these designs were deliberate remains arguable, but one thing is certain—technologies most often favor some and hobble others.

Anti-homeless architecture is an example of a hostile design, as I briefly described earlier in Chap. 4. Hostile designs are not only discriminatory toward certain populations of people, but instructive of the character of the individual or institution that uses them. Or, as philosopher Martin Heidegger asserts, "Technology is therefore no mere means. Technology is a way of revealing."[44] According to Heidegger, the objects that we use are endorsements of our ethical and moral Being. Robert Rosenberger's book *Callous Objects: Designs Against the Homeless* describes overt architectural practices like anti-sleep benches, spiked pavement and windowsills, and boulders under highway overpasses that are designed to discourage homelessness and deter crime. The achieved effect, however, is the marginalization of the unhoused to the outskirts of society, where they become even more vulnerable to violence.

Tom Morello is the lead guitarist for the Grammy Award-winning band Rage Against the Machine, whose reputation is largely mired in anti-corporatism and anarchy. The band's catalog includes songs titled "Township Rebellion," "Freedom," "No Shelter," and "Settle for Nothing"—each its own anthem for young White male revolutionaries from middle-class America. Morello's elite guitar-playing and innovative technical style even earned him a spot on *Rolling Stone* magazine's 100 Greatest Guitarists of All Time. His signature guitar was built by Mongrel Custom and features the phrase "Arm The Homeless" scrawled on its body. Morello has played the guitar since 1990, when he used a black magic marker to write the impromptu phrase on his baby-blue Mongrel Custom guitar just moments before taking the stage. In a 2017 interview, Morello was asked about the meaning of the phrase, and he replied, "In the city of Los Angeles, where you have Bentleys and Rolls-Royces driving by these homeless tent cities, it just felt like a fine, provocative artistic statement."[45] Morello's catchy phrase is a metaphorical one that is meant to draw attention to the stark divide between the haves and the nave-nots that a capitalistic society creates. Homelessness is not a crime, but the unhoused often are criminalized and treated as sub-humans. Morello's message to "Arm The Homeless" is a symbolic reminder of how guns demand notice and command power. The band's 1992 debut studio album features the song "Take the Power Back," which includes the lyrics "Cause the circle of hatred continues unless we

[43] https://www.npr.org/2021/04/07/984784455/a-brief-history-of-how-racism- shaped-interstate-highways.

[44] Heidegger, M., & Lovitt, W. (1977). *The question concerning technology, and other essays*. New York: Harper & Row.

[45] https://www.streetroots.org/news/2017/10/13/tom-morello-if-you-aren-t-angry-you-aren-t-paying-attention.

react; We gotta take the power back." Morello is a Harvard-educated provocateur, but some have interpreted his on-stage social philosophy in a more literal sense.

In 2018, Brian Ellison ran for a U.S. Senate seat in Michigan as a Libertarian. His campaign featured a program to arm and train unhoused people with pump-action shotguns. Ellison is both a fervent supporter of the Second Amendment and a sympathizer for the unhoused. He cites the "war on homelessness" as the justification for arming the homeless so that the program might "help them from being a victim in the future."[46] Ultimately, Ellison was unsuccessful in his political campaign, as was his crowd-sourced GoFundMe crusade to buy shotguns for the unhoused. The program—however preposterous it sounds—illustrates the important theory that guns breed power. Arming the homeless empowers one of the most disadvantaged populations in the entire country, shifting the balance of power in their direction.

Guns are often called "the great equalizer" because they give strength to the weak. They are a cheat code for toughness. Langdon Winner writes: "The things we call 'technologies' are ways of building order in our world," but guns also threaten and disrupt this social and political order. Consider how easy it is for a lone gunman with a vendetta to bring an entire country to a halt, even if for only one news cycle. This is true of mass shooters in public places and in schools but even more so in the rare cases of political assassination attempts. In 1982, 25-year-old John Hinckley Jr. shot and wounded then-President Ronald Reagan and three others outside a Washington, DC hotel. Prior to the assassination attempt, Hinckley had demonstrated fits of mental illness in his own writings and in his letters to actress Jodie Foster, whom he had obsessed over. Presciently, Hinckley wrote numerous poems that invoked guns and the power that they bestow. One poem, titled "Guns are Fun" reads:

See that living legend over there?

With one little squeeze of the trigger

I can put that person at my feet moaning and groaning and pleading with God.

This gun gives me pornographic power.

If I wish, the President will fall and the world will look at me in disbelief All because I own an inexpensive gun.[47]

The poem is an articulate description of the "pornographic power" that he briefly wrestled away from a sitting president and three others. A cheap handgun had costly results. One of the men that Hinckley had shot was Reagan's assistant, James S. Brady, who would later become synonymous with gun reform. After the assassination attempt, which left Brady permanently disabled, he and his wife partnered with the organization Handgun Control, Inc. (HCI) to pass legislation during the Clinton administration that would require background checks for all firearm sales (known today as Brady Background Checks). A gun in the hand of any person automatically promotes him or

[46] https://www.vice.com/en/article/ne9jyb/the-senate-candidate-who-wants-to-arm-the-homeless-explains-himself.

[47] Anderson, J. (1984). *Guns in American Life*. Random House: New York.

her to a legislator of life and death, and this is a powerful, God-like feeling. But one organization has found a way to strip guns of their power by altering their materiality.

RAWtools, Inc. is an artist collective in Colorado Springs, CO whose mission is to "disarm hearts and forge peace."[48] The primary objective of this therapy-based initiative is to partner with local communities to repurpose weaponry into new tools and to offer educational programs for conflict resolution and support for those who have lost loved ones to gun violence. The group accepts donated guns and through a manual process of blacksmithing, turns them into fully functioning gardening tools (see Fig.5.3). Or, as the blacksmiths like to say, "We take the semi-automatic and turn it into a mattock."

The literary term for a word spelled backward that takes on a new meaning is called a semordnilap. The meaning of the name, RAWtools, is deeply symbolic; its root word, RAW, a reference to the literal reversal of the word, WAR, is not coincidental. In this sense, the central mission of RAWtools is to reverse the original intention of the gun, which is to *take away*, and to repurpose the materials into an object that can be used to *provide*. A gun takes away life; a gardening tool sustains it.

I spoke with the founder and Executive Director of RAWtools, Mike Martin, who has a profound respect for gun owners. Martin has an anthropologic understanding of guns; he sees them not just as tools or objects, but as indicators of who we are. In our interview, he wondered aloud to me, "When they dig up our civilization two thousand years from now, what are they going to say about us?" Martin, a Mennonite pastor, has a strong religious background that guides his organization, which cites a bible verse in the Old Testament as its inspiration:

[A]nd they shall beat their swords into plowshares, and their spears into pruning hooks; nation shall not lift up sword against nation, neither shall they learn war anymore. (Isaiah 2:4)

Under the leadership of Martin and his co-founder, Shane Claiborne, RAWtools views its work as an *undoing*. Forging a gun or a rifle back into its original elements, ore and iron, resets our ability to decide how the materials should be used. Martin notes that it was us, after all, who chose to shape these elements into weapons. These men reverse the poeisis of the gun and so that it might be redefined. Deliberately, and metaphorically, Martin talks about how guns exhibit the "power over" others, but in their new form, the tools have "power under" the soil in the garden. This forging process is undoubtedly parallel to the rebuke of mankind's hubris and an acceptance of his servitude to God. The transformation of the gun from a weapon into a gardening tool subtracts its power to take a life, and instead, empower it to help cultivate life.

Religion aside, I asked Martin whether he had encountered criticism from gun apologists who object to his destruction of guns. Largely, he supposes, because the forging process is overseen by victims of gun violence, critics usually remain silent. He recalled one event, however, where a woman witnessed the forging of a hunting rifle that had

[48] https://rawtools.org.

Fig. 5.3 A donated rifle is forged into gardening tools. Used with permission

been passed down through the generations. Appalled, she ran away, shouting, "They're killing our guns!" Martin told me that this personification of a gun was disturbing but not surprising. After all, he noted, "Guns are a part of us." Guns are also an important part of our nation's political identity.

Winner's theory of technological politics is founded upon the central truth that our technologies "embody specific forms of power and authority" and "make a world for each other to live in."[49] He asserts that some technologies, like the atom bomb, are inherently political by their very nature. I would include the gun in this category as well, as the gun has always played a crucial role in government politics. Researchers at the Bloomberg School of Public Health, Johns Hopkins University found that the number of political television ads that reference guns has increased eight times across four election cycles (2012-2018).[50] The researchers analyzed more than 14 million television ads featuring candidates running for a variety of public offices. Not coincidentally, there was a higher concentration of pro-gun messaging in southern states, where public opinion typically favors gun rights; conversely, gun-regulation messaging was more frequent in large metropolitan areas that exhibit high rates of gun violence, like Chicago, Philadelphia, and Washington, DC. This explicit appeal to emotion uses the imagery of guns as a litmus test for quickly identifying a political candidate's stance on gun rights issues,

[49] Winner, L. (1986). *The Whale and the Reactor*. The University of Chicago Press. Chicago, IL.

[50] Barry, C. L., Bandara, S., Franklin Fowler, E., Baum, L., Gollust, S. E., Niederdeppe, J., & Kennedy Hendricks, A. (2020). Guns in political advertising over four US election cycles, 2012-2018. *Health Affairs, 39*(2), 327-333. https://doi.org/10.1377/hlthaff.2019.01102.

but it also carries with it other sentiments that have been long associated with guns, such as racial resentment, which also differs by these geographic regions.

Going back to the founding of the United States, gun rights were used to consolidate power for some and deny it to others. Prior to the Civil Rights Movement in the 1960s, "Black Codes" were enacted in most states as legislative efforts to prevent Black Americans from legally owning firearms.[51] And recent polling indicates that Americans still believe guns to be more dangerous in the hands of Blacks than Whites.[52] Racial resentment continues to be a strong predictor of gun ownership in the United States, and gun owners tend to be more vigilant toward people of color.[53][54] A 2021 study in *Criminology: An Interdisciplinary Journal* reports that "gun rights can be used as a dog whistle to influence the voting intentions of racially resentful voters, regardless of their gun ownership status, and irrespective of the election candidate's political party." And, when political candidates broach the issue of either gun control or advocacy, "voters think about race, which in turn appears to influence how they vote."[55] Guns and race are deeply intertwined with one another.

Winner rightly determines: "The issues that divide or unite people in society are settled not only in the institutions and practices of politics proper, but also, and less obviously, in tangible arrangements of steel and concrete, wires and semiconductors, nuts and bolts."[56] Guns fuel the deepening political and racial polarization in the United States. We must learn to think more sincerely about guns and their impact on our society, not just whether we *want* to own and carry guns, but whether we *should*. They are not neutral, innocuous, or apolitical tools; they are harbingers for violence, masquerading as a noble consecration of a terribly misinterpreted constitutional right.

The Social Contract

By virtue of being born into this world, we are assigned natural freedom. But we also enter into an unspoken agreement with others that tempers this natural freedom with social order. Philosophers have long considered the delicate balance between individual autonomy and freedom and the necessary paternalistic authorities that govern these

[51] Cook, P. J., & Goss, K. A. (2014). *The gun debate: What everyone needs to know*. Oxford University Press.

[52] Hayes, M., Fortunato, D., & Hibbing, M. (2021). Race-gender bias in white Americans' preferences for gun availability. *Journal of Public Policy, 41*(4), 818-834. doi:10.1017/ S0143814X20000288.

[53] Filindra, A., Kaplan, N. J., & Buyuker, B. E. (2021). Racial resentment or sexism? White Americans' outgroup attitudes as predictors of gun ownership and NRA membership. *Sociological Inquiry, 91*(2), 253-286. https://doi.org/10.1111/soin.12388.

[54] Gearhart, M. C., Berg, K. A., Jones, C., & Johnson, S. D. (2019). Fear of crime, racial bias, and gun ownership. *Health & Social Work, 44*(4), 241-248. https://doi.org/10.1093/hsw/hlz025.

[55] Schutten, N. M., Pickett, J. T., Burton, A. L., Jonson, C. L., Cullen, F. T., & Burton, V. S. (2021). Are guns the new dog whistle? Gun control, racial resentment, and vote choice. *Criminology: An Interdisciplinary Journal*. https://doi.org/10.1111/1745-9125.12292.

[56] Winner, L. (1986). *The Whale and the Reactor*. The University of Chicago Press. Chicago, IL.

freedoms. Socrates and Plato pondered these types of questions, but it was not until the seventeenth century that a modern social contract theory was developed. Philosopher 'Thomas Hobbes (1588-1679) viewed human nature bluntly. Hobbes argued that human behavior is driven by self-interest, a concept known as State of Nature. In this condition, all persons are primarily concerned with their individual welfare and base their decisions on shortterm gratifications. For Hobbes, "the golden rule is contrary to human nature unless compelled through the threat of force, and [he] concludes that therefore people cannot be relied upon to keep their agreements."[57] This rationale provides a justification for preemptive self-defense and aggressiveness toward others. Hobbes' assertion then is that an authoritative entity, which he refers to as a Sovereign, is necessary to enforce social order and that this is better than living in a total State of Nature, where it is every man for himself. The social contract is the agreement among free individuals that participating in a society requires that they (1) relinquish their natural rights to abject selfishness, and (2) charge leadership with the role to enforce this balance of rights between individuals.

Another philosopher, John Locke (1632-1704), endorsed the social contract theory but disagreed fundamentally with Hobbes on man's State of Nature. Hobbes saw the natural condition of humans as being "lonely, miserable, cruel, animalistic, and short."[58] Locke instead argued, in his philosophical text *The Two Treatises of Civil Government*:

The state of nature has a law of nature to govern it, which obliges every one: and reason, which is that law, teaches all mankind, who will but consult it, that being all equal and independent, no one ought to harm another in his life, health, liberty, or possessions ... (and) when his own preservation comes not in competition, ought he, as much as he can, to preserve the rest of mankind, and may not, unless it be to do justice on an offender, take away, or impair the life, or what tends to the preservation of the life, the liberty, health, limb, or goods of another.[59]

Locke believed that human beings possess a moral compass because they are made in the image of God, and this prevents them from harming others. As such, a Sovereign as defined by Hobbes is an overreach of power. Locke instead favored the "idea of the supremacy of civil society over the state"[60] and advocated for a balance of individualism and authoritarianism, or what we might recognize as modern liberalism. Locke differentiated between natural law and natural rights. Natural law are those moral truths that are applied to everyone (a religious person might articulate these in the form of commandments); libertarians highlight a key tenet of natural law, which is to

[57] Jespersen, M. (2020). Challenging Hobbes: Is war inevitable? *Global Society: Journal of Interdisciplinary International Relations, 34*(1), 21-35. https://doi.org/10.1080/13600826.201 9.1668363.

[58] Hobbes, Thomas, and W. G. Pogson Smith. 1909. *Hobbes's Leviathan*: reprinted from the edition of 1651. Oxford: Clarendon Press. https://archive.org/details/hobbessleviathan00hobbuoft.

[59] Locke, J., & Carpenter, W. S. (1953). *Two treatises of civil government.*

[60] LUNGU, M. R., URLICA, A., FIRUNEGOESCU, A. G., & SUBA, A. R. (2021). The founding ideas of English liberalism according to Thomas Hobbes and John Locke. *Agricultural Management / Lucrari Stiintifice Seria I, Management Agricol, 23*(2), 125-129.

avoid behaviors that harm others. Natural rights, on the other hand, are the privileges and claims that an individual has been given by a legal or Sovereign system. Locke wrote that everyone has a natural right to life, liberty, and estate, and it was indeed the duty of political authority to ensure and protect these rights.[61]

Jean-Jacques Rousseau (1712-1778) further elaborated on the combative philosophies of Hobbes and Locke, granting that humans have evolved out of Hobbesian State of Nature and into a Lockean modern society. In his text *The Social Contract* (1762), Rousseau attempts to reconcile the duality of man's individual freedom and his participation in a Sovereign state. His theory addresses the question, "How can we live together without succumbing to the force and coercion of others?"[62] Rousseau contends that a social contract between individual members of a society form a *collective will* that is a strengthening of the individual will. There is a tradeoff for living in a civil society rather than as a savage man: "By the social contract he loses a part of his natural independence, but in return he acquires the guarantee of his rights—a security."[63] But Rousseau sides with Locke in that an individual's predominant concern is with self-preservation.

Social contract theory is underscored by morality. It suggests that "individuals in a group or society share a mutual understanding of their moral obligations to one another."[64] And for Rousseau, "it is only through the State that the individual finds a full realization of his moral being."[65] Citizenship and the collective will compels morality. However, gun apologists cite these same political philosophers and the social contract theory to corroborate the shallow view that the Second Amendment enshrines gun ownership and cannot be limited. After all, guns can be used for selfdefense (self-preservation) and for the protection of personal property. But as I have detailed in this book, these concerns are outweighed by the greater likelihood that guns will extoll other detrimental effects, both physically and psychologically. Therefore, if gun ownership (and by extension, gun-carrying in public) is immoral in the respect that it violates a social agreement for the wellbeing of others (and for the self), then a Sovereign authority has an obligation to regulate this behavior. Rousseau believed that it was the duty of the State to determine "the extent of the rights taken away and those retained" as it becomes necessary for the "maintenance of society."[66]

I particularly love this phrase "maintenance of society," from the 1917 article in the *Harvard Law Review*. It represents the evolution of the gun that has taken place

[61] https://www.gutenberg.org/files/7370/7370-h/7370-h.htm.

[62] https://iep.utm.edu/soc-cont/.

[63] Jean Jacques Rousseau and the Doctrine of the Social Contract. (1917). *Harvard Law Review, 31* (1), 27-39.

[64] Hirschman, E. (2014). Social contract theory and the semiotics of guns in America. *Social Semiotics, 24*(5), 541-560. https://doi.org/10.1080/10350330.2014.937077.

[65] Jean Jacques Rousseau and the Doctrine of the Social Contract. (1917). *Harvard Law Review, 31*(1), 27-39.

[66] Jean Jacques Rousseau and the Doctrine of the Social Contract. (1917). *Harvard Law Review, 31*(1), 27-39.

since the time of political philosophers like Hobbes, Locke, and Rousseau. Originally, guns were necessary to this maintenance of society, especially as the United States was forged in the fires of a revolutionary war and on the sacred land of an indigenous people. One might even argue that guns maintained society through the westward expansion of the country. But in our modern society, where we live mostly sedentary lives in front of screens, guns are not essential to this "maintenance of society" in the same way as the electrical grid, telecommunications systems, and physical infrastructure. Although guns have become more semiotic than useful, Americans still see themselves as these revolutionary warriors, nostalgically clinging to this historical narrative and carrying the torch of individualism into the new age. Rousseau also wrote in *The Social Contract* that "Man was/is born free; and everywhere he is in chains. One thinks himself the master of others, and still remains a greater slave than they."[67] This logic pertains to the great lie that is sold to gun owners—that owning a gun makes you free. But as Firmin DeBrabander writes, guns are only an "illusion of freedom—and makes us vulnerable to manipulation, abuse, and oppression. They invite us to feel free and indomitable, while blinding us to the ways in which we are limited and dominated."[68] Undeniably, we have an obligation to protect ourselves and others, but guns are no longer the medium for upholding a modern social contract.

Gun reform is a sensitive subject not least of which because it is deeply entangled with political polarization, murky constitutional rights, and an emotional attachment to firearms. There are numerous approaches to gun control, spanning from a total criminalization of guns to introducing stricter regulatory measures like background checks, waiting periods, and a national gun registry. Some approaches are more feasible than others, but essentially, we might think of gun reform as adopting one of two models: "(1) everyone may possess a handgun except those who cannot; and (2) no one may possess a handgun except those who can."[69] The former resembles a natural right that can be lost, and the latter describes an authoritative State that grants permissibility to its citizenry. Regardless, gun reform has largely stalled, due in part to the efforts of pro-gun organizations like the NRA, which fundraise and lobby politicians to keep gun-friendly legislation. Gun legislation has not been commensurate with the advancements in gun technologies and accessories. This is untrue of other nearly all other technological innovations. As Thomas Gabor points out in his text *Confronting Gun Violence in America*:

While little headway has been made with regard to regulating guns, cars are subject to licensing and registration, car technologies continue to advance (e.g., rear-view cam-

[67] Rousseau, J.-J., & In Frankel, C. (1947). *The social contract*. New York: Hafner Publishing Co.

[68] DeBrabander, F. (2015). *Do guns make us free? Democracy and the armed society*. New Haven: Yale University Press.

[69] Bogus, C. (2019). The hard, simple truth about gun control. In Sarat A., Douglas L., & Umphrey M. (Eds.), *Guns in Law* (pp. 88—134). Amherst; Boston: University of Massachusetts Press. Retrieved January 30, 2020, from www.jstor.org/stable/j.ctvk3gkp9.8.

eras), and road laws governing speeding, texting while driving, and other behaviors that compromise safety keep evolving[70]

Legislation on guns is mostly stagnant, not evolving to match their increasing lethality and accessibility. Furthermore, discourse on gun reform is toxic and divisive; there is little agreement and compromise from either side, and this may stem from a problematic framing of the issue.

Neil Postman, a famed technology critic, relates a fable from Lithuania in which "a curious disease inflicted many of the townspeople."[71] Once infected with the disease, the person would fall into a coma, often mistaken for being dead (Medical science had not yet become sophisticated enough to tell the difference between the two). The townspeople would discover numerous instances of coma patients being buried alive underground in their coffins, and so two solutions were proposed. One group suggested that coffins be stocked with food and water and air holes drilled into the top for ventilation. (Another variation of this story suggested attaching a string to the inside of a coffin, which would ring an aboveground bell, should a person be buried alive and need to signal others. This gave way to the phrase, "Saved by the bell."). The second proposal, however, was to mount a stake to the inside of the coffin lid that would penetrate through the person's heart when the lid was closed—ensuring that the buried person is dead. Postman says that the two proposals came from two different questions: "The first solution was an answer to the question, How can we make sure that we do not bury people who are still alive? The second was an answer to the question, How can we make sure that everyone we bury is dead?"[72]

We might consider that there is a similar problem regarding the framing of the gun debate. One group is asking, "How can we limit the number of guns in circulation?" Another group is asking, "How can we ensure that gun owners are responsible?" (And yet another group might be asking, "How can we increase the presence of guns so that we are safer?"). Gun reform measures usually seek to answer their own questions. Thomas Gabor is clear on his solution to gun violence: "for there is one kind of gun control that works—and only one kind that works—and it is this: anything that significantly reduces the number of handguns in general circulation."[73] But this solution—while idyllic—ignores the competing perspectives of gun owners. Elizabeth Hirschman concludes in her 2014 paper that "civilian possession of firearms [is] unlikely to succeed" because "self-defense and the defense of property is the semiological basis of the American social contract."[74]

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[70] Gabor, T. (2016). *Confronting gun violence in America.* New York, NY: Palgrave Macmillan.

[71] Postman, N. (1992). *Technopoly: The Surrender of Culture to Technology*, Vintage Books: New York.

[72] Postman, N. (1992). *Technopoly: The Surrender of Culture to Technology*, Vintage Books: New York.

[73] Gabor, T. (2016). *Confronting gun violence in America.* New York, NY: Palgrave Macmillan.

[74] Hirschman, E. (2014). Social contract theory and the semiotics of guns in America. *Social Semiotics, 24*(5), 541-560. https://doi.org/10.1080/10350330.2014.937077.

A reframing of the gun debate question might be multi-tiered. First, we must ask, "Do guns impose an excessive physical, social, and moral threat to oneself and to others?" And if yes, "How might we mitigate the effect of guns on society while not infringing on constitutional rights?" Hypothetically speaking, eliminating guns altogether would solve the first question but not the second. Therefore, total avoidance is not a realistic proposal for gun reform. We must begin by acknowledging that there is no single magical solution to curbing gun violence. Instead, the approach needs to be multi-faceted and target specific issues. In addition, gun reform cannot exist solely as legislation; there must be advocacy for reform supplemented through community and law enforcement partnerships, mental health support, and education initiatives.

There are many tangible suggestions for gun reform that could be enacted immediately, with the support of Congress. The Biden administration has proposed a plan that includes investing in evidence-based violence intervention programs, publishing model "red flag" legislation (which temporarily bars individuals from owning firearms), and requiring notice when firearm accessories are purchased and used to modify pistols into semi-automatic rifles.[75] Furthermore, the Pew Research Center has found that there is overwhelming bipartisan support for some gun reform measures, including preventing people with mental illness from owning guns, requiring background checks for private gun sales, and restricting open carry for those without a permit.[76] Authorizing these measures would most certainly make an immediate impact on gun violence. But perhaps meaningful gun reform will require not just laws but an attitudinal shift as well.

I propose that in addition to straightforward measures that can be enacted through bipartisan legislation, we might apply a philosophical approach to gun reform. Figure5.4 is a proposed model that illustrates a harmonious relationship between the gun designers, manufacturers, and sellers, the gun owners and purchasers, and the collective American society in which they all co-participate, each guided by ethical design and use.

This three-pronged model includes three vertices: DESIGN, USER, and SOCIETY. The DESIGN vertex comprises gun designers, manufacturers, and sellers. The USER vertex denotes gun owners. The SOCIETY vertex encompasses all gun-citizens and non-gun-citizens as they participate in a collective American society. Along each side of the triangle is a guiding principle that informs the relationship between each vertex. Inside the triangle are three lines that connect each vertex with a side; these lines represent a system of checks and balances, for which each vertex is responsible. This creates a shared responsibility among users, designers, and the rest of society.

Between DESIGN and USER, there is the guiding principle of Design for Wellbeing (DfW), which includes more specific approaches to designing ethical and moral techno-

[75] https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/07/ fact-sheet-biden-harris-administration-announces-initial-actions-to-address-the-gun-violence- public-health-epidemic/.

[76] https://pewrsr.ch/2YU140z.

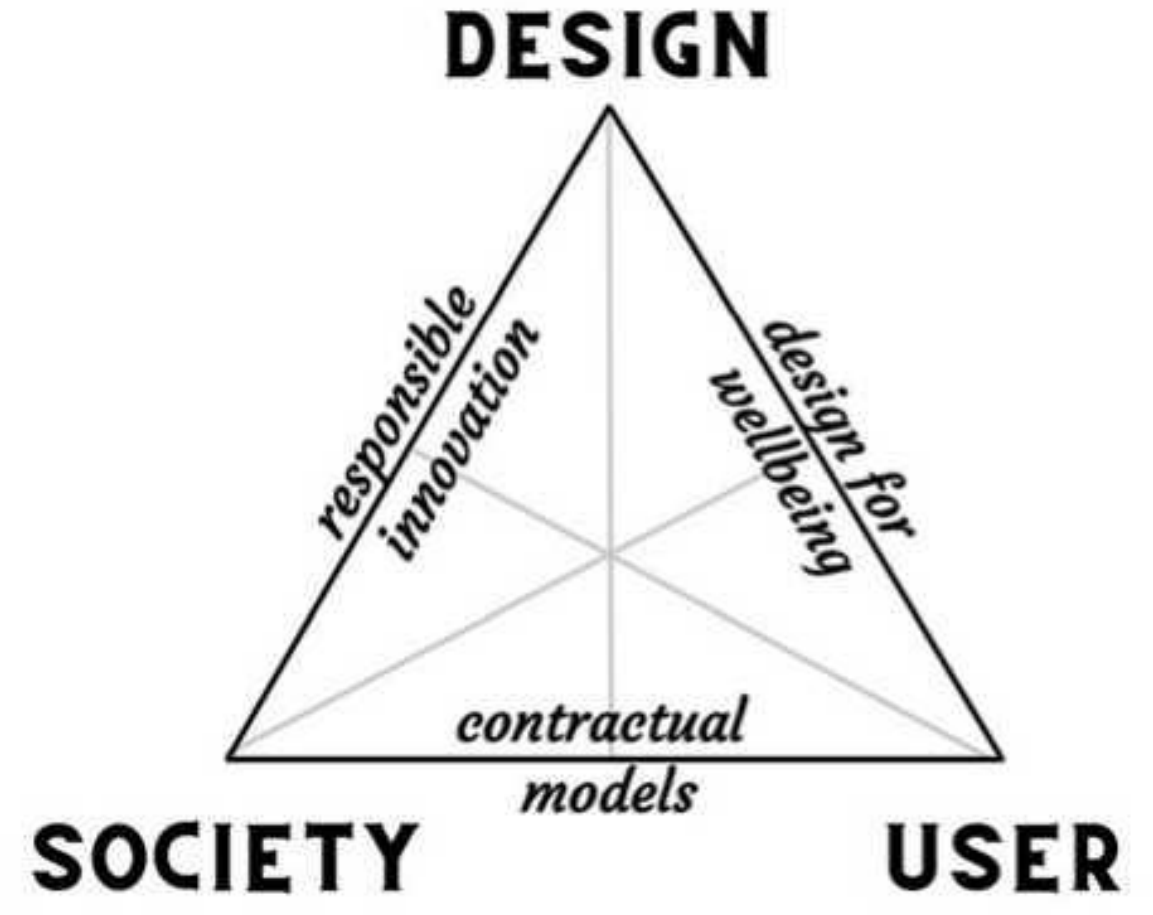

Fig. 5.4 A proposed gun reform model

logical artifacts, such as Value Sensitive Design (VSD) and other wellbeing approaches. According to Philip Brey, wellbeing is "a central value in the design of technological artifacts, especially in the design of consumer products. Firms and designers often pride themselves with developing products that are claimed to enhance well-being, quality of life, the good life, or some similar notion."[77] Products designed for wellbeing improve the quality of life, both for the user and for those residually affected by the product. A value-based design would consider design features of guns that would benefit the well-being of gun users and of those in proximity of gun-citizens, like personalized smart guns that use radio frequency identification (RFID) chips and biometric sensors to properly identify the gun holder, and other safety features like visual indicators for when a chamber is loaded. Designing safer guns would virtually eliminate accidental shootings altogether.

The guiding principle between DESIGN and SOCIETY is the ethical approach of Responsible Innovation (detailed in the next chapter) that articulates expectations for macro-level intervention by national, state, and community-based laws, regulations, and ordinances. The framework of Responsible Innovation (RI) is versatile and can be applied to numerous contexts. In relation to the design, development, sale, and use of guns, we might adopt von Schomberg's (2011) definition of RI as: "A transparent, interactive process by which societal actors and innovators become mutually responsive to each other with a view to the (ethical) acceptability, sustainability and societal desirability of the innovation process and its marketable products."[78] Or, more simply put, Brand and Blok (2019) define RI as: "innovators also take responsibility for the impact of their products on society as a whole."[79] For example, the gun manufacturer Slide Fire Solutions developed, patented, and sold bump stocks, which is an accessory for firearms that enables a "continuous firing cycle with a single pull of the trigger."[80] The shooter in the Las Vegas Massacre (2017) modified his rifle with a bump stock to kill 61 concertgoers. If applied early, the RI framework would have raised serious questions about the ethical nature of the development of bump stock technology prior to the tragedy. In addition, this proposed model of gun reform would demand accountability from the designer, manufacturer, and seller of the unethical technology, who should not remain exculpable. This network of blame is not unlike the law in many states that permit lawsuits against bars and other drinking establishments for overserving their customers, or the legal liability that builders and general contractors

[77] Brey, P. (2015). Design for the value of human well-being. In J. van den Hoven, P. Vermaas & I. van de Poel (Eds), *Handbook of Ethics, Values, and Technological Design. Sources, Theory, Values and Application Domains* (pp. 365—382). Springer.

[78] Von Schomberg, R. (2011). Prospects for technology assessment in a framework of responsible research and innovation. In: Dusseldorp, M., Beecroft, R. (eds.). *Technikfolgen abschatzen lehren: VS Verlag fur Sozialwissenschaften*. pp. 39—61. doi: 10.1007/978-3-531-93468-6_2.

[79] Brand, T., Blok, V. (2019). Responsible innovation in business: a critical reflection on deliberative engagement as a central governance mechanism. *Journal of Responsible Innovation, 6*(1), pp. 4-24. doi: 10.1080/23299460.2019.1575681.

[80] https://www.atf.gov/rules-and-regulations/bump-stocks.

find themselves responsible for the issues that stem from their construction materials, or the legal responsibility that accompanies a homeowner with a swimming pool or trampoline on their property.

Between the USER and the rest of SOCIETY, there is a guiding principle of contractual models. These models include the broader, unspoken social contract that coincides with living in a modern society as well the more targeted models of integrative social contract theory (ISCT), which examines social normative principles at the community and organization levels,[81] and the psychological contract, which applies to individuals at the "nano-level."[82] The social contract emphasizes the good of others, and this drives the morality of the individual, organization, and community at large. Decision-making should consider general wellbeing rather than the satisfaction of an individual's desires (sometimes referred to as *preference-satisfaction*). You may prefer to carry an AR-15 into Walmart— in fact, you may be legally allowed to do so—but while this decision satisfies your personal desire, it negatively impacts other stakeholders in the store, and in doing so, violates the terms of a social contract. This principle requires putting the interests of others above the individual, which is a hallmark of a modern, civilized society.

Dr. Martin Luther King, Jr. once stated: "It may be true that morality cannot be legislated but behavior can be regulated."[83] Gun control measures will never be universally accepted. Just as we will never reach a 100% compliance rate of motorists who wear a seatbelt or for people who receive a vaccination as a matter of public health, gun control will work for some and further radicalize others. Taking a philosophical approach to gun reform would demand a complete rethinking of how guns serve our best interests; it would necessitate a reframing of the mythology of guns; and it would require collaboration between designers, manufacturers, gun owners, and society writ-large instead of just a top-down approach of partisan legislation.

[81] Baird, C., & Mayer, D. (2021). On integrative social contracts theory and corporate decision-making in a polarized political economy. *Business & Society Review (00453609), 126*(1), 3—23. https://doi.org/10.1111/basr.12223.

[82] Thompson, J., & Hart, D. (2006). Psychological contracts: A nano-level perspective on social contract theory. *Journal of Business Ethics, 68*(3), 229—241. https://doi.org/10.1007/ s10551-006-9012-x.

[83] https://www.iwu.edu/mlk/page-4.html.

6. The Future of the Gun

To be completely honest, I don't see this book changing anyone's mind on guns. People tend to be deeply entrenched in their beliefs about guns. If you are a zealous supporter of gun rights, chances are that you have been deeply offended by this point in the book, assuming you even began reading it in the first place. If you love guns, you probably have an emotional relationship with them and have not spent a whole lot of time thinking about how gun use is explained through the philosophies of Latour, Heidegger, Verbeek, Ihde, Norman, or Winner. If you are generally indifferent toward guns and their place in society, I hope that this book has provided a new perspective on guns and their toxic impact on the quality of life. The mission of this book is not to demonize guncitizens but to awaken us from a most deadly technological somnambulism; the gun, after all, is a technological artifact with which we must co-exist.

This final chapter of this book is titled "The Future of the Gun" as a reference to a book of the same title written by Frank Miniter, who espouses the deeply troubling view that guns should play an even greater role in modern society. Miniter's warped vision of the future is one where guns mediate nearly every aspect of our lives through an expansion of concealed and open carry laws. He sees the gun as a path to ultimate freedom, not as a hindrance. At every turn, Miniter sides with the gun-citizen; he opposes gun control measures and dismisses technological innovations that would make guns safer for others. By the end of the book, he resolves: "In the end, whatever technology brings us, the future of the gun will be driven, as it has always been, by the needs of hunters, soldiers, and individuals exercising their right to self-defense. Ultimately, it's all about that fundamental right." But I disagree. We should be less concerned with the imposition on gun-citizens and more concerned with how guns impose their will upon everyone else. We should not operate from the standpoint that gun reform infringes on gun owners but that guns infringe upon the unarmed. The ultimate irony here is that the "fundamental right," which is so sacred to gun-citizens, obstructs the basic rights of others and their pursuit of happiness. The conviction that guns improve the quality of life (or is necessary to the defense of life) simply defies logic and the credible evidence that says otherwise.

Dana Loesch is the former spokesperson for the NRA. Her book *Hands Off My Gun: Defeating the Plot to Disarm America* encapsulates every half-baked talking point on gun culture in America by way of straw man arguments, false equivalencies, and logical fallacies. On the very first page, she criticizes then-President Barack Obama for his calls for gun reform in response to the Sandy Hook Massacre and says, "anyone

who disagreed with him was a racist."[1] Thoughtful discourse about the impact of guns and gun violence becomes extremely difficult if this is the jumping off point for the conversation. The rest of the book spews arguments that can be dismissed easily with a tenuous grasp of law, statistics, and ethics. The writing is schizophrenic and contradictory. In one breath, Loesch writes that her right to carry is a choice, and "[t]he Second Amendment ensures that we have that choice," yet in the very next sentence says, "That which government gives, can be taken away." The Second Amendment was just that—an amendment to the Constitution— not an eternal directive etched in stone for all future generations to have to endure. Given the advancement in firearm technology and the evolution of society over the last 230 years, the Second Amendment should be revised accordingly. Loesch is now selling a children's book, *Paws Off My Cannon*, which is a not-so-subtle allegory that teaches the next generation the perverse view that we should live in perpetual anticipation of violence.

Gun apologists look to groom younger generations to carry forward their vision of a gun-laden America. An online search for pro-gun book titles yields an entire sub-genre of children's books, including ones titled *My Parents Open Carry* (Brian Jeffs), *The Gun Book for Girls* (Silvio Calabi, Roger Sanger, Steve Helsley), and *Guns! Guns! Guns! A Kid's Guide to Safety* (Kermit E. Jones, Jr.). One independent publisher, Firearms Unknown, runs a hyper-masculine website that sells children's books with a pro-gun sentiment. The author's blurb for one book, titled *The Three Little Pigs and the Wolf on the Road: A Tale of Gun Control*, reads: "Violence, contrary to popular adage, does, in fact, solve problems."[2] The sequel to this book, titled *The Big Bad Wolf Strikes Back*, warns that "this book contains graphic violence and descriptions of violence. If you are trying to raise your child into a blubbering feminist cuck with purple highlights in their hair, this book is not for you."[3] In this tale, one of the pigs uses a ghost gun to take on the Big Bad Wolf's three sons who have returned to avenge their father's death. Yet another self-published book, titled *Why Guns Should Be Banned in America: The Definitive Argument*, contains nothing but blank pages. In a video review of the book, the author says:

Guns are here to stay. They're not going away. And that's just a simple fact of life. I can go down to Home Depot right now, and in about fifteen minutes, with under $10, I can build a shotgun. There's no law that you're going to pass that's going to stop that from happening.[4]

Although the future of the gun is uncertain, innovative technologies like 3D printing have democratized the ability to design and manufacture guns and ammunition from home on a do-it-yourself basis, posing new threats and testing the limits of gun laws.

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[1] Loesch, D. (2014). *Hands off my gun: Defeating the plot to disarm America*. New York: Center Street.

[2] https://www.firearmsunknown.com/the-three-little-pigs-childrens-book-guns.html.

[3] https://www.firearmsunknown.com/the-big-bad-wolf-strikes-back-childrens-book-4.html.

[4] https://www.youtube.com/watch?time_continue=169&v=E7cl6FPkVvA&feature=emb_title.

Standing in the way of meaningful gun reform are cultural and political ideologies. In 2020, as political division worsened, there was an increase in the number of social justice and political protests; in these public spaces, armed demonstrations were six times more likely to turn deadly than unarmed demonstrations.[5] Then, during the 2020 presidential election, former President Trump embraced gun-based intimidation at the polling stations, encouraging the presence of armed "poll watchers," particularly in key battleground states where guns are permitted inside voting precincts.[6] Some political leaders have instigated calls to violence in response to COVID-19 vaccine mandates,[7] election integrity,[8] and in preparation of the reading of verdicts in high-profile criminal cases involving shootings of unarmed people.[9] This firestorm of politically violent rhetoric, permissibility of carrying guns in public, and an increased accessibility to guns likely means that bipartisan gun reform efforts are doomed.

However, I see the future of the gun more optimistically. I see a movement toward restraint, fueled by a groundswell of Americans who are fed up with daily media reports of gun violence and the bleak statistics on mass shootings. I see a country that has bankrupted the most powerful gun lobby: the NRA. I see the political will of young activists borne from the age of school shootings, hell-bent on change. And I see the gun itself becoming a relic of the past that once resembled a proxy for strength, an artifice of freedom, and a substitute for morality. The gun brings out the worst in us, and deep down, we know this to be true. Polls continue to show that stricter gun laws are supported by the majority of Americans from diverse backgrounds and political leanings, though this support is declining.[10][11] The time to act is now.

At the conclusion of his book *Things That Make Us Smart*, Don Norman writes: "It is time to revolt. We can't conform."[12] He is making the demand that our technologies adapt to fit the needs and welfare of its users. And although he is mostly ruminating on everyday objects like appliances, computing technologies, and exterior building doors, we might extend the same demand to our most deadly objects. We should not concede to the violent tradeoff that guns introduce into every situation; we should instead challenge gun manufacturers and lawmakers to do better. Design safer guns using innovative technologies. Develop ethical and value-based public policies that

[5] https://everytownresearch.org/report/armed-assembly-guns-demonstrations-and-political-violence-in-america/.

[6] https://www.csgv.org/wp-content/uploads/2020/09/CSGV-GunsAtThePolls-X.pdf.

[7] https://www.nbcnews.com/politics/congress/marjorie-taylor-greene-suggests-southerners-could-welcome-biden-s-police-n1276152.

[8] https://www.theguardian.com/commentisfree/2021/sep/03/madison-cawthorn- republican-party-gerrymandering.

[9] https://www.independent.co.uk/news/world/americas/us-politics/madison-cawthorn-kyle-rittenhouse-protests-b1961122.html.

[10] https://thehill.com/homenews/news/548127-2-in-3-support-stricter-gun-control-laws-poll.

[11] https://www.pewresearch.org/fact-tank/2021/09/13/key-facts-about-americans-and-guns/.

[12] Norman, D. A. (1993). *Things that make us smart: Defending human attributes in the age of the machine*. Reading, Mass: Addison-Wesley Pub. Co.

emphasize the wellbeing of all people over the gun-citizen. Recognize that the gun invites violence into our lives. Demand responsibility from innovators and from users.

On Responsibility

"With great power comes great responsibility." The cliched phrase has been widely attributed to French philosopher Voltaire, though variations of the adage have appeared much earlier in history. The saying is apropos because holding a gun gives you great power—regardless of whether it is used—and this power bears responsibility. In his writings, Voltaire was highly critical of religious and political leaders and their abuse of power: "Those who can make you believe absurdities can make you commit atrocities."[13] Gun-citizens have been duped by mouthpieces for the NRA, like Wayne LaPierre, Frank Miniter, and Dana Loesch, who spread the dangerous and absurd lie that guns improve our lives. The gun emits an illusion of power and strength, when it masks cowardice, mutes empathy, and distorts reality instead. Because of this, there is an even greater responsibility that is required of the gun-citizen, who fancies himself a reaper of death should anyone cross him.

What is *responsibility*, anyways? Like technology, responsibility means different things to different people in different contexts. A generic definition might explain responsibility as an obligation or duty to perform (or to abstain from) a specific action. To a modern philosopher, responsibility also infers a component of morality, or good and bad. From here on, the term *responsibility* will connote a *moral responsibility* that the individual, group, or institution possesses to choose good behaviors over bad. A shirked responsibility, then, becomes not just a dereliction of a duty but an immoral act where an individual deliberately prioritizes himself over the collective good of others. It also should be acknowledged that moral responsibility can vary by degree. A child has less moral responsibility than an adult, simply by way of human development and capability. Acting childishly, then, is to neglect moral behavior, or at least to display the moral behavior of a child.

Technologies are our moral agents. In his article "Materializing Morality: Design Ethics and Technological Mediation," Peter-Paul Verbeek is critical of evaluating technological artifacts from the limited scope of their functionality (doing so would be a value-neutral approach). I have illustrated how guns are scripted for use through their structure of invitation and persuasion, but it is not enough to read and understand the demand characteristics, affordances, or the script of an artifact. The reading of artifacts (and, by extension, how they mediate our lives) also must include a *moral assessment*. Verbeek says that the script approach to understanding technological artifacts "reveals a specific responsibility of the designer, who can be seen as the inscriber

[13] Voltaire (1765). *Questions sur les Miracles* (11th Letter).

of scripts."[14] And here, we are meant to realize that technological artifacts—which are more complex than things and objects—possess the moral underpinnings of the designer and the maker. Certainly, there is no firearm manufactured by pacifists. It follows, then, that some technologies—like the gun—become moralized in addition to their simple materiality, and when we adopt them, we adopt their morality (or lack thereof) by default.

It is my view that the gun epidemic in the United States might benefit from an examination of moral responsibility on three fronts: Innovation, Regulation, and Use. The first subsection describes the role of a responsible innovator and pusher of a technological artifact like the gun; the second explains the influence of legislators and regulators toward responsible policy; the third subsection focuses on the individual responsibility of the gun-citizen.

Responsible Innovation

In 2021, Apple released the AirTag, a GPS-based digital tracking tool about the size of a quarter that acts like a homing beacon. A user can watch on his or her phone, the real-time location of the Apple AirTag with pinpoint accuracy. The AirTag was initially marketed as a "supereasy way to keep track of your stuff,"[15] but thieves and stalkers quickly picked up on a different application of the technology. There have been numerous reports of women being followed to their homes and cars being stolen because criminals used an AirTag to know the precise location of their targets. The non-profit organization Coalition Against Stalkerware (CAS) was formed to combat "technology facilitated abuse"[16] that has resulted from the AirTag and similar products, while Apple maintains that this byproduct of the AirTag is unfortunate but unintentional. It is true that every innovation is susceptible to bad actors who are ill-intentioned, but this does not necessarily outweigh the usefulness of the technology.

In his article "When Technologies Makes Good People Do Bad Things: Another Argument Against the Value-Neutrality of Technologies," David R. Morrow points out that "[l]ess than a decade after the Wright brothers launched their first flight, the Italians were using airplanes to kill people in the Italo-Turkish war of 1911-1912" and that "airplanes were instrumental in the Battle of Britain, the fire bombings of Dresden and Tokyo, and the dropping of nuclear bombs on Hiroshima and Nagasaki."[17] Just as Apple did not set out to develop a stalker-friendly technology, neither did the Wright brothers seek to develop a war machine. But these are the residual outcomes of

[14] Verbeek, P.-P. (2006). Materializing morality: Design ethics and technological mediation. *Science, Technology, & Human Values, 31* (3), 361—380. http://www.jstor.org/stable/29733944.

[15] https://www.apple.com/airtag/.

[16] https://stopstalkerware.org/.

[17] Morrow, D. R. (2014). When technologies make good people do bad things: Another argument against the value-neutrality of technologies. *Science and Engineering Ethics*, *20*(2), 329-343.

these technological innovations, and by some measure, these are inescapable costs of innovation. One can hardly argue that the airplane should never have been invented simply because it has been used in war efforts. But there may be an argument as to whether the Apple AirTag was a necessary development for the company, given the ratio between its usefulness and its foreseeable negative side effects. In 2015, Tile, Inc. introduced a coin-sized, GPS-based tracking tool, and reports of abuse had already begun to surface prior to the launch of Apple's AirTag nearly six years later. In this case, it might have been beneficial to apply a framework for evaluating whether the re-innovation of a similar product that had already shown a propensity for misuse was morally justifiable.

Responsible Innovation (RI) is defined as an "activity or process which may give rise to previously unknown designs ... which when implemented expand the set of relevant feasible options regarding solving a set of moral problems."[18] The idea for RI originated in academia, which saw a need to develop guidelines for responsible research. The fields of business, management, and economics quickly adopted RI as a tool for calculating "market necessity" for products.[19] Responsible Innovation has since come to mean many things, but in design ethics, it might best be summed up by asking the question: *Is it morally responsible to introduce this product or activity into society, given the potential outcomes?*

In Chap 2, I used the examples of the Lego Block19 Gun by Culper Precision and the cellphone pistol by Ideal Conceal as a case study for socially responsive design. Responsiveness is identified as one of the four dimensions of the RI framework, which also includes anticipation, reflexivity, and inclusion.[20] The developers of the RI framework argue that "Responsible innovation requires a capacity to change shape or direction in response to stakeholder and public values and changing circumstances" and that "we must therefore consider how systems of innovation can be shaped so that they are as responsive as possible."[21] Designing deadly weapons as children's play toys or disguising them as non-violent objects for easy concealment is irresponsible and void of design ethics.

Mike Monteiro is a designer and author of *Ruined by Design: How Designers Destroyed the World and What We Can Do to Fix It.* In it, he lays the groundwork for the importance of ethical design in our everyday lives. For me, Monteiro's work has completely redefined the meaning of *design.* One of his code of ethics is that designers

[18] Van den Hoven, J. (2013). Value sensitive design and responsible innovation—Responsible innovation: Managing the responsible emergence of science and innovation in society, 4, pp. 75—83. doi: 10.1002/9781118551424.ch4.

[19] Ivanova, T., Manaienko, I., Shkrobot, M., & Tadeyev, Y. (2021). Theoretical frameworks of responsible innovations. *Economic Studies*, *30*(5), 143—157.

[20] Stilgoe, J., Owen, R., & Mcnaghten, P. (2013). Developing a framework for responsible innovation. *Research Policy, 42*(9), 1568—1580.

[21] Stilgoe, J., Owen, R., & Mcnaghten, P. (2013). Developing a framework for responsible innovation. *Research Policy, 42*(9), 1568—1580.

must value impact over form. Monteiro argues that the responsibility of the designer is to consider the larger societal impact of their work. According to this reasoning, Monteiro concludes that "if a thing is designed to kill you, it is, by definition, bad design."[22] Therefore, "A broken gun is better designed than a working gun" because it affords no killing. He tells designers: "You are responsible for what you put into the world. And you are responsible for how what you've designed affects the world. Mikhail Kalashnikov [innovator of the AK-47] is responsible for as many deaths as the people who pulled those triggers."[23] Many will disagree with this bold statement, but if you pour gasoline throughout a house full of people and let someone else strike a match, you are an accomplice to the murders of those inside. Innovators, designers, and manufacturers of guns have blood on their hands.

Responsible Regulation

It should not be assumed that gun designers and manufacturers are evil or ill-intentioned. It is more likely the case that these individuals were introduced to a gun culture at an early age and continue to view guns as part of their self-identity. Or, perhaps there is no deliberate thought that goes into perpetuating gun culture; it is strictly pleasurable and personally gratifying for someone to design, make, and sell guns. But that is just the problem. Responsible Innovation of firearms requires that designers, manufacturers, and even sellers of guns reflect on the moral and ethical consequence of their actions, which affect the actions of others. When this fails, it becomes the responsibility of policymakers to regulate socially harmful innovations.

The Liberator is the name of the world's first 3D-printed handgun, which was developed by Cody Wilson, founder of Defense Distributed.[24] The company specializes in digitally designed gunsmithing and is selfdescribed as "first private defense contractor in service of the general public."[25] Through open-sourced plans, anyone with access to a 3D printer (which costs around $1000, generally), raw materials such as ABS or PLA (available online via any number of sellers, including Walmart), and internet access can build a homemade firearm, known as "ghost guns." Technology is changing rapidly, but currently, ghost guns are still somewhat unreliable and often only fire a single bullet. The issue with ghost guns is obvious; 3D printing a firearm skirts legal requirements for age, background check, registration, and licensing, making them virtually untraceable. Currently, only a handful of states have passed legislation that outlaws the manufacturing and use of ghost guns. Most of the United States relies on

[22] https://muledesign.com/2017/09/in-praise-of-the-ak-47.

[23] Monteiro, M. (2017, September). In praise of the AK-47. *Mule.* Retrieved from https://muledesign.com/2017/09/in-praise-of-the-ak-47.

[24] Walther, G. (2015). Printing insecurity? The security implications of 3D-printing of weapons. *Science and Engineering Ethics, 21* (6), 1435—1445.

[25] https://defdist.org/.

an ambiguous federal law (the Undetectable Firearms Act) that requires that a firearm contain a piece of metal to be detected by security screening systems. However, the required amount of metal is unspecified, and 3D-printed guns can easily be designed with the metal component as being extraneous and removable.[26] Ghost guns exemplify a failure of responsible innovation.

While ghost guns increase accessibility to guns, other innovations aim to make gun use more exclusive. Smart guns are designed to prohibit the unauthorized use of a gun by requiring identifiable data—usually by way of a fingerprint or the proximity of an RFID-approved device like a watch or a ring—before a gun can be used. Intelligent gun technology ensures that the shooter is a verified user, thereby rendering stolen guns useless

and preventing accidental injury or death by an unauthorized user such as a child. Other technologies, like the IDentilock security system, can be retrofitted and applied to a non-smart gun so that it remains locked until approved for use. The designer of IDentilock, Omer Kiyani, has said that he "wanted to keep his kids safe from the firearm he bought to protect them."[27]

The Biden administration has pledged to endorse common-sense gun policies, including banning the importation of assault weapons, initiating buy-back programs for assault weapons and high-capacity magazines in violence-prone communities, and closing the "gun show and online sales loophole" by requiring background checks for all gun sales. Perhaps most importantly, the Biden Plan aims to "Put America on the path to ensuring that 100% of firearms sold in America are smart guns" and to "Stop 'ghost guns.'"[28] Our elected leaders have an obligation to protect the citizenry in the face of an epidemic of gun violence, yet intelligent gun technology is only part of the solution.

Responsible Use

Responsible use by the individual is the last safeguard for a technology once responsibility fails at the institutional level and eludes regulation. I am defining the term *use* rather broadly here, as it includes gun ownership, carrying (open and concealed), and shooting. Responsible use refers to an individual's responsibility to use a technology in ethical ways that does no harm to others; in the context of guns, this includes educating oneself about their harmful effects and how to mitigate these effects with proper training and safe storage. Responsible use also includes the ability to self-regulate behavior. Paul Kettl, MD, is a clinician at the Hospital of the University of Pennsylvania and self-identifies as a hunter. During a run for Congress, Kettl said in a speech: "If you need a semiautomatic weapon to go deer hunting, what you really need is practice." He subsequently lost that race and went back to practicing medicine. In an op-ed article in the *Journal of the American Medical Association* (JAMA), Kettl laments the gun-

[26] https://giffords.org/lawcenter/gun-laws/policy-areas/hardware-ammunition/ghost-guns/.
[27] https://getidentilock.com/.
[28] https://joebiden.com/gunsafety/.

related trauma that could be avoidable with responsible use. He acknowledges, "Gun use is part of the American way, but so is responsibility."[29]

Calls for gun reform are common among medical experts, but not for political reasons. In 2018, the NRA opened a flood gate of responses from doctors, nurses, and hospital staff, when the organization tweeted from its Twitter account: "Someone should tell self-important anti-gun doctors to stay in their lane."[30] The hashtag #ThisIsOurLane prompted an onslaught of medical professionals who responded by sharing heartfelt anecdotes of treating victims of gun violence, mobilizing awareness campaigns, and some even running for political office on an anti-gun platform. The American Medical Association (AMA) Code of Ethics explicitly states that "a physician must recognize responsibility to patients first and foremost, as well as to society, to other health professionals, and to self."[31] In addition, two of the nine principles in the Code of Ethics specifically mention the individual responsibility of the medical professional:

A physician shall respect the law and also recognize a responsibility to seek changes in those requirements which are contrary to the best interests of the patient. (AMA Code of Ethics, Principle III)

A physician shall, while caring for a patient, regard responsibility to the patient as paramount. (AMA Code of Ethics, Principle VII)

Standing in direct contradiction to these ethics are "Physician Gag Laws," which prevent a medical professional from directly asking a patient if there are firearms in the home to assess harmful risk. These laws also block pediatricians from having important conversations with parents about the increased risk of danger when guns are not stored properly in the home. An article in the *AMA Journal of Ethics* claims that gag laws infringe upon the First Amendment rights of physicians, stating that it is the responsibility of the physician to educate gun-citizens on the risk imposed by guns: "Patients may not be aware that the presence of firearms in a home can have dangerous and unintended consequences, especially if there are children in the house. The risk of accidental and unintentional firearm-related injury and death are real but preventable."[32] Florida is the only state to have fully enacted Physician Gag Laws—named the Firearm Owners' Privacy Act (FOPA)—though the law was reversed by the Supreme Court three years later in 2014. Nevertheless, this has not prevented several other states from attempting to pass similar legislation, which imposes a moral dilemma on physicians who must choose between compliance with the law and ethical responsibility.

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[29] Kettl P. (2013). The NRA let me down. *JAMA, 309*(12), 1239-1240. doi:10.1001/ jama.2013.1302.

[30] https://twitter.com/NRA/status/1060256567914909702.

[31] https://www.ama-assn.org/sites/ama-assn.org/files/corp/media-browser/principles-of-medical-ethics.pdf.

[32] Rathore, M.H. (2014). Physician "Gag Laws" and gun safety. *Virtual Mentor, 16*(4), 284—288. doi: 10.1001/virtualmentor.2014.16.4.pfor2-1404.

Gun apologists don't want to be reminded that guns are violent, but the reality is that guns are antithetical to the wellbeing of the individual and of society. Philosopher Martha Nussbaum argues for a "philosophical underpinning for an account of basic constitutional principles that should be respected and implemented by the governments of all nations, as a bare minimum of what respect for human dignity requires."[33] Nussbaum articulates these principles as ten categories of human capabilities that are essential to human dignity: life; bodily health; bodily integrity; senses, imagination, and thought; emotions; practical reason; affiliation; other species; play; control over one's environment—both political and material.[34] Gun violence, or a threat of gun violence, stifles each of these human capabilities, which are the minimum thresholds for living in a civilized society.

An Armed Society

There are two, extremely disparate views of America. The first scenario, in which the gun apologist's vision is realized, holds up guns as the arbiters of safety and peace. We will call this dystopic scenario "An Armed Society." It is a vision where guns have reached a saturation point and are completely normalized in everyday life. There are virtually no restrictions on firearm ownership. Gun-carrying is permitted everywhere: places of worship, movie theaters, bars, stadiums, supermarkets, playgrounds, and schools. Everyone is armed: pastors, rabbis, bartenders, sports fans, the teenager taking your movie ticket or bagging your groceries, students, and teachers. Everyone. There is a subtext of impending violence everywhere you go and with everyone you encounter. This is the armed society. This, says the gun apologist, is true freedom.

An armed society has deputized gun-citizens as vigilante defenders of personal and public safety. Peacekeeping has become a shared responsibility between citizens and law enforcement, blurring the lines between the two. Presumably, there is a sharp decrease in violent crime because criminals now fear instant retribution from bystanders, and this is deterrent for behaving badly. In instances where there is crime, we have subscribed to street justice that overrides due process and fair trials. In this shoot-first society, we live in a surveillance state where all are guilty until proven innocent. The gun is the judge and the jury, and the shooter just has to claim self-defense and that he feared for his life to avoid criminal prosecution.

In the armed society, there are no "soft targets" for mass shooters to attack because guns are permitted everywhere, including schools and playgrounds. Marksmanship is a skill learned at an early age. Young children are taught to shoot just as they would learn how to write cursive, tie their shoes, and ride a bike. But because everyone is armed,

[33] Nussbaum, Martha. 2000. *Women and Human Development.* Cambridge: Cambridge University Press.

[34] Nussbaum, M.C. (2000) *Women and Human Development; The Capability Approach.* Cambridge University Press, New York.

we fall prey to emotion-guided threat detection more easily. We identify more people as a potential threat in nearly every situation. An unknown person walking briskly in our direction suddenly becomes *a person with a gun* walking directly at us. We misread others and tensions rise. Disagreements escalate when each person is brandishing a gun. Many confrontations end in violence, which means that many more people have threatened violence, killed someone, or become a witness to killings. This cycle of violence is modeled for children, who learn to resolve conflict through intimidation and force rather than through mutual respect, civil discourse, and compromise.

Our cultural, social, and political differences become even more polarized in an armed society. Implied violence becomes more explicit and grows louder. There is increased support for civil war, antagonized by politicians suggesting a "national divorce."[35] As we reach a crescendo of partisanship, democratic processes are halted with threats of violence and armed insurrections. Armed protestors flood federal, state, and local government buildings under the guise of security. Political efforts that clash with an individual voter's preferences (such as public health mandates) are mistaken for *tyranny*, which provides gun-citizens the justification for the overthrow and dissolution of government, per the Constitution. The country fragments into sectarian violence dominated by the groups with the most firepower, armed with their own set of alternative facts.

* * *

Granted, this is an extremely pessimistic Hobbesian view of an armed society that is driven by self-interest and self-preservation. It is possible that an armed society does none of these things, aside from increasing the availability of firearms. One could even argue that humans possess a basic decency and a minimum standard of morality that would prevent a total regression of society into a *Mad Max* scenario. However, this book has argued that the gun introduces its own set of morals that can easily override the user, and as a result, affect intuitions, emotions, and ultimately, behaviors. Gun apologists downplay this vision of the armed society, often repeating the popular phrase from the 1948 sci-fi novel *Beyond This Horizon* that "an armed society is a polite society. Manners are good when one may have to back up his acts with his life."[36] But guns do more than breed a feigned politeness and manners. There is a dark undercurrent to an armed society. As the accessibility to guns increases, so too does the rate of gun-enabled suicides, domestic violence, firearm injuries, and accidental shootings. Guns also amplify aggressiveness, create hierarchical power structures, imply intimidation, and embolden the holder. With more guns, there is more death and less tolerance for others.

Quite frankly, there simply isn't enough reasonable evidence to justify the pursuit of an armed society. Gun apologists present the view that guns are a God-given right

[35] Georgia Rep. Marjorie Taylor Greene advocated for a "national divorce" in a tweet on December 30, 2021. Her Twitter account has since been suspended, and the tweet is no longer available.

[36] Heinlein, R. A., Breck, R., & Donnell, A. J. (1948). *Beyond this horizon.* Reading, PA: Fantasy Press.

bequeathed to Americans through a constitutional amendment and that guns are all that stands between us and the deterioration of society into the hands of violent criminals and mass murderers. In his essay "A Nation of Cowards," published in 1993 in the quarterly journal *The Public Interest*, Jeffrey Snyder writes: "Far from being 'civilized,' the beliefs that counterviolence and killing are always wrong are an invitation to the spread of barbarism."[37] Snyder's fear was contradictory. It's not that an absence of guns leaves the door open for barbarian; viewing the world through guns *makes us* those barbarians. David Frum is a senior editor at *The Atlantic* and former speechwriter for President George W. Bush. In his article "How to Persuade Americans to Give up Their Guns," he relates the following: "Twenty-five hundred years ago, the Greek writer Thucydides described the progress of civilization. It began, he said, when the Athenians ceased carrying arms inside their city, and left that savage custom to the barbarians."[38] This practice extended all the way into the American frontier. The "Old West" is mythologized as a wild society filled with gunslingers, where peace and order were maintained through holstered gun-carrying and high-noon duels on main street. But this is more Hollywood than history. Guncarrying laws were considerably more restrictive in old west towns like Dodge City, Tombstone, and Deadwood than they are today.[39] In fact, the notorious gunfight at the O.K. Corral began when ruffian cowboys refused to abide by Tombstone's law that required disarmament before entering town limits. The gun has long symbolized a backslide of humanity into savagery and barbarism and as an impediment to social progress. We are less civil with a gun in our hand; we are less human.

A Civil Society

Standing in direct opposition to the armed society is the unarmed society. This is a scenario not entirely void of firearms, however. In this hypothetical, guns still may be privately owned, but more stringent laws require their safe and proper storage, separate from ammunition. Additionally, there are limits on the number of guns one can own, and the eligibility requirements for purchasing and owning guns have been strengthened. The minimum age for gun ownership has been raised in all 50 states. The types of firearms available for purchase have been dramatically neutered; assault weapons have been outlawed, as have ghost guns, bump stocks and excessively dangerous ammunition (R.I.P. bullets, Key Points, hollow points, Teflon-covered and armor-piercing ammo). Furthermore, there are restrictions on the amount of ammunition that can be possessed by an individual. All firearms are equipped with smart gun technology. Sentencing guidelines for firearm-related offenses have been toughened, including for gun

[37] https://www.nationalaffairs.com/public_interest/detail/a-nation-of-cowards.

[38] https://www.theatlantic.com/magazine/archive/2021/10/responsible-gun-ownership- is-a-lie/619811/.

[39] https://www.smithsonianmag.com/history/gun-control-old-west-180968013/.

manufacturers and dealers, for the parents of a minor offender, and for the registered owner of a firearm used in a criminal act. Open and concealed carry is not permitted in public spaces. People no longer brandish guns to intimidate, threaten, or suppress others.

In this civil society, where guns are mostly absent, crime still exists, though there is a sharp decrease in the number of gun-enabled homicides, suicides, and domestic violence attacks because of the limited access to firearms. Cultivating a civil society will require more than just handicapping firearms. In his 1984 book *Technology and the Character of Contemporary Life,* philosopher Albert]]Borgmann proposed his vision of a "good society," which tends to the basic most human needs not unlike the human capabilities identified by Martha Nussbaum: life; bodily health; bodily integrity; senses, imagination and thought; emotions; practical reason; affiliation; other species; play; control over one's environment. The goodness of a society, Borgmann writes, "depends on *the kind of opportunities* that the society provides for its citizens." A good society ensures that its technologies are responsibly designed, sensitive to positive values and ethics, and one that provides access to tools and services that promote general wellbeing rather than put a gun into the hands of its citizens to stop those intent on sabotaging that wellbeing. Fundamentally, the gun is antithetical to general wellbeing; when we surround ourselves with guns, we are primed for violence, which we will likely find. This is not becoming of a good and civil society. No, this is a narcissistic society that assumes the worst in everyone and prioritizes the individual over the collective good. American author Kurt Vonnegut once wrote, "We are what we pretend to be, so we must be careful about what we pretend to be." Guns encourage us to be pretenders. The gun helps us to pretend that we are safe, when in fact, guns create danger and foment violence. This is the self-fulfilling prophecy of the gun.

A rational person might not understand why there is a serious gun problem in the United States. Why is it, he might wonder, that there is clear evidence to suggest that more guns result in a higher likelihood of gun-related injuries and fatalities, yet there is a staunch resistance to enacting any sort of measures that might curb the residual effect of guns in a modern society? How can the United States, a developed country with more guns than people, ignore its peer countries who have adopted legislation that is the blueprint for successfully eradicating nearly all gunrelated deaths? The first step to ending gun violence may seem straightforward: limit access to guns. In fact, proposed gun control legislation is often referred to as "common sense gun reform" because it is so blatantly obvious. But as I have discussed in this book, gun rights in the United States are considered sacred because they are baked into our constitutional rights, they satisfy our individual and social identities, and they emit a sense of personal security and freedom. There are many responsible gun owners in the United States, probably the vast majority, but this does not discount the wickedness of the gun. It is likely that most guncitizens will go their entire lives adorning guns but never shoot another person or commit a violent crime with a gun. But this is not proof that the gun does not radicalize its holder. Firmin DeBrabander writes: "Gun owners see a

hostile world—and guns are bound to make it so."[40] Perhaps it is most ironic that gun apologists view themselves as freedom fighting libertarians, poised to thwart criminals or a tyrannical government, when in fact, they are subjugated by the gun, which makes everyone around them less safe and poisons their perspectives of themselves, of others, and of the world.

Throughout this book, I have drawn many parallels between guns and architecture because both are examples of how technological artifacts can be both inviting and inhibiting. Architecture blends into the background of our daily lives, yet it subliminally impacts our behaviors and communicates our morals and ethics. So, it might be fitting that I refer to a textbook, *Architectural Design and Ethics*, for some closing thoughts on the matter. The book's author, Thomas Fisher, cautions aspiring architects to avoid what he terms "pseudo-satisfiers"[41] or things "that appear to liberate us, even though their direct cost to us as well as their indirect cost to our communities and common landscape are anything but liberating." Similarly, I have suggested in this book that guns provide a dangerous type of pseudo-satisfaction. The gun tricks us into feeling safe when it invites trouble, feeling empowered when it strips us of our power, and feeling free when it restricts us. Fisher also sees the need for a new social contract between architects, their designs, and the people they serve. He stresses that the scarcity of resources on this planet is a dire situation that will force us to address "the consequences of ignoring consequences," and he advocates for value-based, ethical architecture that is pragmatic and sensible. He says, "The most useful and pragmatic thing we can do is figure out how to sustain ourselves and as many other species as possible on this one planet of ours for as long as we can. Anything less than that is unethical— and suicidal." Similarly, a failure to confront the gun epidemic is just as consequential as a failure to recognize the fragility of our planet and its resources. To deny either is to deny an uncomfortable reality.

We must be critical of the architecture of the gun. We must ask ourselves if it is pragmatic, ethical, or civilized to continue designing, developing, and selling guns that can kill more efficiently than ever before, and to do so in ways that circumvent regulation. We must ask if we are content with sacrificing thousands of men, women, and children every year for the personal satisfaction of owning and carrying a gun. We must ask if these decisions uphold the social contract for greater good. We must ask if more guns make for a more sophisticated society. We must ask if we want our children to inherit a gun-laden world. It is my hope that this book has made a convincing argument that the answer to each of these questions is a resounding "No" and that we must take the necessary steps toward realizing a better future.

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[40] DeBrabander, F. (2015). *Do guns make us free? Democracy and the armed society.* New Haven: Yale University Press.

[41] Fisher, T. (2008). *Architectural Design and Ethics: Tools for Survival.* Kidlington: Architectural Press.

A critique of his ideas & actions.

Alan J. Reid
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