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A Higher Caliber of Regulation: Is Making Smart-Gun Technology Mandatory Constitutionally Permissible?

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— Comment —

A HIGHER CALIBER OF REGULATION:
IS MAKING SMART-GUN TECHNOLOGY
MANDATORY CONSTITUTIONALLY
PERMISSIBLE?

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INTRODUCTION

Andy Raymond owns a gun store in Rockville, Maryland, called Engage Armament.¹ In 2014, Raymond thought he could attract

1. Steve Pokin, *Proponents of “Smart Guns” Say NRA Is the Main Obstacle*, SPRINGFIELD NEWS-LEADER (Mo.), Aug. 3, 2014, at C7, available at <http://www.usatoday.com/story/news/nation/2014/08/03/proponents-smart-guns-nra-obstacle/13551659/>.

business by selling guns equipped with a new technology that prevented the gun from firing in the hands of anybody but the gun's owner—so-called “smart guns.”² Raymond did not intend to draw attention to himself by selling these guns, but he was thrust into the national spotlight by the gun's manufacturer, Armatix.³ Raymond's publicity triggered ardent reactions from those opposing the new technology, and Raymond began receiving degrading messages and death threats.⁴ Immediately, Raymond stopped offering the Armatix smart gun, but he did not understand why some people would object to the product.⁵ In response, another man in his community claimed that these guns were a mistake and that no “gun person” would ever want to own one.⁶ However, both supporters and critics of these new smart guns agreed that the technology is untested, making it unclear what the benefits or dangers may be.⁷

This is an extreme example, but is meant to communicate the point that people disagree, quite passionately, on the extent to which the Second Amendment protects the right to bear arms. The text of the amendment itself reads as follows: “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.”⁸ A superficial reading of that text gives almost no indication on where the boundaries of its protections lie.⁹ In 2002, New Jersey tested those boundaries by enacting a law mandating that “[o]n the first day of the 24th month following the date on which the Attorney General reports that [smart guns] are available for retail sales purposes,” it will be illegal to sell guns in New Jersey that are not smart guns.¹⁰

Now suppose in the next few years, New Jersey starts implementing its smart-gun law. Alternatively, suppose that Congress or another state legislature passes a similar law requiring that all guns manufactured or sold be equipped with smart-gun technology. Is there, as of right now, a basis in the Second Amendment for objecting to those laws? This Comment suggests that the answer to that

2. *Id.*

3. *Id.*

4. *Id.*

5. *Id.*

6. *Id.*

7. *Id.*

8. U.S. CONST. amend. II.

9. See Peter D. Junger, *The Original Plain Meaning of the Right to Bear Arms*, 63 CASE WESTERN RESERVE L. REV. 141, 142 (2012) (“Only the Humpty Dumpty—*sic volo, sic jubeo*—school of constitutional analysis appears capable of dealing with [the Second Amendment].”).

10. N.J. STAT. ANN. §§ 2C:58-2.4, 2C:58-2.5 (2005).

question is no. In Part I, this Comment discusses how smart-gun technology functions and the controversy surrounding its implementation. Part II develops a framework for analyzing the constitutionality of the new technology based on jurisprudence and the work of Eugene Volokh. Finally, Part III of this Comment applies the framework from Part II to the arguments discussed in Part I.

I. SMART GUNS: CONCERNS, GOALS, AND FACTS

This Comment will first describe how smart-gun technology works and the various debates surrounding its implementation.¹¹ Understanding the implications, both positive and negative, of smart guns will shed light on their constitutionality, which is discussed in Part III. This Comment describes what smart guns are and how they work. Next, this Comment discusses arguments concerning the functionality of smart guns, whether they actually will result in less gun violence, and the cost of implementing a smart-gun regime.

A. *An Overview of Smart-Gun Technology*

A smart gun is a gun that “will only fire when grasped by an authorized user.”¹² This takes place using a variety of technologies, including touch memory, remote control, radio frequency identification (“RFID”), and biometric technology.¹³ The most well known of these technologies is RFID technology. This type of smart gun requires the user to wear a ring, watch, or bracelet, which transmits radio waves to the corresponding gun, allowing it to be fired. However, the distance these radio waves can travel requires the owner to be holding the gun or similarly situated in proximity for the gun to fire.¹⁴ In order to power the receiver inside the gun, the RFID smart gun requires batteries. A passive transmitter (the ring, bracelet, or watch) does not require electricity to function properly.¹⁵ It is not yet clear if RFID smart guns would be sold on a one-gun-one-

11. This discussion will involve some practical information about how the technology works in general, but an in-depth discussion is outside the scope of this Comment. For more information regarding the technology itself, see SANDIA NATIONAL LABORATORIES, SMART GUN TECHNOLOGY PROJECT FINAL REPORT (1996); Michael J. Ram, *Technology of Safety Devices for Firearms*, 12 LOY. CONSUMER L. REV. 218 (2000).

12. Ram, *supra* note 11, at 222.

13. SANDIA NATIONAL LABORATORIES, *supra* note 11, at 120. The German Armatix iP1 pistol is one of the best-known smart guns commercially available. See *Armatix iP1 Pistol*, ARMATIX, <http://www.armatix.de/iP1-Pistol.779.0.html?&L=1> (last visited Sept. 26, 2014).

14. See SANDIA NATIONAL LABORATORIES, *supra* note 11, at 120.

15. See *id.* at 82.

transmitter policy, but the technology certainly exists to allow multiple transmitters to access the weapon.

Biometric technology is another popular form of smart-gun technology. Typically, biometric technology uses digitally recorded behavioral or physiological characteristics of the owner to verify an authorized user.¹⁶ One common type of biometric technology identifies an authorized user through fingerprint recognition, but the technology also includes recognition through voice recognition or a personal identification number.¹⁷ The lock and key function of biometric technology tends to be very accurate at recognizing an authorized user, but it consumes a concerning amount of power and requires a number of seconds in order to identify a user.¹⁸ Like RFID, the legality of authorizing more than one user is not clear, but the possibility exists.

Regardless of what sort of technology the smart gun uses, the goal and the essential function of those technologies are the same. If these smart guns are only sold to law-abiding citizens and only fire in the hand of the buyer, then chances of the smart gun being used for an unlawful purpose or in accidental shootings should be substantially lower than for regular guns.

To some this “unlocking” technology is to firearms as air bags are to automobiles.¹⁹ Guns that only fire in the hands of authorized users greatly mitigate the threat of a person’s own gun being turned against her or of accidental shootings in the home.²⁰ To others, smart guns are

16. *See id.* at 90 (describing the difference between “behavioral” and “physiological” characteristics in “identifying” or “verifying” the user’s identity).

17. *See id.*

18. *See id.* at 92–93.

19. *See* Michael S. Rosenwald, “*We Need the iPhone of Guns*”: *Will Smart Guns Transform the Gun Industry?*, WASH. POST, Feb. 19, 2014, at A1, available at http://www.washingtonpost.com/local/we-need-the-iphone-of-guns-will-smart-guns-transform-the-gun-industry/2014/02/17/6ebe76da-8f58-11e3-b227-12a45d109e03_story.html (“Electronic chips inside the gun and the watch communicate with each other. If the watch is within close reach of the gun, a light on the grip turns green. Fire away. No watch means no green light. The gun becomes a paperweight.”).

20. Jonathan Turley, *The Smart Gun: Will New Technology Open Up a New Wave of Liability Claims Over “Dumb” Guns?*, JONATHAN TURLEY (Feb. 21, 2014), <http://jonathanturley.org/2014/02/21/the-smart-gun-will-new-technology-open-up-a-new-wave-of-liability-claims-over-dumb-guns/> (“It is technology that could substantially reduce accidental shootings at home as well as cases where officers have their guns taken from them in shootings.”).

an unnecessary hindrance on the ability to use a gun freely and will actually make gun owners less safe.²¹

B. The Debate Surrounding Smart Guns

1. Are Smart Guns Reliable?

The first, and perhaps largest, concern regarding smart guns is whether the technology will inhibit the gun's functionality because the internal processing system of the gun will result in a delay in use. This is particularly worrisome to police officers, who use guns in split-second decisions and need their guns to be ready to fire immediately.²² Such a delay not only threatens the usability of firearms in the hands of officers but also in the hands of anyone who is using the gun for self-defense, which also requires quick decision making.²³ In one study, the Office of Legislative Research to the Connecticut General Assembly gave great weight to the concern that "neither biometric or RFID systems are instantaneous as it takes time for the controller to disengage the safety on the gun."²⁴ At the same time, the report observes that there has yet to be any independent study on the reliability of smart guns.²⁵ Thus, it is difficult to gauge the appropriate weight to assign to studies about smart guns.

Thankfully, the technology is not likely be commercially available while it presents the risk of the gun not firing when needed.²⁶ The United States Department of Justice placed three smart guns in the "upper tier" of "production-ready design": iGun's M-2000, Armatix's Smart System, which consists of the iP1 pistol and iW1 watch, and Kodiak's Intelligun.²⁷ According to a study by Sandia National Laboratories, the speed of RFID smart guns was satisfactory for

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21. Joseph Steinberg, *Why You Should Be Concerned About the New "Smart Guns" (Whether You Love or Hate Guns)*, FORBES (May 4, 2014), <http://www.forbes.com/sites/josephsteinberg/2014/05/04/smart-guns/>.
22. See SANDIA NATIONAL LABORATORIES, *supra* note 11, at 50.
23. See Steinberg, *supra* note 21.
24. KEVIN MCCARTHY, CONN. GEN. ASSEMBLY, OFFICE OF LEGISLATIVE RESEARCH, 2013-R-0036, OLR RESEARCH REPORT: SMART GUNS 4 (2013).
25. *Id.*
26. *Cf.* SANDIA NATIONAL LABORATORIES, *supra* note 11, at 117 (observing that smart guns' reliability had not attained the police officers' ideal goals as of 1996).
27. MARK GREENE, NATIONAL INSTITUTE OF JUSTICE RESEARCH REPORT, A REVIEW OF GUN SAFETY TECHNOLOGIES 28–30 (June 2013) (ranking gun technology in tiers based on a scale of 1–9, where receiving a rank of 7–9 placed the technology in the "Upper Tier").

police officers as of 1996.²⁸ Eugene Volokh has observed that “if police departments are ready to use personalized guns,” then requiring such guns is less likely to be regarded as an actual change to the weapon’s reliability.²⁹ This argument cuts both ways because while police may be ready for the adoption of smart guns, the fact remains that no police department in the United States has employed the technology. Perhaps this reflects the broader issue that smart guns are not currently commercially available in the United States.³⁰ Regardless, the reliability of smart guns will remain a major issue until independent studies confirm or deny such concerns.

2. Will Smart Guns Really Keep Guns Out of the Wrong Hands?

The next important debate about smart guns is whether they really will reduce unnecessary gun violence by preventing unauthorized use. It is important to note that “[s]mart guns would have no impact on firearms already in circulation,”³¹ which is about 270,000,000 to 310,000,000 guns in the U.S.³² Thus, there is a strong argument that smart guns will have little to no impact on gun violence because there are already so many guns available that can be fired by anyone for any reason. Moreover, given the high number of lawful gun owners in the United States, and the small likelihood that a homicide would be “committed by a perpetrator using someone else’s gun,” there is no reason to expect a noticeable reduction in violence due to smart guns.³³ Some purport that suicides would not likely be affected by smart guns because most gun suicides take place

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28. See SANDIA NATIONAL LABORATORIES, *supra* note 11, at 117 (noting that for RFID equipped smart guns “speed [was] not a problem” although there was a lingering concern was that electromagnetic interference could render the gun unusable).
29. Eugene Volokh, *Implementing the Right to Keep and Bear Arms in Self-Defense*, 56 UCLA L. REV. 1443, 1492 (2009).
30. See MCCARTHY, *supra* note 24, at 4–5 (observing that, as of 2012, smart gun technology “does exist, at least for demonstration purposes, [but] it is still not” commercially available in a ‘handgun package’). The Armatrix iP1 described above was briefly for sale by the Oak Tree Gun Club in California, but the shop has since discontinued sales and denied ever carrying the gun, after receiving harsh criticism from gun rights advocates. Michael S. Rosenwald, *California Store’s Sale of Smart Gun Prompts a Furious Backlash*, WASH. POST, Mar. 8, 2014, at A2.
31. VIOLENCE POLICY CENTER, “SMART” GUNS BACKGROUNDER 1 (2013), available at https://www.vpc.org/fact_sht/Smart%20Gun%202013.pdf.
32. *United States—Gun Facts, Figures, and the Law: Gun Numbers*, GUN POLICY.ORG, <http://www.gunpolicy.org/firearms/region/united-states> (last visited Sept. 26, 2014).
33. See VIOLENCE POLICY CENTER, *supra* note 31, at 2 (noting that gun violence is typically the result of an authorized owner using a gun for an illegal purpose).

by an “authorized” gun user.³⁴ Regarding deaths of children using guns, the NRA has asserted that such statistics are usually exaggerated and so there is no real need for smart-gun technology to prevent those types of injuries.³⁵ Further, the gun is still likely to fire in a struggle where the authorized user and unauthorized user both have their hands on the gun.³⁶ Putting all the statistics aside, there is the possibility that the computer technology in smart guns could be hacked, rendering them usable by anybody.³⁷

Pro-smart gun pundits have fewer statistics to rely on but can still make a forceful argument. “One out of every six police officers who is killed in the line of duty is shot with his or her own gun.”³⁸ Smart guns would likely reduce this number. Additionally, if the owner is a parent who does not authorize her children to use the gun, the number of children killed or injured by guns would likely drop.³⁹ However, statistics regarding gun violence and the actual effects of increased gun regulation are typically unreliable and almost impossible to find.⁴⁰ Perhaps the best response for the pro-smart gun pundit is that keeping guns out of the hands of unauthorized users is a good thing by itself and statistics about gun violence are a byproduct.⁴¹ Given that statistics are not trustworthy, the most practical step in reducing gun violence may be to ignore the numbers and try to eliminate the cause of the violence and let that be enough. To that end, the pro-smart gun pundit has a strong argument

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34. *Id.* (describing an authorized gun user as an individual who owns a gun or has access to guns with parental permission).
 35. See *Fact Sheet: “Smart” Guns*, NRA-ILA (Jan. 27, 2000), <http://www.nra.org/news-issues/fact-sheets/2000/smart-guns.aspx> (remarking that the number of children killed due to gun violence was approximately 138 and that “anti-gun groups often grossly exaggerate the number of such shootings”).
 36. See Steinberg, *supra* note 21 (“[T]he ‘watch approach’ would seemingly not prevent a criminal from grabbing someone’s weapon and shooting him at point black range (as long as the gun was always near the watch). . . .”).
 37. *Id.*
 38. Matthew Pontillo, *Suing Gun Manufacturers: A Shot in the Dark*, 74 ST. JOHN’S L. REV. 1167, 1182 (2000).
 39. Approximately 1,500 children die from gun use every year. See *Injury Research and Policy*, NATIONWIDE CHILDREN’S, <http://www.nationwidechildrens.org/cirp-gun-safety> (last visited Sept. 16, 2014).
 40. See Volokh, *supra* note 29, at 1465 (identifying the inherent problem with attempting to predict the consequences of increased gun regulation).
 41. See generally Ram, *supra* note 11, at 221 (observing that in addition to preventing unauthorized users from firing them, smart guns “may also include means to prevent firing the weapon at certain people”).

because there can be little debate over whether a smart gun is the most effective means available to restrict gun use to those who are authorized to use them.

3. Expect to Pay a Premium Price

Finally, pundits disagree on the feasibility of implementing a regime making smart guns mandatory because of the technology's cost. This is an understandable concern considering that smart guns are likely to cost approximately twice as much as a normal handgun.⁴² “[A] possible target for a smart gun technology may be approximately 10% additional cost in volume production,” although a study showed that some police officers would be willing to spend twice as much on a reliable smart gun.⁴³ Even those who do not support the idea of making smart guns mandatory admit that the technology provides peace of mind worth paying for.⁴⁴

On the other hand, if there are questions about a smart gun's reliability while the product's cost doubles that of reliable, normal handguns, there is no sense in forcing the consumer to buy such a product.⁴⁵ In fact, “[g]un-store owners say there is no market for such guns and that they have never had a single customer inquiry.”⁴⁶ It seems unfair to require the public to buy smart guns, especially when the technology is so expensive that even government agencies could

42. *Compare Domestic MSRP Price List 2014*, COLT (Jan. 1, 2014), available at <http://www.colt.com/DesktopModules/Bring2mind/DMX/Download.aspx?EntryId=846&PortalId=0&DownloadMethod=attachment> (pricing various models of the Colt .45 ACP at approximately \$1,000), with AWR Hawkins, *Armatix Ip1 “Smart Gun” Only Chambered In .22lr, Costs \$1,800*, BREITBART (May 4, 2014), <http://www.breitbart.com/Big-Government/2014/05/04/Much-Touted-Smart-Gun-Only-Chambered-In-22-LR-Costs-1-800>.

43. See SANDIA NATIONAL LABORATORIES, *supra* note 11, at 40–41 (discussing various issues associated with the cost of smart guns).

44. See, e.g., Eugene Volokh, *Smart Guns, Electromagnetic Pulse, and Planning for Unknown-Probability Dangers*, THE VOLOKH CONSPIRACY (May 23, 2014), <http://www.washingtonpost.com/news/volokh-conspiracy/wp/2014/05/23/smart-guns-electromagnetic-pulse-and-planning-for-unknown-probability-dangers/> (“If I had a child, and smart guns were reliable enough, I might well be willing to spend some extra money to get a smart gun instead of my current gun.”).

45. Cf. Eugene Volokh, “*Smart Guns*,” THE VOLOKH CONSPIRACY (May 22, 2014), <http://www.washingtonpost.com/news/volokh-conspiracy/wp/2014/05/22/smart-guns-2/> (observing that “we can see that it’s doable, we can expect that it will at one point make it big, inventors and manufacturers have lots of incentive to make it work—but it takes time for it to develop to the point that it works for consumers”).

46. Pokin, *supra* note 1.

not likely afford it.⁴⁷ Between the questionable reliability and the lack of demand for smart guns, the price will not likely drop anytime soon.

II. SECOND AMENDMENT JURISPRUDENCE AND AN ANALYTICAL FRAMEWORK

A. District of Columbia v. Heller

*District of Columbia v. Heller*⁴⁸ is the seminal U.S. Supreme Court case addressing the right to bear arms under the Second Amendment. An understanding of what rights are protected under *Heller* is essential to moving forward with an analysis on the constitutionality of current or future gun laws. At the same time, much of the analysis in *Heller* has little bearing on the scope of this Comment and will not be discussed.

The suit in *Heller* arose when Dick Heller applied for a license to own a handgun in his home in the District of Columbia.⁴⁹ Essentially, the District of Columbia regulated gun ownership in two steps. First, D.C. CODE § 7-2502 did not permit a person to own a handgun without a certificate from the chief of police.⁵⁰ Second, D.C. CODE § 7-2502 required that a handgun, present lawfully in the owner's home, be maintained "unloaded and disassembled or bound by a trigger lock or similar device."⁵¹ Pursuant to this law, the District of Columbia refused to issue such a license to Heller.⁵² Heller then filed suit to enjoin the District of Columbia from enforcing the law.⁵³

47. SANDIA NATIONAL LABORATORIES, *supra* note 11, at 40 (observing that police departments function on a minimal budget and will not be able to afford smart guns).

48. 554 U.S. 570 (2008).

49. *Id.* at 575.

50. *Id.* (citing D.C. CODE §§ 22-4504(a) and 22-4506 (2001)).

51. *Id.* (quoting D.C. CODE § 7-2502.02 (2001)).

52. *See id.* at 574–75 (describing the restrictions on handgun ownership imposed by D.C. CODE §§ 7-2501.01–2502.02 (2001), which prevented the ownership of a handgun without a certificate issued by the Chief of Police, and in the event that a person did own a handgun in her home, the handgun was required to be effectively unusable). *See generally* D.C. CODE §§ 7-2501.01–2502.02 (2001) (detailing the circumstances under which ownership of a handgun is legal).

53. *See Heller*, 554 U.S. at 575–76 ("He thereafter filed a lawsuit in the Federal District Court for the District of Columbia seeking, on Second Amendment grounds, to enjoin the city from enforcing the bar on the registration of handguns, the licensing requirement insofar as it prohibits the carrying of a firearm in the home without a license, and the trigger-lock requirement insofar as it prohibits the use of 'functional firearms within the home.'").

In a 5–4 decision, the Supreme Court struck down the District of Columbia law.⁵⁴ The crux of the majority opinion is that the federal government may not restrict an individual’s right to self-defense, as protected in the Second Amendment, by prohibiting the possession of an operable handgun in the home.⁵⁵ This Comment discusses how Justice Scalia, writing for the majority, arrived at that conclusion using an originalism analysis that bifurcated the scope of the Second Amendment. After discerning the scope, Justice Scalia determined that the District of Columbia law infringed upon the right to keep and bear arms. But the Supreme Court concluded that the District of Columbia law infringed on those rights, not because the law failed a constitutional standard of review but rather because prohibitions of the type embodied in the District of Columbia law could be assumed to offend Second Amendment rights under any analysis.

1. The Scope of the Second Amendment Under *Heller*

Justice Scalia began by separating the text of the Second Amendment into the “prefatory clause” and the “operative clause.”⁵⁶ His analysis of the operative clause started by determining to what group of people the Second Amendment refers in “the right of the people.”⁵⁷ Through examining the term “right of the people” as used elsewhere in the Constitution, Scalia established that the starting point for his analysis was “a strong presumption that the Second Amendment right is exercised individually and belongs to all Americans,” not just those Americans serving in some sort of militia.⁵⁸

54. *Id.* at 570–72, 635.

55. *See id.* at 635 (“In sum, we hold that the District’s ban on handgun possession in the home violates the Second Amendment, as does its prohibition against rendering any lawful firearm in the home operable for the purpose of immediate self-defense. Assuming that *Heller* is not disqualified from the exercise of Second Amendment rights, the District must permit him to register his handgun and must issue him a license to carry it in the home.”).

56. *Id.* at 577.

57. *See id.* at 579 (discussing the term “right of the people” as used in the Second Amendment).

58. *Id.* at 581. Stevens rigorously disagreed with this analysis in his dissent. *See id.* at 644 (Stevens, J., dissenting). Stevens’s dissenting opinion is due, in large part, to a disagreement about whether the Second Amendment protects a collective right or an individual right. While Justice Stevens admits that the Second Amendment protects a right that “can be enforced by individuals” his evaluation of the scope of that right conforms to the collective-right school of thought. *Id.* at 636. For an excellent discussion on the “collective right theory,” see Roger I. Roots, *The Approaching Death of the Collective Right Theory of the Second Amendment*, 39 DUQ. L. REV. 71, 73–83 (2000) (discussing how the collective right theory has fallen out of favor).

The majority went on to say that the meaning of “to keep and bear arms” does not limit the type of weapons protected under the Second Amendment to weapons in “military use.”⁵⁹ After discerning that the right is unconnected with military service, Justice Scalia determined that the essential purpose of the right codified in the Second Amendment was individual self-defense.⁶⁰ The Second Amendment did not create this right to self-defense; it is innate.⁶¹ Thus, the purpose of the Second Amendment was only to enshrine it.⁶²

Heller next explained the meaning of the prefatory clause of the Second Amendment. First, the prefatory clause’s use of the term “well-regulated militia” did not limit the amendment’s application to those with some connection to formal military service.⁶³ When the Framers drafted the Second Amendment, a standing army was a subsection of able-bodied men who were part of a “militia” and not the other way around.⁶⁴ Second, the Second Amendment secures a free state through the preservation of a militia by (1) enabling all people to “repel[] invasions and suppress[] insurrections,” (2) “render[ing] large standing armies unnecessary,” and (3) enabling the people to better “resist tyranny.”⁶⁵ While this interpretation may, at first, seem to tie the Second Amendment to service in some sort of militia, Justice Scalia determined that the prefatory clause kept the individual right to bear arms intact. The prefatory clause serves to prevent the government from eradicating a militia.⁶⁶

2. Lawful Regulations and Impermissible Violations of Second Amendment Rights

The Court’s interpretation of the Second Amendment entirely abrogated the District of Columbia law,⁶⁷ and in slamming the door

59. *Heller*, 554 U.S. at 589.

60. *Id.* at 592.

61. *Id.*

62. *Id.*

63. *See id.* at 595 (reiterating the definition of this term as espoused in *United States v. Miller*, 307 U.S. 174, 179 (1939)).

64. *Id.* at 596.

65. *See id.* at 597–98 (listing the purpose for which the Framers included the term “security of a free state”). The purpose of the prefatory clause is to “prevent the elimination of the militia”; thus, the Second Amendment does have some connection to organized armed service. *Id.* at 599. However, the strength of that connection is not within the scope of this Comment.

66. *Id.* at 599.

67. *See id.* at 635 (ruling that the District of Columbia’s ban on keeping a usable firearm in one’s home violated the Second Amendment).

on that law, Justice Scalia set two important precedents. First, Justice Scalia admitted that the Second Amendment does not protect the right of gun possession for all people and does not protect gun possession for any purpose.⁶⁸ Second, the majority did not use a “standard of review” analysis to strike down the District of Columbia law but found the law infringed on rights on a categorical basis.

Although *Heller*’s majority was protective of Second Amendment rights, it acknowledged that those rights are not unlimited.⁶⁹ This was not a revelation discovered in *Heller* but rather an observation that in the Second Amendment’s history there are “longstanding prohibitions on the possession of firearms by felons and the mentally ill, or laws forbidding the carrying of firearms in sensitive places . . . [and] laws imposing conditions and qualifications on the commercial sale of firearms.”⁷⁰ In fact, Justice Scalia recognized that this was not an exhaustive list of “presumptively lawful” regulations of the right to bears arms.⁷¹

At the same time, the majority did not give much guidance to courts discerning when a regulation is “presumptively lawful” or when it impermissibly infringes upon Second Amendment rights. Typically, when a constitutional right is at issue in a case, the Supreme Court undertakes a “standard of review” analysis to determine if a law impermissibly burdens those constitutional rights.⁷² In *Heller*, Justice Scalia did not establish what standard of review applies to laws that are alleged to infringe on Second Amendment rights; in fact, he acknowledged that the Court was deliberately avoiding the issue.⁷³ However, the majority did give two guideposts for future courts presented with similar issues. First, rational basis is likely not the appropriate standard of review when analyzing laws that regulate rights within the scope of the Second Amendment because rational

68. *Id.* at 595.

69. *Id.* at 626.

70. *Id.* at 626–27.

71. *Id.* at 627 n.26, 628 n.27.

72. See David Chang, *Structuring Constitutional Doctrine: Principles, Proof, and the Functions of Judicial Review*, 58 RUTGERS L. REV. 777, 779–80 (2006) (describing the types of scrutiny that typically apply to corresponding constitutional rights). See also Jason T. Anderson, *Second Amendment Standards of Review: What the Supreme Court Left Unanswered in District of Columbia v. Heller*, 82 S. CAL. L. REV. 547, 567 (2009) (explaining that it “makes sense to start with a discussion of fundamental rights, as the Court has actually provided some guidelines for how to determine if a right is fundamental. Strict scrutiny is generally thought to apply to ‘any governmental actions which limit the exercise of ‘fundamental’ constitutional rights’”).

73. See *Heller*, 554 U.S. at 628 n.27 (observing Justice Breyer’s criticism for not announcing a standard of review).

basis would not do justice to the “substance of a constitutional guarantee.”⁷⁴ Second, Justice Scalia expressed why no standard of review was needed:

Under any of the standards of scrutiny that we have applied to enumerated constitutional rights, banning from the home “the most preferred firearm in the nation to ‘keep’ and use for protection of one’s home and family,” would fail constitutional muster.⁷⁵

Scalia believed that the District of Columbia law so obviously infringed on Second Amendment rights that the Court needed no analysis to deem it unconstitutional. In other words, the Supreme Court determined that the kind of regulations at issue in *Heller* were categorically unjustifiable violations of Second Amendment rights.⁷⁶ Moreover, the majority specifically barred an analysis of the Second Amendment rights that balanced the burden on protected interests as compared with the “statute’s salutary effect upon important government interest.”⁷⁷ Such a strong position disfavoring regulation of Second Amendment rights is arguably harsher than strict scrutiny because it does not inquire into the purpose or tailoring of the law. Thus, it seems *Heller* did not give much hope for those in favor of gun control.

In summary, an inquiry on whether a particular gun law is constitutional under *Heller* should proceed by asking whether the regulation infringes on the scope of the Second Amendment according to the prefatory or operative clauses. If a law does impede the exercise of the right to bear arms in the way described in *Heller*, the court conducts no analysis, and the law is struck down. At the same time, certain regulations are almost categorically permissible, or “presumptively lawful.” While this inquiry is illuminating, it is far

74. *Id.* (“Justice Breyer correctly notes that this law, like almost all laws, would pass rational-basis scrutiny. But rational-basis scrutiny is a mode of analysis we have used when evaluating laws under constitutional commands that are themselves prohibitions on irrational laws. . . . In those cases, ‘rational basis’ is not just the standard of scrutiny, but the very substance of the constitutional guarantee. Obviously, the same test could not be used to evaluate the extent to which a legislature may regulate a specific, enumerated right, be it the freedom of speech, the guarantee against double jeopardy, the right to counsel, or the right to keep and bear arms.”) (citations omitted).

75. *Id.* at 628–29.

76. *See* *Ezell v. City of Chicago*, 651 F.3d 684, 703 (7th Cir. 2011); *United States v. Skoien*, 614 F.3d 638, 641 (7th Cir. 2010); *Anderson*, *supra* note 72, at 578 (discussing categorical violations of Second Amendment rights analogized to categorical violations of First Amendment rights).

77. *Heller*, 554 U.S. at 634.

from exhaustive because it does not deliver “a coherent method with which to evaluate Second Amendment restrictions.”⁷⁸ In particular, *Heller* did not establish the scope of the Second Amendment’s right to bear arms or what level of scrutiny applies to laws burdening the right to bear arms.⁷⁹ Consequently, the development of a Second Amendment analysis has been left to lower courts and scholars.⁸⁰

B. Post-Heller Courts and Eugene Volokh’s Framework

Since the landmark decision in *Heller*, federal courts have struggled to articulate an analysis for gun regulations that purportedly violate the Second Amendment right to keep and bear arms. In order to determine the constitutionality of laws mandating that guns be equipped with smart-gun technology, this Comment must lay out a practical analysis. Thus, this Comment first discusses why adopting the Second Amendment claims framework discussed by Eugene Volokh agrees with Second Amendment rights and jurisprudence.⁸¹ Second, this Comment will address the “how” restriction described by Volokh by looking at *Jackson v. City and County of San Francisco*.⁸² Next, this Comment discusses how federal courts have dealt with “who” restrictions by reviewing cases from circuit courts. Finally, this Comment discusses how the Second Circuit handled what Volokh describes as an “expenses” restriction. The result is that no constitutional objection to smart-gun laws would likely succeed, using the analysis trending in federal courts.

1. Restrictions on “How,” “Who,” and “Expenses”
According to Volokh

Predominantly, federal courts cite the lack of guidance regarding what standard of review applies to right-to-bear-arms claims as the

78. Jeff Golimowski, *Pulling the Trigger: Evaluating Criminal Gun Laws in a Post-Heller World*, 49 AM. CRIM. L. REV. 1599, 1600 (2012).

79. See Anderson, *supra* note 72, at 547–48 (“But the Court left the door open for a new debate to begin in the Second Amendment context: what standard of review applies to legislation that restricts an individual’s right to bear arms?”).

80. See Andrew Peace, *A Snowball’s Chance in Heller: Why Decastro’s Substantial Burden Standard Is Unlikely to Survive*, 54 B.C. L. REV. 175, 180 (2013), available at <http://lawdigitalcommons.bc.edu/bclr/vol54/iss6/14> (“Since the Supreme Court handed down *Heller*, courts have struggled with what standard to use when evaluating Second Amendment challenges.”).

81. See Volokh, *supra* note 29, at 1446 (“I sometimes offer my views on how particular gun-rights controversies should be resolved, but more often I just suggest a structure for analyzing those controversies.”).

82. 746 F.3d 954 (9th Cir. 2014).

biggest problem when analyzing those claims.⁸³ But as Eugene Volokh points out, the bigger issue is that federal courts have not recognized “different categories of justification for a restriction on the right to bear arms.”⁸⁴ These categories of regulations mirror those recognized in First Amendment right cases and should apply in Second Amendment cases for two reasons. First, the Supreme Court recognized that traditional limitations on the right to bear arms were similar to the limitations recognized in First Amendment free speech cases in *Heller*.⁸⁵ Second, it makes sense to differentiate between restrictions that directly concern a constitutional right and other measures that appear to do so by regulating a certain right but that upon further investigation are outside that right’s scope.⁸⁶ Volokh developed a framework based on these ideas. In that framework, different types of restrictions fit into different categories, and the different categories invoke corresponding standards of review.⁸⁷ By identifying the type of gun regulation, a court is more apt to apply a standard of review that is appropriate considering how the regulation affects the rights at issue, directly or tangentially.⁸⁸

Volokh discusses three categories of restrictions that are relevant to this Comment’s analysis. First, Volokh describes some gun regulations as “how” restrictions.⁸⁹ This type of restriction tends to place requirements on how guns are to be stored: loaded or unloaded, using trigger locks, keeping the gun disassembled, etc.⁹⁰ This type of restriction was contemplated by the Court in *Heller*, where the District of Columbia law prohibited keeping a gun in the home if the gun was not unloaded or disassembled.⁹¹ According to Volokh, self-

83. See, e.g., *United States v. White*, 593 F.3d 1199 (11th Cir. 2010); *United States v. Chovan*, 735 F.3d 1127 (9th Cir. 2013).

84. Volokh, *supra* note 29, at 1446.

85. *District of Columbia v. Heller*, 554 U.S. 570, 595 (2008). See also *Ezell v. City of Chicago*, 651 F.3d 684, 702 (7th Cir. 2011); *United States v. Skoien*, 614 F.3d 638, 641 (7th Cir. 2010).

86. See Volokh, *supra* note 29, at 1449 (“Sometimes a constitutional right isn’t violated by a restriction because the restriction is outside the terms of the right as set forth by the constitution. The restriction may still implicate some of the central concerns that prompted the recognition of the right, but the constitutional text, the original meaning, or our understanding of background constitutional norms may lead us to conclude that the right is narrower than its purposes may suggest.”).

87. *Id.* at 1446.

88. *Id.* at 1447.

89. *Id.* at 1534.

90. *Id.*

91. See *District of Columbia v. Heller*, 554 U.S. 570, 574–75 (2008) (describing the restrictions on handgun ownership imposed by D.C.

defense requires a gun to be ready at a moment's notice, so these types of burdens are typically subject to strict scrutiny for placing a substantial burden on Second Amendment rights.⁹²

The next type of restriction is a “who” restriction, which bans certain classes of people from possessing a firearm.⁹³ In *Heller*, the Court recognized this type of restriction as “presumptively lawful” and observed that such prohibitions had been in place since the inception of the Second Amendment.⁹⁴ Generally, these types of laws place restrictions on gun ownership for those who have been convicted of certain crimes, who are under a certain age, or who have a mental disability.⁹⁵ Volokh contends that such restrictions should receive strict scrutiny because while they may be justifiable, they are imposing a substantial burden on an entire class's Second Amendment rights.⁹⁶ This seems to go against the Supreme Court's determination in *Heller* that such restrictions are “presumptively lawful,” so the level of scrutiny that applies to these restrictions is unclear.⁹⁷

The last type of restriction relevant to this discussion are the expenses attached to gun ownership. These sorts of restrictions show up in a number of ways: high taxes, raising the price of the gun, or fees on permits.⁹⁸ The burden this imposes on gun ownership is variable and may shift depending on the purpose of the fee and the additional amount that the individual must pay.⁹⁹ However, if the government were to “materially raise” the “price of guns and ammunition, or bans on inexpensive firearms,” then the regulation would constitute a “substantial burden” demanding strict scrutiny.¹⁰⁰ Put another way, the government may hike up prices on gun ownership, but when the prices become a deterrent to owning a gun,

CODE §§ 7-2501.01–2502.02 (2001), which prevented the ownership of a handgun without rendering the handgun effectively unusable). See generally D.C. CODE §§ 7-2501.01–2502.02 (2001) (detailing the circumstances under which ownership of a handgun is legal).

92. See Volokh, *supra* note 29, at 1534 n.380 (discussing *Heller* and observing that such laws “substantially burden” the right to bear arms).

93. *Id.* at 1493.

94. *Heller*, 554 U.S. at 627 n.26.

95. See Volokh, *supra* note 29, at 1498–1515 (discussing the various classes of individuals who cannot own a gun lawfully).

96. *Id.* at 1496–97.

97. *Heller*, 554 U.S. at 627 n.26. This issue is addressed in detail *infra* Part II.B.2.

98. See Volokh, *supra* note 29, at 1542–43 (discussing how increasing the cost of owning a firearm may burden Second Amendment rights).

99. See *id.* at 1542–43.

100. *Id.* at 1542.

the measure is presumptively unconstitutional. Volokh compares such measures to imposing a 24-hour waiting period for women seeking abortions; the measure is permissible until it deters exercising the right instead of regulating certain aspects of exercising that right.¹⁰¹

2. Volokh's Categories in Circuit Courts

Although circuit courts do not seem to be aware of it, they have developed and applied their own versions of Volokh's analysis as a way to deal with the gaps in *Heller's* analysis. The result has been that most gun regulations are reviewed under intermediate scrutiny or something lower, even if doing so required the court to veer from the Supreme Court's decision in *Heller*. The most noticeable example of federal courts creating an analysis for Second Amendment claims is seen in "who" restrictions. Next, this Comment discusses the Ninth Circuit's handling of a "how" restriction. Finally, this Comment looks at the Second Circuit's ruling regarding "expenses" restrictions.

a. Bans Resulting from Domestic Misdemeanors as a "Who" Restriction

*United States v. Chovan*¹⁰² is one of many circuit court cases to rule on the constitutionality of provisions contained in 18 U.S.C. § 922.¹⁰³ The particular provision at issue in the case prohibited a person from possessing or owning a firearm if that person had "been convicted in any court of a misdemeanor crime of domestic violence."¹⁰⁴ Because it bans a class of people from owning a firearm, 18 U.S.C. § 922(g)(9) is an ideal example of a "who" restriction. It also has been a prolific topic of litigation concerning Second Amendment rights since *Heller*.¹⁰⁵ Consequently, analysis regarding this provision has become very popular in addressing "who" restrictions.

101. *See id.* at 1544 (describing how waiting periods for abortions are constitutional as long as they are not a "substantial obstacle" to getting an abortion).

102. 735 F.3d 1127 (9th Cir. 2013).

103. 18 U.S.C. § 922 (2012) is titled "Unlawful Acts" and places statutory restraints on gun ownership, sale, possession, purchase, and various other aspects of gun regulation.

104. 18 U.S.C. § 922(g)(9) (2012).

105. *See United States v. White*, 593 F.3d 1199 (11th Cir. 2010); *United States v. Chester*, 628 F.3d 673 (4th Cir. 2010); *United States v. Skoien*, 614 F.3d 638 (7th Cir. 2010); *United States v. Booker*, 644 F.3d 12 (1st Cir. 2011). *See also United States v. Williams*, 616 F.3d 685 (7th Cir. 2010).

Based on circuit court cases applying the test announced in *United States v. Marzzarella*,¹⁰⁶ *Chovan* conducted the increasingly popular two-part inquiry to discern whether 18 U.S.C. § 922(g)(9) violated the Second Amendment.¹⁰⁷ In the first part of the analysis, the Ninth Circuit asked “whether the challenged law burden[ed] conduct protected by the Second Amendment.”¹⁰⁸ Historical evidence indicated that gun bans for felons did not exist before World War I, and at that, there is no deep history in the United States of misdemeanor convictions acting as a bar to gun ownership.¹⁰⁹ The court acknowledged that this regulation was similar to gun bans for convicted felons, which the Supreme Court recognized as presumptively lawful but did not categorically exclude them from review; they can still be unconstitutional in effect.¹¹⁰ The court was therefore persuaded that *Chovan* had a right to a gun for the purpose of self-defense, and, therefore, 18 U.S.C. § 922(g)(9) touched on Second Amendment rights.¹¹¹

The court then asked what level of scrutiny should apply to 18 U.S.C. § 922(g)(9).¹¹² This analysis was based on two queries: “(1)

106. 614 F.3d 85, 89 (3d Cir. 2010). In *Marzzarella*, the defendant challenged the constitutionality of 18 U.S.C. § 922(k) (2006) by purchasing a gun with an “obliterated serial number.” *Id.* at 87. The Third Circuit determined that intermediate scrutiny was appropriate because the regulation at issue was one of the “presumptively lawful” and “longstanding limitations [that] are exceptions to the right to bear arms” announced in *Heller*. *Id.* at 91 (citing *District of Columbia v. Heller*, 554 U.S. 570, 627 n.26 (2008)). Accordingly, the court found that 18 U.S.C. § 922(k) did burden Second Amendment rights, but that burden was de minimis, so the law passed constitutional muster. *Id.* at 94, 97, 99. The Court recognized that it was sailing into uncharted waters and so, as a precaution, also conducted a strict-scrutiny analysis and still found that 18 U.S.C. § 922(k) was constitutional. *Id.* at 99. The court likely did so knowing that its analysis was based on how it perceived Second Amendment rights, not a prior determination by the Supreme Court or other authoritative law. *See* *Anderson*, *supra* note 72, at 556 (“[T]he use of different standards of review reflects and implements a hierarchy of constitutional values, and that the choice of a particular standard of review reflects the Court’s value determination of the right at issue as compared to other constitutionally protected rights.”).

107. *See Chovan*, 735 F.3d at 1134–36 (reviewing the cases that have applied *Marzzarella*’s two-part inquiry). *See also White*, 593 F.3d at 1205; *Chester*, 628 F.3d at 680; *Skoien*, 614 F.3d at 641.

108. *Chovan*, 735 F.3d at 1136.

109. *See id.* at 1137.

110. *See id.*

111. *Id.*

112. *Id.* at 1136.

how close the law comes to the core of the Second Amendment right, and (2) the severity of the law's burden on the right."¹¹³ To discern how close the law was to the right to bear arms, the Ninth Circuit looked to *Heller*, which gave the scope of Second Amendment rights.¹¹⁴ The court found that the law at issue did not burden a "core" Second Amendment right because those "core" rights only apply to "law-abiding responsible citizens"—not to domestic violence convicts.¹¹⁵ But the court did find that 18 U.S.C. § 922(g)(9) substantially burdened some other Second Amendment rights by functioning as a lifetime ban on gun ownership.¹¹⁶ The court determined that the lack of infringement on "core" rights with the "substantial burden" on others demanded that the court apply intermediate scrutiny.¹¹⁷

In applying intermediate scrutiny, the court found that 18 U.S.C. § 922(g)(9)'s "prohibition on gun possession by domestic violence misdemeanants [was] substantially related to the important government interest of preventing domestic gun violence."¹¹⁸ Thus, it passed intermediate scrutiny, and Chovan was banned from owning a gun for life.

b. Jackson v. City and County of San Francisco, and the "How" Restriction.

In *Jackson v. City and County of San Francisco*,¹¹⁹ the Ninth Circuit evaluated the constitutionality of a San Francisco law requiring guns stored in the home to be "stored in a locked container or disabled with a trigger lock that has been approved by the California Department of Justice."¹²⁰ This was the most exemplary case of a "how" restriction since *McDonald v. Chicago*.¹²¹ Using the

113. *Id.* at 1138 (quoting *Ezell v. City of Chicago*, 651 F.3d 684, 703 (7th Cir. 2011)) (internal quotation marks omitted).

114. *Id.*

115. *Id.*

116. *Id.*

117. *Id.*

118. *See id.* at 1140–41 ("We hold that the government has thereby met its burden to show that § 922(g)(9)'s prohibition on gun possession by domestic violence misdemeanants is substantially related to the important government interest of preventing domestic gun violence."). *See also* *United States v. Skoien*, 614 F.3d 638, 642–44 (7th Cir. 2010).

119. *Jackson v. City and County of San Francisco*, 746 F.3d 953 (9th Cir. 2014).

120. *Id.* at 958 (quoting *SAN FRANCISCO, CAL., POLICE CODE* § 4512 (2013)).

121. 130 S. Ct. 3020 (2010). *McDonald* is the most notable Supreme Court case to discuss Second Amendment rights since *Heller*. But while the

same analysis that applied in *Chovan* and other “who” restriction cases, the court upheld the San Francisco ordinance using intermediate scrutiny.¹²²

In the first part of the court’s analysis, the Ninth Circuit asked “whether the challenged law burden[ed] conduct protected by the Second Amendment.”¹²³ The court answered that question by engaging in a discussion of firearm regulations that have been upheld as constitutional.¹²⁴ The Ninth Circuit could not find that the law resembled any presumptively lawful regulation, “because it applie[d] to law-abiding citizens, and impose[d] restrictions on the use of handguns within the home.”¹²⁵ Thus, the San Francisco Police Code § 4512 was within the scope of rights protected in the Second Amendment.

Next the court determined what level of scrutiny was appropriate.¹²⁶ This analysis consisted of the same two parts as in *Chovan*: (1) how close is the law to Second Amendment rights and (2) with what severity does the law burden that right.¹²⁷ *Heller* demanded the court consider the San Francisco law a “core” burden on the Second Amendment because keeping a gun stored in a locked container or disabled with a trigger lock makes it more difficult for the owner to use the gun in self-defense.¹²⁸ However, this mandate on

Second Amendment may have taken center stage in the Court’s analysis in *McDonald*, it did not have the lead role. The facts of *McDonald* are similar to *Heller* but with one key difference: the law at issue in *McDonald* was a city ordinance effectively “banning hand gun possession by almost all private citizens” instead of a federal law. *Id.* at 3026. Thus, *McDonald* was a case that dealt primarily with the incorporation of Second Amendment Rights—not with whether the manner in which the Chicago ordinance regulated gun possession was constitutional. *Id.* at 3036. *See also* Suja A. Thomas, *Nonincorporation: The Bill of Rights after McDonald v. Chicago*, 88 NOTRE DAME L. REV. 159, 177–80 (2012) (analyzing the Supreme Court’s decision to incorporate the Second Amendment through the Fourteenth Amendment). Discussing *McDonald* would be outside the scope of this Comment because its only relevance to this discussion is that it affirmed *Heller*. *See McDonald*, 130 S. Ct. at 3036.

122. *Jackson*, 746 F.3d at 958, 961.

123. *Id.* at 960 (quoting *United States v. Marzzarella*, 614 F.3d 85, 89 (3d Cir. 2010)).

124. *Id.* at 962–63.

125. *Id.* at 963.

126. *Id.* at 960 (quoting *Marzzarella*, 614 F.3d at 89).

127. *Id.* at 963 (citing *United States v. Chovan*, 735 F.3d 1127, 1137) (9th Cir. 2013)).

128. *Id.* at 964 (citing *District of Columbia v. Heller*, 554 U.S. 570, 630 (2008)).

a gun's storage did not directly burden Second Amendment core rights but instead

indirectly burden[ed] the ability to use a handgun, because it require[d] retrieving a weapon from a locked safe or removing a trigger lock. But because it burdens only the “*manner* in which persons may exercise their Second Amendment rights,” the regulation more closely resembles a content-neutral speech restriction that regulates only the time, place, or manner of speech. The record indicates that a modern gun safe may be opened quickly.¹²⁹

Thus, the Ninth Circuit applied intermediate scrutiny to San Francisco Police Code § 4512.¹³⁰

Under intermediate scrutiny, the Ninth Circuit applied a two-prong analysis that inquired whether the government interest in imposing the law was “substantial or important.”¹³¹ The court accepted that San Francisco had a significant interest in preventing accidental gun use against family and friends, suicides, and in restricting children’s access to guns.¹³² The next part of the inquiry involved whether the law was sufficiently tailored to the government interest.¹³³ The law accomplished its goals by preventing accidental gun violence within the home because it restricted access to guns from children and could prevent suicides.¹³⁴ Although, if the gun was needed for self-defense, the trigger lock or safe would restrict access to the gun by only a “few seconds.” Thus, this burden did not persuade the court that the law was not sufficiently tailored,¹³⁵ and the Ninth Circuit upheld the San Francisco Police Code § 4512.¹³⁶

c. *Kwong v. Bloomberg and “Fee Jurisprudence”*

The last case that illuminates the constitutionality of smart guns is the Second Circuit’s decision in *Kwong v. Bloomberg*.¹³⁷ At issue in

129. *Id.* (internal citation omitted). This analysis is dubious considering that in *Heller* the Supreme Court seemed to categorically strike down the District of Columbia law’s mandate to keep a gun locked by a trigger or disassembled and unloaded. *See Heller*, 554 U.S. at 635.

130. *Jackson v. San Francisco*, 746 F.3d 954, 965 (9th Cir. 2014).

131. *Id.* at 965.

132. *See id.* at 965–66.

133. *Id.* at 966.

134. *See id.*

135. *Id.*

136. *Id.*

137. 723 F.3d 160 (2d Cir. 2013), *cert. denied*, 134 S. Ct. 2696 (2014).

Kwong was a New York City administrative law that set the licensing fee for owning a gun in New York City at \$340.¹³⁸ Shui Kwong, the Second Amendment Foundation, and the New York State Rifle and Pistol Association claimed that a \$340 licensing fee placed too great a burden on Second Amendment rights and could not pass constitutional scrutiny.¹³⁹ The Second Circuit disagreed.¹⁴⁰

The court in *Kwong* considered the licensing fee under “fee jurisprudence,” which is typically used in assessing the constitutionality of fees government entities charge for “expressive activities protected by the First Amendment.”¹⁴¹ The permissibility of such a fee is based on the extent to which it offsets the cost of regulating the protected activity.¹⁴² New York City would incur costs of \$343.49 for each gun license application it received, and thus the licensing fee was permissible because it did not exceed that cost.¹⁴³ Since the fee was not a substantial burden, the Second Circuit applied a level of scrutiny that would allow a “marginal, incremental or even appreciable restraint” on Second Amendment rights.¹⁴⁴ The court noted that “the fact that the licensing regime makes the exercise of one’s Second Amendment rights more expensive does not necessarily mean that it ‘substantially burdens’ that right.”¹⁴⁵ In dicta, the Second Circuit went as far as to say that the New York City law would pass intermediate scrutiny if the court chose to apply it.¹⁴⁶ However, the court in *Kwong* did not apply intermediate scrutiny. The court found that a fee did not actually impose a burden “on the

138. *Kwong*, 732 F.3d at 161. *See generally* N.Y.C. ADMIN CODE § 10-131(a)(3) (2013) (“Every applicant to whom a license has been issued by any person other than the police commissioner, except as provided in paragraph five of this subdivision, for a special permit from the commissioner granting it validity within the city of New York, shall pay for such permit a fee of three hundred forty dollars, for each renewal a fee of three hundred forty dollars, for each replacement of a lost permit a fee of ten dollars.”).

139. *Kwong*, 732 F.3d at 165.

140. *Id.*

141. *Id.*

142. *See id.* (“Put another way, imposing fees on the exercise of constitutional rights is permissible when the fees are designed to defray (and do not exceed) the administrative costs of regulating the protected activity.”).

143. *Id.* at 166.

144. *Id.* at 167.

145. *Id.* at 167–68.

146. *See id.* at 168 (observing that New York City has a substantial interest in reducing gun violence, and recovering costs associated with licensing guns would allow the city to promote that agenda).

exercise of constitutional rights” as long as the cost functioned to “defray” without exceeding the cost of regulating Second Amendment rights.¹⁴⁷

III. APPLYING THE ANALYSIS TO SMART-GUN TECHNOLOGY

This Comment’s review and critique of Second Amendment scholarship hardly does justice to the wealth of knowledge available. While this Comment has discussed various tests that have been applied to laws touching on Second Amendment rights, it makes no suggestion on which is correct. Rather, it only applies the various tests to what facts are available regarding smart guns in order to determine whether there is currently a constitutional basis upon which to make an objection to a law mandating the implementation of smart-gun technology. The relevant restrictions are “how” restrictions, “who” restrictions, and “expense” restrictions.¹⁴⁸

A. A “How” Restriction

The “how” restriction was at the center of the opinions in *Heller* and *Jackson* because how the guns were stored slowed access to the guns in cases of immediate self-defense.¹⁴⁹ Similarly, the main concerns discussed previously in Part I.B.1 are whether smart guns will be reliable and fire immediately when needed. To determine this issue, this Comment has discussed how those concerns fit within the analysis of *Heller* and *Jackson*, respectively.¹⁵⁰ Applying these

147. *Id.* at 165.

148. Requiring that only smart guns be sold may raise additional concerns as a “what” restriction, by effectively banning the use of all guns not outfitted with smart-gun technology. *See generally* Volokh, *supra* note 29, at 1475 (describing a “what” restriction on bans of categories of weapons). This concern is quickly addressed if all guns available to consumers would become available as smart guns because these guns would not be banned, just modified. To that extent, the modification of these weapons becomes the central concern of a “what” restriction analysis: the analysis focuses on “[w]hether these requirements are . . . more expensive, slower to fire, or unreliable.” *Id.* at 1491. Thus, the issues for a “what” restriction depend on the other restrictions discussed in this Comment. In any case, if a smart gun is “highly reliable, and the batteries are extremely long lived . . . , or the gun is designed so that, if the electronics fail, the gun is left operational as a mechanical weapon Then the requirement probably wouldn’t be a substantial burden, and should be upheld.” *Id.* at 1491–92.

149. *See* District of Columbia v. Heller, 554 U.S. 570, 686 (2008). *See also* Jackson v. San Francisco, 746 F.3d 954, 961–63 (9th Cir. 2014).

150. An additional question is what would happen if a court reasoned that neither standard was correct and applied strict scrutiny. However, such an analysis is outside the scope of this Comment because this Comment only applies the law as it exists within the circuit courts.

analyses, it seems that concerns regarding smart guns' readiness in emergencies do not rise to the level of a burden on a core Second Amendment right.

While *Heller* did not establish an analysis for what the Comment recognizes as a "how" restriction, the Supreme Court struck down the provisions of the District of Columbia law that delayed access to a firearm categorically.¹⁵¹ This means that if smart guns cause delay in firing the weapon in self-defense, any law restricting ownership solely to smart guns would be unconstitutional. On the other hand, if smart guns do not delay an individual's ability to immediately react, there is no constitutional issue. The problem with determining this issue now is that there are not enough studies on smart guns to know what their average activation time tends to be. At best, information from a police test of smart guns revealed that RFID smart guns have no issue with speed.¹⁵² Moreover, a good indicator of the readiness and reliability of smart guns is police use—as they are more likely to rely on them more frequently than other people.¹⁵³

However, the technology is not yet instantaneous, meaning a gun may not be ready to fire at the moment the user lays her hand on it.¹⁵⁴ It is important to note that there is a difference between this sort of delay and the delay as contemplated in *Heller*. To disengage a trigger lock, a gun owner needs to enter a combination or use a key. Putting a disassembled gun back together would present a similar problem. Both of these involve a physical act the user must perform before handling the gun. Conversely, RFID technology requires no action separate from picking up the firearm. Thus, any delay in the readiness of the firearm stemming from the smart gun identifying the user is likely to be less than the delay caused by the measures at issue in *Heller*; therefore, the burden may be negligible compared to the restriction in *Heller*. Given a minimal yet not "instantaneous" period between when a smart gun is touched and when it is ready to fire, and the fact that RFID smart guns already possess "top tier"

151. See *Heller*, 554 U.S. at 635 ("In sum, we hold that the District's ban on handgun possession in the home violates the Second Amendment, as does its prohibition against rendering any lawful firearm in the home operable for the purpose of *immediate* self-defense.") (emphasis added); *Ezell v. City of Chicago*, 651 F.3d 684, 703 (7th Cir. 2011); *United States v. Skoien*, 614 F.3d 638, 641 (7th Cir. 2010); *Anderson*, *supra* note 72, at 578 (discussing categorical violations of Second Amendment rights analogized to categorical violations of First Amendment rights).

152. SANDIA NATIONAL LABORATORIES, *supra* note 11, at 117 ("Speed is not a problem, nor is signal integrity since electronics containing error checking codes can check if a valid transmission was received and if not try again.").

153. See Volokh, *supra* note 29, at 1492.

154. See MCCARTHY, *supra* note 24, at 4.

technology,¹⁵⁵ RFID smart guns would likely pass muster under *Heller*'s categorical exclusion.

If a court were to apply the “how” analysis used in *Jackson*, it would likely also decide that a smart-gun mandate passes muster because the burden imposed by smart guns is minimal. First, a court would consider whether a smart gun affects a right within the scope of the Second Amendment. Part of the Second Amendment's scope, as described in *Heller*, is using a gun for the purpose of immediate self-defense.¹⁵⁶ Under *Jackson*, this would trigger intermediate scrutiny.¹⁵⁷ Also, as in *Jackson*, this burden would touch on a “core” Second Amendment right because the smart gun would inhibit the owner's exercise of self-defense by preventing the owner from immediately firing.¹⁵⁸ But the burden would be slight; easily under the “few seconds” threshold established in *Jackson*.¹⁵⁹ Further, smart guns would effectively serve the “important and substantial” government purpose of preventing accidental injury to children playing with a smart gun.¹⁶⁰ Finally, a court would likely consider smart guns narrowly tailored to serve the government interest because they are less restrictive and less burdensome than placing a trigger lock on a gun or locking the gun in a safe as upheld in *Jackson*.¹⁶¹ Thus, a federal court would likely find that a smart-gun mandate would survive intermediate scrutiny.

B. A “Who” Restriction

The essential function of a smart gun is to prevent an entire class of people—those not authorized to use it—from using the gun. As noted in *Chovan*, banning an entire class of people from using a firearm implicates Second Amendment rights.¹⁶² However, while the smart gun functions to prevent those who do not have a right to possess a firearm from doing so, smart guns themselves are not responsible for preventing anyone from owning a gun. Rather, smart guns can be viewed as a practical means of enforcing “who” restrictions already in place. At the same time, there may be

155. See GREENE, *supra* note 27, at 29–30.

156. See *Heller*, 554 U.S. at 635 (“In sum, we hold that the District's ban on handgun possession in the home violates the Second Amendment, as does its prohibition against rendering any lawful firearm in the home operable for the purpose of immediate self-defense.”).

157. See *Jackson v. San Francisco*, 746 F.3d 954, 964 (9th Cir. 2014).

158. See *id.*

159. *Id.* at 966.

160. *Id.*

161. *Id.*

162. See *United States v. Chovan*, 735 F.3d 1127, 1138 (9th Cir. 2013).

instances in which a person other than the owner needs to use the firearm for self-defense. For example, a police officer may be in a situation where she needs to use another officer's gun in the field.¹⁶³ This type of prohibition may violate Second Amendment rights because a fellow police officer surely has the right to own a firearm and is the type of individual protected under the Second Amendment.

Even if smart guns impose some sort of “who” restriction, a federal court would likely uphold the restriction. First, whatever burden a court found likely would be minimal. In *Chovan*, the restriction was within the scope of the Second Amendment because 18 U.S.C. § 922(g)(9) placed a life ban on a class that historically had the right to bear arms for self-defense.¹⁶⁴ In stark contrast, smart guns only prevent gun possession for those not already possessing a gun and only do so for the period during which that person chooses not to have a gun. Given this slight burden, it is highly unlikely that a court would find smart guns touch a “core” right, but more likely that they would regulate the manner of practicing that right.¹⁶⁵ However, since rational basis is not appropriate, a court would likely undertake an intermediate scrutiny review. For the purposes of intermediate scrutiny, the government has a substantial interest in preventing violence involving guns.¹⁶⁶ Assuming that those who lawfully own guns are the type of people not prone to commit violent acts with guns,¹⁶⁷ then by keeping guns out of the hands of those who possess guns unlawfully, or for an illicit purpose, smart guns will reduce gun violence. Therefore, a smart-gun mandate would survive intermediate scrutiny because smart guns fulfill the important government interest of reducing violence while imposing a minimal burden on the ability to defend one's self.¹⁶⁸

163. See SANDIA NATIONAL LABORATORIES, *supra* note 11, at 35 (“Some of the people that officers thought should be able to use their firearms included: partners, other officers within the department, officers from another county/state/jurisdiction, gunsmiths and armorers, trainers, and friends of the officer such as helpful citizens or spouses.”).

164. See *Chovan*, 735 F.3d at 1136.

165. *Id.* at 1138.

166. *Id.* at 1140.

167. See Scott O'Grady, *The Third Century NRA*, http://home.nra.org/pdf/thirdcenturynra_scottogrady_june17.pdf (“What many don't seem to realize is that an armed, law-abiding citizenry bears no threat to anyone other than criminals and tyrants.”).

168. See *Chovan*, 735 F.3d at 1140 (finding that a law that prevents a class of people who are more likely to commit violent acts with guns is tailored to satisfy the government's goals).

C. An “Expenses” Restriction

The last possible constitutional infringement arising from a law requiring that only smart guns be sold comes from the price of the technology. As noted earlier, smart guns will not be cheap. As discussed in Part II, measures that raise the cost of exercising Second Amendment rights may impose a burden if they “materially raise” the cost of owning a gun.¹⁶⁹ According to *Kwong*, an increase on the cost of owning a gun does not impose a burden on Second Amendment rights so long as the increase in price to the consumers exists only to offset some cost associated with regulating the right.¹⁷⁰ Essentially, the price increase cannot be an obstacle intended to deter the exercise of the right; it has to be tied to a legitimate purpose.

Under this analysis, the price of smart guns does not likely constitute a burden on Second Amendment rights because the price is tied to new technology that ensures a higher degree of safety. The fact remains that this price hike may effectively deter many from purchasing a gun. But this was also the case in *Kwong*, and there, some deterrent effect was not enough to abrogate the New York law.¹⁷¹ However, the Second Circuit indicated that intermediate scrutiny could be appropriate for provisions that raise the price of a gun.¹⁷² Under intermediate scrutiny, a court would likely decide that in effectively preventing gun ownership, the cost would infringe on a “core” Second Amendment right. The severity of that burden would likely be substantial, considering that the cost of a smart gun is around twice that of a normal handgun.¹⁷³ Thus, the analysis would turn on what important government interest such a price increase serves and how narrowly tailored the law forcing the price increase is to that government interest. The government interest would be the prevention of accidental shootings, suicides, harm to children, and gun violence in general. The means of achieving this goal are likely sufficiently tailored because the price increase in a smart gun is due to its new technology. That technology is tied to the government purpose of decreasing violence by keeping guns out of the hands of those with a propensity for violence. In any case, the rise in price

169. See Volokh, *supra* note 29, at 1542.

170. *Kwong v. Bloomberg*, 723 F.3d 160, 165 (2d Cir. 2013), *cert. denied*, 134 S. Ct. 2696 (2014).

171. See *id.* at 167–68 (“Indeed, the fact that the licensing regime makes the exercise of one’s Second Amendment rights more expensive does not necessarily mean that it ‘substantially burdens’ that right.”).

172. See *id.* at 168 (“But we need not definitively decide that applying heightened scrutiny is unwarranted here because we agree with the District Court that Admin. Code § 10–131(a)(2) would, in any event, survive under the so-called ‘intermediate’ form of heightened scrutiny.”).

173. See *supra* notes 43–44 and accompanying text.

might not actually deter would-be gun owners from purchasing a gun because consumers may be willing to pay more for increased safety.¹⁷⁴ Thus, the price increase in smart guns would likely not be a constructional barrier to implementing a smart-gun-only regime.

CONCLUSION

While a constitutional challenge relating to the implementation of smart guns in America has yet to happen, it is not far off. Second Amendment rights have been highly regarded and disputed, and the onset of new technology associated with those rights will not be any different. Concerns regarding smart-gun technology are understandable, but as this Comment demonstrated, there is not yet a constitutional basis for objecting to smart-guns-only regime. It is important to note that just because a law that prevents the manufacturing or purchasing of any gun that is not a smart gun is constitutional, there are other barriers preventing smart guns from thriving in the market. Although the technology used in smart guns is valuable, the demand for the technology is still developing.¹⁷⁵ For now, this means high prices, but that will change as factors in the market begin influencing manufactures and consumers. The point is that intelligent arguments can be crafted on both sides, but there is little reason to believe that any objection to laws that require all guns, manufactured or sold, to be smart guns has a basis in the Second Amendment.

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174. See Volokh, *supra* note 45 (“If I had a child, and smart guns were reliable enough, I might well be willing to spend some extra money to get a smart gun instead of my current gun.”); SANDIA NATIONAL LABORATORIES, *supra* note 11, at 40–41 (indicating that some police officers may be willing to pay twice as much for smart guns).

175. See Volokh, *supra* note 45 (observing that the incentive for manufacturers to develop a more affordable version of smart guns will increase as the market expands).

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