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Corpus Linguistics and Gun Control: Why Heller Is Wrong

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Corpus Linguistics and Gun Control: Why *Heller* Is Wrong

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INTRODUCTION

In March 2018, thousands of school-aged children organized the “March for Our Lives,” where they demanded stricter gun control across the United States in the aftermath of the Parkland school shooting.¹ Responding to the event, retired United States Supreme Court Justice John Paul Stevens argued that while the students’ message was commendable, it simply did not go far

1. Michael D. Shear, *Students Lead Huge Rallies for Gun Control Across the U.S.*, N.Y. TIMES, Mar. 24, 2018, at A1.

enough.² “They should demand a repeal of the Second Amendment,” he stated flatly.³ In support of his position, Justice Stevens reiterated the essence of his dissenting opinion in the pivotal Supreme Court case *District of Columbia v. Heller*—that the Second Amendment does not protect an individual’s right to keep and bear firearms.⁴

To understand Justice Stevens’s opinion, we must begin with the text of the Second Amendment of the United States Constitution, which states: “A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed.”⁵ Since its ratification, the national debate over the Amendment’s scope has been a veritable boxing match. Does it protect the right to use firearms only with respect to militia service, or does it extend past militia service to protect private use?

This debate is particularly problematic when applying so-called *originalism*—determining what the Second Amendment was intended to mean at the time of its ratification. Although the Supreme Court justices agree that *originalism* based on the public’s understanding of the text at the time of ratification is the correct method to ascertain the Second Amendment’s scope,⁶ other questions still linger. For instance, which founding-era materials should be consulted? And how should those materials be interpreted? In sum, a simple claim of *originalism* analysis, even if there is consensus on what *originalism* means,⁷ is prone to cherry-picking, misinterpretation, and bias.

Perhaps the most pertinent and public example of the originalism debate is enshrined in the *District of Columbia v. Heller* decision Justice Stevens referenced in his New York Times opinion article.⁸ At the outset of the *Heller* opinion, the Court offered its own take on originalism: “In interpreting [the Second Amendment], we are guided by the principle that ‘[t]he Constitution was written to be

2. John Paul Stevens, *John Paul Stevens: Repeal the Second Amendment*, N.Y. TIMES, Mar. 27, 2018, at A23.

3. *Id.*

4. *Id.*; *District of Columbia v. Heller*, 554 U.S. 570, 636 (2008).

5. U.S. CONST. amend. II.

6. *See Heller*, 554 U.S. at 570.

7. *See infra* Part I.

8. *Heller*, 554 U.S. at 570.

understood by the voters; its words and phrases were used in their normal and ordinary as distinguished from technical meaning.”⁹ Unsurprisingly, however, the Court still managed to come to radically different conclusions in its 5–4 decision, even with the same baseline originalist theory and the same founding-era documents.

With the aforementioned difficulties of originalism in mind, this Note reexamines *Heller’s* Second Amendment interpretation via a new, data-driven method: corpus linguistics, or the study of language by analyzing samples of real-world language in large bodies of text.¹⁰ In presenting this new method, this Note covers four main topics. Part I explores original meaning, its difficulties, and how the Supreme Court has traditionally approached it. Part II discusses corpus linguistics: what it is, how to use it, and its difficulties and weaknesses. Part III implements a scientific peer review of a previous corpus search of the Second Amendment by Professor Josh Blackman and James C. Phillips, demonstrating corpus linguistics’ scientific features, namely repeatability and falsifiability.¹¹ Lastly, Part IV discusses this Note’s corpus findings

9. *Id.* at 576 (alteration in original). In his dissent, Justice Stevens infers his support for the baseline originalist theory Justice Scalia offers in the majority (or at least he does not directly contradict the theory in any portion of the dissent), stating,

I shall first explain why our decision in *Miller* was faithful to the text of the Second Amendment and the purposes revealed in its drafting history. I shall then comment on the postratification history of the Amendment, which makes abundantly clear that the Amendment should not be interpreted as limiting the authority of Congress to regulate the use or possession of firearms for purely civilian purposes.

Id. at 640 (Stevens, J., dissenting).

10. Thomas R. Lee & Stephen C. Mouritsen, *Judging Ordinary Meaning*, 127 *YALE L.J.* 788, 795 (2018).

11. Philosopher of science Karl Popper introduced the concept of falsifiability, asserting that a statement, hypothesis, or theory is falsifiable if it has the potential to be contradicted. KARL R. POPPER, *REALISM AND THE AIM OF SCIENCE: FROM THE POSTSCRIPT TO THE LOGIC OF SCIENTIFIC DISCOVERY* xx–xxii (W. W. Bartley, III ed., 1983). And for a statement, hypothesis, or theory to have the potential to be contradicted, it must be reproducible, or repeatable. KARL POPPER, *THE LOGIC OF SCIENTIFIC DISCOVERY* 66 (2002). Popper proposed that statements, hypotheses, and theories that are not falsifiable (and by extension not repeatable) are fundamentally unscientific. *Id.* (“We say that a theory is falsified only if we have accepted basic statements which contradict it []. This condition is necessary, but not sufficient; for we have seen that non-reproducible single occurrences are of no significance to science.”).

Here, corpus linguistics offers the opportunity to inject science into the law, because it provides a method of reproducing a judge’s reasoning via data-driven experiments, thus transforming a judge’s legal reasoning into scientifically falsifiable reasoning. Currently, a

and applies them to the majority and dissenting opinions of the *Heller* case.

As this Note will demonstrate in Parts III and IV, the results of Blackman and Phillips' corpus search with expanded sample sizes overwhelmingly support Justice Stevens's dissent in the *Heller* opinion, where four Justices found that the Second Amendment, based on the Court's interpretation of originalism, does not protect an individual's right to keep and bear arms. Put differently, the corpus search data demonstrates that Justice Scalia, writing for the majority, incorrectly interpreted the Second Amendment under the majority's own proposed originalist legal theory.

Of course, while Justice Stevens's originalist interpretation is correct by virtue of the corpus linguistics analysis, such an interpretation stands only if the Court continues to make the normative decision that originalism is the best legal theory to apply in interpreting the Second Amendment. Such a decision will have sweeping effects for both the legal world and the public at large as the debate over gun control and the Second Amendment churns across the United States.

I. DETERMINING ORIGINAL MEANING

Originalism is a method of constitutional interpretation that seeks to determine the ordinary meaning of the Constitution's text based on the time period in which it was written.¹² Of course, this search for the Constitution's ordinary meaning is deceptively simple on its surface. While recent scholarship shows that the "originalist family" of theories at least "agree[s] that the communicative content of the constitutional text was fixed at the

judge's reasoning cannot be contradicted unless another judge or other binding legal authority uses its power and its own reasoning (subject to human error and bias) to overturn. Furthermore, a judge's reasoning cannot be scientifically repeated or reproduced, because human reasoning, being irrevocably connected to the particular individual and rife with uncontrollable variables, cannot be subject to scientific experiment. Corpus linguistics presents an opportunity to remove a judge's reasoning from his or her individualized thought processes and subjects it to a controlled experiment that others can objectively repeat. This gives the judiciary greater power to provide clarity in and remove bias from the law, as will be demonstrated in the following sections.

12. ANTONIN SCALIA & BRYAN A. GARNER, *READING LAW: THE INTERPRETATION OF LEGAL TEXTS*, § 7, at 78 (2012) ("Words must be given the meaning they had when the text was adopted."); Paul Brest, *The Misconceived Quest for the Original Understanding*, 60 B.U. L. REV. 204, 204 (1980).

time each provision was framed and ratified,"¹³ originalist theories tend to diverge based on the language community they feel is most pertinent to interpreting the document, rendering interpretation of the Second Amendment rather messy. To illustrate, there are three main approaches to originalism that both scholars and judges have implemented in the past: public meaning, original intentions, and original methods.

The first approach, public meaning originalism, deemphasizes the intentions of the framers, instead focuses on the general public's understanding of the text in the late 1700s.¹⁴ This approach is designed to mitigate the difficulty of ascertaining the intentions of multimember conventions at the federal and state levels at the time the Constitution was drafted and ratified.¹⁵ Utah Supreme Court Justice Thomas R. Lee and scholar James C. Phillips assert that original public meaning is an "originalist 'standard picture.' It is an inquiry into the communicative content of provisions of the Constitution as they would have been understood by the public in the late eighteenth century."¹⁶ As previously mentioned, this method is the United States Supreme Court's preferred originalist method of interpreting the meaning of the Second Amendment.¹⁷

The second approach is original intentions originalism, which seeks for meaning that is "fixed by . . . the framers of the text."¹⁸ This approach seeks to parse meaning from the framers' personal writings, such as the Federalist Papers or records of the constitutional convention.¹⁹ Lee and Phillips argue that such writings and records communicate the mental states and intentions of the framers, which could aid in filling in areas where the Constitution appears to be ambiguous or have a gap in meaning.²⁰

13. Lawrence B. Solum, *The Fixation Thesis: The Role of Historical Fact in Original Meaning*, 91 NOTRE DAME L. REV. 1, 7 (2015).

14. Thomas R. Lee & James C. Phillips, *Data Driven Originalism*, 167 U. PA. L. REV. 261, 268 (2019).

15. Solum, *supra* note 13, at 4.

16. Lee & Phillips, *supra* note 14 at 269. James C. Phillips, the scholar quoted here, is the one of the two scholars who conducted the original corpus analysis that is re-conducted with an expanded sample size in Parts III and IV below.

17. See *District of Columbia v. Heller*, 554 U.S. 570 (2008).

18. Solum, *supra* note 13, at 7.

19. Lee & Phillips, *supra* note 14, at 269.

20. See Lawrence B. Solum, *Triangulating Public Meaning: Corpus Linguistics, Immersion, and the Constitutional Record*, 2017 BYU L. REV. 1621, 1656 (2018) ("[D]rafting history can provide evidence of conventional semantic meaning, but this role is [only] evidential").

Original intentions originalism demonstrates a parallel with modern day statutory interpretation, where judges begin with the plain meaning of the text and fill in any perceived ambiguities by turning to the spirit or purpose of the text, as found in areas such as documented legislative history.²¹ However, just as Justice Kagan asserted that “[w]e are all textualists now[,]” it is accurate to state that “we originalists are all public meaning originalists now,” because public meaning originalism has become the dominant theory in originalist camps.²²

The third approach in originalism is original methods originalism, advocated by John O. McGinnis and Michael B. Rappaport. Their method aims to determine original meaning by decoding the language of the 18th century, or “dialect,” by immersing oneself into the language community of the dialect.²³ This approach seeks to fill in the gaps of the constitutional text by “using canons and methods of interpretation that would have been used by lawyers and judges in the eighteenth century.”²⁴ McGinnis

21. See JOHN F. MANNING & MATTHEW C. STEPHENSON, *LEGISLATION AND REGULATION: CASES AND MATERIALS* 60 (2d ed. 2013) (“Over the last quarter-century, textualism has had an extraordinary influence on how federal courts approach questions of statutory interpretation. When the Court finds the text to be clear in context, it now routinely enforces the statute as written.”); Abbe R. Gluck, *The States as Laboratories of Statutory Interpretation: Methodological Consensus and the New Modified Textualism*, 119 *YALE L.J.* 1750, 1756–58 (2010) (showing that state supreme courts consistently give primacy to text and decline to look to external sources of meaning if they find the text “plain”); Chris Wallace, *Interview with Supreme Court Justice Antonin Scalia*, FOX NEWS SUNDAY (July 29, 2012), <https://perma.cc/Q2VH-9BCS> (asserting that “[o]riginalism is sort of [a] subspecies of textualism”); Harvard Law School, *The Scalia Lecture: A Dialogue with Justice Kagan on the Reading of Statutes*, YOUTUBE (Nov. 25, 2015), <https://youtu.be/dpEtszFT0Tg> (Justice Kagan, stating “[w]e are all textualists now”).

22. See generally *District of Columbia v. Heller*, 554 U.S. 570 (2008). See Laurence H. Tribe, *Comment*, in *A MATTER OF INTERPRETATION: FEDERAL COURTS AND THE LAW* 65, 67 (1997) (summarizing Ronald Dworkin’s comments in the same volume); Lee & Phillips, *supra* note 14; Jonathan H. Adler, *The Judiciary Committee Grills Elena Kagan*, WASH. POST (June 29, 2010, 1:18 PM), <http://www.washingtonpost.com/wp-dyn/content/article/2010/06/29/AR2010062902652.html> (reporting that during her confirmation hearings, Elena Kagan declared, “We are all originalists”).

23. See John O. McGinnis & Michael B. Rappaport, *Original Methods Originalism: A New Theory of Interpretation and the Case Against Construction*, 103 *NW. U. L. REV.* 751, 752 (2009) (stating that “[t]o find the original intent of the Constitution’s enactors, one must look to the interpretative rules that the enactors expected would be employed to understand their words. Similarly, to find what an informed speaker of the language would have understood the Constitution’s meaning to be, one must look to the interpretive rules that were customarily applied to such a document.”).

24. Lee & Phillips, *supra* note 14, at 271.

and Rappaport, the chief proponents of this theory, argue it “provides the most accurate method for determining the original meaning of the Constitution,”²⁵ although how widespread its use will be within the judiciary is yet to be seen.

Despite the competing methods of originalism, the Supreme Court asserts it has both currently and traditionally leaned toward the public meaning originalism approach in interpreting the Constitution, as Justice Scalia states in *Heller*.²⁶ However, it is up for debate whether the Court’s usage of original public meaning originalism has answered major value judgment questions concerning the use of originalism or mitigated the issues regarding traditional sources used to determine ordinary meaning of the United States Constitution.

For example, what does *ordinary meaning* mean? As seen by the theories presented above, there is not necessarily an ordinary meaning of the *ordinary meaning* of the Constitution. Furthermore, at what point is a term or a phrase considered *ordinary*? Is it when it reaches a possible meaning, a common meaning, the most frequent meaning, an exclusive meaning, or simply a prototypical meaning? How much of a role should context play? And how should modifiers change word meaning? This is all besides the difficulty that ordinary meaning is defeasible, which means it is open in principle to revision or valid objection. Ordinary meaning can be applied narrowly or broadly. Ordinary meaning is also susceptible to false consensus bias, or the assumption that one’s own interpretation is ordinary meaning.²⁷

Putting these questions and issues with ordinary meaning aside, the sources typically used to determine the ordinary meaning of the Constitution have their limits. As demonstrated in *Heller*, judges typically use three methods to glean ordinary meaning: their own intuition as native English speakers, dictionaries, and

25. McGinnis & Rappaport, *supra* note 23.

26. *Heller*, 554 U.S. at 576 (“[T]he Constitution was written to be understood by the voters; its words and phrases were used in their normal and ordinary as distinguished from technical meaning.” (citing *United States v. Sprague*, 282 U.S. 716, 731 (1931) and *Gibbons v. Ogden*, 22 U.S. 1 (1824))).

27. See Lawrence M. Solan & Tammy Gales, *Corpus Linguistics as a Tool in Legal Interpretation*, 2017 BYU L. REV. 1311, 1319–22, 1333 (2017).

“empirical research using a corpus of English.”²⁸ Each has its own unique set of pros and cons.

First, a judge’s intuition as a native English speaker on its own is sufficient for people to grasp the basic idea of what others are talking about in everyday life, but it falls short in making the nuanced distinctions required for legal interpretation.²⁹ For example, Justice Thomas R. Lee and Professor Stephen C. Mouritsen offer the “no vehicles in the park” example to demonstrate the wide range of linguistically permissible definitions of the word “vehicle.”³⁰ Even in this example, a judge’s intuition of the meaning of “vehicle” may diverge drastically from the average person’s definition of the word “vehicle.” For instance, does a “vehicle” include bicycles, skateboards, *and* shopping carts? Thus, this divergence necessitates a more standardized method of ascertaining specific meaning from legal language than mere intuition.

In addition, use of a judge’s native speaker intuition also leaves the unwary interpreter susceptible to false consensus bias, or the perception that other people understand language in the exact same way as oneself.³¹ Professors Lawrence M. Solan and Tammy Gales illustrate this concept by explaining the results of a study of false consensus bias, where participants were asked to interpret the meaning of certain contract terms and then were asked to estimate how many other participants agreed with their judgment.³² While the responses to the initial interpretation question varied, all participants (including participating judges) significantly overestimated how many other participants agreed with their individual interpretation of the contract terms.³³

The next commonly used method is consulting a dictionary. In dictionaries, there is a tendency toward a lack of semantic context, meaning the dictionary fails to demonstrate subtle shades in the

28. *Id.* at 1331. See generally *Heller*, 554 U.S. 570.

29. Solan & Gales, *supra* note 27, at 1332–34.

30. Lee & Mouritsen, *supra* note 10, at 800.

31. Solan & Gales, *supra* note 27, at 1334.

32. *Id.* at 1333 (citing Lawrence Solan, Terri Rosenblatt & Daniel Osherson, *False Consensus Bias in Contract Interpretation*, 108 COLUM. L. REV. 1268 (2008)).

33. *Id.*

meaning of words based on their usage.³⁴ In addition, dictionaries carry the potential to have multiple senses of a term missing.³⁵ They also tend to favor prescriptive use over descriptive use, meaning they usually offer definitions based on suggested usage of a word, rather than merely describing the actual meaning of words independent of the dictionary drafter's preferred use.³⁶ Furthermore, dictionaries undergo change over time as language evolves, rendering them the subject of sharp criticism by legal academics³⁷ and even judges themselves.³⁸ Because they lack proper context, it is easy for judges to cherry-pick dictionaries that provide the particular definitions that suit their position the best.³⁹

34. Consider, for example, the words "last stop" and "final destination." While the two technically mean the same thing, a dictionary does not typically parse out the differences in meaning of words based on how each is used in context. For example, "This is the last stop before our final destination."

35. As another example (albeit a vulgar one) used frequently in today's pop culture, consider the use of the word "shit." Merriam-Webster offers a mere ten definitions of this term: "feces; an act of defecation; nonsense, foolishness, crap; something of little value; trivial and usually boastful or inaccurate talk; stuff; any of several intoxicating or narcotic drugs; damn; a worthless, offensive, or detestable person; or used as an interjection or used as an intensive usually with the." *Shit*, MERRIAM-WEBSTER (<https://www.merriam-webster.com/dictionary/shit>). However, pop culture continuously adds new senses to the word which may be missing in dictionaries, usually by adding articles, adjectives, and other modifiers. See ISMO, *I Didn't Know Sh*t*, YOUTUBE (Feb. 23, 2018), <https://youtu.be/igh9iO5BxBo> ("So important, the article. Like, if I 'give shit' to you, that means I am 'telling you off.' But if I 'give a shit,' then 'I care.'"). Such changes in meaning can be heavily reliant on semantic context, which is also generally missing in dictionaries. See *supra* note 34.

36. To illustrate, Merriam-Webster does not expressly offer in its entry an explanation as to why the definitions of "shit" are listed in their particular order, i.e. *feces* as the first prescribed definition rather than *stuff* or *used as an interjection* as the first prescribed definition. However, Merriam-Webster does assert that as a general rule, the "order of senses within [all] entr[ies] is historical." *Order of Senses*, MERRIAM-WEBSTER (<https://www.merriam-webster.com/help/explanatory-notes/dict-definitions>). Unhelpfully, it then adds a caveat that not every "multisense word developed from the immediately preceding sense." *Id.* This ultimately leaves the reader to guess if the listed senses are objectively based on history or based on the drafter's preferences when history is unclear.

37. For a review of the pertinent literature, see James J. Brudney & Lawrence Baum, *Oasis or Mirage: The Supreme Court's Thirst for Dictionaries in the Rehnquist and Roberts Eras*, 55 WM. & MARY L. REV. 483 (2013).

38. For example, Judge Posner criticizes the use of dictionaries in *United States v. Costello*, 666 F.3d 1040, 1043-44 (7th Cir. 2012) (summarizing literature critical of judicial reliance on dictionaries to ascertain ordinary meaning, focusing on the gap between context-sensitive use of words, and the acontextual nature of dictionary definitions), as does Associate Chief Justice Thomas R. Lee of the Utah Supreme Court in *State v. Rasabout*, 2015 UT 72, ¶¶ 42-50, 356 P.3d 1258, 1271-73 (Lee, J., concurring).

39. Solan & Gales, *supra* note 27, at 1334.

II. USING CORPUS LINGUISTICS TO ASCERTAIN ORIGINAL MEANING

With these issues in mind, some judges have begun to turn to the use of a corpus of English, or corpus linguistics, to mitigate the problems of intuition and dictionaries.⁴⁰ As a brief introduction, corpus linguistics is an empirical approach to the study “of language variation and use, resulting in research findings that have much greater generalizability and validity than would otherwise be feasible.”⁴¹ Its two main goals are to (1) assess linguistic patterns and (2) analyze context to determine what influences linguistic variability.⁴²

A corpus (plural: corpora) is a large body of naturally occurring texts that is sampled to represent a particular language community.⁴³ Text can be drawn from newspapers, books, academic journals, legal documents, and many other written sources.

There are two types of corpora: general, which include language used by a “broad (often national) community”; and special, which “are limited to a particular genre, register, or dialect.”⁴⁴ By entering a particular word or phrase into a corpus search engine, the corpus provides tools to determine frequency, collocation (words that naturally occur near the word or phrase), and context of the word or phrase.⁴⁵

40. See *Muscarello v. United States*, 524 U.S. 125, 129 (1998) (parsing through usages of the word “carry” found in the *New York Times* and *U.S. News* databases to understand whether the meaning of “carrying a firearm” includes transporting a gun in a locked glove compartment to a drug deal); *United States v. Costello*, 666 F.3d 1040, 1044 (7th Cir. 2012) (using a Google search to look for relative numbers of “hits” for phrases like “harboring fugitives” to find if a woman who allowed her boyfriend, an undocumented immigrant, to sleep at her apartment was guilty of “harboring an alien”); *People v. Harris*, 885 N.W.2d 832, 838–39 (Mich. 2016) (citing a Utah Supreme Court opinion in support of the methodology of corpus linguistics and relying on corpus linguistics data to buttress the court’s interpretation of the term “information” in a Michigan statute forbidding the use of “information” provided by a law enforcement officer if compelled under threat of employment sanction); *State v. Rasabout*, 2015 UT 72, ¶¶ 68–75, 356 P.3d 1258, 1278–79 (Lee, J., concurring in part and concurring in the judgment) (advancing Google search data in support of his interpretation of the phrase “discharge[] a firearm” in a state statute).

41. Douglas Biber, *Corpus-Based and Corpus-Driven Analyses of Language Variation and Use*, in *THE OXFORD HANDBOOK OF LINGUISTIC ANALYSIS* 193, 193 (Bernd Heine & Heiko Narrog eds., 2d ed. 2012).

42. DOUGLAS BIBER, SUSAN CONRAD & RANDI REPPEN, *CORPUS LINGUISTICS: INVESTIGATING LANGUAGE STRUCTURE AND USE* 3 (1998).

43. TONY MCENERY ET AL., *CORPUS-BASED LANGUAGE STUDIES: AN ADVANCED RESOURCE BOOK* 4 (2006).

44. Lee & Mouritsen, *supra* note 10, at 830–31; see also Solan & Gales, *supra* note 27, at 1337.

45. Lee & Mouritsen, *supra* note 10, at 831–32.

At minimum, corpus linguistics can provide transparency to a judge's interpretation of legal language, which is not as readily found in other methods of statutory and constitutional interpretation. It does so by presenting a data-driven experiment that theoretically and practically can be repeated and falsified in the same manner as a scientific experiment. This sheds light on a judge's decision-making process and removes the need for the judge's native-speaker intuition or a dictionary.

As a logistical matter, a corpus linguistics interpretation of a word is briefed and argued just like an interpretation based on a dictionary would be. The parties run their own analyses and perhaps share their methods as a part the discovery process. The judge is then free to repeat the parties' analyses to determine which is more methodologically sound, run an analysis of his or her own, or ignore corpus linguistics altogether.

Of course, a new method of statutory and constitutional interpretation like corpus linguistics does not come without pushback. One criticism is that judges and lawyers are not proficient linguists, and therefore they should not undertake corpus linguistics without the requisite expertise.⁴⁶ This criticism, however, ignores the linguistic nature of the legal profession, as lawyers and judges already undertake the task of resolving ambiguities in legal language, albeit without the tools of linguistic theory.⁴⁷ Corpus linguistics is a readily available tool for lawyers and judges to improve what they are already often required to do.

A second criticism is that it is inappropriate for judges to use corpus linguistics because they cannot *sua sponte* run their own experiments on the facts.⁴⁸ However, this misconstrues what corpus linguistics empowers a judge to do. Corpus linguistics allows judges to analyze statutory and constitutional language, which is well within their power and a common judicial task. Conversely, corpus linguistics does not allow a judge to examine the adjudicative facts best left to juries.⁴⁹

A third criticism is that corpus linguistics is impractical because it will make expert testimony more prevalent, thus making

46. *Id.* at 865.

47. *Id.* at 866.

48. *Id.* at 868–71.

49. *Id.*

litigation costlier.⁵⁰ However, because corpus linguistics is both new and still considered a last resort method, it is not used frequently enough to make costs a concern. Furthermore, corpus linguistics does not always require an expert to run an analysis, especially with a new generation of tech-savvy lawyers.⁵¹

Criticisms aside, corpus linguistics provides an alternative pathway to the constitutional interpretation methods that currently lack standardization and transparency. In Part III below, this Note demonstrates the capabilities of corpus linguistics via a scientific peer review of Professor Josh Blackman and James C. Phillips's corpus analysis of the Second Amendment as analyzed in *District of Columbia v. Heller*.⁵²

For optimal results in this scientific peer review, this Note begins the analysis by answering five normative questions: (1) Who is the speech community?; (2) What is the relevant time period?; (3) What are the relevant search terms?; (4) Which type of ordinary meaning applies?; and (5) What type of corpus is best used? Paralleling the *Heller* opinion, the analysis below looks for the original public meaning of the Second Amendment when it was originally drafted in 1791. It zeroes in on three terms in particular: *keep arms, bear arms, and the right of the people*.

Both my search and Blackman and Phillips' search are conducted in Brigham Young University's Corpus of Founding Era American English ("COFEA"). The COFEA includes over 130 million words from a range of sources dating from 1760-1799.⁵³

50. *Id.* at 871.

51. *Id.* at 872.

52. See generally Josh Blackman & James C. Phillips, *Corpus Linguistics and the Second Amendment*, HARV. L. REV. BLOG (Aug. 7, 2018), <https://blog.harvardlawreview.org/corpus-linguistics-and-the-second-amendment/>. A scientific peer review is an evaluation of the work of someone with similar competency. In this case, I, by virtue of my own training in the law and in corpus linguistics, am conducting a scholarly review of Blackman and Phillip's work published in the Harvard Law Review Blog by re-conducting their corpus linguistics analysis. In doing so, it enables me to find out if it is possible to repeat their corpus results via the same methods they employed. In my analysis of their work, I will keep all variables the same as the original experiment with the exception of the sample size, which I expanded to ensure the results are statistically significant. By conducting this peer review, I will demonstrate corpus linguistics' scientific features, namely that a corpus analysis is both repeatable and falsifiable.

53. BYU LAW, LAW & CORPUS LINGUISTICS, <https://lawncf.byu.edu/> (last visited Dec. 21, 2018). The majority of the texts are pulled from the National Archive Founders Online;

Although the COFEA is one of the most comprehensive databases of founding-era documents, it is still currently representative of only elite, white, male voices, and it has a glaring omission of newspapers.

III. A PEER REVIEW OF BLACKMAN AND PHILLIPS'S CORPUS ANALYSIS OF *HELLER*

To properly understand this corpus analysis, we must begin with the background facts and the reasoning found in the majority and dissenting opinions in *District of Columbia v. Heller*. Respondent Dick Anthony Heller was a "police officer authorized to carry a handgun while on duty at the Thurgood Marshall Judiciary Building" in Washington, D.C.⁵⁴ When he applied for a certificate to register a firearm for personal use at home, the District refused to grant his application.⁵⁵ Heller then filed suit with the Federal District Court for the District of Columbia on Second Amendment grounds.⁵⁶ When the case finally reached the United States Supreme Court, Justice Scalia, writing for the majority, held that the Second Amendment protects the right to private use of a firearm.⁵⁷

In his analysis, Justice Scalia states that the Court's desired method for interpreting the Second Amendment is original public meaning originalism.⁵⁸ He then uses multiple founding-era sources to discern the original public meaning of each portion of the phrase, *the right of the people to keep and bear arms*.⁵⁹ In analyzing these documents, he states that the words *bear arms* referred to not just militia-related confrontation, but encompassed private usage as well.⁶⁰ He also states that *bear arms* had a militia connotation only when followed by the preposition *against*.⁶¹

William S. Hein & Co., HeinOnline; Text Creation Partnership (TCP) Evans Bibliography (University of Michigan); Elliot's Debates; Farrand's Records; and the U.S. Statutes-at-Large from the first five Congresses.

54. *District of Columbia v. Heller*, 554 U.S. 570, 575 (2008).

55. *Id.*

56. *Id.* at 575-76.

57. *Id.* at 635-36.

58. *Id.* at 576.

59. *Id.* at 581-91.

60. *Id.* at 584.

61. *Id.* at 586.

For the phrase *keep arms*, Justice Scalia posits that *keep arms* is a distinct right from the right to *bear arms* that applied to both militiamen and private citizens.⁶² And for the phrase *the right of the people*, he argues that it refers to individual rights that may be exercised independent of any collective action, that is, militia action.⁶³

Conversely, Justice Stevens, writing for the dissent, proffers that the phrase *bear arms* limited the right to firearm usage to the militia only, in light of its “natural meaning” as ascertained from founding-era dictionaries.⁶⁴ As for the phrases *keep arms* and *the right of the people*, Justice Stevens asserts that the Second Amendment protected *keep and bear arms* as a singular right for members of a militia, and that *the right of the people* refers to collective rights that apply only in a militia context.⁶⁵

In their COFEA analysis, Blackman and Phillips follow the Court’s lead and divide the phrase *the right of the people to keep and bear arms* into simply *bear arms* and *keep arms*, running their corpus analysis using these phrases.⁶⁶ Keeping in step with their work, I ran an identical analysis on these phrases using Blackman and Phillips’s data, although with an expanded sample size to ensure statistical significance. I also independently ran an analysis on the phrase *the right of the people*, which is outlined below.

A. Bear Arms Findings

To analyze the phrase *bear arms*, Blackman and Phillips ran a corpus analysis in COFEA on every instance of the word *arm* or *arms* appearing within 4 words of any and all forms of the verb *bear*.⁶⁷ They then evaluated a sample size of 50 concordance lines of the 600 lines total in the corpus search, asserting that while small, the sample was sufficient to accurately represent the data as a whole.⁶⁸

62. *See id.* at 582, 584 (“Johnson defined ‘keep’ as, most relevantly, ‘[t]o retain; not to lose,’ and ‘[t]o have in custody.’ . . . [And] [a]t the time of the founding, as now, to ‘bear’ meant to ‘carry.’”)

63. *Id.* at 579; Blackman & Phillips, *supra* note 52.

64. *Heller*, 554 U.S. at 646–47 (Stevens, J., dissenting); Blackman & Phillips, *supra* note 52.

65. *Heller*, 554 U.S. at 645, 650 (Stevens, J., dissenting).

66. Blackman & Phillips, *supra* note 52.

67. *Id.*

68. *Id.* Blackman and Phillips do not offer any authority regarding why 50 concordance lines is a sufficient sample size.

Their study found that the majority of the uses of *bear arms* were in the militia context.⁶⁹ This included *bear arms* without the preposition *against* directly following, although those usages were less common.⁷⁰

The research for this Note evaluated the same data Blackman and Phillips used in COFEA, though with a vastly larger sample size. From the outset, a search for the word *arm* or *arms* within 4 words of all forms of the verb *bear* indeed resulted in approximately 600 concordance lines. From there, I analyzed over 300 of those concordance lines in order to achieve a 95% certainty that the data was accurately represented, give or take a 4% margin of error.⁷¹

After I calculated the sample, I separated each instance into one of three main categories of context based on Justice Scalia's majority opinion in *Heller*: non-militia/private usage, militia, and ambiguous.⁷² The militia context was further subdivided into the usage *bear arms* with and without the preposition *against*. Instances that directly quoted the text of the Second Amendment were discarded because original meaning cannot be ascertained by referring to the text of the Amendment itself.⁷³

Within the sample, instances of *bear arms* in an ambiguous context—those that did not clearly refer to the Second Amendment—occurred about 2% of the time. Direct quotation of the Second Amendment occurred less than 1% of the time. The non-militia/private usage context occurred about 4% of the time, with the militia context accounting for the remaining 93%. And finally, the majority of the militia context usages (61%) appeared without the preposition *against*, while 39% of usages included it.

69. *Id.*

70. *Id.*

71. To calculate the sample size, I used the equation:
$$\text{Sample size} = \frac{\frac{z^2 \cdot p(1-p)}{e^2}}{1 + \left(\frac{z^2 \cdot p(1-p)}{e^2 N}\right)}$$

Here, the variables are N= population size; e = margin of error (percentage in decimal form); and z = z-score. The z-score is the number of standard deviations a given proportion is away from the mean. For a desired confidence level of 95%, the correct z-score to use is 1.96. As a rule, the smaller the margin of error, the larger the sample size must be given the same population. In a similar vein, the higher the desired level of confidence, the larger the sample size must be.

72. *District of Columbia v. Heller*, 554 U.S. 570, 584–586 (2008).

73. Blackman & Phillips, *supra* note 52.

Overall, the second round of analysis was relatively similar to Blackman and Phillips's findings despite their smaller sample size. The main difference was the frequency of *bear arms* in the militia context absent the preposition *against*. Contrary to Blackman and Phillips's original finding that *bear arms* minus the preposition *against* used in the militia context appeared less often than *bear arms against*, the usage of *bear arms* alone dwarfed the usage of *bear arms against*, comprising nearly two thirds of all the instances in the militia context.⁷⁴

B. Keep Arms Findings

To analyze the phrase *keep arms*, Blackman and Phillips performed a search in COFEA for the word *keep* and its variants within 4 words of the terms *arm* or *arms*.⁷⁵ Their search resulted in approximately 200 results, of which they reviewed a sample size of 50 instances.⁷⁶ They discarded irrelevant searches, quotations from the Constitution, and duplicates.⁷⁷ Of the remaining 18 results, they determined that approximately 25% referred to non-militia/private usage, another 25% were ambiguous, and the final 50% referred to keeping arms in the militia.⁷⁸

In a second round of analysis, this Note analyzed the same data Blackman and Phillips used in COFEA, again with a vastly larger sample size. Like Blackman and Phillips's data, the search for the word *arm* or *arms* within 4 words of any and all forms of the verb *keep* resulted in approximately 200 concordance lines. From there, I analyzed over 150 of those concordance lines in order to achieve a 95% certainty that the data was accurately represented, give or take a 4% margin of error.⁷⁹

Just like in the *bear arms* analysis described above, I separated each instance of *keep arms* into one of three main categories: non-militia/private usage context, militia context, and ambiguous context. I discarded 21% of the instances at the outset because of

74. To access the peer reviewed concordance data for "bear arms," follow this link: <https://docs.google.com/spreadsheets/d/1jbx8cZmhFVVdmfkyjTgorbkzb0AurJ63vXEy9THnDek/edit?usp=sharing>.

75. Blackman and Phillips, *supra* note 52.

76. *Id.*

77. *Id.*

78. *Id.*

79. *See supra* note 71.

direct quotation and duplication. Of the remaining instances, 43% were ambiguous, 7% were non-militia/private usage, and 48% were in the context of a militia.

Unlike the findings in the *bear arms* analysis, the larger sample size relative to Blackman and Phillips's original study caused the numbers to skew dramatically. In the original search, Blackman and Phillips discarded over half of their original sample size of 50 concordance lines, ultimately using only 18 instances, or 8%, of the entire corpus of findings to reach their conclusions. In contrast, using the larger sample size of over 150 concordance lines shrank the number of discarded instances to 21% instead of the original discarded 50%. Of the remaining concordance lines, non-militia/private usage shrank from 25% of the findings to approximately 7% of the findings, ambiguous context grew from 25% to 43%, and militia context remained more or less the same, going from 50% of the findings to 48%.⁸⁰

C. The Right of the People Findings

In their research, Blackman and Phillips state the potential need for performing a corpus search on the phrase *the right of the people* as it appears in the Second Amendment.⁸¹ However, they do not perform this analysis. Rather, they reiterate the intratextualist arguments of Justice Scalia and Justice Stevens. Justice Stevens argues that *the right of the people* refers to collective rights that apply only in a militia context.⁸² Scalia, on the other hand, asserts that *the right of the people* refers to individual rights that may be exercised independent of any collective action, that is, militia action.⁸³ Blackman and Phillips then suggest some potential searches to answer the collective/individual rights problem, including a query on how often the phrase *the right of the people* was used outside of the Constitution to refer to collective or individual rights and

80. To access the peer reviewed concordance data for "keep arms," follow this link: <https://docs.google.com/spreadsheets/d/1uBvYkl4rYZRnngM6T7YUrE9a3FgeWp5OD75-ImiXzLA/edit?usp=sharing>.

81. Blackman & Phillips, *supra* note 52.

82. *District of Columbia v. Heller*, 554 U.S. 570, 644–46 (2008) (Stevens, J., dissenting); Blackman & Phillips, *supra* note 52.

83. *Heller*, 554 U.S. at 579 (majority opinion); Blackman & Phillips, *supra* note 52.

a query on how often the words *arm* or *arms* were used in the vicinity of the word *right*.⁸⁴

In light of Blackman and Phillips's observations, I completed a corpus analysis of the phrase *the right of the people* by searching it in the COFEA corpus and determining whether each instance referred to collective or individual rights when mentioned outside the text of the Constitution. Although there is no study to repeat or former findings to compare and contrast, my results provide a baseline for how the phrase was used.

The phrase *the right of the people* was used in only 153 instances in the entire COFEA corpus. For this analysis, I analyzed all 153 instances in lieu of calculating an appropriate sample size. I discarded any direct quotations of the Constitution, duplicates, and ambiguous lines.

Next, I determined that the phrase appeared in the context of collective rights if it appeared with at least one of the following: (1) the pronouns *they* and/or *their*; (2) the mention of a large geographic region, such as "the right of the people of the Territory," or "the right of the people of this state"; or (3) a direct reference to collective action, such as "to assemble and deliberate" or "to choose their own rulers."⁸⁵ Of the 153 instances, I discarded 35% because of ambiguity, direct quotation, and duplication. Of the remaining 65%, I found 100% were used in the context of collective rights. This finding directly supports Justice Stevens's interpretation of the phrase in *Heller*.⁸⁶

Perhaps the most debatable criterion I used to parse the data was my usage of the pronouns *they* and/or *their*. To explain, it is certainly possible for a plural noun (such as *people*) to have a plural pronoun (such as *they/their*). This might be the case regardless of whether the right is collective or individual. For example, the Supreme Court has interpreted the Fourth Amendment's search and seizure clause to protect individual rights, even though the text of the Amendment states: "The right of the *people* to be secure in

84. Blackman & Phillips, *supra* note 52.

85. To access the peer review concordance data for "the right of the people," follow this link: https://docs.google.com/spreadsheets/d/1uwLzkmhrx_fmrr6oLNzzldWIqva4zoS1IvAeu5hpN84/edit?usp=sharing.

86. *Heller*, 554 U.S. at 645 (Stevens, J., dissenting).

their persons, houses, papers, and effects . . .”⁸⁷ Of course, if the concordance lines using *they* and/or *their* are entangled in the value judgment debate concerning whether the lines reference collective or individual rights, then simplicity and clarity demand that those lines would be discarded as ambiguous. Even if they are discarded, the remaining concordance lines referring to *the right of the people* are found solely in the context of collective rights.

Because this is a first impression of the data regarding *the right of the people*, I encourage other scholars to perform the same search and review the sample based on their own criterion and any patterns they may find in the data.

IV. IN PEER REVIEWING BLACKMAN AND PHILLIPS’S ANALYSIS, THE DATA OVERWHELMINGLY SUPPORTS JUSTICE STEVENS’S DISSENT IN *HELLER*

The results above do not unequivocally support one position or the other on the militia or private usage of firearms. However, they do overwhelmingly favor a militia context for both *bear arms* and *keep arms*. Coupled with the collective rights meaning of *the right of the people*, this strongly suggests that written references to firearm usage in a militia-only setting were both a common and prototypical usage among the general public at the time the Second Amendment was ratified. Furthermore, while the COFEA searches above have their shortcomings, the data nevertheless makes an excellent case that the dissenting opinion in *Heller* was correct about the original meaning of the phrase.

A. Comparing the Bear Arms Data and the Heller Opinion

The prefatory clause of the Second Amendment first states that “[a] well regulated Militia . . . [is] necessary to the security of a free State . . .,” followed by the phrase “the right of the people to keep and bear Arms.”⁸⁸ At minimum, this indicates that Second Amendment protections have at least some connection to militia service. Whether these protections are understood to restrict firearm usage to militia service *only*, or if it includes militia service

87. U.S. CONST. amend. IV (emphasis added); *Heller*, 554 U.S. at 579–80 (majority opinion).

88. U.S. CONST. amend. II.

in addition to private usage, is where the majority and dissent in the *Heller* opinion diverge.

In his *Heller* dissent, Justice Stevens utilizes founding-era dictionaries to argue that the natural meaning of *bear arms* applied exclusively to the militia.⁸⁹ Justice Scalia's majority opinion, however, contends that the phrase *bear arms* was best understood as using firearms for "confrontation" and that such usage was not necessarily limited to militia-related confrontation.⁹⁰ He reaches this conclusion by reviewing multiple founding-era sources, including founding-era dictionaries and state constitutional provisions, ultimately asserting that both its natural meaning and its eighteenth century public meaning were the same.⁹¹ He demonstrates that some instances of *bear arms* were used to reference private usage of firearms unconnected with militia service, as in the case of state constitutional provisions referencing the right of citizens to "bear arms in defense of themselves and the state" or "bear arms in defense of himself and the state."⁹² He also contends that *bear arms* in the militia context was in fact an idiomatic meaning at the time of the founding and only occurred when *bear arms* was followed by the preposition *against*.⁹³ For example, the Declaration of Independence makes reference to "bear arms" in one of its passages: "He has constrained our fellow Citizens taken Captive on the high Seas to bear Arms against their Country."⁹⁴ However, Justice Scalia acknowledges that other sources, such as records of congressional debate, used *bear arms* in the militia context, however "unremarkable" he personally felt those usages were.⁹⁵

After scientific peer review, the Blackman and Phillips data overwhelmingly favors Justice Stevens's dissenting viewpoint. In their first set of corpus analysis, Blackman and Phillips were correct that the vast majority of the usage of *bear arms* is used in the militia context. Upon a second analysis, however, they were incorrect in stating that *bear arms* is used in a militia context less frequently

89. *Heller*, 554 U.S. at 646–47 (Stevens, J., dissenting)..

90. *Id.* at 584 (majority opinion).

91. *Id.* at 584–86.

92. *Id.* at 584–92.

93. *Id.* at 586.

94. *Id.*

95. *Id.* at 587.

when the preposition *against* is missing. The data presents strong evidence overall that the general public likely understood the right to *bear arms* as generally synonymous with militia service.

Of course, while overwhelming, the usage of *bear arms* in the militia context is not exclusive. While usage of *bear arms* in the militia context certainly appears prototypical for the era, the appearance of the non-militia/private context could very well mean that *bear arms* had more than one sense associated with it, frequency aside. Moreover, the corpus itself may not be perfectly representative of the general public's mindset as the corpus has a limited set of documents to use in determining public meaning at the time.

B. Comparing the Keep Arms Data and the Heller Opinion

In comparison to the *bear arms* analysis, Justice Stevens posits in his *Heller* dissent that to *keep arms* is not a right separate from the right to *bear arms*. He stated that the Second Amendment "describe[s] a unitary right: to possess arms if needed for military purposes and to use them in conjunction with military activities."⁹⁶ Additionally, Stevens concludes that the Second Amendment's "use of the term 'keep' in no way contradicts the militia meaning conveyed by the phrase 'bear arms' and the Amendment's preamble."⁹⁷ In support of his position, Stevens offers examples of state militia laws requiring militia members to store their arms in their homes to be ready for militia service later.⁹⁸

Justice Scalia, on the other hand, asserts in the majority opinion that the most natural meaning of *keep arms* in the Second Amendment is to "have weapons."⁹⁹ He also argued that while *keep arms* lacked prevalence in founding-era documents, *all* of the examples the Court reviewed found the right to *keep arms* was an individual right unconnected to militia service.¹⁰⁰

Applying the Blackman and Phillips data, Justice Scalia's arguments appear to hold some water, as both *keep arms* and *bear*

96. *Id.* at 646 (Stevens, J., dissenting).

97. *Id.* at 650.

98. *Id.*

99. *Id.* at 582 (majority opinion).

100. *Id.*

arms are spoken of separately in the data set. However, the problem for Scalia is that both are used most often within the militia context.

Furthermore, it is starkly untrue that *all* usages of *keep arms* in founding-era documents were framed as an individual right unconnected to militia service. In fact, in both Blackman and Phillips's study and the study in this Note, approximately half of all usages of *keep arms* were in the context of militia service.

C. Comparing The Right of the People Data and the Heller Opinion

A final point Blackman and Phillips cover in their original study is the need to conduct a corpus analysis of *the right of the people* to determine if the Second Amendment was written in reference to individual rights or collective rights. Nevertheless, Blackman and Phillips do not conduct this analysis, choosing instead to merely summarize Justice Stevens and Justice Scalia's arguments on the *right of the people*.

In the dissent, Justice Stevens asserts that *the right of the people* refers to collective action in the Second Amendment the same way it does in the First Amendment (e.g. the right of "the people" to peaceably assemble).¹⁰¹ Thus, the phrase is more concerned with the action engaged by a group, rather than that of any particular individual.¹⁰²

In the majority decision, however, Justice Scalia asserts that *the right of the people* unambiguously references individual rights rather than collective rights "that may be exercised only through participation in some corporate body."¹⁰³ He does not make this assertion by referencing any founding-era works to determine the original meaning of *the right of the people* the way he does with *keep arms* and *bear arms*; instead he uses the same intratextualist method Justice Stevens used to ascertain its meaning by comparing and

101. *Id.* at 645–46 (Stevens, J., dissenting). Additionally, Justice Stevens concedes to Justice Scalia that *the people* as used in the Fourth Amendment refer to the exercise of individual rights, not collective rights. *Id.* at 645. However, Justice Stevens counters by arguing that *the people* as used in the Fourth Amendment does not settle what *the people* means in the Second Amendment. *Id.*

102. *Id.*

103. *Id.* at 579 (majority opinion).

contrasting the phrase's use in other areas of the Constitution.¹⁰⁴ Like Justice Stevens, he specifically mentions the phrase's use in the First Amendment's Assembly and Petition Clause and the Fourth Amendment's Search and Seizure Clause, demonstrating how the similar terminology is used in reference to the exercise of individual rights.¹⁰⁵

Rather than presenting yet another intratextualist take on *the right of the people*, my data above indicates that *the right of the people* was used exclusively in the context of collective rights, falling directly in step with Justice Stevens's dissenting opinion. And while my study presented here gives only a first-impression review that deserves additional study, it still provides a strong baseline for how the phrase was generally understood in the founding era. One approach my data does not look at is the use of the word *right* in context of the word *arm* or *arms*, which may produce different results as to whether use of firearms concerns an individual or a collective right.

D. Areas of Improvement in the Analysis Overall

While Blackman and Phillips's study and this Note's scientific peer review function to provide greater clarity to the original public meaning of the Second Amendment, there is room for improvement in some areas. First, the original study lacks data on collective versus individual rights, thus necessitating a scientific peer review of my own analysis on *the right of the people* provided in this Note. Second, the relatively manageable size of the data leaves room for not just a larger sample size but for review of all concordance lines. Third, should COFEA grow larger (e.g. with the addition of newspapers), a new analysis would be needed to see if the data changes. And finally, there are certainly some value judgments on whether a concordance line references militia or personal use of a firearm, which may slightly skew some of the

104. Blackman & Phillips, *supra* note 52 (stating that "[f]or purposes of a textualist analysis of the Second Amendment, the final relevant phrase is 'the right of the people.' Neither the majority nor the dissent in *Heller* attempted to use linguistic sources to interpret the 'right of the people,' standing by itself. Instead, both opinions used what Professor Akhil Reed Amar dubbed *intratextualism* in order to compare the Second Amendment's reference to 'the people' with how that phrase is used in First and Fourth Amendments.").

105. *Heller*, 554 U.S. at 579.

results. Further peer review and study can work to mitigate any or all of these issues.

CONCLUSION

As demonstrated above, the results of Blackman and Phillips's corpus search with expanded sample sizes overwhelmingly support Justice Stevens's position in the *Heller* opinion that the original public meaning of the Second Amendment did not support the private right to use a firearm. In other words, Justice Scalia and the majority incorrectly interpreted the Second Amendment based on the original public meaning theory of originalism.

The results of this corpus analysis, coupled with its repeatable and falsifiable nature, should raise a major red flag for political conservatives, "conservative" judges and justices, and legal scholars who adopt Justice Scalia's originalist theory of constitutional interpretation concerning the Second Amendment. If the goal is to maintain *Heller* as legal precedent in future cases, the most intellectually honest thing for the United States Supreme Court to do is to conclude that *Heller* was correct in its ultimate judgment but incorrect in its reasoning. In addition, the Court should seriously reconsider its use of originalism in interpreting the Second Amendment generally. This reconsideration would raise many questions, such as whether the people of the founding era had a monopoly on wisdom concerning the Second Amendment's meaning and whether that "wisdom" from the 1700s is still relevant in today's America.¹⁰⁶ In sum, doing away with the Court's use of originalism to interpret the Second Amendment may be necessary to keep *Heller* viable.

106. The Supreme Court, however unwittingly, does indicate a certain awareness of these points. In his *Heller* analysis, Justice Scalia states,

Some have made the argument, bordering on the frivolous, that only those arms in existence in the 18th century are protected by the Second Amendment. We do not interpret constitutional rights that way. Just as the First Amendment protects modern forms of communication, e.g., *Reno v. American Civil Liberties Union*, 521 U.S. 844, 849 (1997), and the Fourth Amendment applies to modern forms of search, e.g., *Kyllo v. United States*, 533 U.S. 27, 35-36 (2001), the Second Amendment extends, *prima facie*, to all instruments that constitute bearable arms, even those that were not in existence at the time of the founding.

Heller, 554 U.S. at 582.

With further peer review and study, not only will there be continued improvement on the accuracy of the data regarding the Second Amendment, but there will also be greater exposure to (and comfort with) corpus linguistics usage in the legal community and greater clarity in judicial opinions. To be sure, when it comes to the private use of firearms, an honest look at the data could make all the difference.

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