

ARTICLE

READING LAW WITH LINGUISTICS: THE STATUTORY INTERPRETATION OF ARTIFACT NOUNS

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ABSTRACT

Is an airplane a “vehicle”? Is a floating home a “vessel”? Is an unassembled gun a “firearm”? Such questions about “artifact nouns”—nouns that describe human-created entities—are fodder for legal philosophy. They are also common statutory interpretation issues, which today’s textualist courts resolve with linguistic analysis. We propose that textualist courts complement familiar tools, like dictionaries, with insights from linguistics.

We examine as a case study Garland v. VanDerStok, which the Supreme Court will soon decide. It concerns “gun parts kits,” firearm parts that can become operable firearms through combination or part finishing. These kits have been used in several mass shootings, and the case concerns whether such a kit is a “firearm” subject to regulation under the 1968 Gun Control Act. To analyze the statute’s meaning, we apply insights from linguistic theory, new data from language usage, and a survey study of ordinary Americans. This evidence supports that the gun parts kits identified by the government fit within the statutory meaning of “firearm.”

The Article’s case study in the legal interpretation of artifact nouns also carries broader implications. We develop lessons for the practice of legal interpretation, statutory interpretation theory, and broader debates in legal philosophy.

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I. PREFATORY NOTE

We wrote this Article and an associated amicus brief in *Garland v. VanDerStok*¹ over the summer and fall of 2024. The Supreme Court heard the oral argument on October 8, 2024. The case remained undecided as this Article entered the final stages of publication with the *Harvard Journal of Legislation* in early 2025. On March 26, 2025, the Supreme Court decided the case: *Bondi v. VanDerStok*.² We were pleased that seven Justices applied a commendable linguistic analysis, and that the majority referenced our amicus brief,³ upon which this Article expands.

The publication timeline did not allow time to substantively update this Article to address the Court's analysis. As such, we ask readers to consider the pre-decision window as the reference context for our Article. In keeping with that context, we have made no changes to the Article in light of the decision (including even minor changes to reflect the final caption, "*Bondi v. VanDerStok*"). We are grateful to the *Harvard Journal on Legislation* for allowing us this introductory note, the remainder of which briefly addresses the relationship between some of this Article's arguments and the Court's opinion.

In what follows in this Prefatory Note, we assume that the reader is already acquainted with the relevant background of *Bondi v. VanDerStok* and with our linguistic analysis as presented in this Article and in our amicus brief.

The Court's opinion explicitly identifies *weapon*, *frame*, and *receiver* with linguistic terminology: these nouns are "artifact nouns" denoting entities of human creation and/or assimilation.⁴ The Court characterizes its task as determining whether "Congress... use[d] artifact nouns to reach incomplete objects" in the statutory definition of *firearm*, another artifact noun.⁵ The Court recognizes a key aspect of artifact noun meaning: artifact nouns are distinguished by the potential to exhibit human-intended functions.⁶ Thus, "everyday speakers sometimes use artifact nouns to refer to unfinished objects—at least when their intended function is clear."⁷

¹ Brief for Professors and Scholars of Linguistics and Law as Amici Curiae in Support of Petitioners at 15, *Garland v. VanDerStok*, 144 S. Ct. 1390 (2024) (No. 23-852) [hereinafter *Linguistics Brief*].

² *Bondi v. VanDerStok*, 604 U.S. __ (2025) (In early 2025, Merrick Garland was replaced by Pamela Bondi as the United States Attorney General).

³ *Id.* at *10 n.3.

⁴ *VanDerStok*, 604 U.S. at *10, *11, *13, *14, *17 n.4, *19, *21, *22, *23; *see also* *Linguistics Brief*, *supra* note 1, at 6–9; *infra* Part IV.

⁵ *VanDerStok*, 604 U.S. at *17 n.4.

⁶ *Id.* at *10 (citing *Linguistics Brief*, *supra* note 1, 6–9; Scott Grimm & Beth Levin, *Artifact Nouns: Reference and Countability*, 47 *PROC. N. E. LING. SOC'Y* 55 (2017); JAMES PUSTEJOVSKY, *THE GENERATIVE LEXICON* 97 (1995); Jules Coleman & Ori Simchen, "Law", 9 *LEGAL THEORY* 1, 20 (2003); Terrence Parsons, *The Progressive in English*, 12 *LINGUISTICS & PHIL.* 213, 225–26 (1989).

⁷ *VanDerStok*, 604 U.S. at *10. Moreover, speakers need not clarify their intention to refer to such objects through the use of explicit nominal modifiers such as *unfinished* or *incomplete*: "ordinary speakers sometimes use unadorned artifact nouns like 'weapon,' 'frame,' or 'receiver' to reach unfinished articles." *Id.* at *22.

Nevertheless, just because artifact nouns *can* be used in a way that emphasizes their function does not mean they should always be read in this way. The Court recognizes, rather, that context is crucial for determining the relevance of design considerations and functional potential in the Gun Control Act of 1968 (“GCA”) definition of *firearm*.⁸ Some contexts may exclusively center entities’ physical form or physical constitution. The GCA definition of *firearm* does not provide such a context: rather, “Congress explained that a ‘weapon’...qualifies for regulation if it is either ‘designed’ to accomplish that function or ‘capable of being ‘readily...converted’ to do so.’”⁹

The Court acknowledges that the context supplied by the GCA definition is by no means unusual in this respect: ordinary speakers routinely deploy terms such as *weapon* to refer to incomplete, unfinished, or disassembled objects. “Imagine a rifle disassembled for storage, transport, or cleaning...as a matter of every day speech, that rifle *is* a weapon, whether disassembled or combat ready.”¹⁰ More generally, the Court finds it relevant to consider how ordinary Americans and weapons manufacturers use language to refer to gun parts kits. The Court discusses one such kit, Polymer80’s “Buy Build Shoot” kit, at length. For the Court, this kit’s “intended function as instrument of combat is obvious. Really, the kit’s name says it all: ‘Buy Build *Shoot*.’”¹¹

Moreover, the Court recognizes that artifact nouns encode an inherently vague and context-dependent notion of functional potential.¹² “[A]t some point a kit may be so incomplete or cumbersome to assemble that it can no longer fairly be described as a ‘weapon’ capable of ‘read[y]... conver[sion]’ into a working firearm.”¹³ The language of the GCA definition makes clear that some gun parts kits meet the threshold of potential, on any plausible specification of that threshold. “If Congress had wanted to regulate only operable firearms, it could have simply addressed ‘weapons’ that can ‘expel a projectile by the action

⁸ In this respect, the Court’s analysis relies on “one of the most traditional tools for discerning statutory meaning—contextual clues found in the pertinent statute itself.” *VanDerStok*, 604 U.S. at *17.

⁹ *Id.* at *12; see also Linguistics Brief, *supra* note 1, at 17–20; *infra* Part IV.

¹⁰ *VanDerStok*, 604 U.S. at *11.

¹¹ *Id.* We provide empirical evidence in support of the claim that manufacturers and customers use the terms *weapon*, *firearm* and *rifle* to refer to gun parts kits. Linguistics Brief, *supra* note 1, at 12–17; see also *infra* Part V. We also present evidence in support of the claim that *receiver* can refer to an incomplete receiver in ordinary usage. Linguistics Brief, *supra* note 1, at 23; see also *infra* Part V. Moreover, people regularly use the terms *firearm* and *rifle* to refer to unassembled packages that include an unfinished receiver. Linguistics Brief, *supra* note 1, at 23; see also *infra* Part V.

¹² See *VanDerStok*, 604 U.S. at *13; see also *infra* Part IV. In advancing this claim, the Court likens the fuzzy boundary between functionally “capable” and “incapable” artifact noun-denoted entities to the ancient philosophical *sorites* paradox: “Think of the problem of the heap: Start with a heap of sand and begin removing grains; at some point, a heap no longer exists. That problem attends many artifact nouns.” *VanDerStok*, 604 U.S. at *13. Indeed, it is recognized in linguistic theory that linguistic vagueness gives rise to *sorites*-like puzzles of categorization. See, e.g., Christopher Kennedy, *Vagueness and Grammar: The Semantics of Relative and Absolute Gradable Adjectives*, 30 LINGUISTICS & PHIL. 1, 2–3 (2007).

¹³ *VanDerStok*, 604 U.S. at *13; see also *infra* Part IV.

of an explosive.’ But Congress didn’t stop there.”¹⁴ Thus, “the ATF’s rule [at CFR §478.11] is not facially inconsistent with the GCA,”¹⁵ contra the Respondents’ position.

The Court also employs insights from linguistic theory in its analysis of *frame* and *receiver*. In addition to recognizing that these terms are artifact nouns,¹⁶ the Court recognizes that subsection (B) of the statutory definition contains an anaphoric expression *any such weapon* that “refers us back to weapons encompassed by subsection (A).”¹⁷ Subsection (A) in turn “encompasses some things that are not yet fit for effective use in combat, including...certain weapon parts kits” containing unfinished frames/receivers.¹⁸ For us and for the Court, this relationship between subsections (A) and (B) undermines the Respondents’ “complete-items-only reading of subsection (B).”¹⁹

The Court’s interpretation of *frame* and *receiver* is further supported by the following principle of linguistic interpretation: ordinarily, “we expect context to clarify language in a consistent manner.”²⁰ Having established that *weapon* in (B) refers back to weapons “not yet fit for effective use,”²¹ the Court contends that (B) should be read such that the artifact nouns *frame* and *receiver* similarly reach unfinished objects: “the fact that Congress used one artifact noun (‘weapon’) in subsection (B) to reach some unfinished articles suggests it used two other artifact nouns (‘frame’ and ‘receiver’) in the same way in the same provision.”²²

The Court’s analysis stands in tension with an alternative, which proceeds from the observation that Congress explicitly contemplates weapons “readily converted” to exhibit particular functions in (A) but does not include similar language in (B). This alternative analysis takes this omission to be a meaningful

¹⁴ *VanDerStok*, 604 U.S. at *11–12; see also Linguistics Brief, *supra* note 1, at 19; *infra* Part IV.

¹⁵ *VanDerStok*, 604 U.S. at *2.

¹⁶ *VanDerStok*, 604 U.S. at *19–22; see also Linguistics Brief, *supra* note 1, at 22–25; *infra* Part VI.

¹⁷ *VanDerStok*, 604 U.S. at *22; see also Linguistics Brief, *supra* note 1, at 25–28; *infra* Part VI.

¹⁸ *VanDerStok*, 604 U.S. at *22.

¹⁹ *Id.* at *20; see also Linguistics Brief, *supra* note 1, at 25–26; *infra* Part VI. A similar line of argumentation is pursued in Brief of *Amicus Curiae* Gun Violence Protection Groups in Support of Petitioners at 18, *Garland v. VanDerStok*, 144 S. Ct. 1390 (2024) (No. 23-852).

²⁰ Linguistics Brief, *supra* note 1, at 30; see also *infra* Part VI.

²¹ *VanDerStok*, 604 U.S. at *22.

²² Our analysis provides a formal account of how context serves to resolve the indeterminacies of *weapon*, *frame*, and *receiver* in a consistent manner: “subparagraphs (A) and (B)...[are] expressly link[ed]...together with the phrase ‘any such weapon,’ so that they are best read as sharing a single context in which both the Design and Potential facets of meaning are salient.” Linguistics Brief, *supra* note 1, at 30; see also *infra* Part VI. We claim that the Court’s reading of *frame* and *receiver* also coheres with subparagraphs (C) and (D), which similarly “foreground the Potential and Design facets of meaning ahead of considerations of physical shape or constitution.” Linguistics Brief, *supra* note 1, at 27–28, 30; see also *infra* Part VI.

variation: whereas (A) may reach unfinished or incomplete weapons, (B) extends only to complete frames and receivers.²³

However, the Court’s analysis provides a ready explanation for this omission. There are sufficient clues from the surrounding context of (B)—including the anaphoric expression *any such weapon* linking back to (A)—to support the government’s interpretation of *frame* and *receiver* in that subsection.²⁴ Indeed, “reading subsection (B) in light of subsection (A) does more to undermine than to advance the plaintiffs’ cause.”²⁵

In *VanDerStok*, the Court leveraged analytical insights from linguistic theory to navigate a contested matter of statutory interpretation. In our Article, we argue that these insights have implications not only for *VanDerStok*, but for future hard cases involving the interpretation of artifact nouns. We also claim that our analysis bears on theories of legal interpretation more generally.

II. INTRODUCTION

In 2019, a sixteen-year-old shooter in California killed two students and injured several others.²⁶ This shooter’s gun had been assembled from a “gun parts kit,” an unassembled collection of firearm parts. A sixteen-year-old is not legally eligible to buy a firearm.²⁷ But the sale of “gun parts kits” has made it easier to avoid age and background requirements; since 2019, there have been at least 150 shootings involving these guns, many of which involve teen shooters.²⁸ “Gun parts kits” are typically unserialized, making them difficult to trace, and they are sold from many online retailers. Internet tutorials demonstrate how to convert parts kits into an AR-15 assault rifle in as little as thirty

²³ Brief of Respondents VanDerStok, Andren, Tactical Machining, Firearms Policy Coalition, Inc., and Blackhawk Manufacturing Group, Inc. at 16, *Garland v. VanDerStok*, 144 S. Ct. 1390 (2024) (No. 23-852).

²⁴ *VanDerStok*, 604 U.S. at *22–23. We similarly contend that the absence of overt ‘design’ and ‘functional potential’ language in (B) can be explained by “[t]he presence of an anaphoric construction in subparagraph (B) (‘any such weapon’)—coupled with the linguistic context of subparagraph (A).” Linguistics Brief, *supra* note 1, at 28; *see also infra* Part VI. These textual features “are sufficient to determine the interpretation of ‘frame or receiver’ in context.” Linguistics Brief, *supra* note 1, at 28; *see also infra* Part VI. For this reason, the absence of “design” and “functional potential” language in (B) “does not support a restrictive construction of ‘frame or receiver’” in that subsection. Linguistics Brief, *supra* note 1, at 28; *see also infra* Part VI.

²⁵ *VanDerStok*, 604 U.S. at *22–23.

²⁶ Eric Leonard & Philip Drechsler, ‘Kit Gun’ Was Used in Deadly Saugus High School Shooting, *Sheriff Says*, NBC LOS ANGELES (Nov. 21, 2019), <https://www.nbclosangeles.com/news/national-international/ghost-kit-gun-saugus-high-school-shooting-weapon-santa-clarita/2226421/> [perma.cc/6Y9J-755N]; *see also* Tom Jackman & Emily Davies, *Teens Buying ‘Ghost Guns’ Online, with Deadly Consequences*, WASH. POST (June 12, 2023), <https://www.washingtonpost.com/dc-md-va/2023/07/12/teens-ghost-guns-deadly-shootings/> [perma.cc/VU9Q-2673] (explaining that an eighteen year-old purchased, assembled, and fired a “gun parts kit” to kill two schoolmates).

²⁷ Federal law prohibits firearms dealers from selling to those known or reasonably believed to be under twenty-one years of age. Gun Control Act, 18 U.S.C. § 922(b)(1).

²⁸ *Ghost Guns Recoveries and Shootings*, EVERYTOWN RESEARCH & POLICY (July 31, 2023), <https://everytownresearch.org/report/ghost-guns-recoveries-and-shootings/#ghost-guns-shootings> [perma.cc/KTY6-JAF3].

minutes.²⁹ Federal law imposes requirements concerning age minimums, licensing, and background checks for the purchase of “firearms.”³⁰ However, the Fifth Circuit recently held that “gun parts kits” are **not** firearms within the definition of these federal laws.³¹

The Supreme Court will decide that decision’s appeal in 2025. *Garland v. VanDerStok*³² asks whether the Gun Control Act of 1968 (“GCA”), allowing government regulation of “firearms,”³³ includes “gun parts kits” or “ghost guns.”³⁴

The Court’s decision will turn on its application of textualism,³⁵ an interpretive theory that gives statutory text the meaning it would communicate to an ordinary person, “reasonable person,”³⁶ or “ordinary . . . speaker.”³⁷ Although the Court’s textualists have some theoretical disagreements,³⁸ the Justices are “all textualists”³⁹ in the sense that the debate will start with the linguistic meaning of the statutory definition, which implicates the meaning of terms like *firearm* and *weapon*.⁴⁰ The textualist Court often relies on dictionary

²⁹ See, e.g., *How Hard is it to Build a Gun from a Parts Kit?*, REDDIT, https://www.reddit.com/r/guns/comments/bdadoa/how_hard_is_it_to_build_a_gun_from_a_parts_kit/ [perma.cc/AQ76-D7FC] (last visited Feb. 16, 2025); *How Long to Build AR-15? Adam’s Arms Piston Kit*, YOUTUBE, <https://www.youtube.com/watch?v=1yN3IFaG1o0> [perma.cc/42JD-YMD4] (last visited Feb. 13, 2025).

³⁰ 18 U.S.C. § 921.

³¹ *VanDerStok v. Garland*, 86 F.4th 179, 188 (5th. Cir. 2023), *cert. granted*, 2024 WL 1706014 (U.S. Apr. 22, 2024) (No. 23-852).

³² *Id.*

³³ 18 U.S.C. §§ 921–934.

³⁴ Specifically, the case concerns “gun parts kits” or “ghost guns,” and certain “frames” or “receivers,” which are readily able or designed to be assembled into complete frames or receivers, the structure for the primary energized component of a firearm.

³⁵ See, e.g., Victoria Nourse, *The Paradoxes of a Unified Judicial Philosophy: An Empirical Study of the New Supreme Court, 2020-2022*, 38 CONST. COMMENT. 1 (2023).

³⁶ John F. Manning, *What Divides Textualists from Purposivists*, 106 COLUM. L. REV. 70, 70 (2006) (noting that textualists should consider how a “reasonable person” uses words).

³⁷ E.g., Amy Coney Barrett, *Congressional Insiders and Outsiders*, 84 U. CHI. L. REV. 2193, 2194 (2017) (explaining that “[w]hat matters to the textualist is how the ordinary English speaker—one unacquainted with the peculiarities of the legislative process—would understand the words of a statute”).

³⁸ See, e.g., William Eskridge, Brian G. Slocum & Kevin Tobia, *Textualism’s Defining Moment*, 123 COLUM. L. REV. 1611 (2023); Tara Leigh Grove, *Which Textualism?*, 134 HARV. L. REV. 265 (2020); see also *Pulsifer v. United States*, 601 U.S. ____ (2024); *Bostock v. Clayton Cnty., Ga.*, 590 U.S. 644 (2020); *Atl. Richfield Co. v. Christian*, 590 U.S. 1 (2020); *McGirt v. Oklahoma*, 591 U.S. 894 (2020); *HollyFrontier Refining v. Renewable Fuels*, 594 U.S. 382 (2021); *Van Buren v. United States*, 593 U.S. 374 (2021); *Niz-Chavez v. Garland*, 593 U.S. 155 (2021); *Wooden v. United States*, 595 U.S. 360 (2022).

³⁹ *The 2015 Scalia Lecture Series: A Dialogue with Justice Elena Kagan on the Reading of Statutes*, YOUTUBE (Nov. 25, 2015), https://www.youtube.com/watch?v=dpEtszFT0Tg&list=PL2q2U2nTrWq1bz6_l-PPEUf9Pw-blX6Pl&index=4 [https://perma.cc/3YUN-A75E]; see generally Kevin Tobia, *We’re Not All Textualists Now*, 78 N.Y.U. ANN. SURV. AM. L. 243 (2022).

⁴⁰ See generally ANTONIN SCALIA & BRYAN A. GARNER, *READING LAW: THE INTERPRETATION OF LEGAL TEXTS* (2012) (providing an overview of textualism); BRIAN G. SLOCUM, *ORDINARY MEANING: A THEORY OF THE MOST FUNDAMENTAL PRINCIPLE OF LEGAL INTERPRETATION* (2015) (providing an overview of ordinary meaning in textualism).

definitions and intuitive hypotheticals.⁴¹ This Article argues that textualist courts should also consider analytical insights from the field of linguistics. In making this recommendation, the Article builds on prior calls to “triangulate” ordinary meaning,⁴² which emphasize the use of interpretive tools like analysis of naturally occurring language and survey data about how ordinary Americans understand language.⁴³

The Article considers *VanDerStok* and the regulation of “gun parts kits” as an important practical example. These firearms are sold without serial numbers and allow minors and other parties to obtain weapons that would normally be prohibited, with no paperwork or background check. Each year, law enforcement recovers thousands of these weapons.

At the same time, our linguistic analysis applies more broadly. *Firearm* is an *artifact noun*, denoting entities of human-made creation. Legal interpretation often implicates the meaning of these nouns, asking questions like: Is an airplane a *vehicle*, and is a floating home a *vessel*?⁴⁴ Our case study’s analysis also illustrates lessons for other interpretive disputes, statutory textualism, and legal philosophy.

Part III of the Article provides brief background on *VanDerStok* and traditional textualist tools like dictionary definitions and intuitive examples. Part IV introduces and applies relevant research from linguistics to *VanDerStok*. First, linguistic theory suggests that the interpretation of artifact nouns (like *weapon*, *firearm*, *frame*, *receiver*, *bicycle*, or *table*) depends critically on context. We explain how context indicates the relevant facets of meaning of these artifact nouns, including facets related to the noun’s potential function or manner of creation. Next, we argue that the statutory context of the GCA strongly emphasizes the functional and creational facets of *firearm* and *frame* or *receiver* over other facets.

In Part V, we supplement our theoretical argument with two types of new empirical data. First, we report examples of naturally occurring language in which people describe firearm parts kits as “weapons” and “firearms.” This indicates that, in many contexts, parts kits fit comfortably within the ordinary meaning of *firearm* and *weapon*. Next, we present an original experimental study of ordinary Americans. The survey has two primary implications. First, most (65%) of our sample understood parts kits as firearms, even with no further context. Second, when participants had context mirroring the statutory definition,⁴⁵ they agreed even more (73%) that parts kits are firearms. Part VI of the Article extends our linguistic analysis to the second question in *VanDerStok*, concerning the interpretation of *frame* and *receiver*.

⁴¹ See *infra* Section III.B.

⁴² See, e.g., Lawrence B. Solum, *Triangulating Public Meaning: Corpus Linguistics, Immersion, and the Constitutional Record*, 2017 BYU L. REV. 1621 (2017); Kevin Tobia, Jesse Egbert & Thomas R. Lee, *Triangulating Ordinary Meaning*, GEO. L.J. ONLINE (2023).

⁴³ E.g., Kevin Tobia, Brian Slocum & Victoria Nourse, *Statutory Interpretation from the Outside*, 122 COLUM. L. REV. 213 (2022).

⁴⁴ *McBoyle v. United States*, 283 U.S. 25 (1931); *Lozman v. City of Riviera Beach*, 568 U.S. 115 (2013).

⁴⁵ A firearm is “any weapon which will or is designed to or may readily be converted to expel a projectile by means of an explosive.” 18 U.S.C. § 921(a)(4)(B).

Part VII elaborates the implications. First, the Article has implications for legal practice. This includes a recommendation for how the Supreme Court should analyze *VanDerStok*. Insofar as the Court seeks to resolve the case through textualism, the Court should not rely solely on dictionary definitions and arbitrary hypotheticals about word meaning.⁴⁶ Instead, it should look to the rich context provided by the statutory definition, which emphasizes an object’s potential functionality and design as a firearm. We additionally discuss recommendations for other cases involving the interpretation of artifact nouns. The Article’s case study also carries broader implications for textualist theory, which we elaborate in Section VII.B, and for longstanding legal philosophical debates about text and purpose, which we discuss in Section VII.C.

III. *VANDERSTOK* AND TRADITIONAL TEXTUALIST TOOLS

A. *Background on Garland v. VanDerStok*

The Gun Control Act of 1968 (“GCA”), codified at 18 U.S.C. § 921, defines *firearm* as:

- (A) any weapon (including a starter gun) which will or is designed to or may readily be converted to expel a projectile by the action of an explosive;
- (B) the frame or receiver of any such weapon;
- (C) any firearm muffler or firearm silencer; or
- (D) any destructive device.⁴⁷

Congress delegated authority to administer the GCA to the Attorney General,⁴⁸ who delegated that authority to the Director of the Bureau of Alcohol, Tobacco, Firearms, and Explosives (“ATF”).⁴⁹ In 2022, the ATF promulgated a rule clarifying its interpretation of the definition.⁵⁰ The ATF interpreted *firearm* to include “a weapon parts kit that is designed to or may readily be completed, assembled, restored, or otherwise converted to expel a projectile by the action of an explosive.”⁵¹ The rule also explained that the agency interprets *frame or receiver*⁵² to include certain partially complete, disassembled, or nonfunctional

⁴⁶ See, e.g., *Garland v. Cargill*, 602 U.S. 406, 415 (2024) (relying on dictionary definitions to determine whether bump stocks fall within the National Firearms Act of 1934, 26 U.S.C. § 5845(b), which defines “machinegun” as “any weapon which shoots, is designed to shoot, or can be readily restored to shoot, automatically more than one shot, without manual reloading, by a single function of the trigger”).

⁴⁷ 18 U.S.C. § 921(a)(3).

⁴⁸ 18 U.S.C. § 926(a).

⁴⁹ 28 C.F.R. § 0.130(a).

⁵⁰ Definition of “Frame or Receiver” and Identification of Firearms, 87 Fed. Reg. 24652 (Apr. 26, 2022) (to be codified at 27 C.F.R. pts. 447, 478, 479).

⁵¹ 27 C.F.R. § 478.11.

⁵² 27 C.F.R. § 478.12(a) provides the following definitions: “(1) The term ‘frame’ means the part of a handgun, or variants thereof, that provides housing or a structure for the component (i.e., sear or equivalent) designed to hold back the hammer, striker, bolt, or similar primary energized component prior to initiation of the firing sequence, even if pins or other attachments

frames and receivers, including a parts kit: “The terms ‘frame’ and ‘receiver’ shall include a partially complete, disassembled, or nonfunctional frame or receiver, including a frame or receiver parts kit, **that is designed to or may readily be completed, assembled, restored, or otherwise converted to function as a frame or receiver.**”⁵³

Jennifer VanDerStok and a set of individual, manufacturer, and organizational plaintiffs who sought to utilize, purchase, or sell gun parts kits (hereinafter “VanDerStok”) challenged the agency’s interpretation in a Texas district court, which held that the ATF exceeded its statutory authority and vacated the final rule nationwide.⁵⁴ The Fifth Circuit upheld the decision,⁵⁵ and the Supreme Court granted certiorari.⁵⁶ In the October 2024 Term, the Supreme Court will decide two questions:

1. Whether “a weapon parts kit that is designed to or may readily be completed, assembled, restored, or otherwise converted to expel a projectile by the action of an explosive,” 27 C.F.R. 478.11, is a “firearm” regulated by the Act.
2. Whether “a partially complete, disassembled, or nonfunctional frame or receiver” that is “designed to or may readily be completed, assembled, restored, or otherwise converted to function as a frame or receiver,” 27 C.F.R. 478.12(c), is a “frame or receiver” regulated by the Act.⁵⁷

VanDerStok will have important consequences for the regulation of firearms. Although some states have passed laws regulating “gun parts kits,”⁵⁸ most have

are required to connect such component (i.e., sear or equivalent) to the housing or structure. (2) The term ‘receiver’ means the part of a rifle, shotgun, or projectile weapon other than a handgun, or variants thereof, that provides housing or a structure for the primary component designed to block or seal the breech prior to initiation of the firing sequence (i.e., bolt, breechblock, or equivalent), even if pins or other attachments are required to connect such component to the housing or structure.”

⁵³ 27 C.F.R. § 478.12(c) (emphasis added).

⁵⁴ See *VanDerStok v. Garland*, 680 F.Supp.3d 741 (N.D. Tex. 2023).

⁵⁵ See *VanDerStok v. Garland*, 86 F.4th 179, 188 (5th Cir. 2023).

⁵⁶ See 144 S. Ct. 1390 (mem.).

⁵⁷ *Id.*

⁵⁸ Laws regulating “gun parts kits” and/or unserialized firearms have been passed in California, CAL. PENAL CODE § 30400 (requiring serial numbers and background checks); Colorado, COLO. REV. STAT. ANN. § 18-12-111.5 (requiring serial numbers and background checks, prohibiting 3D printing); Delaware, DEL. CODE ANN. tit. 11, § 1463 (requiring serial numbers and background checks, prohibiting 3D printing and distribution of 3D printing instructions, prohibiting plastic guns); the District of Columbia, D.C. CODE ANN. § 7-2502.06 (requiring firearms be serialized within five business days of manufacture); Hawaii, HAW. REV. STAT. ANN. § 134-10.2 (requiring serial numbers and background checks, prohibiting 3D printing); Illinois, 720 ILL. COMP. STAT. ANN. 5/24-5.1 (prohibiting knowingly selling, offering to sell, or transferring an unserialized firearm or unserialized unfinished frame or receiver to a federally unlicensed buyer, requiring serial numbers and background checks); Maryland, MD. CODE. ANN., PUB. SAFETY § 5-702 (requiring serial numbers and background checks, prohibiting buying, transferring, or selling gun parts unless required by federal law or imprinted by a federally-licensed manufacturer); Massachusetts, 2024 Mass. Legis. Serv. ch. 135 (H.B.

not. And although some significant “gun parts kits” manufacturers have recently shut down,⁵⁹ many others are operating.⁶⁰ Tens of thousands of “gun parts kits” are recovered by law enforcement each year, and *VanDerStok* will determine the efficacy of existing federal regulation of these kits.

B. Textualism’s Traditional Tools

The questions presented in *VanDerStok* concern statutory interpretation: Do the weapons parts kits, frames, and receivers identified by the ATF fall within the statutory definitions of *firearm*, *frame*, and *receiver*? For a textualist Supreme Court, the case turns on the statute’s linguistic meaning, including what it would communicate to an ordinary reader.

The textualist Court often relies on dictionary definitions and intuitive hypotheticals.⁶¹ These traditional tools infuse both the *VanDerStok* lower court opinions⁶² and Supreme Court briefs.⁶³ They appeal to dictionary definitions of *firearm* and colorful hypotheticals about ordinary language: When IKEA sells a “table parts kit” that must be assembled by the purchaser into a table, isn’t this parts kit a *table*?⁶⁴

4885) (requiring serial numbers and background checks for all firearms and parts); Nevada, NEV. REV. STAT. ANN. § 202.3635 (requiring serial numbers and background checks for all firearms and parts, prohibiting the manufacture or assembly of an unserialized firearm unless regulated as firearms under state and federal law); New Jersey, N.J. STAT. ANN. § 2C:39-1 (requiring serial numbers and background checks for all firearms and parts, prohibiting 3D printing and distribution of 3D printing instructions), *preempted in part by* Ass’n. of New Jersey Rifle & Pistol Clubs, Inc. v. Platkin, No. CV 18-10507-PGS-JBD, 2024 WL 3585580 (D.N.J. July 30, 2024); New York, N.Y. PENAL LAW §§ 265.55, 265.60, 265.61 (prohibiting selling, manufacturing, or possessing a ghost gun); Oregon, OR. REV. STAT. ANN. § 166.265 (requiring serial numbers for all firearms, frames and receivers, prohibiting 3D printed guns, prohibiting possession or manufacture of undetectable firearms); Rhode Island, 11 R.I. GEN. LAWS ANN. § 11-47-8 (requiring serial numbers and background checks for all firearms and parts, prohibiting 3D printing of firearms); Vermont, VT. STAT. ANN. 13 § 4084 (requiring serial numbers and background checks for all firearms and parts, prohibiting the possession or transfer of unserialized firearms and finished or unfinished frames and receivers); Washington, WASH. REV. CODE ANN. § 9.41.326 (requiring serial numbers and background checks, prohibiting plastic undetectable guns, prohibiting the manufacture, assembly, sale, offered sale, knowing or reckless aid in the manufacture of unserialized firearms, prohibiting the possession and transportation of an untraceable firearm).

⁵⁹ ‘Ghost Gun’ Maker Goes Dark, NPR, (Sept. 5, 2024), <https://www.npr.org/2024/09/04/nx-s1-5099467/ghost-gun-maker-goes-dark> [<https://perma.cc/2HM4-YLGU>].

⁶⁰ These include JSD Supply, Ghost Gunner, Blackhawk Manufacturing, Glockstore, and MDX Arms. *See, e.g.*, GHOST GUNNER, <https://ghostgunner.net> [<https://perma.cc/5A3Y-RT8B>] (last visited Mar. 9, 2025).

⁶¹ *See, e.g.*, John Calhoun, *Measuring the Fortress: Explaining Trends in Supreme Court and Circuit Court Dictionary Use*, 124 YALE L.J. 497, 497 (2014).

⁶² *See VanDerStok v. Garland*, 86 F.4th 179, 182 (5th Cir. 2023), *cert. granted*, 144 S. Ct. 1390 (U.S. Apr. 22, 2024) (No. 23-852).

⁶³ *See, e.g.*, Petition for Writ of Certiorari at 14–16, *VanDerStok* (Feb. 7, 2024) (No. 23-852), 2024 WL 515619.

⁶⁴ For example, the petition argued the following: “If a State placed a tax on the sale of home goods, such as tables, chairs, couches, and bookshelves, IKEA surely could not avoid that tax by claiming that it does not sell any of those items and instead sells “furniture parts kits” that

Definitions and hypotheticals can assist in clarifying how an ordinary speaker of English understands language, but these tools must be carefully employed. Dictionary definitions can be cherry-picked.⁶⁵ Intuitive hypotheticals can also be easily cherry-picked, and they may not accurately reflect ordinary language.⁶⁶ Moreover, “[w]hen Justices—elite lawyers—debate how ‘ordinary people’ talk, there is a serious risk that their renderings will speak with an upper-class, judicially-inflected accent.”⁶⁷

IV. ANALYTICAL INSIGHTS FROM RESEARCH IN LINGUISTICS

This article augments the traditional textualist toolkit with formal linguistic theory and empirical linguistic methods. We show that out of context, artifact nouns such as *firearm* are underdetermined as a matter of their ordinary linguistic meaning. Specifically, the interpretation of *firearm* depends everywhere and always on the context in which that term appears. Though dictionary definitions may characterize the interpretation of *firearm* in frequently encountered contexts, such definitions cannot possibly anticipate the rich variety of contexts in which the word is used or how those contexts shape interpretation. We review empirical evidence that supports our theoretical perspective, which is a mainstream one in linguistics.

Linguistic theory also provides guidance on how an artifact noun’s meaning is resolved as a function of context. This allows us to ascertain when a statutory definition, e.g., the definition of *firearm* in the GCA, departs from ordinary meaning, as has been debated among the litigants in *VanDerStok*. We complement this theoretical exercise with two empirical contributions: naturally occurring evidence of ordinary linguistic usage and experimental survey data on ordinary linguistic interpretation.

A. *The Ordinary Meaning of Artifact Nouns*

To ascertain the ordinary meaning of *firearm*, we look to linguistic theory, which has extensively studied the linguistic category to which *firearm* belongs: artifact nouns (e.g., *firearm*, *weapon*, *table*, and *bicycle*). Artifact nouns “denote[] entities of human invention and/or entities that, through some

must be assembled by the purchaser. So too with guns: An ordinary speaker of English would recognize that a company in the business of selling kits that can be assembled into firearms in minutes—and that are designed, marketed, and used for that express purpose—is in the business of selling firearms.” *Id.* at 16.

⁶⁵ See Ellen P. Aprill, *The Law of the Word: Dictionary Shopping in the Supreme Court*, 30 ARIZ. ST. L.J. 282, 282 (1988).

⁶⁶ Intuitive hypotheticals play an important role in theoretical linguistics, and we will make extensive use of them to help advance our claims regarding the ordinary meaning of artifact nouns. Through the use of intuitional data, researchers can carefully control and adjust the properties of a sentence (or the surrounding context) that determine linguistic interpretation. Our point is that intuition-based methods are susceptible to misuse: a single hypothetical cannot account for all the ways in which interpretation depends on language and context.

⁶⁷ William N. Eskridge Jr. & Victoria F. Nourse, *Textual Gerrymandering: The Eclipse of Republican Government in an Era of Statutory Populism*, 96 N.Y.U. L. REV. 1718, 1728 (2021).

assimilative procedure, come to serve some human-intended function.”⁶⁸ These nouns differ in this respect from so-called natural kind-denoting nouns (e.g., *egg*, *dog*, and *water*). Linguists have long recognized that as a matter of literal semantic meaning, an artifact noun can be characterized by basic attributes that pertain to members of the category denoted by the noun. A widely cited analytical framework was developed by Professor Pustejovsky, who associates words of the English lexicon with a semantic structure representing the essential facets (‘qualia roles’) of artifact noun meaning:

- (1) The **Constitutive** facet: the relationship between an object and its constituents, or proper parts;
- (2) The **Formal** facet: that which distinguishes the object in the larger domain;
- (3) The **Potential** (‘telic’) facet: the potential of an object to fulfill some function or purpose;
- (4) The **Design** (‘agentive’) facet: factors involved in the origin or ‘bringing about’ of an object.⁶⁹

In a given context, only select facets of nominal meaning may be relevant for the purposes of linguistic interpretation. For example, consider sentence (1) below. This sentence is underspecified as to the action that Noel undertakes. On one interpretation, (1) implies that Noel initiated the process of **reading** a novel; on another interpretation, (1) implies that Noel initiated the process of **writing** a novel:

- (1) Noel began a novel.

Linguistic theory illuminates the source of this underspecificity. On the ‘begin-to-read’ interpretation, the relevant facet of the noun *novel* is its ‘Potential’ facet: here, the *novel* realizes its potential to fulfill its intended function (i.e., to be read). On the ‘begin-to-write’ interpretation, the relevant facet is the ‘Design’ facet, i.e., the property of being brought into existence through writing. Context is crucial for identifying the relevant facet(s) and hence the intended meaning of the sentence. Out of context, (1) does not have a stable interpretation.⁷⁰

⁶⁸ Brandon Waldon, Cleo Condoravdi, Beth Levin & Judith Degen, *On the Context Dependence of Artifact Noun Interpretation*, in 27 PROC. OF SINN UND BEDEUTUNG 674, 675 (Maria Onoeva, Anna Staňková & Radek Šimík eds., 2023).

⁶⁹ See James Pustejovsky, *The Generative Lexicon*, 17 COMPUTATIONAL LINGUISTICS 409, 426–27 (1991); see generally PUSTEJOVSKY, *supra* note 6. We borrow the “facet” terminology from D. A. Cruse, *On Polylexy*, 14 DICTIONARIES: J. DICTIONARY SOC. N. AM. 88, 92 (1992). These facets of meaning identified above serve to distinguish artifact nouns from other types of nouns. For example, though both artifact nouns and natural kind-denoting nouns are associated with a Design facet, “[t]he manner in which something is created is a mode of explanation that will distinguish natural kinds from artifacts.” PUSTEJOVSKY, *supra* note 6, at 97. Moreover, not all nouns are concretely associated with a Potential facet. “[The Potential facet] defines what the purpose or function of a concept is, if there is such a constraint associated with it.” *Id.* at 99.

⁷⁰ This is not a *word sense* ambiguity. There are not two general meanings of “began,” one of which is ‘started-to-write’ and the other of which is ‘started-to-read’; nor does “novel” have

According to one naïve hypothesis of linguistic meaning, contexts that center an artifact noun's Potential facet are ones in which members of the category realize their intended function. On this hypothesis, the set of *vehicles* in such a context consists exclusively of objects that are (currently) engaged in the action of transporting people or things. Clearly, this hypothesis is untenable: it predicts that parked cars can never belong to the set of *vehicles* (or even *cars*). A more plausible hypothesis states that category membership in such contexts is determined by functional potential that may or may not be realized in context.⁷¹ The parked car is a *vehicle* in part because it is ready to be used for transportation (once one turns the ignition key and starts driving). The Potential facet attends to **potential** capabilities, rather than exhibited behaviors.

The line between 'capable' and 'incapable' vis-à-vis function is vague and heavily dependent on context and the artifact noun under consideration. The government's *bicycle* hypothetical in *VanDerStok* supports this point:

A bicycle is still a bicycle even if it lacks pedals, a chain, or some other component needed to render it complete or **allow it to function**. So too if the bicycle is shipped with plastic guards attached to the gears or brakes that must be removed **before operation**, or with a seat tube that the user must cut to length before installing. No one would deny that a company selling and shipping products in any of those conditions was engaged in selling 'bicycles.'⁷²

This hypothetical considers objects that, with some manipulation, can fulfill the canonical intended purpose of bicycles. The relevant context is one in which "a company [is] selling and shipping products" to buyers who fully expect to put in some elbow grease before they can ride the thing they have purchased. Form and constitution—including the physical shape of the object and the relative position of constituent parts in physical space—are secondary considerations; what is important is that the buyer receives a product that is capable of being ridden, given an appropriate amount of effort. If the company ships a hunk of aluminum and other raw materials sufficient to produce a bicycle, the buyer can justifiably pursue a refund on the grounds that he did not receive a *bicycle*. Of course, this is a clear case on a continuum of possibilities; there is no crisp line between 'appropriate' and 'inappropriate' effort.

In sum, this theoretical perspective takes the ordinary meaning of artifact nouns like *weapon*, *firearm*, and *table* to be inherently underspecified. There is no complete interpretation of these artifact nouns without context. In some contexts, a *firearm* must be completed; in others, *firearm* or *gun* may have an

two distinct meanings, 'prose-literature-in-the-process-of-being-written' and 'prose-literature-in-the-process-of-being-read.' Rather, the indeterminacy lies in the meaning facet of the concept of "novel" that is being elaborated in relation to the verb. *See also infra* Section VII.B (explaining the "word sense disambiguation paradigm").

⁷¹ *See, e.g.,* Lynn Nichols, *Lexical Semantic Constraints on Noun Roots and Noun Borrowability*, 32 *STUD. LANG.* 683, 694 (2008); Grimm & Levin, *supra* note 6.

⁷² Application for a Stay of the Judgment Entered by the U.S. Dist. Ct. for the N.D. of Tex. at 22, *Garland v. VanDerStok*, No. 23A82 (filed Jul. 27, 2023) (emphasis added).

interpretation that includes incomplete members. Moreover, context is crucial to determine both (1) whether, in context, an artifact noun refers to entities that share common functional properties and (2) how to characterize that common functional ‘core.’ Below, we apply this linguistic framework to analyze how statutory context resolves the interpretation of *firearm* in the GCA.

B. Context’s Role in Interpreting “Firearm”

For the textualist Supreme Court, *VanDerStok* turns on the meaning of *firearm* in the GCA. This section addresses this linguistic question in light of the statutory context, which has been emphasized by textualists from Scalia⁷³ to Barrett.⁷⁴ We restrict our attention to a contested subpart of the statutory definition, section 921(a)(3)(A) [hereinafter “(A)”], the part of the statutory definition from which the ATF derives its authority to regulate firearm parts kits. Below, we argue that (A) clearly extends beyond the narrowest category of completed, operable weapons. We then argue that (A) does so in a manner consistent with the ordinary meaning of *firearm*.

1. Analysis of the GCA Definition

When a statute “includes an explicit definition,” the Court “must follow that definition, even if it varies from a term’s ordinary meaning.”⁷⁵ While the meaning of *firearm* in the GCA may be informed by contemplating the ordinary meaning of that term, it is crucial to attend to the statutory context to discern the contextual meaning that *firearm* has within the Act. We might not call a firearm silencer or a bomb kit a *firearm* in ordinary language. But the statutory definition of *firearm* explicitly includes a wide range of objects, from firearm frames and receivers,⁷⁶ to any combination of parts designed and intended for use in assembling a firearm silencer,⁷⁷ to bombs and bomb-making kits.⁷⁸

In *VanDerStok*, a locus of disagreement is part (A) of the GCA definition, which defines *firearm* as “any weapon (including a starter gun) which will or is designed to or may readily be converted to expel a projectile by the action of an explosive.”⁷⁹ The Respondents in the case sometimes suggest that the only “actual” firearms are completed ones, and that the statute covers only such firearms: “It covers only an **actual** firearm...it does not cover mere parts or kits of parts that might be manufactured into one.”⁸⁰

⁷³ See ANTONIN SCALIA, A MATTER OF INTERPRETATION: FEDERAL COURTS AND THE LAW 37 (Amy Gutmann ed., 1997) (noting that “[i]n textual interpretation, context is everything”).

⁷⁴ See *Biden v. Nebraska*, 600 U.S. 477, 511 (2023) (Barrett, J., concurring) (“To strip a word from its context is to strip that word of its meaning.”).

⁷⁵ *VanDerStok v. Garland*, 680 F.Supp.3d 741, 764 (N.D. Tex. 2023) (quoting *Digit. Realty Tr., Inc. v. Somers*, 583 U.S. 149, 160 (2018)).

⁷⁶ See 18 U.S.C. § 921(a)(3)(B).

⁷⁷ See 18 U.S.C. §§ 921(a)(3)(C), 921(a)(24).

⁷⁸ See 18 U.S.C. §§ 921(a)(4)(A), 921(a)(4)(B).

⁷⁹ 18 U.S.C. § 921(a)(3)(A).

⁸⁰ Brief of Respondents Defense Distributed, Polymer80, Inc., Not an L.L.C. (Doing Business as JSD Supply), and the Second Amendment Foundation, Inc., On Petition for a Writ of Certiorari, at 10, *Garland v. VanDerStok*, No. 23-852 (filed Mar. 8, 2024).

The plain language of (A) undermines this analysis. (A) communicates three relevant categories of *firearms*, comprising a list of items interpreted disjunctively:

- (1) “any weapon...which will...expel a projectile by the action of an explosive”;
- (2) “any weapon...which...is designed to...expel a projectile by the action of an explosive”; or
- (3) “any weapon...which...may readily be converted to expel a projectile by the action of an explosive.”⁸¹

To read (A) to include completed, assembled, currently functional firearms gives effect to the first disjunct (1). But to read (A) to include *only* such entities renders (2) and (3) superfluous, and “courts should avoid treating any statutory language as surplusage.”⁸²

Thus, the statutory context of (A) emphasizes that *firearm* extends to weapons beyond fully completed, functional firearms. The text clearly communicates that *firearm* includes some weapons beyond those that “will . . . expel” a projectile by the action of an explosive; it also includes (2) weapons **designed to** or that (3) **may readily be converted** to do so.⁸³

Though we expect the statutory definition of *firearm* to take precedence over its ordinary meaning in *VanDerStok* (if the two diverge), the latter notion nevertheless features prominently in that case: does (A) embellish the ordinary meaning of *firearm*, or does it explicate an interpretation consistent with that term’s ordinary meaning? We turn to that question below.

2. *A Linguistic Perspective on the Statutory Definition*

The litigants in *VanDerStok* no doubt recognize the primacy of the statutory definition of *firearm* for the purposes of the GCA (and that Act’s implementation by the ATF). However, *VanDerStok* claims that (A) is “an expansion of the ordinary usage” of *firearm* because it covers weapons “that could readily be converted” to expel projectiles.⁸⁴ The Government disagrees, claiming that (A) explicates the term’s ordinary meaning rather than embellishing it (it is an “explicit” definition of the ordinary meaning).⁸⁵

This dispute over ordinary meaning is consequential. First, as discussed in Part IV, the Government’s ‘ordinary meaning’ analysis of *firearm* is important for its analysis of the phrase *frame or receiver* as it appears in section

⁸¹ 18 U.S.C. § 921(a)(3)(A).

⁸² *Whole Woman’s Health v. Jackson*, 595 U.S. 30, 47 n.4 (2021) (citing *Kallinen v. City of Houston*, 462 S.W.3d 25, 28 (Tex. 2015)).

⁸³ See 18 U.S.C. § 921(a)(3)(A).

⁸⁴ See Respondents *VanDerStok*, Andren, Tactical Machining, Firearms Policy Coalition, Inc., and Polymer80, Inc.’s Response in Opposition to Stay at 13, *Garland v. VanDerStok*, 144 S. Ct. 1390 (2023) (No. 23A82), 2023 WL 5046734.

⁸⁵ See Brief for the Petitioners at 9, 19, *Garland v. VanDerStok*, 144 S. Ct. 1390 (2024) (No. 23-852), 2024 WL 3344939.

921(a)(3)(A) [hereinafter “(B)”]. Our analysis of *firearm*’s ordinary meaning will similarly inform our own analysis of *frame or receiver*. Another reason to consider this question is that while statutory definitions take priority by default, “[s]ometimes a definition itself contains a term that is not clear.”⁸⁶ In such cases, “the usual criteria of interpretation . . . are brought to bear,”⁸⁷ and “[f]ar and away the most important of those is the contextual factor of the word actually being defined.”⁸⁸ In other words, judges should look to a term’s ordinary meaning and surrounding context when specialized statutory definitions are unclear. More broadly, “the meaning of the definition is almost always closely related to the ordinary meaning of the word being defined.”⁸⁹

As far as (A) is concerned, there is no conflict between the ordinary meaning of *firearm* and its statutory definition. Rather, (A) contains ample linguistic context to specify the noun’s ordinary meaning. (A) identifies the relevant facets of meaning for the purposes of interpretation: there is a clear and specific elaboration that *firearm*’s Design facet (“designed to”) and Potential facet (“may readily be converted to”) are essential.⁹⁰

The Potential facet encodes a notion of potential capability that is inherently vague and context dependent. (A) faithfully reflects this inherently vague dimension of artifact noun meaning: the definition explicitly identifies objects that “may **readily be converted** to expel a projectile by the action of an explosive.”⁹¹ With “converted,” we see Congress contemplating scenarios in which the user must perform a non-trivial action to get the object to perform its intended function, “to expel a projectile by the action of an explosive.”⁹² Nevertheless, the line between **readily converted** and its negation is inherently fuzzy. In this regard, the definition takes pains not to narrow the reach of the term *firearm* relative to its ordinary meaning. That is, the definition explicates a property of artifact noun interpretation that constitutes part of the implicit linguistic knowledge of competent ordinary speakers, who recognize that an object can be called a firearm even when it does not presently realize its intended function.

Finally, (A) covers “any weapon” that exhibits the design and potential characteristics.⁹³ Thus, to determine whether (A) is faithful to the ordinary meaning of *firearm*, we must understand the contribution of mentioning “weapon” in the definition.⁹⁴ Because *weapon*, an artifact noun, is not defined elsewhere in the statute, we consider its ordinary meaning.

The relationship between *firearm* and *weapon* is well-characterized in both linguistic and psychological research, which draws a distinction between ‘basic-level’ categories, the most typical names we assign to everyday things (e.g., those categories denoted by *tree*, *book*, *table*), and superordinate-level

⁸⁶ SCALIA & GARNER, *supra* note 40, at 228.

⁸⁷ *Id.*

⁸⁸ *Id.*

⁸⁹ *Id.*

⁹⁰ See 18 U.S.C. § 921(a)(3)(A).

⁹¹ *Id.* (emphasis added).

⁹² *Id.*

⁹³ *Id.* (emphasis added).

⁹⁴ *Id.*

categories, which reside at a higher level of abstraction (e.g., *organism* and *furniture*). Superordinate terms group together categories denoted by basic-level terms: for example, the superordinate category *mammal* groups together the categories denoted by *dog* and *cat*.

Firearm and *weapon* stand in exactly this basic-superordinate relationship. (A) grounds the definition of *firearm* in its superordinate category, just as the category denoted by *firearm* constitutes part of the category denoted by *weapon* as a matter of ordinary linguistic meaning.

Like basic-level artifact nouns, superordinates tend to identify entities that have common potential-related properties; however, there may be few (if any) common perceptual attributes that characterize a superordinate category.⁹⁵ For example, the superordinate noun *vehicle* identifies entities of many shapes, sizes, and descriptions; what makes something a *vehicle* is the potential to transport people or things.

As a matter of ordinary meaning, *weapon* contemplates entities with common functional potential. Moreover, like *firearm*, *weapon* may denote entities that are far from operable. Thus, *weapon* harmonizes with the rest of (A), which explicitly emphasizes the role of potential while downplaying the relevance of physical characteristics.

In sum, there are multiple sources of linguistic context within (A) that point to the relevance of the Design and Potential facets of *firearm* while deemphasizing considerations of physical form and/or constitution. This interpretation is routinely available for artifact nouns, and the Government offers compelling evidence that supports this generalization regarding entities that require further assembly to become functional: for example, “[e]very speaker of English would recognize that a tax on sales of ‘bookshelves’ applies to IKEA when it sells boxes of parts and the tools and instructions for assembling them into bookshelves.”⁹⁶ The same is true of entities that require finishing, with additional tools sold separately, to become functional. For example, Ticonderoga’s “Classic Yellow Wood-Cased Pencils” are sold unsharpened.⁹⁷ They can only actually function (write) after the purchase of a sharpener and an additional finishing step: sharpening the pencil. Nevertheless, buyers and sellers recognize that these are clearly pencils. Similarly, customizable belts and watches are sold without holes. Users must hole punch the belts and watches with additional tools to complete them. Nevertheless, the objects as sold are belts and watches.

Thus, from a linguistic perspective, Congress’s definition of *firearm* in (A) is best understood not as an instruction to disregard or embellish the noun’s ordinary meaning but as an attempt to provide sufficient context to resolve an

⁹⁵ See, e.g., Eleanor Rosch, Carolyn B Mervis, Wayne D Gray, David M Johnson & Penny Boyes-Braem, *Basic Objects in Natural Categories*, 8 COG. PSYCH. 382 (1976); Barbara Tversky & Kathleen Hemenway, *Objects, Parts, and Categories*, 113 J. EXPERIMENTAL PSYCH.: GEN. 169 (1984).

⁹⁶ Application for a Stay of the Judgment Entered by the U.S. Dist. Ct. for the N.D. of Tex. at 4, *Garland v. VanDerStok*, No. 23A82 (filed Jul. 27, 2023).

⁹⁷ *Classic Yellow Wood-Cased Pencils*, DIXON TICONDEROGA, <https://weareticonderoga.com/shop/products/pencils/yellow-wood-cased-pencils/> [<https://perma.cc/PWY3-GFUS>] (last visited Mar. 2, 2025).

indeterminacy that is inherent to its ordinary meaning. Because the resolution depends on context, we expect that some contexts may suggest a different resolution. For example, when we call a child’s toy gun his *gun*, the relevant facets are the Formal and Constitutive facets: the object has certain physical properties that make it a suitable object for make-believe play. (A) is not such a context; the language of the definition points to an interpretation that centers the object’s functional capabilities and the circumstances of its creation.

Notably, the Government and Respondents in *VanDerStok* appear to dispute whether the ATF’s interpretation of the GCA departs from the ordinary meaning of ‘firearm’:

[A] covered firearm parts kit qualifies as a firearm **as a matter of ordinary usage . . . An ordinary speaker of English** would recognize that a company in the business of selling kits that can be assembled into firearms in minutes—and that are designed, marketed, and used for that express purpose—is in the business of selling firearms.⁹⁸

The district court correctly held that [the ATF] . . . extend[s] the definitions of “firearm” and “frame or receiver” in federal law **beyond any reasonable understanding of those terms.**⁹⁹

As mentioned above, we expect the statutory definition of *firearm* to be privileged over considerations of ‘ordinary usage’ or ‘reasonable,’ ‘commonsense’ understanding—insofar as the statutory definition diverges from ordinary meaning. Nevertheless, the above passages suggest that some parties believe that the Court’s interpretation of the statutory definition should also cohere with ordinary meaning and ‘commonsense’ linguistic intuition. The analysis presented in this section helps clarify this issue: to the extent that the ATF’s regulatory authority over firearm parts kits is grounded in (A), its authority is also grounded in the ordinary meaning of *firearm*, since (A)’s definition is fundamentally underscoring the ordinary meaning of *firearm* in context. In the next section, we present empirical linguistic data that speaks in favor of the ATF’s interpretation of (A) and provides further evidence that this interpretation coheres with ordinary meaning considerations.

V. EMPIRICAL DATA ON THE MEANING OF “FIREARM”

In this Part, we supplement Part IV’s theoretical linguistic analysis with two sources of empirical evidence: naturally occurring linguistic data, which demonstrates that ordinary speakers can felicitously refer to a parts kit as a *firearm*, *weapon*, *gun*, *rifle*, and/or *assault rifle (AR)*, and experimental survey

⁹⁸ Application for a Stay of the Judgment Entered by the U.S. Dist. Ct. for the N.D. of Tex. at 17–18, *Garland v. VanDerStok*, No. 23A82 (filed Jul. 27, 2023) (emphasis added).

⁹⁹ Response in Opposition to Stay for *VanDerStok et al.* at 13, *Garland v. VanDerStok*, No. 23A82 (filed Aug. 2, 2023) (emphasis added).

data, which demonstrates that ordinary speakers interpret *firearm* to include parts kits in the context of definitions akin to (A).

A. New Data on Ordinary Language Use

In assessing whether firearm parts kits fall within the ordinary meaning of *firearm* and *weapon*, actual linguistic usage is instructive. The Court regularly considers hypothetical linguistic examples to assess the ordinary meaning of statutes, particularly in criminal contexts.¹⁰⁰ Members of the Court have also recommended considering patterns of actual language use through corpus linguistics.¹⁰¹

Ordinary usage shows that firearm parts kits fall within the ordinary meaning of both *firearm* and *weapon* in many contexts—especially contexts similar to § 921. Below, we present several examples from online product advertisements and reviews, with the relevant term bolded for emphasis. The Appendix has an extensive set of examples.

First, grammatical evidence links the label “firearm” to a parts kit:

- “Introducing the AR-40 4.5” MOD1 Billet Upper Receiver Pistol Build Kit, a powerful and compact **firearm** designed to deliver outstanding performance in the dynamic world of pistol builds.”¹⁰²
- “Tiger Rock AR-15 Enhanced Flat Dark Earth Rifle Kit with a 10” Handguard, a precision-engineered **firearm** designed for optimal performance and durability.”¹⁰³
- “Tiger Rock AR-15 Enhanced Robins Egg Blue Pistol Kit - a compact and powerful **firearm** designed for performance and style.”¹⁰⁴
- “Discover the iconic 16” Burnt Bronze Rifle Kit 5.56 from House Keymod, a stylish and versatile **firearm** made in the USA.”¹⁰⁵
- “Invest in excellence with the Tiger Rock AR-15 Burnt Bronze 5” Complete Pistol Kit – a versatile, reliable, and

¹⁰⁰ See, e.g., *Pulsifer v. United States*, 601 U.S. 124, 138–41 (2024); *Lockhart v. United States*, 577 U.S. 347, 357 (2016).

¹⁰¹ See, e.g., *Facebook, Inc. v. Duguid*, 592 U.S. 395, 411–12 (2021) (Alito, J., concurring).

¹⁰² *AR-40 4.5” Billet MOD1 Upper Receiver Pistol Build Kit*, A1ARMORY, <https://a1armory.com/ar-40-4-5-billet-mod1-upper-receiver-pistol-build-kit/> [<https://perma.cc/5KXL-4426>] (last visited Feb. 16, 2025) (emphasis added).

¹⁰³ *Tiger Rock AR-15 Flat Dark Earth Enhanced Rifle Kit w 10” Handguard*, A1ARMORY, <https://a1armory.com/tiger-rock-ar-15-flat-dark-earth-enhanced-rifle-kit-w-10-handguard/> [<https://perma.cc/6TNY-6AZG>] (last visited Feb. 16, 2025) (emphasis added).

¹⁰⁴ *Tiger Rock AR-15 Robins Egg Blue 7” Pistol Build Kit*, A1ARMORY, <https://a1armory.com/tiger-rock-ar-15-robins-egg-blue-7-pistol-build-kit/> [<https://perma.cc/9GD9-Q8C5>] (last visited Feb. 16, 2025) (emphasis added).

¹⁰⁵ *16” Burnt Bronze Rifle Kit 5.56 with 12” House Keymod*, DAYTONA TACTICAL, <https://daytonatactical.com/products/16-burnt-bronze-rifle-kit-5-56-with-12-house-keymod/> [<https://perma.cc/Q2Z5-SW3U>] (last visited Mar. 2, 2025) (emphasis added).

aesthetically pleasing **firearm** that stands out in both performance and style.”¹⁰⁶

The construction used above (“the...Kit, a powerful and compact firearm”),¹⁰⁷ with a comma or hyphen separating the full product name and a descriptive phrase, conveys that the speaker believes that the kit **is** a firearm. Specifically, this is an illustration of an “ascriptive [noun phrase] supplement[.]”¹⁰⁸ For example, the first part of the sentence “Kim Jones, a quite outstanding student, won a scholarship to MIT,” is equivalent in meaning to “Kim Jones is a quite outstanding student.”¹⁰⁹

Second, many advertisements name the kit and then immediately refer to a “weapon” or “rifle.” For example:

- “Looking for a little more firepower in your life? Say hello to the 16” Flat Dark Earth Rifle Kit 5.56 with 12” Keymod. This powerful **rifle** comes equipped with an M4 Feed Ramp, a 1×7 barrel twist, and a 1/2×28 thread, making it perfect for taking down even the most tough targets.”¹¹⁰

Others refer to parts kits themselves as weapons:

- “When you need the best AR-15 rifle available, look no further than this Blue Titanium 16” Rifle Kit 5.56 12” House M-LOK. Designed and manufactured with an obsessive attention to detail, this rugged and dependable **weapon** is perfect for the professional gun owner or enthusiast.”¹¹¹
- “Outstanding! A great value and a great **weapon**! Assembles pretty easy, I would recommend it for anyone who is interested in making their first build.”¹¹²

¹⁰⁶ *Tiger Rock AR-15 Burnt Bronze 5” Complete Pistol Kit*, A1ARMORY, <https://a1armory.com/tiger-rock-ar-15-burnt-bronze-5-complete-pistol-kit/> [<https://perma.cc/ETL8-JHYZ>] (last visited Feb. 16, 2025) (emphasis added).

¹⁰⁷ A1ARMORY, *supra* note 102.

¹⁰⁸ See RODNEY HUDDLESTON & GEOFFREY K. PULLUM, *THE CAMBRIDGE GRAMMAR OF THE ENGLISH LANGUAGE* 1356–57 (2002).

¹⁰⁹ See *id.* at 1357.

¹¹⁰ *16” Flat Dark Earth Rifle Kit 5.56 with 12’ Keymod with Lower*, DAYTONA TACTICAL, <https://daytonatactical.com/products/flat-dark-earth-fde-rifle-kit-magpul-lower-furniture-upper-assembled-with-fde-80-lower/> [<https://perma.cc/94J4-RXTZ>] (last visited Feb. 16, 2025) (emphasis added).

¹¹¹ Brief for Professors and Scholars of Linguistics and Law as Amici Curae in Support of Petitioners at 15, *Garland v. VanDerStok*, 144 S. Ct. 1390 (2024) (No. 23-852) (emphasis added).

¹¹² *PSA AR-15 RIFLE KIT 5.56 16” NITRIDE 1:7 MID-LGTH 13.5” LTWT M-LOK MOE W/ MBUS SIGHTS*, PALMETTO STATE ARMORY, <https://palmettostatearmory.com/psa-16-5-56-nato-1-7-mid-length-nitride-13-5-lightweight-m-lok-moe-ept-rifle-kit-516446780.html> [<https://perma.cc/7BJU-CFV3>] (last visited Mar. 9, 2025) (emphasis added).

Customer reviews also tightly tether references to the unassembled firearm parts kits and a “gun” or “rifle.”¹¹³

- “Since I bought this kit I have bought several more AR’s. This one by far is still my go to range **rifle** as it nails at 200 yards.”¹¹⁴
- “The kit came in as advertised. Great inexpensive **rifle**.”¹¹⁵
- “Purchased this **rifle**. The assembly was a learning experience since this was my first build.”¹¹⁶

The purchased entity is an uncompleted firearm kit, not a completed firearm—so it cannot be the case that “rifle” in these sentences refers **only** to completed firearms. Rather, the writers’ use of the demonstrative word “this” to modify “rifle,” near references to the kit, shows that the customers refer to both the kit and the firearm assembled from the kit as one holistic product.¹¹⁷

The preceding examples offer ample evidence that sellers and consumers readily deploy *firearm* and similar nouns to refer to a product over its lifespan, or to the product that is purchased (as a kit). These examples demonstrate that

¹¹³ If speakers made a sharp categorization distinction between kits and assembled firearms, they might have been expected to signal the difference more explicitly: instead of “Great inexpensive rifle,” perhaps, “This inexpensive kit builds a great rifle”—but of course, this sounds unnecessarily explicit when one understands what the kit is.

¹¹⁴ *PSA AR-15 Rifle Kit 5.56 16” Nitride 1:7 MID-LGTH 13.5” LTWT M-LOK MOE W/ MBUS Sights*, PALMETTO STATE ARMORY, <https://palmettostatearmory.com/psa-16-5-56-nato-1-7-mid-length-nitride-13-5-lightweight-m-lok-moe-ept-rifle-kit-516446780.html> [<https://perma.cc/GP35-M7AS>] (last visited Feb. 16, 2025) (emphasis added).

¹¹⁵ *AR-15 Rifle Kit 15” M-Lok Barreled Upper with NIB BCG*, DAYTONA TACTICAL, <https://daytonatactical.com/products/ar-15-rifle-kit-15-m-lok-barreled-upper-with-nib-bcg/> [<https://perma.cc/G6A7-MFNM>] (last visited Feb. 16, 2025) (emphasis added).

¹¹⁶ *AR-15 5.56/.223 16” M4 Tactical Rifle Kit with 15” MLOK Super Slim Handguard – MIL-SPEC, USA Made*, MORIARTI ARMAMENTS, <https://moriartiarmaments.com/ar-15-6.5-grendel/5.56-nato-.223-rem/ar-15-5.56.223-16-m4-tactical-rifle-kit-with-15-mlok-super-slim-handguard-rk15-fk15-nl?sort=rating&order=DESC> [<https://perma.cc/7HAH-UQPS>] (last visited Feb. 16, 2025) (emphasis added).

¹¹⁷ Brief for Professors and Scholars of Linguistics and Law as Amici Curae in Support of Petitioners at 16 n.19, *Garland v. VanDerStok*, 144 S. Ct. 1390 (2024) (No. 23-852) (“Respondent VanDerStok (Opp. 24) attempts to analogize a weapon parts kit to a “pinewood derby car kit that comes with wheels, nails to affix them, and a block of wood that must be carved and sanded before it becomes a car.” VanDerStok notes, “No one would call such a kit a car.” *Id.* Yet, some do. See, e.g., AMAZON, https://www.amazon.com/Woodland-Scenics-Pine-Derby-Basic/product-reviews/B000BR4VBG/ref=cm_cr_ar_p_d_viewopt_kywd (stating “[t]his car is easy to work with and great for Scouts. The kids can help when putting the car together”). This usage is not surprising, as these pinewood derby kits are designed to be complete cars. If the block of wood were sold separately (not as part of a kit designed to become a car), one would not expect customers to describe that wood block as a car. But the Court does not need to decide the status of pinewood derby cars. With respect to weapon parts kits, the linguistic usage data is clear: Americans regularly treat the weapon parts kit and the completed firearm as the same thing, and the Court should assume Congress did as well. See Amy Coney Barrett, *Congressional Insiders and Outsiders*, 84 U. CHI. L. REV. 2193, 2209 (2017) (arguing that “[i]f, moreover, a legislative command is directed to the citizenry, it is both sensible and fair for the courts to interpret the command as its recipients would”) (internal citations cleaned up)).

ordinary speakers do not confine *firearm* to just completed weapons or those extremely close to operability as a matter of ordinary meaning.

B. New Data from a Survey Experiment

Supreme Court justices have also recognized the usefulness of survey data to textualist analysis.¹¹⁸ Survey data are a useful complement to traditional textualist sources of linguistic evidence, especially insofar as the Court seeks to understand how “the ordinary English speaker . . . would understand the words of the statute” or how the “reasonable person” uses words. In an experiment, we observe that ordinary speakers readily construe *firearm* to include parts kits. This observed decision by consensus among ordinary speakers is particularly strong in contexts akin to (A), which clearly centers *firearm*’s design and potential facets.

1. Methods

Participants: We recruited 1250 participants from Prolific, a widely used online crowdsourcing platform. We recruited a U.S.-based sample, with a minimum 99% approval rating, 50% men and 50% women, and 50% Republican–identified, 50% Democrat–identified, <1% Independent, Other or No Preference. We preregistered three comprehension check questions and one CAPTCHA (to screen out bots). There were 988 participants who completed all checks correctly and were included in the analysis (50% male, 49% female, 1% non-binary; 49% Republican, 47% Democrat, 3% Independent, <1% Other or No Preference). Participants were paid \$1.00, and median completion time was 3 minutes and 53 seconds, for a median compensation rate of \$15.44/hour.¹¹⁹

Materials: Experiment trials are schematized in Figure 1. Participants were asked to read a short passage which described a disagreement between two parties. The locus of the disagreement was the interpretation of some artifact noun, which was defined within the context of a law (in “legal”-domain trials) or a company rule (in “ordinary”-domain trials).

In all trials, the definition specified that members of the relevant nominal category are also members of a corresponding superordinate category. (E.g., for X to meet the definition of *firearm*, X must also be a *weapon*). However, these definitions were further elaborated in ways that varied across experimental conditions. In trials featuring a “restricted” definition, the law/rule explicitly

¹¹⁸ *Pulsifer v. United States*, 601 U.S. 124, 163 (2024) (Gorsuch, J., dissenting) (referring to a survey of ordinary Americans in support of an interpretation). This is the first, and to our knowledge only, reference to a survey in statutory interpretation, although other Justices have indicated interest. For example, in the oral argument of *Facebook, Inc. v. Duguid*, Chief Justice Roberts asked whether a survey of ordinary Americans might prove instructive for judges seeking the statute’s ordinary meaning. Transcript of Oral Argument at 52, 592 U.S. 395 (2021) (No. 19-511).

¹¹⁹ Methods, exclusions, and analyses for this study were pre-registered through the Open Science Foundation. *Artifact Nouns*, OPEN SCIENCE FOUNDATION, <https://osf.io/8m5vh/> [<https://perma.cc/VRH4-XY6W>] (last visited Feb. 16, 2025). Data and code are available at the same link.

contemplated entities with the immediate potential to exhibit a canonical function. In trials featuring a “full” definition, the law/rule additionally contemplated the Design and Potential of such entities. These definitions were designed to closely track the statutory definition of *firearm* in (A), modulo relevant manipulations. There were 12 trial types total: 3 Noun conditions [firearm, table, or bicycle] \times 2 Domain conditions [legal or ordinary] \times 2 Definition conditions [restricted or full].

Participants were then asked to provide their judgment as to the permissibility of an [AN] parts kit, where [AN] was the artifact noun defined in the law/rule. Participants were told that these kits can be purchased online, that creating a functional [AN] requires combining the parts, and that most people could combine the parts in one or two hours with the right tools.¹²⁰ Participants provided a binary “Yes”/ “No” judgment to the following question: “In your view, does the rule’s definition of “[AN]” include [AN] parts kits?”

Procedure: Each participant completed one trial of a randomly assigned type. Before the trial, participants completed two tasks which served as exclusion criteria: an attention task, designed to ensure that participants were reading experiment instructions in full, and a simple reasoning problem task. After the trial, participants completed a comprehension task, in which they were asked to recall how the artifact noun of interest was defined in the experimental trial. The two selection options corresponded to the artifact noun’s two associated Definition conditions. This task served as a third exclusion criterion. Data from participants who met at least one criterion were excluded from analysis.

¹²⁰ The time to convert a weapon varies from kit to kit—as with furniture or bicycles—but the process generally does not take very long. Companies market the ease and speed with which a functional firearm can be assembled, many people report less than an hour of work, and even “un-handy” first-time gun purchasers can assemble them in the equivalent of a day’s work. For most gun kits, the indexes and tabs have been made, the kit can be assembled with common hand tools (or tools that are included in the kit), and instructions are either included or easy to find online. See Brief for the Petitioners at 6, *VanDerStok v. Garland*, 86 F. 4th. 179, 188 (5th. Cir. 2023 (No. 23-852)). For comparison, courts have found that a gun restoration process that can be completed in six hours or less falls within the definition of “readily restored.” *United States v. TRW Rifle 7.62×51mm Caliber, One Model 14 Serial 593006*, 447 F.3d 686, 691 (9th Cir. 2006); *United States v. One TRW, Model M14, 7.62 Caliber Rifle*, 441 F.3d 416, 422–24 (6th Cir. 2006).

Legal

Imagine that a U.S. court is deciding a dispute between two parties

Firearm

about the meaning of the term "firearm" in a law.

Table

about the meaning of the term "table" in a law.

Bicycle

about the meaning of the term "bicycle" in a law.

The law includes a definitions section, which states:
"The term "[firearm / table / bicycle]" means

Restricted Context

any weapon which will expel a projectile by the action of an explosive."

any piece of furniture which will provide a level surface on which objects can be placed."

any vehicle which will propel a rider forward through the rider's pedaling."

Full Context

any weapon which will or is designed to or may readily be converted to expel a projectile by the action of an explosive."

any piece of furniture which will or is designed to or may readily be converted to provide a level surface on which objects can be placed."

any vehicle which will or is designed to or may readily be converted propel a rider forward through the rider's pedaling."

The disagreement concerns whether [firearm / table / bicycle] parts kits are included in the law. These parts kits are packages of [firearm / table / bicycle] parts that a person can order online. To create a functional [firearm / table / bicycle], the buyer must combine the elements of the parts kit. Most people could combine the parts in one or two hours with the right tools.

Question

In your view, does the law's definition of "firearm" include firearm parts kits?

In your view, does the law's definition of "table" include table parts kits?

In your view, does the law's definition of "bicycle" include bicycle parts kits?

Figure 1a. Experimental materials, legal condition

Ordinary		
Imagine that two employees that work for a company have a disagreement		
Firearm about the meaning of the term "firearm" in one of the company's rules.	Table about the meaning of the term "table" in one of the company's rules.	Bicycle about the meaning of the term "bicycle" in one of the company's rules.
The rule includes a definitions section, which states: "The term "[b] firearm / table / bicycle]" means		
Restricted Context	<div style="border: 1px solid black; padding: 10px;"> <p>any weapon which will expel a projectile by the action of an explosive."</p> <p>any piece of furniture which will provide a level surface on which objects can be placed."</p> <p>any vehicle which will propel a rider forward through the rider's pedaling."</p> </div>	
Full Context	<div style="border: 1px solid black; padding: 10px;"> <p>any weapon which will or is designed to or may readily be converted to expel a projectile by the action of an explosive."</p> <p>any piece of furniture which will or is designed to or may readily be converted to provide a level surface on which objects can be placed."</p> <p>any vehicle which will or is designed to or may readily be converted propel a rider forward through the rider's pedaling."</p> </div>	
The disagreement concerns whether [b] firearm / table / bicycle] parts kits are included in the rule. These parts kits are packages of [b] firearm / table / bicycle] parts that a person can order online. To create a functional [b] firearm / table / bicycle], the buyer must combine the elements of the parts kit. Most people could combine the parts in one or two hours with the right tools.		
Question		
In your view, does the rule's definition of "firearm" include firearm parts kits?	In your view, does the rule's definition of "table" include table parts kit?s	In your view, does the rule's definition of "bicycle" include the bicycle parts kits?

Figure 1b. Experimental materials, ordinary condition

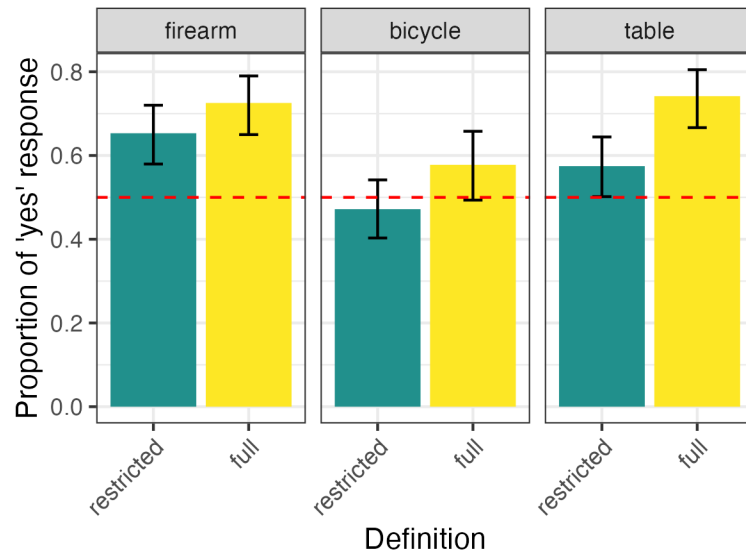


Figure 2. Proportions of ‘yes’ response in Experiment 1. Error bars represent 95% binomial confidence intervals (as computed with the Hmisc function in R).

2. Results

In total, 262 participants ($\approx 21\%$) met at least one exclusion criterion or exited the study early, leaving data from 988 participants for analysis.¹²¹ Figure 2 visualizes participant responses as a function of Definition, faceted by Noun. A majority of participants (69%; 95% CI = [63%, 74%]) considered firearm parts kits to be firearms. This trend held in both the legal context (64%; 95% CI = [56%, 71%]) and the ordinary context (74%; 95% CI = [67%, 80%]), regardless of whether *firearm* received a restricted definition (65%; 95% CI = [58%, 72%]) or full definition (73%; 95% CI = [65%, 79%]).

To investigate whether and how participant responses varied as a function of Noun (reference level *firearm*), Domain (reference level “legal”), and Definition (reference level “restricted”), we conducted a binary logistic regression predicting log odds of “Yes” response from fixed effects of these three variables and all possible interactions. None of the interaction terms were significant predictors of the outcome variable, so we dropped these terms from the model and conducted a second regression with only the additive fixed effects of the three variables. Relative to *firearm* trials, the likelihood of “Yes” response was significantly lower on *bicycle* trials ($\beta = -0.7073$, $SE = 0.1637$, $z = -4.319$, $p = 1.56e-05$) but not on *table* trials ($\beta = -0.1626$, $SE = 0.1671$, $z = -0.973$, $p = 0.330611$). Moreover, we found no evidence of an effect of Domain ($\beta = 0.1096$, $SE = 0.1338$, $z = 0.819$, $p = 0.412656$); i.e., there was no evidence that the likelihood of “Yes” response was either higher or lower in the “legal” condition

¹²¹ Our data includes responses from nine participants who, in a debrief survey, indicated “I am not fluent in English but am fluent in another language or languages.” Excluding such participants from analysis does not qualitatively change any of the findings reported below.

as compared to the “ordinary” condition. However, there was evidence of significant positive effect of Definition ($\beta = 0.5136$, SE 0.1359, $z = 3.780$, $p = 0.000157$); i.e., there was evidence that the likelihood of “Yes” response was higher when participants were provided with a ‘full’ definition of the relevant noun.

3. Discussion

Across multiple tested contexts, a majority of ordinary Americans evaluated firearm parts kits as members of the category denoted by *firearm*. Note that this occurred **without** any further language emphasizing the relevance of design or potential function, such as the language of (A) (“designed to” and “may readily be converted to”). We found that when such language was provided, an even greater proportion of participants considered firearm parts kits to be firearms. That is, ordinary readers recognize that a clear statement including weapons that are “designed to” or “may readily be converted to” function as a firearm indicates that parts kits are included.

This result is fully compatible with the theoretical framework presented in Part IV. Without definitional language that explicitly identifies the relevant facets of artifact noun meaning, ordinary speakers attempt to infer those relevant facets under considerable uncertainty. We predict this uncertainty to be reflected as population-level variation in interpretive judgments, which is what we observe in the “restricted” condition of the experiment. When the context includes language which explicitly identifies the Design and Potential facets of *firearm*, the uncertainty is resolved.¹²² As predicted, we see greater levels of population-level agreement in the expected direction, with a greater proportion of speakers construing *firearm* to include parts kits.

These results also carry methodological implications. Not all artifact nouns (or artifact noun parts kits) were treated equally: most participants reported that the term *firearm* includes firearm parts kits, but a significantly smaller proportion of participants judged *bicycle* to include bicycle parts kits. In *VanDerStok*, the Government, Respondents, and lower courts have all attempted to elucidate the meaning of *firearm* and *firearm parts kit* by considering ‘analogous’ linguistic expressions. (Recall, e.g., the Government’s “IKEA bookshelf” hypothetical.)¹²³ Our results suggest that there are limits to this approach: it may obscure substantial divergences in how ordinary Americans would interpret the words or phrases under comparison. This cautionary note applies even when making analogies between highly related linguistic expressions. (For example, *bicycle* and *firearm* are both alike in that they are both basic-level artifact terms.)

VI. THE MEANING OF “FRAME” AND “RECEIVER”

¹²² In a second study, we investigated the relative contribution of Design language and Potential language when it comes to the availability of this more inclusive interpretation. The results of that study are available in the OSF repository. *Artifact Nouns*, OPEN SCIENCE FOUNDATION, <https://osf.io/8m5vh/> [<https://perma.cc/5YBC-25V8>] (last visited Feb. 16, 2025).

¹²³ Brief for the Petitioners at 18, *VanDerStok v. Garland*, 86 F.4th 179, 188 (5th Cir. 2023) (No. 23-852).

Beyond the interpretation of *firearm*, *VanDerStok* implicates the interpretation of *frame or receiver* as that phrase appears in (B), the second disjunct of the GCA’s statutory definition of *firearm*. The Government contends that (B) includes *frame or receiver* parts kits that are designed to or may readily be converted to function as a *frame or receiver*. The respondents claim that “[i]f an item potentially could be made into a frame or receiver but is not a[n assembled] frame or receiver that is insufficient under the Act’s plain text.”¹²⁴ That is, the respondents contend that (B) extends only to fully-assembled, fully-functional frames and receivers.

A. Linguistic Theory

As a reminder, recall the language of 18 U.S.C. § 921(a)(3):

The term “firearm” means

- (A) any weapon (including a starter gun) which will or is designed to or may readily be converted to expel a projectile by the action of an explosive;
- (B) the frame or receiver of any such weapon;

Like *firearm*, both *frame* and *receiver* are artifact nouns whose linguistic meanings are made more precise by context. We argued that (A) underscores that the contextual meaning of *firearm* includes the ATF-identified gun parts kits, by foregrounding the Potential (“expel projectiles . . .”) and Design (“designed”) facets of the noun’s ordinary linguistic meaning and backgrounding the Formal and Constitutive facets (no mention of size, shape, trigger, etc.). Notably, however, Congress does not similarly underscore the meaning of *frame or receiver* in (B) with similar language (e.g., “any object which will or is designed to or may readily be converted to function as a firearm frame or receiver”).

The Government argues that the inclusion of (A)’s “designed” and “readily be converted” language merely serves to ground the statutory definition of *firearm* in a familiar, ordinary sense of that term;¹²⁵ and in (B), *frame or receiver* is similarly interpreted according to its ordinary meaning, which for the

¹²⁴ Respondents *VanDerStok et al.*’s Response in Opposition to Stay at 11, *Garland v. VanDerStok*, 144 S. Ct. 44 (2023) (No. 23A82).

¹²⁵ “Like the district court, respondents emphasize . . . that Congress used the phrase ‘designed to or may readily be converted to’ in Section 921(a)(3)(A) but did not include a similar phrase in Section 921(a)(3)(B) . . . [T]here is an obvious explanation for that difference: If Congress had limited the express definition of ‘firearm’ in Section 921(a)(3)(A) to weapons that ‘**will** expel a projectile by the action of an explosive,’ 18 U.S.C. 921(a)(3)(A) (emphasis added), it would have departed from ordinary meaning by including only **functional** firearms.” Reply in Support of Application for a Stay at 7–8, *Garland v. VanDerStok*, 144 S. Ct. 44 (2023) (No. 23A82).

Government “include[s] a partially completed frame or receiver that can readily be made functional.”¹²⁶

In contrast, the lower courts and respondents take the omission of such language in (B) to be deliberate and meaningful, and they conclude on that basis that *frame or receiver* extends only to fully assembled and functional frames and receivers. However, proper understanding of artifact nouns reveals that this conclusion does not follow. (B) not only omits the “designed” and “readily be converted” language found in (A) but also omits language analogous to (A)’s “*will . . . expel a projectile by the action of an explosive.*” (B) could have been written to explicitly identify (only) fully assembled, fully functional frames or receivers, e.g., ‘a frame that *will* hold the essential mechanism’ (“will” to express purpose-readiness) of ‘any such weapon’ defined in (A). But (B)’s language varies from (A)’s in this respect. As we argue below, we do not think these strong inferences should be drawn from the “variation” between (A) and (B). But even for those who propose that this variation is meaningful, it does not follow that the variation cuts in one direction. (B) has neither the explicit mirroring language that would favor the government (“any object which will or is designed to or may readily be converted to function as a firearm frame or receiver”) nor the explicit mirroring language that would favor the respondents (“any object which will function as a firearm frame or receiver”).

1. *The Context of Section 921(a)(3)(B)*

How, then, does context contribute to the meaning of *frame or receiver*? To answer this question, we first note that language users routinely leverage contextual information to inform a word’s contextual meaning. Recall from Section IV.A that verb + artifact noun combinations may leave unspecified the nature of the activity. (2) shows that when multiple under-specifications are present, there is pressure to specify them similarly:

- (2) Last week, Noel started a novel, and Liz finished a nonfiction book.

In (2), the nouns *novel* and *nonfiction book* have a possible ‘Potential’-oriented interpretation: Noel and Liz are reading (realizing the object’s intended function). Both nouns also have a possible ‘Design’ interpretation: Noel and Liz are writing (creating) the object. Where available, interpreters tend to apply contextual information broadly to specify nouns consistently. This is demonstrated by (3) and (4), in which the first sentence provides a context clue for how to resolve the indeterminacy in (*start a novel*). Because of the strong default expectation of similar specification, this context clue may also serve to determine an interpretation of (*finished a nonfiction book*).

- (3) Noel is a prolific writer. Last week, he started a new novel. A few days later, his friend Liz finished a nonfiction book.

¹²⁶ Application for a Stay of the Judgment Entered by the U.S. Dist. Ct. for the N.D. of Tex. at 17–18, *Garland v. VanDerStok*, 144 S. Ct. 44 (2023) (No. 23A82).

- (4) Noel is an avid reader. Last week, he started a new novel. A few days later, his friend Liz finished a nonfiction book.

The context of (3) clarifies that Liz is writing, and the context of (4) clarifies that Liz is reading. The same kind of contextual inferences clarify section 921(a)(3). In (A), Congress furnishes the reader with the context sufficient to identify the relevant facet of *firearm*'s ordinary meaning for the purposes of the definition. *Frame or receiver* does not receive a similar elaboration in (B), but because *frame or receiver* is underspecified in the same way that *firearm* is, we can readily account for this omission by appealing to the same principle of interpretive consistency exemplified in (2), (3), and (4). Section 921(a)(3)(A) contemplates gun parts kits, including those with 80% frames or receivers, as we have argued above in Part IV; in context, section 921(a)(3)(B)'s "frames or receivers" are just those same frames or receivers. Even though 80% frames or receivers are not immediately ready to function, they are regularly included as part of a kit that may readily be converted into a firearm, and therefore the *frame or receiver* of any such weapon contemplated in (A).

The remainder of section 921(a)(3) bolsters this conclusion. Part (C) defines "any firearm muffler or firearm silencer" as a *firearm*; (D) further extends this definition to include "any destructive device." Both (C) and (D) 'bottom out' in statutory definitions which, like (A), foreground the Potential and Design facets over and above Formal or Constitutive facets:

The terms "firearm silencer" and "firearm muffler" . . . includ[e] **any combination of parts, designed or redesigned, and intended for use in assembling or fabricating** a firearm silencer or firearm muffler."¹²⁷

The term "destructive device" means . . . (B) any type of weapon . . . which will, or **which may be readily converted to, expel a projectile** by the action of an explosive or other propellant . . . and (C) any combination of **parts either designed or intended for use in converting any device into any destructive device** . . . and from which **a destructive device may be readily assembled**.¹²⁸

(C) and (D) thus provide further contextual information which helps to resolve the indeterminacy of *frame or receiver* in (B). In sum, neither context nor considerations of ordinary linguistic meaning suggest that *frame or receiver* extends exclusively to fully assembled frames and receivers in (B).

This analysis contrasts starkly with one presented in the lower court opinions, which apply a familiar heuristic of legal interpretation and achieve the opposite interpretive result. The lower courts' preferred heuristic—sometimes called the *Presumption of Consistent Usage* canon of statutory construction—states that "[a] word or phrase is presumed to bear the same meaning throughout

¹²⁷ 18 U.S.C. § 921(a)(25).

¹²⁸ 18 U.S.C. § 921(a)(4).

a text; a material variation in terms suggests a variation in meaning.”¹²⁹ From the *Meaningful Variation* corollary to this canon, we can derive an ‘omitted terms, negative implication’ principle of the kind invoked by the lower courts.¹³⁰

By contrast, the argument developed in this section is evocative of another heuristic, the *Associated Words* canon (*noscitur a sociis*), which states that “[a]ssociated words bear on one another’s meaning.”¹³¹ Scalia and Garner elaborate: “When several nouns or verbs or adjectives or adverbs . . . are associated in a context suggesting that the words have something in common, they should be assigned a permissible meaning that makes them similar.”¹³² The *Associated Words* and *Consistent Usage (Meaningful Variation)* canons appear to offer contradictory guidance when it comes to the meaning of *frame or receiver* in (B). How can we be confident that *Associated Words* takes “precedence” over *Meaningful Variation* in this case?

According to Scalia and Garner, “[t]he [*Associated Words*] canon has tremendous value in a broad array of cases”;¹³³ by contrast, “[b]ecause it is so often disregarded, [the *Consistent Usage*] canon is particularly defeasible by context . . . [it] can hardly be said to apply across the whole *corpus juris*.”¹³⁴ The *Consistent Usage* canon “more than most other canons . . . is not often achieved.”¹³⁵ Thus, say Scalia and Garner, as a general matter the *Associated Words* canon is more broadly applicable than *Consistent Usage* reasoning.¹³⁶

2. *The Role of Anaphora in Section 921(a)(3)*

The specific language and context of section 921 further confirm the conclusion recommended by the *Associated Words* canon. There are clear linguistic indications that count against inferring any “meaningful” variation from differences between (A) and (B). Recall that section 921 defines *firearm* to include:

- (A) any weapon (including a starter gun) which will or is designed to or may readily be converted to expel a projectile by the action of an explosive;
- (B) the frame or receiver of any such weapon.¹³⁷

The phrase “any such weapon” in (B) refers back to “weapon” as defined in (A). Linguists call this relationship “anaphora.” This is “a relation between two linguistic elements, wherein the interpretation of one (called an anaphor) is in

¹²⁹ SCALIA & GARNER, *supra* note 40, at 170 (emphasis added).

¹³⁰ See, e.g., *id.* (explaining that “where [a] document has used one term in one place, and a materially different term in another, the presumption is that the different term denotes a different idea”).

¹³¹ *Id.* at 195.

¹³² *Id.*

¹³³ *Id.* at 196.

¹³⁴ *Id.* at 171–72.

¹³⁵ *Id.* at 170.

¹³⁶ *Id.* at 170, 195–96.

¹³⁷ 18 U.S.C. § 921.

some way determined by the interpretation of the other (called an antecedent).”¹³⁸

This clear reference from Congress, using “any such weapon” in (B) to refer back to “weapon” in (A), is essential elaboration of the contextual meaning of “frame” and “receiver.” It indicates a close connection between (A) and (B). As Parts I and II of this Article explain, (A) describes weapons that will, are designed to, or may readily be converted to expel a projectile by means of an explosive. Section (B), then, describes frames and receivers of “such weapons” that will, are designed to, or may readily be converted to expel a projectile by means of an explosive.

Anaphora’s contribution to this contextual meaning clarifies why “receiver” in (B) would not include, for example, the **completed** metal receiver of a toy gun.¹³⁹ Literally, such a receiver is a **completed** receiver, but there is no statutory context to indicate that “completion” in the constitutive sense is the relevant facet of meaning. Overreliance on abstract dictionary definitions could imply the same bizarre conclusion.¹⁴⁰ But the completed receiver of a toy gun—or the completed receiver of a metal model gun—is not a receiver **in this context**: Those are not receivers of “any such weapon,” as defined in (A). The text says nothing about whether the relevant receivers should be restricted to only *completed* ones; to the contrary, it emphasizes that the relevant receivers are ones compatible with the “weapons” described in (A).

Recognizing the contextual meaning of (B) underscores that it includes an “incomplete” 80% receiver that is designed to or could be converted in one hour into the essential firing mechanism of an AR-15. Such receivers are frequently sold as parts of weapons that are *firearms* under (A), as we argued in Parts I–III.¹⁴¹ Those (unfinished) receivers are receivers of *any such weapon* as defined in (A).

The presence of the anaphoric construction in (B) (“any such weapon”)—coupled with the linguistic context provided by (A) (elaborating firearm as “any weapon” that is designed to or may readily be converted to expel a projectile), which contains the antecedent—clarifies why the absence of similar language in (B) does not point to such a restrictive construal of *frame or receiver*. These two linguistic phenomena are sufficient to determine the interpretation of *frame or receiver* in context. For this reason, it would have been superfluous for Congress to add overt ‘designed to or may readily be converted to’ language directly into (B). The absence of such language in (B) is further evidence that the interpretation of *frame or receiver* is resolved by considering the context of (A),

¹³⁸ See YAN HUANG, ANAPHORA: A CROSS-LINGUISTIC APPROACH 1 (2000).

¹³⁹ E.g., *Shopping Filter for Military Rifles*, MAGNUM ENTERPRISES, <https://www.rubberbandguns.com/rifles/rifles-military> [https://perma.cc/DG66-6MB2] (last visited Feb. 16, 2025); *MOC 14022 Military Thompson Sub Machine Gun Bricks Toys*, USA BLOCKS, <https://www.usablocks.com/products/moc-14022-military-thompson-sub-machine-gun-bricks-toys-usablocks> [https://perma.cc/A8MH-98PX] (last visited Feb. 16, 2025).

¹⁴⁰ See, e.g., *VanDerStok v. Garland*, 86 F.4th 179, 188 (5th Cir. 2023) (relying on dictionary definitions of “frame” and “receiver”).

¹⁴¹ See, e.g., *16” AR-15 Rifle Kit with 15” Slim Keymod with 80% Lower Receiver - Titanium Blue*, DAYTONA TACTICAL, <https://daytonatactical.com/products/titanium-blue-16-ar15-kit-with-15-slim-keymod-with-lower/> [https://perma.cc/C7MB-CHE3] (last visited Feb. 16, 2025).

which in turn suggests that *frame or receiver* extends beyond fully completed frames and receivers in context. The textual indications from section 921 strongly support applying the *Associated Words* canon.

In contrast, there are none of the indications one would expect to support the *Meaningful Variation* canon. That canon carries the most weight when there is clear linguistic evidence that text was added in one place and not the other in order to draw a contrast.¹⁴² That is not the case here. Consider a hypothetical alternative where instead of (B), there was (B'), coupled with (A) as follows:

- (A) any weapon (including a starter gun) which will or is designed to or may readily be converted to expel a projectile by the action of an explosive;
- (B') any frame or receiver of a weapon which will expel a projectile by the action of an explosive.

In this hypothetical, the parallel language (“which will expel”) and absence of any connection between the two clauses (i.e., no anaphoric “such”) provide a stronger basis for reading the absence of “is designed to or may readily be converted to” from (B') as deliberate and meaningful.

The actual statutory text, however, is not a good candidate for such a *Meaningful Variation* inference. It does not use two different terms (e.g., land vs. real estate, completed frame vs. frame), nor does it include any language that indicates a contrast between (A) and (B). It does the opposite: It explicitly binds the two clauses together (with “any such weapon”) such that they are best read as sharing a context in which both Design and Potential facets of meaning are salient.

B. New Data on Ordinary Language Usage

The preceding linguistic analysis may seem complex, and the contribution of context here is easily overlooked. But the preceding analysis is confirmed by ordinary examples and common sense.

1. Unfinished frames as frames and unfinished receivers as receivers

Our analysis of *frame or receiver* in (B) extends to usages of *frame* and *receiver* in ordinary contexts. As the government’s reply brief in *VanDerStok* notes, sellers (including Respondents in *VanDerStok*) refer to 80% frames as simply *frames*.¹⁴³ Ordinary people also refer to incomplete receivers as *receivers*:

¹⁴² SCALIA & GARNER, *supra* note 40, at 170; *see also* *Pulsifer v. United States*, 601 U.S. 124, 162–63 (2024) (Gorsuch, J., dissenting) (noting that statutory use of both “and” and “or” implies Congress having contemplated difference between two words).

¹⁴³ Reply Brief for the Petitioners at 8 n.4, *VanDerStok v. Garland*, 86 F.4th 179, 188 (5th Cir. 2023) (No. 23-852) (noting that “Respondent Polymer80, for example, sold the relevant products on a section of its website entitled ‘Pistol Frame[s] and Jigs.’ Polymer80, 80% *Frames and Jigs*, <https://perma.cc/DLG5-GRGX>. Similarly, respondent BlackHawk marketed ‘the GST-9’ ‘[f]rame.’ 80% Arms, *GST-9*, <https://perma.cc/4N5Y-YQHM>”).

- “What additional parts do I need to assemble a complete rifle or pistol using **this receiver**?”¹⁴⁴

People also regularly refer to unassembled packages that include an unfinished 80% receiver as a *firearm* and *rifle*.

- “Get ready to rock and roll with the brand new 16” AR-15 Rifle Kit with 15” Slim Keymod and 80% Lower Receiver – Burnt Bronze! Not only does it look great, thanks to its stylish burnt bronze color, but it’s also the perfect **firearm** for any shooter.”¹⁴⁵
- “Introducing the 16” AR-15 Rifle Kit with 15” Slim Keymod with 80% Lower Receiver – Titanium Blue; the perfect addition to your collection! This **rifle** has many of the features you’d expect from a higher-end model, like a .223/5.56 M4 Feed Ramp and 1:7-barrel twist.”¹⁴⁶

An unfinished 80% frame or receiver falls within the ordinary meanings of *frame* and *receiver*, respectively. As such, it is sensible for a statute to simply employ these terms with this meaning (inclusive of, e.g., 80% receivers), with no additional language to underscore this meaning.

2. *Analogous ordinary examples do not support an inference from “meaningful variation” or “lack of similar language.”*

Section VI.A’s linguistic analysis of artifact nouns extends beyond firearm frames and receivers. Here we present five ordinary examples that mirror the structure of section 921(a)(3). Imagine, as a simple example, that a high school prohibits students from bringing cigarettes to school. The rule defines cigarettes as follows.

Example 1: Cigarettes

The term “cigarette” means

- (A) any object which will or is designed to or may readily be converted to smoke tobacco;

¹⁴⁴ *Pike Arms Elite22 80% Receiver with Extended Picatinny Rail Matte Black*, TACTICAL INC., <https://www.tacticalinc.com/catalog/product/id-8186> [<https://perma.cc/73SP-MQZN>] (last visited Feb. 16, 2025) (emphasis added) (characterizing a Frequently Asked Question).

¹⁴⁵ *16” AR-15 Rifle Kit with 15” Slim Keymod with 80% Lower Receiver – Burnt Bronze*, DAYTONA TACTICAL, <https://daytonatactical.com/products/burnt-bronze-16-ar15-kit-with-15-slim-keymod-with-lower/> [<https://perma.cc/4TEG-YK9K>] (last visited Feb. 16, 2025) (emphasis added).

¹⁴⁶ *16” AR-15 Rifle Kit with 15” Slim Keymod with 80% Lower Receiver – Titanium Blue*, DAYTONA TACTICAL, <https://daytonatactical.com/products/titanium-blue-16-ar15-kit-with-15-slim-keymod-with-lower/> [<https://perma.cc/S2EG-64EP>] (last visited Feb. 18, 2025) (emphasis added).

(B) the tobacco tube of any such object.

(A)’s express definition prohibits finished cigarettes as well as an unassembled and unfinished “cigarette kit,” complete with tobacco, rolling papers that must be unboxed and torn out of their holder, and a filter. (B) does not explicitly define “tobacco tube” of “any such object.” Now imagine that a student entered the school with (only) unopened/unboxed rolling papers and claimed that these do not fall under (B) because they are only an “unfinished” and “unassembled” tobacco tube and (B) does not have language mirroring (A), like “any object which will or is designed to or may readily be converted to be used as a tobacco tube.” The school principal would rightly reject this argument as an unsuccessful effort to evade the rule’s meaning. The absence of an explicit definition in (B) is not meaningful in the sense that it implies that (B) is artificially limited to only 100% completed tobacco tubes. The language “any such object” in (B) underscores that the contextual meaning of “tobacco tube” is not artificially restricted in this way: (B) explicitly includes those tobacco tubes that are part of a kit falling under (A).

Before turning to the next example, note that the anaphora (“any such object”) also underscores the contextual meaning of *tobacco tube* by emphasizing the **exclusion** of entities that might fall under the meaning. A candy cigarette tube (that is solid and cannot hold tobacco) does not fall under (B). This reasoning also answers the Fifth Circuit’s suggestion that the government’s reading of section 921(a)(3)(B) might extend to objects that “look like frames or receivers.”¹⁴⁷ The court worries that:

One could make a cake that looks like a hamburger, just as one could make a cake that looks like a gun frame or receiver. One is ‘clearly identifiable’ as a hamburger, just as the other is ‘clearly identifiable’ as a gun part. But that does not make the former taste like a Big Mac, just as it does not make the latter covered by the GCA.¹⁴⁸

The court is correct that section 921(a)(3)(B) does not include a cake that looks like a firearm receiver, and that this would be an absurd conclusion. But the court is incorrect that such an absurd conclusion must follow from an interpretation that extends section 921(a)(3)(B) beyond fully completed receivers. In Example 1 above, *tobacco tube* extends to unfinished and unassembled tubes but not toy tubes or cake tubes. This is underscored by the statutory context, indicating the relevant class of tubes with “any such tube.”

As a second example, suppose that a middle school prohibits children from bringing board games to school. The rule defines board games as follows.

Example 2: Board games

¹⁴⁷ VanDerStok v. Garland, 86 F.4th 179 (5th. Cir. 2023), *cert. granted*, 2024 WL 1706014 (U.S. Apr. 22, 2024) (No. 23-852).

¹⁴⁸ *Id.*

The term “board game” means

- (A) any object which will or is designed to or may readily be converted to be played as a game by placing or moving pieces on a board;
- (B) the board of any such object.

Suppose a student enters the school with a brand-new cardboard sheet of tiled board pieces from the board of the game Settlers of Catan. To convert these tiles into a functional board, the pieces must be “punched out” of the cardboard sheet that holds them and assembled, but the student has clearly brought to school a *board* within the meaning of (B). The same would be true of a student who brought unfinished and unassembled boards of Guess Who? or Mousetrap. There is no *Meaningful Variation* inference to draw from the explicit definition in (A) to an artificial restriction of the ordinary meaning of (B)’s terms. The best reading in context, underscored by the anaphora (“any such object”) connecting (A) and (B), is that (B) includes such an unfinished and unassembled board.

We are cautious about drawing too much from ordinary examples for legal interpretation. But these examples show that there is nothing unusual about the contextual argument from Section VI.A. There is no *Meaningful Variation* inference that must be drawn from a construction like section 921(a)(3)’s.¹⁴⁹

The real examples from “gun parts kits” advertisements and customer reviewers also illustrate that the Design and Potential function of artifact nouns, like unfinished frames and receivers, are often contextually relevant. Moreover, these examples illustrate that it is a mistake to assume that the “variation” in descriptions of artifact nouns in sections 921(a)(3)(A) and 921(a)(3)(B) is a sound basis of contextual restriction of those nouns’ meaning. The opposite inference is often contextually warranted: artifact nouns described in slightly different terms should be construed consistently, not artificially inconsistently. Finally, the construction in section 921(a)(3) underscores this opposite contextual inference: The anaphoric “any such weapon” explicitly unifies the context of sections 921(a)(3)(A) and 921(a)(3)(B).

VII. IMPLICATIONS

This Article’s analyses have implications for legal interpretive practice. These include (1) a recommendation for deciding *VanDerStok*, and (2) lessons for other interpretive disputes involving artifact nouns.

The case study has broader implications for statutory interpretation theory. Today’s textualists rely heavily on what we call a “word sense disambiguation” (“WSD”) paradigm. The analysis here illustrates the limits of that approach. This also has implications for the increasingly important determination of textual clarity versus ambiguity.

¹⁴⁹ The definition has two parts. Part A elaborates the facets of meaning of an entity. Part B omits those facets for a subpart, but instead connects A and B through anaphora.

Most broadly, this study advances longstanding discussions in legal philosophy. First, *vehicle* is an artifact noun, and we turn to the classic Hart-Fuller debate about the hypothetical “no vehicles in the park” rule. That debate has been explored thoroughly,¹⁵⁰ but the Article’s linguistic analysis provides new support for Fuller’s (sometimes disparaged) view of language and the relationship between text and purpose. Second, the Article’s case study illustrates the benefits to legal interpretation of employing *intensional* rather than *extensional* definition.¹⁵¹

A. Legal Interpretive Practice

1. Implications for *Garland v. VanDerStok*

The linguistic theories and data presented in this Article bear directly on how to interpret the terms *firearm*, *frame*, and *receiver* in the GCA. These interpretive questions are at the heart of *VanDerStok*. Our arguments support the claim that the GCA grants the ATF regulatory authority over the firearm parts kits and unfinished frames and receivers identified by the government.

Begin with ordinary meaning. The linguistic theory explained here clarifies that artifact nouns (like *firearm*, *weapon*, *frame*, *receiver*, *table*, and *bicycle*) have context-sensitive meanings, which are heavily influenced by the entity’s design and potential function. In many contexts, artifact nouns include members missing parts (a book missing a page is a *book*), members that are unassembled (an IKEA table is a *table*), and members with unfinished parts that can only be completed by applying additional tools (an unsharpened pencil is a *pencil*).

This linguistic theory is supported by a survey experiment of a sample of ordinary Americans. The majority of participants evaluated a firearm parts kit as a *firearm* without any further context. Ordinary linguistic usage further supports this finding. Moreover, in online consumer reviews of weapon parts kits, people regularly refer to such a product as a firearm, weapon, gun, rifle, and AR (“assault rifle”).

The statutory context further underscores this ordinary meaning of *firearm* and *weapon*. Section 921(a)(3)(A) explicitly defines *firearm* with reference to design (“designed to”) and potential function (“may readily be converted to”) as key facets of meaning of the firearm-weapons contemplated by the statute. Our empirical results demonstrate that ordinary readers are sensitive to these contextual cues. When survey participants were presented with this statutory language (a firearm is “any weapon which will or is designed to or may readily be converted to...”), their categorization of weapon parts kits as firearms increased to 73%.

¹⁵⁰ See generally Frederick Schauer, *A Critical Guide to Vehicles in the Park*, 83 N.Y.U. L. REV. 1109 (2008).

¹⁵¹ For recent legal discussions of this distinction, see generally William N. Eskridge Jr., Brian G. Slocum & Stefan Th. Gries, *The Meaning of Sex: Dynamic Words, Novel Applications, and Original Public Meaning*, 119 MICH. L. REV. 1503 (2021); Stefan Th. Gries, Brian G. Slocum & Kevin Tobia, *Corpus-Linguistic Approaches to Lexical Statutory Meaning: Extensionalist vs. Intensionalist Approaches*, 4 APPLIED CORPUS LINGUISTICS 1 (2024).

Frame and *receiver* are also artifact nouns, and thus they are also context-sensitive and heavily influenced by design and functional potential. In many contexts, an “80% receiver,” which can be converted into a fully functional receiver in a few hours, fits comfortably within the ordinary meaning of *receiver*. Ordinary language confirms this: Firearms manufacturers and consumers refer to such unfinished frames and receivers as simply a “frame” and “receiver.”

Moreover, the statutory context underscores this meaning. Section 921(a)(3)(A) contains an explicit disjunctive definition of the ordinary meaning of *firearm*, while section 921(a)(3)(B) does not include such a definition. However, it is a mistake to assume that this construction implies an artificial restriction of the ordinary meaning of *frame* and *receiver* in 921(a)(3)(B). Moreover, section 921(a)(3)(B) contemplates the “frame” and “receiver” of “any such weapon,” as defined in Section 921(a)(3)(A). In linguistics terminology, this language establishes an anaphoric relation, clarifying that the relevant class of frames and receivers are the ones for the weapons contemplated by section 921(a)(3)(A).

2. Implications for Artifact Noun Disputes

This Article has focused on the artifact nouns *firearm*, *weapon*, *frame* and *receiver*. But litigation implicates many other artifact nouns. Since 2010, the Supreme Court has examined the meaning of artifact nouns including *administration*, *certified mail*, *document*, *employee*, *jail*, *money*, *prison*, and *public accommodation*.¹⁵² Artifact nouns also arise regularly in contract litigation,¹⁵³ as the next sub-section’s example illustrates. And there is dispute about artifact nouns in common law adjudication.¹⁵⁴ The analysis here provides a template for linguistic analysis of these terms.

Consider, for example, the meaning of *vessel*. The meaning of this term was the central issue in both *Stewart v. Dutra Construction Co.*, which the Supreme Court decided in 2005,¹⁵⁵ and *Lozman v. City of Riviera Beach*, which the Supreme Court decided in 2013.¹⁵⁶ The Rules of Construction Act, codified at 1 U.S.C. §§ 1–8, defines *vessel*:

The word “vessel” includes every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water.¹⁵⁷

¹⁵² See Kevin Tobia, Brian G. Slocum & Victoria Nourse, *Ordinary Meaning and Ordinary People*, 171 U. PA. L. REV. 365, 444–45 (2023) (documenting terms defined by a dictionary in Supreme Court opinions between 2010 and the present).

¹⁵³ See, e.g., Stephen C. Mouritsen, *Contract Interpretation with Corpus Linguistics*, 94 WASH. L. REV. 1337, 1365–79 (2019) (discussing debate about “sport” and “snorkeling”).

¹⁵⁴ See, e.g., *Adams v. N.J. Steamboat Co.*, 45 N.E. 369, 369 (N.Y. 1896) (asking whether sleeping cabin on steamboat is a “room” or “inn,” both being artifact nouns).

¹⁵⁵ 543 U.S. 481, 484 (2005).

¹⁵⁶ 568 U.S. 115, 118 (2013).

¹⁵⁷ 1 U.S.C. § 3.

Begin with *Stewart*. As part of the City of Boston's "Big Dig" construction project, it employed Dutra Construction Company. Dutra owned and used the "Super Scoop," a massive floating platform with a clamshell bucket that removes silt from the ocean floor. Dutra hired Willard Stewart to monitor the Super Scoop's mechanical systems, and Stewart was injured in an accident on the Super Scoop. Stewart sued under the Jones Act, alleging Dutra's negligence, and under the Longshore and Harbor Workers' Compensation Act (LHWCA), which allows employees to sue a "vessel" owner for an injury caused by that owner's negligence. Ultimately, one question reached the Supreme Court: Is the Super Scoop a *vessel* for the purposes of the LHWCA?

At the time of the accident, the Super Scoop was not moving in the water. So, an interpreter might be inclined to think that it is not a vessel—vessels are only watercrafts that are actively transporting. But Justice Thomas's majority came to the opposite conclusion, that the stationary Super Scoop is a *vessel*:

A ship long lodged in a drydock or shipyard can again be put to sea, no less than one permanently moored to shore or the ocean floor can be cut loose and made to sail. The question remains in all cases whether the watercraft's use "as a means of transportation on water" is a practical possibility or merely theoretical one.¹⁵⁸

Here, Thomas's majority reads 1 U.S.C. § 3's "capable of being used as a means of transportation on water" not to mean *literally* being used or extremely close to being used, but rather *practically* capable of being used. There is, of course, inevitable fuzziness around the category boundaries of "practically capable." But Justice Thomas, rightly, did not take that fuzziness to imply that any object could be a *vessel* within the meaning of 1 U.S.C. § 3.

This Article's discussion of the linguistics of artifact nouns clarifies both why Justice Thomas's interpretation is consistent with the meaning of *vessel* and a sensible reading in context. The meaning of artifact nouns is not necessarily limited to currently operable members. *Firearm* often includes firearms without bullets or magazines; *table* often includes unassembled IKEA tables; and so on. Similarly, *vessel* need not be restricted to vessels that are currently transporting entities on water, or even vessels that are extremely close to doing so. Vessels that have a "practical possibility" of transporting on water are also vessels.

The statutory definition of *vessel* underscores this ordinary meaning. Like the explicit definition of firearm in the GCA, the definition of *vessel* includes a disjunction: "The word 'vessel' includes every description of watercraft or other artificial contrivance used, *or capable of being used*, as a means of transportation on water."¹⁵⁹ This context underscores that *vessel* extends beyond only watercrafts "used."

As a second *vessel* example, consider *Lozman v. City of Riviera Beach*.¹⁶⁰ In 2002, Fane Lozman bought a floating, two-story structure that was about fifty-

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*

¹⁶⁰ *Lozman*, 568 U.S. at 118.

seven feet long. Lozman lived there for three years, until a hurricane struck, when Lozman moved the structure to the Riviera Beach marina and lived there for a year. About two years later, the Riviera Beach city brought an in rem action against the structure. The City argued that Lozman's structure was a *vessel*, and thus that maritime liens attach to the vessel; Lozman argued that his structure was not a vessel.

The district court held that Lozman's floating home was a *vessel* under the Rules of Construction Act, which defines a *vessel* as including "every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water."¹⁶¹ This is a broad definition, which would seemingly include a floating mobile home, capable of moving on water (and thus transporting on water). The Eleventh Circuit agreed, holding that Lozman's structure was a vessel.¹⁶²

However, the Supreme Court reversed. Justice Breyer rejected the proposal that a vessel is "anything that floats." Instead, Justice Breyer's majority held that a vessel is something that a reasonable observer would consider designed for transportation on water; as such, Lozman's floating home was not a vessel. Justice Breyer's opinion highlighted the importance of design to artifact nouns:

Not *every* floating structure is a "vessel." To state the obvious, a wooden washtub, a plastic dishpan, a swimming platform on pontoons, a large fishing net, a door taken off its hinges, or Pinocchio (when inside the whale) are not "vessels," even if they are "artificial contrivance[s]" capable of floating, moving under tow, and incidentally carrying even a fair-sized item or two when they do so Consequently, in our view a structure does not fall within the scope of this statutory phrase unless a reasonable observer, looking to the home's physical characteristics and activities, would consider it *designed to* a practical degree for carrying people or things over water

The home has no other feature that might suggest a design to transport over water anything other than its own furnishings and related personal effects. In a word, we can find nothing about the home that could lead a reasonable observer to consider it designed to a practical degree for "transportation on water."¹⁶³

Justice Breyer's opinion also emphasized that actual use would be relevant. Lozman's home was *towed* from location to location, and was rarely (if ever) used for transportation. Justice Breyer writes that "[t]his is far too little *actual* 'use' to bring the floating home within the terms of the statute,"¹⁶⁴ implicitly

¹⁶¹ 1 U.S.C. § 3.

¹⁶² *City of Riviera Beach v. That Certain Unnamed Gray, Two-Story Vessel Approximately Fifty-Seven Feet in Length*, 649 F.3d 1259, 1269 (11th Cir. 2011), *rev'd*, 568 U.S. 115 (2013).

¹⁶³ *Lozman*, 568 U.S. at 121–22 (second emphasis added).

¹⁶⁴ *Id.* at 130.

acknowledging that more robust actual use could bring the home within the meaning of the statute.

This Article's analysis of artifact nouns illuminates the analysis and discussion in these two cases. In *Stewart*, the Court held that the Super Scoop *was* a vessel: The term also included vessels that have a practical possibility of transporting on water.¹⁶⁵ In linguistic terms, this is to emphasize the Potential (telic) facet. In *Lozman*, the Court held that Lozman's floating home was *not* a vessel: The term did not apply to all floating structures, though it did apply to those that are designed to transport.¹⁶⁶ This emphasizes the Design (agentive) facet.

This linguistic analysis also clarifies the source of seeming contradiction between *Stewart* and *Lozman*. If the Super Scoop was a vessel, surely a floating mobile home was also one? Both can transport people and goods on water, though neither's primary purpose is to do so. Part of what explains the difference between the opinions is that Justice Thomas emphasizes the Potential (telic) facet (what can practically operate as a vessel) while Justice Breyer emphasizes the Design (agentive) facet (what is designed to be a vessel).

In these cases, and others concerning artifact nouns,¹⁶⁷ a proper understanding of artifact nouns illuminates legal decision making.

B. Statutory Interpretation Theory

The case study presented here also has broader implications for statutory interpretation. First, the Article's analysis illustrates the limitations of "word sense disambiguation" ("WSD"). WSD is a common approach in current textualist discourse and the foundation of contemporary legal corpus linguistics; but, we argue, this approach has important limitations. Second, the case study illuminates current interpretive debate about textual clarity and ambiguity.

1. Beyond Word Sense Disambiguation

Contemporary textualist theory emphasizes word sense, often asking: Does the statutory term express sense A or sense B? Important distinctions, like ordinary versus technical meaning, are framed as ones about competing word senses.¹⁶⁸ Traditional tools, like dictionaries, are often employed to distinguish

¹⁶⁵ *Stewart v. Dutra Construction Co.*, 543 U.S. 481, 484 (2005).

¹⁶⁶ *Lozman*, 568 U.S. at 118, 121.

¹⁶⁷ See, e.g., Tobia, Slocum & Nourse, *supra* note 152, at 444–50 (collecting terms, including artifact nouns, defined by the Supreme Court using dictionaries).

¹⁶⁸ See e.g., Frederick Schauer, *Is Law a Technical Language?*, 52 SAN DIEGO L. REV. 501 (2015).

between competing word senses.¹⁶⁹ New tools, like corpus linguistics, are also framed in relation to sense differentiation.¹⁷⁰

A broader lesson of this Article's analysis is that textualist interpreters should think beyond what we call the WSD paradigm. This paradigm views interpretation through the lens of selecting the right "sense" of a contested word, among various competing senses.

Some textualists might be tempted to analyze *VanDerStok* as a WSD problem. This analysis would begin by positing two separate senses of *firearm*: a narrower "completed sense" and a broader "completed-or-uncompleted sense." Next it would analyze which of those senses is the ordinary meaning. This might involve quantifying which sense is more frequent in ordinary language.¹⁷¹

Such a frequency approach is problematic for many reasons,¹⁷² and it would be unhelpful to conduct a corpus linguistic analysis reporting that most ordinary uses of *firearm* or *weapon* refer to completed or uncompleted entities. The question in *VanDerStok* is about the contextual meaning of a statutory definition, not the meanings that *firearm* or *weapon* most often take in literature or on the internet. Just because most (or even all) uses of *table* in a corpus refer to completed tables does not imply that an unassembled IKEA table is outside of the ordinary meaning of that term in all contexts. And even if most uses of *pencil* in a corpus refer to finished (i.e., sharpened) pencils, this does not imply that an unfinished (i.e., unsharpened) pencil must fall outside of the term's ordinary meaning.

This Article's analysis also challenges textualism's familiar WSD paradigm in a more fundamental way. A term like *bank* has separate senses: (1) land beside a body of water; (2) a financial institution.¹⁷³ But there is no basis to assert that an artifact noun like *firearm* has a "completed sense" and an "uncompleted sense." This distinction applies to many artifact nouns: *firearm*, *weapon*, *table*, *chair*, *house*, *hammer*, etc. A parsimonious explanation of this phenomenon (and

¹⁶⁹ See e.g., *United States v. Hansen*, 143 S. Ct. 1932, 1936, 1942 (2023) (distinguishing between an ordinary "sense" of a term found in Webster's Dictionary and a "specialized, criminal law sense" of a term).

¹⁷⁰ See Thomas R. Lee & Stephen C. Mouritsen, *Judging Ordinary Meaning*, 127 YALE L.J. 788, 799 (2018) (asking "[h]ow is the court to decide which sense is the ordinary one?").

¹⁷¹ See, e.g., *id.* at 859.

¹⁷² See generally Kevin Tobia, *Testing Ordinary Meaning*, 134 HARV. L. REV. 726 (2020). Ordinary understanding often exceeds attested examples of printed language. In print, we tend to refer to airplanes as "airplanes" rather than "vehicles," but this does not imply that ordinary readers understand vehicles to exclude airplanes or that an airplane is not a "vehicle" in a statutory context. *Id.* at 735.

¹⁷³ Linguists use the term *polysemy* to refer to this kind of correspondence of a single linguistic form to multiple possible senses. Even when the relevant "sense" has been identified, a linguistic form is not interpretable (that is, it does not have a "complete meaning") out of context. It has long been recognized in linguistic theory that polysemy is distinct from these latter varieties of indeterminacy. Understanding the interpretive "division of labor" between lexical meaning (which describes sense-level generalizations) and context is an active and long-standing area of linguistic research. See, e.g., WILLIAM CROFT & D. ALAN CRUSE, *COGNITIVE LINGUISTICS* (Cambridge Univ. Press 2004) (surveying the field of cognitive linguistics, including an exploration of cognitive approaches to lexical semantics).

the one arrived at by dictionary-makers¹⁷⁴) is that (non-)completion simply does not warrant specification as part of the listed senses of these nouns. *Firearm* or *table* does not usually have a distinct “complete” versus “uncompleted” sense listed in a dictionary; instead, as discussed in Section IV.A, it has an underspecified sense, the complete meaning of which depends on context.¹⁷⁵

This one-sense vs. multiple-sense distinction matters for textualist theory.¹⁷⁶ On the multiple-sense view, the interpretive debate may center on whether Congress has clearly enough replaced the “ordinary sense” of *firearm* with a technical sense. But on the one-sense view of artifact nouns, Congress is not “overriding” ordinary meaning in definitions like the GCA’s; with these artifact nouns, context is necessary to specify what is relevant. This is what occurs in part (A) of the statutory definition.¹⁷⁷ This provides a different reason from those mentioned above to reject a corpus linguistic study of the “common” use of *firearm* in ordinary language. On the one-sense view, every example demonstrates the same ordinary meaning of *firearm*, an ordinary meaning that must be further specified by context.

Textualists should not abandon word sense disambiguation, but they should grapple with the existence of other linguistic phenomena besides lexical ambiguity. Current textualism often operates with the hammer of WSD, viewing many interpretive problems as lexically ambiguous nails. But not all linguistic indeterminacy is the product of lexical ambiguity. Treating most linguistic indeterminacy as lexical ambiguity likely contributes to interpretive overreliance on the choice among dictionary definitions. Some definitions, like those of *firearm*, *vessel*, or *vehicle*, explain one sense that is context-dependent. The approach advanced in this Article illustrates how textualism can make progress in interpreting one sense of an artifact noun, in context.

2. *Clarity vs. Ambiguity*

Consider one more implication of the overreliance on the WSD paradigm. Begin by noting that textualists often use the word “ambiguity” to refer to *any* linguistic indeterminacy (including, for example, indeterminacy caused by vagueness, polysemy, or underspecification). For textualists, “ambiguity” is the opposite of clarity. For linguists, lexical ambiguity is simply one type of linguistic indeterminacy, and its proper resolution may or may not be clear from

¹⁷⁴ In other cases, dictionary entries listing multiple numbered senses have been taken as evidence for sense ambiguity. *See generally* Lee & Mouritsen, *supra* note 170. For a particularly egregious example, see, for example, Health Freedom Def. Fund v. Biden, No. 21-cv-1693-AEP, 2022 WL 1134138, at *20–22 (M.D. Fla. Apr. 18, 2022). Dictionary entries are, linguistically speaking, far from bulletproof; they are subject to practical limitations and are not written to be legally binding. That said, it is worth noting that VanDerStok has not identified any dictionary that distinguishes completed and uncompleted senses in its entry for “firearm.”

¹⁷⁵ Note that this is not always a problem. In some cases, the underspecification is not practically relevant, and in other cases the underspecification is readily resolved from context.

¹⁷⁶ There is also psycholinguistic debate about the role of senses in mental organization. *See, e.g.,* Sean Trott & Benjamin Bergen, *Word Meaning is Both Categorical and Continuous*, 130 PSYCH. REV. 1239 (2023).

¹⁷⁷ 18 U.S.C. § 921(a)(3)(A).

context.¹⁷⁸ Even when context serves to resolve the lexical ambiguities of a text, there may be other unresolved indeterminacies that serve to make the text unclear.

For this reason, conflating linguistic ambiguity with textual indeterminacy can lead textualists astray. The typical textualist approach to clarity vs. ambiguity is to draw a line between competing word senses: If the statutory term could express sense A or sense B, we will treat it as “clear” so long as we’re 90% (or 65% or 55%) certain it expresses A; otherwise, it is ambiguous between A and B.¹⁷⁹ When faced with a true case of lexical ambiguity (in context, does *bank* refer to a financial institution or to a river bank?), this is a sensible paradigm. But when faced with other sources of indeterminacy, this paradigm is less useful.

In contrast, Justice Kavanaugh has proposed a “best reading” standard: Judges should determine whether reading A or reading B is the better reading.¹⁸⁰ This idea animates *Loper Bright Enterprises v. Raimondo* in which the Court overruled *Chevron* deference to agencies adopting reasonable interpretations of “ambiguous” statutes and replaced it with a command for judges to implement the statute’s best reading.¹⁸¹ For cases like *VanDerStok*, this “best reading” paradigm is a better fit than a paradigm that seeks to adjudicate between two senses of a term. To the question, “Are terms like *firearm*, *weapon*, and *frame* ambiguous between two senses in the GCA?,” there is an easy answer: No. The relevant question is about the contours of the senses of these terms that the GCA expresses: Does the statutory context indicate that the Formal, Potential, and/or Design facets are most relevant? In Justice Kavanaugh’s terms, the linguistic question is one that should concern the “best reading” of an entirely unambiguous sense of *firearm*, *weapon*, *frame*, and *receiver*.

Attending to this distinction has implications for the rule of lenity and the degree of indeterminacy required to trigger it.¹⁸² The rule of lenity holds that ambiguities in criminal statutes should be resolved by construing the statute favorably to the defendant. Justice Gorsuch’s trigger for lenity occurs when traditional interpretive tools yield no clear answer.¹⁸³ Justice Kavanaugh’s trigger is a grievous ambiguity,¹⁸⁴ i.e., an unresolvable indeterminacy for which there is no “best” reading. Understanding the linguistic issue in *VanDerStok* to

¹⁷⁸ For example, it is clear how to resolve the lexical ambiguity of “bank” in the sentence, “The bank accepted my check.” It is less clear how to resolve the ambiguity in the sentence, “I saw John at the bank.”

¹⁷⁹ See Brett Kavanaugh, *Fixing Statutory Interpretation*, 129 HARV. L. REV. 2118, 2118 (2016).

¹⁸⁰ See *id.*

¹⁸¹ 144 S. Ct. 2244, 2266, 2273 (2024).

¹⁸² See, e.g., *Wooden v. United States*, 595 U.S. 360, 376 (2022) (Kavanaugh, J., concurring); *id.* at 383 (Gorsuch, J., concurring).

¹⁸³ *Id.* at 395 (Gorsuch, J., concurring) (explaining that “[w]here the traditional tools of statutory interpretation yield no clear answer, the judge’s next step isn’t to legislative history or the law’s unexpressed purposes. The next step is to lenity”).

¹⁸⁴ *Id.* at 377 (Kavanaugh, J., concurring) (noting that “[i]f a federal criminal statute is grievously ambiguous, then the statute should be interpreted in the criminal defendant’s favor...Importantly, the rule of lenity does not apply when a law merely contains some ambiguity or is difficult to decipher”).

involve artifact nouns clarifies that there is no grievous ambiguity in Justice Kavanaugh's sense: There is rich statutory context that indicates which facets of meaning (i.e., the Potential and Design facets) are relevant.

C. Legal Philosophy

This Article's analysis also speaks to broader philosophical issues. We discuss implications for (1) the famous "no vehicles in the park" debate and (2) the distinction between intensional and extensional definition.

1. The Hart-Fuller Debate: No Vehicles in the Park

Recall the famous debate between philosophers H.L.A. Hart and Lon Fuller.¹⁸⁵ Hart argued that a rule's text resolves most cases, while Fuller argued that decisions always require looking to a rule's purpose.¹⁸⁶ This debate introduced one of the most famous and well-known hypotheticals: Imagine a rule stating that "no vehicles may enter the park." Hart insisted that this rule gives rise to debate about edge cases (e.g., a bicycle or a drone) but that the easy cases are resolved by the text alone: The rule prohibits cars and trucks.

Fuller disagreed. What if, asked Fuller, the city council installed as a memorial a non-functioning World War II truck in the park? Fuller suggested that this truck would be permitted by the rule. More importantly, Fuller thought that what explains this judgment is the rule's purpose. This debate spawned decades of legal philosophical debate about the role of text and purpose in interpretation.

In recent years, empirical legal scholars have turned attention to this hypothetical. Experimental jurisprudence studies have examined ordinary people's judgments about the "no vehicles" rule.¹⁸⁷ For example, one study confirms that there are easy and hard cases: Most laypeople, law students, and judges agree that a car is a vehicle; but all populations are divided about other entities, like drones and canoes.¹⁸⁸ Interestingly, the rates of disagreement are

¹⁸⁵ See generally H.L.A. Hart, *Positivism and the Separation of Law and Morals*, 71 HARV. L. REV. 593 (1958); Lon Fuller, *Positivism and Fidelity to Law: A Reply to Professor Hart*, 71 HARV. L. REV. 630 (1958).

¹⁸⁶ See, e.g., Schauer, *supra* note 150, at 1111 (stating that "Fuller meant to insist that it was never possible to determine whether a rule applied without understanding the purpose that the rule was supposed to serve").

¹⁸⁷ E.g., Noel Struchiner, Ivar R. Hannikainen & Guilherme da F. C. F. de Almeida, *An Experimental Guide to Vehicles in the Park*, 15 JUDGMENT & DECISION MAKING 312 (2020); Ivar R. Hannikainen, Kevin P. Tobia, Guilherme da F. C. F. de Almeida, Noel Struchiner, Markus Kneer, Piotr Bystranowski, Vilius Dranseika, Niek Strohmaier, Samantha Bensinger, Kristina Dolinina, Bartosz Janik, Egle Lauraitye, Michael Laakasuo, Alice Liefgreen, Ivars Neiders, Maciej Prochnicki, Alejandro Rosas, Jukka Sundvall & Tomasz Zuradzki, *Coordination and Expertise Foster Legal Textualism*, 119 PROC. NAT. ACAD. SCI. 1 (2022). See generally Guilherme da Franca Couto Fernandes de Almeida, Noel Struchiner & Ivar Hannikainen, *Rules*, in CAMBRIDGE HANDBOOK OF EXPERIMENTAL JURISPRUDENCE (Kevin Tobia ed., Cambridge Univ. Press forthcoming 2025) (discussing the role of experimental jurisprudence in addressing questions about rule interpretation).

¹⁸⁸ Tobia, *supra* note 172, at 766–68.

similar among populations; for example, judges are just as divided as laypeople are over whether a canoe is a vehicle.¹⁸⁹

One might conclude from the similarity among the populations (e.g., cars are vehicles; crutches are not) that there is a stable core of ordinary meaning. This is the result, presumably, taken by scholars who use these survey results as a baseline against which to assess the accuracy of new tools, like word embeddings¹⁹⁰ and ChatGPT,¹⁹¹ in measuring ordinary meaning. Alternatively, one might emphasize that the disagreement about some cases (e.g., canoe) reinforces that it is hopeless to achieve interpretive determinacy—at least in hard cases.

A different interpretation of these data is that they underscore the importance of context and illustrate the limits of relying exclusively on individual words in interpretation (and tools and paradigms that emphasize word meaning, like dictionaries and early approaches to legal corpus linguistics). Interpreting “no vehicles may enter the park” requires consideration of more than just the word *vehicle*. Empirical studies demonstrate this effect. Laypeople evaluate what is a vehicle under the rule “no vehicles in the park” differently from their evaluation of what is simply a *vehicle*.¹⁹² Moreover, changing the background context affects people’s understanding of the category boundaries of artifact nouns like *vehicle* in a rule “no vehicles in the town square.”¹⁹³

This Article’s case study in artifact nouns enriches this second, contextual interpretation. The meaning of artifact nouns is context dependent, influenced by the object’s functional potential and design. For rules that regulate conduct, these facets—functional potential and design—are often closely connected with the purpose of the rule. For example, imagine “no vehicles may enter the park” is passed for the purpose of keeping the park safe. Can a bicycle enter the park? A bicycle may not be considered a *vehicle* in all contexts; however, its design and functional potential characteristics are such that it can move so quickly as to injure someone. In our hypothetical example, context—in particular, policymaker objectives—identifies these dimensions as the relevant facets of *vehicle*, which in turn may suggest a particular interpretive result, namely that the “no vehicles” rule prohibits bicycles. Of course, if noise or emissions are the policy concerns, this cuts the other way.

Other theoretical frameworks suggest similar interpretive outcomes. Hart suggested that purposes play a role outside of the core of settled meaning, in the penumbra.¹⁹⁴ And Eskridge proposes that “[t]ext and purpose are like the two blades of a scissors; neither does the job without the operation of the other.”¹⁹⁵

¹⁸⁹ *Id.* (noting that about 45% say “yes” and 55% say “no”).

¹⁹⁰ Jonathan H. Choi, *Measuring Clarity in Legal Text*, 91 U. CHI. L. REV. 1, 19–21 (2024).

¹⁹¹ E.g., Christoph Engel & Richard H. McAdams, *Asking GPT for the Ordinary Meaning of Statutory Terms* (Univ. Chi. L. Sch. Pub. L. & Legal Theory Rsch. Paper, Paper No. 848, 2024).

¹⁹² Kevin Tobia, *Testing Ordinary Meaning*, 134 HARV. L. REV. 726 app. (2020).

¹⁹³ Waldon, Condoravdi, Levin & Degen, *supra* note 68, at 691.

¹⁹⁴ See Hart, *supra* note 185, at 614 (suggesting that for questions “in the penumbra,” judges look to the “aims, purpose, and policies” of the law).

¹⁹⁵ WILLIAM N. ESKRIDGE, JR., *INTERPRETING LAW: A PRIMER ON HOW TO READ STATUTES AND THE CONSTITUTION* 9 n.18 (2016) (noting that “[t]he scissors metaphor is inspired by L. L.

Recent work in cognitive science concludes that laypeople use both a rule's text and purpose when evaluating rule violation.¹⁹⁶

This Article's theory is subtly, but importantly, different from these other views that emphasize context and purpose. Our point is not that a rule's purpose informs people's application of a rule,¹⁹⁷ or that purpose can override text in cases of conflict. Our point is that there is a more fundamental problem with the "text vs. purpose" dichotomy.

This "text vs. purpose" dichotomy is at the heart of many discussions of the Hart-Fuller debate. Consider, for example, legal philosopher Fred Schauer on the World War II Truck example, asking does a non-functioning truck count as a *vehicle* for the purposes of the rule?:

The war memorial made out of a functioning military truck really *was a vehicle*...It was Fuller's point that language could not...ever be sufficient to produce a core or clear case, because in at least some instances the clear application of clear language would nonetheless produce an absurd result. Only by *always* considering the purpose behind the rule, Fuller believed, could we make sense of legal rules and indeed of law itself.¹⁹⁸

This is one of many examples illustrating the traditional understanding of the debate about vehicles in the park: First, we begin with some clear cases of vehicles (e.g., trucks). Both Hart and Fuller endorse this conclusion.¹⁹⁹ Hart thinks that for these clear or easy cases, text alone resolves interpretation.²⁰⁰ Fuller disagrees, claiming that we always need to consider purpose, even for some "easy" cases, such as the example of a non-functioning truck, which is a truck.²⁰¹

We seek to question this central text vs. purpose dichotomy. For example, we reject the assumption that a truck is simply within the core of the meaning of *vehicle* in all contexts. On Schauer's account above, this is a starting point that both Hart and Fuller share. Everyone agrees that a truck is a vehicle. The disagreement simply concerns whether text (linguistic meaning) trumps purpose.

To elaborate our account, recall our hypothetical law with the text "no vehicles may enter the park," passed for the purpose of keeping the park safe. Now imagine that a commemorative, non-functional truck is installed in the park. One way to analyze this case is to posit a conflict between text and purpose:

Fuller, *American Legal Realism*, 82 U. PA. L. REV. 429, 452–61 (1934) (suggesting that Law and Society are like two blades of a scissors)").

¹⁹⁶ See Struchiner, Hannikainen & de Almeida, *supra* note 187.

¹⁹⁷ See *id.*; see also Kevin Tobia, Brian Slocum & Victoria Nourse, *Progressive Textualism*, 110 GEO. L.J. 1437, 1488–92 (summarizing recent studies on purpose's contribution to ordinary understanding of rules).

¹⁹⁸ FREDERICK SCHAUER, *THINKING LIKE A LAWYER* 156 (Harvard Univ. Press 2009).

¹⁹⁹ See Hart, *supra* note 185; Fuller, *supra* note 185.

²⁰⁰ Hart, *supra* note 185.

²⁰¹ Fuller, *supra* note 185.

Text: The rule is violated because any truck is a vehicle.

Purpose: The rule is not violated because this truck does not threaten the safety of people in the park.

Did the truck violate the rule by entering the park? The traditional understanding of the Hart-Fuller debate would see the answer “yes” as evidence of purposivism. A truck is simply a vehicle, as the quotation from Schauer above illustrates. What leads us to say that this truck is permitted is a desire to override the clear linguistic meaning with consideration of purpose or consequences.

This Article’s theory of artifact nouns and their facets of meaning supports a different interpretation. If the World War II truck is allowed by the rule, it is not necessarily because people elevate the rule’s purpose over its clear text, which includes all trucks. Instead, we propose the meaning of *vehicle* (i.e., the “text”) is specified by context. And the stated purpose of the rule is relevant context in understanding what *vehicle* means. In other words, people construe *vehicle* to exclude this non-functional truck because they understand the in-context meaning of vehicle to make relevant a vehicle’s functionality—not because the rule’s purpose overrides the common truck-inclusive meaning of vehicle.

Similarly, if bicycles are prohibited by the “no vehicles” rule in our hypothetical, it is not necessarily because the rule’s purpose fills in gaps left open in its “core” textual meaning, nor because considerations of purpose are weighed against the rule’s plain text. These explanations presuppose that the words of the rule are sufficient to determine a linguistic interpretation, one which may be augmented or overridden by purposive considerations. But out of context, there is no complete interpretation of *vehicle* in “rules about vehicles” and hence no interpretation of such rules.²⁰² In our “no vehicles” hypothetical, text and purpose must jointly conspire to produce an interpretation: That is, purposive considerations resolve an indeterminacy in *vehicle* which is not otherwise resolvable in the provided context. This suggests that, at least insofar as artifact nouns are concerned, the “text-purpose dichotomy” assumed by previous accounts offers an incomplete, and perhaps even misleading, starting point for theorizing about legal interpretation of artifact nouns.

Finally, we note a second important way in which “text” and “purpose” are complementary, rather than oppositional, notions when it comes to artifact noun interpretation. With artifact nouns, context can indicate the relevance of design (i.e., an object’s intended purpose) and functional potential (i.e., its possible purpose). These facets of meaning are relevant to the textual or linguistic analysis of artifact nouns. In this sense, purposive considerations are at the heart of an artifact noun’s meaning.

²⁰² Of course, if someone asked, “Is a car a vehicle?,” with no other context, one can provide an answer. And there is systematicity in such answers. More people will agree that a car is a vehicle than a baby stroller is, even though both are (and are not) vehicles in certain more specified contexts. See, e.g., *id.* However, there are multiple explanations available for this pattern, including that people respond to this question by endorsing their estimate of the most frequent contextual resolution of the indeterminate term *vehicle*.

In concluding this discussion, let us return briefly to Hart and Fuller.²⁰³ Hart claimed that for some cases (“easy” cases, in a core of settled meaning), no consideration of morals or purpose is necessary. Fuller claimed that purposive reasoning is needed in all cases.²⁰⁴ Although Hart and Fuller debated “legal interpretation” generally, their extended discussion concerned one rule about vehicles in the park; we limit our conclusions to that case and the class of interpretive problems centered on artifact nouns.

At first our theory might seem to provide new support for Fuller. We have argued that artifact nouns like *vehicle* are necessarily context-dependent. In other words, there is no “core of settled meaning” for the term *vehicle*, in the sense that even some trucks or cars could fall outside of the contextual meaning of *vehicle*. We always need to consider context to specify the term’s meaning.

However, insofar as Schauer’s reading of Fuller is right, and Fuller agreed that the World War II truck is always within the meaning of *vehicle*,²⁰⁵ our results chart a third path forward. In some cases, in which it appears that purpose trumps text, what really occurs is that the linguistic context indicates the relevance of an artifact noun’s design or potential function. Assume that someone agrees that a commemorative, non-functioning truck does not violate the “no vehicles in the park” rule,²⁰⁶ passed for the purpose of reducing park emissions. This is not necessarily a demonstration of intuitive purposivism, in which the person elevates a rule’s purpose over its text. Instead, our theory posits that this is a demonstration of the person’s sophisticated attention to context. The non-functioning truck is simply not within the contextual meaning of *vehicle*.

2. *Intensional vs. Extensional Definition*

The analysis here also illuminates the relevance of the distinction between intensional and extensional definition, which divides textualists on the Supreme Court.²⁰⁷ Terms like *vehicle* can be defined extensionally through the set of entities falling under the term. For example, extensionally defined, *vehicle* denotes the set of car, truck, bus, etc. An *intensional* definition characterizes *vehicle* through its features: For example, a *vehicle* is an entity that can self-propel and carry an object. In this section, we briefly explain how this case study in artifact nouns further illustrates the usefulness of intensional definition.

Consider the “original meaning” of the disputed provisions in *VanDerStok* (i.e., the 1968 meaning). The Gun Control Act was passed in 1968, and the provisions disputed in *VanDerStok* were not affected by later amendments. “Gun parts kits” were not manufactured and sold until decades later. An extensional approach to the original meaning of *firearms* might suggest that gun parts kits are not within that meaning. This approach might be buttressed by research

²⁰³ See Hart, *supra* note 185; Fuller, *supra* note 185.

²⁰⁴ See *id.*

²⁰⁵ See SCHAUER, *supra* note 198.

²⁰⁶ In a survey of laypeople, law students, and lawyers, this example proves divisive. See Tobia, *supra* note 172, at 766.

²⁰⁷ See Eskridge, Slocum & Tobia, *supra* note 38, at 1630–35.

demonstrating that it was rare or uncommon to refer to “gun parts kits” or parts as *firearms* in 1968.

In contrast, an intensional approach might begin by identifying the features that characterized *firearm*, such as those that have a high cue validity for firearm in 1968.²⁰⁸ For example, the feature “having a beak” has a high cue validity for the category of birds: Many (all) birds have beaks, and most non-birds lack beaks. For *firearm*, the GCA’s definition itself identifies plausible original features that have a high cue validity: a weapon which will expel a projectile through the action of an explosive; a weapon which is designed to expel a projectile through the action of an explosive; and a weapon which may be readily converted to expel a projectile through the action of an explosive. These features identify weapons that are designed to or may readily be converted to fire (e.g., an unloaded gun or a gun separated from its magazine), overlapping with the original 1968 extensional definition of *firearm*. But these features also identify weapons that fit the intensional criteria but which no one would have pointed to in 1968, such as firearms that were only invented later.

The existence of intensional definition counts against an “originalist” argument that seeks to reject the government’s view in *VanDerStok* on the basis that the 1968 meaning of *firearm* excludes these kits simply because no one associated such kits with “firearms.” One of us has proposed that, for textualists, intensional definition, rather than extensional definition, is generally a more promising approach to interpretation.²⁰⁹ The details of this debate take us too far from the analysis offered in this Article, but the more modest point here is that originalism about statutory meaning does not require rejecting category members that no one “expected.” One can adopt *intensional* originalism.

Readers familiar with debates about constitutional originalism will recognize a correspondence between “original expectations originalism” and extensional definition and “original public meaning originalism” and intensional definition.²¹⁰ Consider questions like: Could the original meaning of *arms* in the Second Amendment include arms that no one would have expected at the Founding; could the original meaning of “unreasonable searches” include searches of cell phones; could the original meaning of a statute from the 1850s concerning *vehicles* apply to airplanes invented decades later? It is easy to answer “yes” to these questions with intensional definition. An original 1850 intensional definition of *vehicle* could include airplanes, even if the original extensional definition excludes them. In constitutional law, modern public meaning originalists have gravitated towards the intensional approach, although recent emphasis of “history and tradition” pulls some analyses in the direction of a more extensional analysis.

Again, here we do not defend intensional over extensional definition for interpretation—although it is difficult to square many originalist applications

²⁰⁸ For an implementation of this approach, see generally Gries, Slocum & Tobia, *supra* note 151.

²⁰⁹ See Eskridge, Slocum & Tobia, *supra* note 38, at 1630–35.

²¹⁰ Cf. John Perry, *Textualism and the Discovery of Rights*, in PHILOSOPHICAL FOUNDATIONS OF LANGUAGE IN THE LAW 105, 105–29 (Andrei Marmor & Scott Soames eds., 2011) (arguing for the necessity of distinguishing “meaning-textualism” from “conception-textualism”).

with a purely extensional theory of original meaning. However, recognizing the availability of intensional definition provides an avenue to accommodate the arguments of this Article within an originalist approach to statutory meaning.

Considering intensional definition also underscores a second point about context sensitivity. Our analysis of artifact nouns is highly context sensitive, and some might object that language is not. Some things cannot be firearms in any context. And *firearm* calls to mind a certain thing, a gun, suggesting that its meaning does not entirely depend on context.

Our account is consistent with these intuitions. The first intuition is that there are some things that cannot be category members in any context. A hunk of metal is never a firearm, and an egg is never a motor vehicle. The second intuition is that these nouns seem to have a stable conceptual core that licenses generalizations. For example, *vehicle* calls to mind a certain set of features, and we are inclined to say that a truck is a better example of a vehicle than a bicycle even if a bicycle is also a *vehicle* in some contexts.

Our theory of artifact nouns is highly context sensitive, but it also accommodates these intuitions. First, consider the intuition that some entities are not category members in any context such as a hunk of metal as a firearm. Insofar as none of the facets of the artifact noun's meaning are applicable to this entity, this conclusion is consistent with our theory. Category members can also be ruled out when context indicates the relevance of certain facets of meaning. Recall that in the context of the GCA, a toy gun or cake that looks like a gun frame is not a firearm. In other contexts that emphasize certain formal and constitutive properties, those entities would be firearms. Moreover, in other contexts, the facets of meaning will be specified in a way that rules out certain entities. For example, imagine that in the middle of a war, a soldier yells to another, "I'm all out of ammo, pass me a firearm." The functional facet in this context is not the same as it is in the GCA. Here, the soldier refers to a firearm that will immediately shoot. Finally, the modal "readily" in "readily be converted to" is necessarily context sensitive. It would be strange to understand this term to imply that only objects readily convertible in 1968 are included. One way to interpret this phrase is as a hearer-centric term,²¹¹ communicating that originally the meaning of "readily" should be completed by its current hearer. Another possibility would be to give the term an intensional meaning.

Second, consider the intuition that artifact nouns have a stable conceptual core. This idea is premised on intensional definition—there are essential features that define these nouns. This proposal is intuitive and runs through Schauer's analysis of the "no vehicles" hypothetical: There is something that *vehicle* calls to mind like a car, so the term must have a stable core of context-invariant meaning. We agree with the first part of this claim. The term *vehicle* calls to mind certain properties, and it is sensible to use these properties to endorse statements about artifact nouns that cut across contexts: A car is generally a better example of a vehicle than a wheelchair. An explanation for this phenomenon is prototype theory,²¹² which posits that certain category members

²¹¹ See Jeesoo Nam, *Indexicals in the Constitution* (draft).

²¹² Eleanor Rosch, *Principles of Categorization*, in COGNITION & CATEGORIZATION 28, 28–48 (Eleanor Rosch & Barbara Lloyd, eds., 1978).

are seen as more “central” than others. One way to elaborate this idea is through the possession of category features, in a way that is similar to the proposal to use category features as a basis for intensional definition. On this theory of artifact nouns, there is still substantial context sensitivity. In some contexts, a non-functioning truck is a vehicle, but in others it is not. But there is also a compatible explanation for our sense that, in general, a truck is a good example of a vehicle.

VIII. CONCLUSION

Extending a scholarly tradition at the intersection of law and linguistics,²¹³ this Article employed linguistic theory and empirical methods to enrich current textualist theory and analysis.

As a specific case study, we answer a question about the GCA’s meaning—the question at the center of *Garland v. VanDerStok*. The Supreme Court’s decision will impact the regulation and accessibility of firearms across the country.

More broadly, this analysis illustrates how textualists should reason about artifact nouns. When it comes to the artifact nouns in *VanDerStok*, like *weapon*, *firearm*, *frame*, *receiver*, and those elsewhere like *vehicle* or *vessel*, context informs interpretation by identifying the relevant essential facets of those nouns’ ordinary meanings. We showed that this analysis has implications not only for the interpretational disputes in *VanDerStok* but also for theories of statutory interpretation more generally.

We supported this theoretical analysis with new empirical data which demonstrates that ordinary Americans use and comprehend artifact nouns in a way that is both flexible and systematic. This Article documents over one hundred examples of people describing weapon parts kits as a “firearm,” “weapon,” “rifle,” or a similar term. It also presents an original survey experiment, supporting the same interpretation. These findings support the broader analytical framework explored in this article.

The Article has concrete practical implications for the Supreme Court’s analysis of *VanDerStok*, a case which has profound implications for the regulation of “ghost guns” or “gun parts kits,” which have been involved in several mass shootings. This Article’s extended case study also has implications for statutory interpretation practice, clarifying the interpretation of artifact nouns in many other cases, and theory. For example, the results illustrate how textualists should supplement the common “word sense disambiguation” paradigm. Finally, the results have broader implications for legal philosophy, providing a deeper explanation for a resolution between textualists and purposivists.

²¹³ See, e.g., LAWRENCE SOLAN, *THE LANGUAGE OF JUDGES* (Univ. Chicago Press 1993) (examining, as the first book to do so, the linguistic analysis of the law).