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THE MEANING OF SEX: DYNAMIC WORDS, NOVEL APPLICATIONS, AND ORIGINAL PUBLIC MEANING

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The meaning of sex matters. The interpretive methodology by which the meaning of sex is determined matters. Both of these were at issue in the Supreme Court's recent landmark decision in Bostock v. Clayton County, where the Court held that Title VII protects lesbians, gay men, transgender persons, and other sexual and gender minorities against workplace discrimination. Despite unanimously agreeing that Title VII should be interpreted in accordance with its original public meaning in 1964, the opinions in Bostock failed to properly define sex or offer a coherent theory of how long-standing statutes like Title VII should be interpreted over time. We argue that long-standing statutes are inherently dynamic because they inevitably evolve beyond the original legislative expectations, and we offer a new theory and framework for how courts can manage societal and linguistic evolution. The framework depends in part on courts defining 'meaning' properly so that statutory coverage is allowed to evolve naturally over time due to changes in society, even if the meaning of the statutory language is held constant (via originalism).

Originalism in statutory and constitutional interpretation typically focuses on the language of the text itself and whether it has evolved over time (what we term linguistic dynamism), but courts should also recognize that the features of the objects of interpretation may also evolve over time (what we term societal dynamism). As society changes, so do social norms; what we call normative dynamism is the influence of evolving values on the interpretive

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enterprise, however conceptualized. Linguistic and normative dynamism create difficulties for originalism, but societal dynamism should not, as originalists have assumed in other contexts (such as Second Amendment jurisprudence). We explore the relationship among societal, linguistic, and normative dynamism and their implications for original public meaning.

*Putting our framework into action, we demonstrate, through the application of corpus analysis and linguistic theory, that sex in 1964 was not limited to “biological distinctions between male and female,” as all the opinions in *Bostock* assumed, and that gender and sexual orientation were essentially non-words in 1964. Sex thus had a broader meaning than it does today, where terms like gender and sexual orientation (and other terms like sexuality) denote concepts that once could be referred to as sex (on its own and in compounds). In turn, today’s gays and lesbians and transgender people are social groups that did not exist (or that existed in a very different form) in 1964. By limiting the meaning of sex to “biological distinctions” and failing to recognize that societal dynamism can change statutory coverage, the Court missed the opportunity to explicitly affirm that the societal evolution of gays and lesbians and transgender people has legal significance. Finally, the Court missed an opportunity to acknowledge the importance law can assume in societal and linguistic dynamism: one reason gays and lesbians are a novel social group is that they live in a world where same-sex intimacy is not a crime and the state does not treat homosexuality as psychopathic.*

TABLE OF CONTENTS

INTRODUCTION	1505
I. A FRAMEWORK FOR UNDERSTANDING ORIGINAL PUBLIC MEANING IN A CHANGING SOCIETY	1513
A. <i>Framing the ‘Public’ of Original Public Meaning</i>	1516
1. The Basic Concept of ‘Ordinary Meaning’.....	1516
2. Public Meaning as an Empirical Question or a Linguistic Question	1519
3. Corpus Linguistics as a Tool that Offers Evidence of Public Meaning	1522
B. <i>Framing the ‘Meaning’ of Original Public Meaning</i>	1525
1. Extensional Versus Intensional Meaning.....	1526
2. The Advantages of Intensional Meaning for Legal Interpretation	1530
II. DEMONSTRATING THE EVOLUTION OF PUBLIC MEANING OVER TIME (THE NO-VEHICLES HYPOTHETICAL)	1534
A. <i>Difficulties with the Basic No-Vehicles Hypothetical, Involving No Time Gap Between Enactment and Application</i>	1535

B.	<i>New Things in the World</i>	1538
C.	<i>Old Things That Have Changed</i>	1540
D.	<i>New Social, Statutory, or Constitutional Norms</i>	1543
E.	<i>New Meaning for the Regulatory Term</i>	1544
III.	CHANGED CIRCUMSTANCES, EVOLVING LANGUAGE, AND TITLE VII	1549
A.	<i>The Meaning of Sex</i>	1550
1.	In the 1960s, <i>Gender</i> and <i>Sexual Orientation</i> Were Uncommon Words	1551
2.	In the 1960s, <i>Sex</i> Was Used in Place of Terms Like <i>Gender</i> and Was Sometimes Used in Ways that Were Not Binary	1554
3.	The Meaning of <i>Sex</i> in <i>Bostock</i>	1558
B.	<i>Sex and Societal Dynamism</i>	1560
C.	<i>The Evolution of Sex and the Dynamic Meaning of Title VII</i>	1564
1.	Linguistic Dynamism and Title VII’s Evolution	1565
2.	“Unexpected” Interpretations and Normative Dynamism	1570
	CONCLUSION	1573

INTRODUCTION

On June 15, 2020, the Roberts Court set off a minor public law explosion when it handed down its decision in *Bostock v. Clayton County*.¹ The big news was that lesbians, gay men, transgender persons, and other sexual and gender minorities are protected against workplace discrimination under Title VII of the Civil Rights Act of 1964.² In less than twenty years, these minorities have moved from being outlaws and psychopaths to in-laws with jobs.³ For professors of legislation, history, and linguistics, the headline was that all three opinions in the case—the majority opinion for the 6–3 Court and both dissenting opinions—billed themselves as determining the *original*

1. 140 S. Ct. 1731 (2020).

2. See *Bostock*, 140 S. Ct. at 1754.

3. See WILLIAM N. ESKRIDGE JR. & CHRISTOPHER R. RIANO, MARRIAGE EQUALITY: FROM OUTLAWS TO IN-LAWS (2020).

*public meaning*⁴ of Title VII's text, which from 1964 through the present has told employers they cannot "discriminate against any individual . . . because of such individual's . . . sex."⁵ But how do you get from this language focusing on *sex* to protection of the two gay men and one transgender woman involved in the cases consolidated in *Bostock*? This was surely beyond the imagination or even the tolerance of legislators in 1964.

Justice Gorsuch's opinion for the Court focused on the definitions of the key statutory terms—including *sex*, which he explicitly assumed meant only the biological differences between women and men—and concluded that a man fired for dating men would not have been fired if he were a woman who dated men, and a person identified as male at birth but who now identifies as female would not have been fired had they been identified as female at birth.⁶ Thus, the *original public meaning* of Title VII covered gay and transgender employees. Joined by Justice Thomas, Justice Alito's dissenting opinion framed the public meaning inquiry as an empirical issue: no one reading the statutory language in 1964 would have thought it protected "gays and lesbians" or "transgender persons," who were considered immoral, criminal, or, at best, "mental[ly] disorder[ed]" in that period.⁷ Rather, "[t]he possibility that discrimination on either of these grounds might fit within some exotic understanding of sex discrimination would not have crossed the[] minds" of "ordinary Americans."⁸ In fact, "Americans . . . would have been shocked to learn" that Title VII forbids "discrimination on the basis of 'transgender status' or 'gender identity,'" which are "terms that would have left people [in 1964] scratching their heads."⁹ Justice Kavanaugh's dissenting opinion similarly argued that the Court's opinion "rewrites history" by refusing to acknowledge that "an overwhelming body of federal law . . . demonstrates that sexual orientation discrimination is distinct from, and not a form of, sex discrimination."¹⁰

While the justices disagreed about how the public meaning of a legal text should be framed, and what evidence is relevant to its determination, the *Bostock* Court was unanimous in maintaining that the meanings of all the

4. In this Article, we use double quotes for quotations, single quotes for meanings and concepts, and italics for mentions of words (and for emphasis), as exemplified in the following sentence: The *public meaning* of *run* is 'to go faster than a walk.'

5. Title VII of the Civil Rights Act of 1964, 42 U.S.C. § 2000e-2(a)(1). Another relevant provision, § 703(m), was added to Title VII in its 1991 Amendments. See Civil Rights Act of 1991, Pub. L. 102-166, sec. 107, § 703(m), 105 Stat. 1071, 1075 (codified at 42 U.S.C. 2000e-2).

6. *Bostock*, 140 S. Ct. at 1741-42.

7. *Id.* at 1769-73, 1777 (Alito, J., dissenting); see also WILLIAM N. ESKRIDGE JR., DISHONORABLE PASSIONS: SODOMY LAWS IN AMERICA, 1861-2003, at 387-407 (2008) (documenting factual points made in this part of the Alito dissent).

8. *Bostock*, 140 S. Ct. at 1767 (Alito, J., dissenting).

9. *Id.* at 1772 (explaining that "transgender" and "gender identity" were not in "common parlance" in the 1960s).

10. *Id.* at 1828-29 (Kavanaugh, J., dissenting).

relevant terms—“discriminate,” “because of,” “individual,” and “sex”—were the same in 2021 as in 1964. Indeed, the notion of “updating” Title VII was anathema to all the justices. One major theme of both dissenting opinions was that the Court was updating Title VII to reflect the current values of society while disingenuously claiming to apply textualist principles,¹¹ which the Court sternly denied.¹² The thesis of this Article is that the *Bostock* Court—majority and dissenters alike—overstated the dichotomy between original public meaning and dynamic interpretation.¹³

As we explain in Part I, because super-statutes like Title VII are both transformative and long-standing, interpretive uncertainties arise when they are applied to new, and often unforeseen, circumstances.¹⁴ An original-public-meaning interpreter will also be a dynamic interpreter (even if unconsciously) because statutes must be applied to scenarios that did not exist (and often could not have been imagined) at the time of the statute’s creation. In addition, the objects or concepts to which the statute is applied, rather than the statutory language itself, may also evolve over time. Situations like the two described above—where applying the statute today has different outcomes than applying it when it was enacted, even when the original meaning of the statutory language is unchanged—are examples of what we term *societal dynamism*. Significantly, these scenarios are distinct from circumstances where the meanings of the statutory words themselves evolve over time, as natural language often does. We label this situation *linguistic dynamism* and argue that it is as inevitable as the earlier scenarios. Finally, because changes in society and law over time produce new social and even

11. *Id.* at 1756 (Alito, J., dissenting) (arguing that the Court should “own up to what it is doing,” which is “represent[ing] . . . a theory of statutory interpretation that Justice Scalia excoriated—the theory that courts should ‘update’ old statutes so that they better reflect the current values of society”); *id.* at 1834 (Kavanaugh, J., dissenting) (arguing that the Court updated Title VII by “seizing on literal meaning and overlooking the ordinary meaning of the phrase ‘discriminate because of sex.’” (quoting 42 U.S.C. § 2000e-2(a)(1))).

12. *Id.* at 1738 (majority opinion) (explaining that “[i]f judges could . . . update . . . old statutory terms inspired only by extratextual sources and our own imaginations, we would risk amending statutes outside the legislative process reserved for the people’s representatives”).

13. For a similar project in the context of the Founding and the early Republic, see Farah Peterson, *Expounding the Constitution*, 130 YALE L.J. 2 (2020).

14. Super-statutes are landmark laws that successfully displace common law norms and entrench new transformational legal rules. See William N. Eskridge, Jr. & John Ferejohn, *Super-Statutes*, 50 DUKE L.J. 1215, 1230–46 (2001). Most leading scholars believe such statutes ought to be applied dynamically to carry forth their purposes into modern society. See, e.g., BENJAMIN N. CARDOZO, *THE NATURE OF THE JUDICIAL PROCESS* 81–88 (1921); JOHN CHIPMAN GRAY, *THE NATURE AND SOURCES OF THE LAW* 170–83 (Roland Gray ed., Macmillan 1921) (1909); HENRY M. HART JR. & ALBERT M. SACKS, *THE LEGAL PROCESS: BASIC PROBLEMS IN THE MAKING AND APPLICATION OF LAW* 1111–1210 (William N. Eskridge, Jr. & Philip P. Frickey eds., 1994); KENT GREENAWALT, *STATUTORY AND COMMON LAW INTERPRETATION* (2013); RICHARD A. POSNER, *HOW JUDGES THINK* (2008). Experience suggests that whatever the interpretive theory, these long-standing statutes *will* inevitably be applied dynamically over time. See WILLIAM N. ESKRIDGE, JR., *DYNAMIC STATUTORY INTERPRETATION* 48–49 (1994).

constitutional norms, the application of old statutes to current circumstances often implicates what we label *normative dynamism*. Linguistic and normative dynamism challenge originalism in ways that societal dynamism does not.

In Part II, we address these three scenarios through analysis of a variation of a famous hypothetical discussed in *Bostock*, an ordinance we shall (for narrative convenience) situate in 1964: “No vehicles shall be allowed in the park.”¹⁵ Society since 1964 has evolved in various ways, including technologically. This evolution creates potential interpretive disputes about whether the ordinance applies to mechanisms (such as Segways) that exist in 2021 but did not in 1964.¹⁶ As a matter of language as well as legal logic, a directive using words whose meaning is stable over time is therefore moderately dynamic: it will often apply beyond the expectations of its framers.¹⁷ Similarly, capturing the second type of societal evolution, the no-vehicles prohibition may apply to mechanisms that *did* exist but may not have been covered in 1964, if those mechanisms have fundamentally changed since 1964.¹⁸ An example might be new motorized wheelchairs that are much bigger, faster, and more sophisticated than those existing in 1964. Application of the earlier law to something that changed so dramatically might often be a fairly uncontroversial example of statutory updating, beyond but not necessarily against the original expectations or meaning.

The two scenarios above demonstrate the dynamic potential of statutory provisions even without implicating situations where the meanings of the statutory terms have changed over time. But language is dynamic. Words may mean today something quite different than in some earlier period.¹⁹ For

15. See *Bostock*, 140 S. Ct. at 1825 (Kavanaugh, J., dissenting); H.L.A. Hart, *Positivism and the Separation of Law and Morals*, 71 HARV. L. REV. 593, 607 (1958).

16. See *infra* Section II.B. (analyzing how the no-vehicles statute should be applied to objects that did not exist at the time of the statute’s enactment).

17. See Daniel A. Farber, *Statutory Interpretation and Legislative Supremacy*, 78 GEO. L.J. 281, 282–83, 287–92 (1989); cf. William N. Eskridge, Jr., *Spinning Legislative Supremacy*, 78 GEO. L.J. 319, 324 (1989) (arguing that the “faithful agent” of an open-textured statute will apply it both beyond and against original legislative expectations).

18. See *infra* Section II.C. (analyzing how the no-vehicles statute should be applied to objects whose features have changed over time).

19. See JOHN R. TAYLOR, *LINGUISTIC CATEGORIZATION* 59–60 (3d ed. 2003) (“[T]he prototype representations of many categories may change dramatically over time. Speakers in 1800, 1900, and 2000 would surely have selected different entities as good examples of the vehicle category, while the prototypical automobiles of eighty years ago are now fairly marginal exemplars of the category.”); see also JEAN AITCHISON, *LANGUAGE CHANGE: PROGRESS OR DECAY?* 153–54 (Cambridge Univ. Press 4th ed. 2013) (1981) (explaining that “sociolinguistic causes of language change” involve the altering of language “as the needs of its users alter”); PETER LUDLOW, *LIVING WORDS: MEANING UNDERDETERMINATION AND THE DYNAMIC LEXICON* 3 (2014) (rejecting “the idea that words are relatively stable things with fixed meanings”); DIRK GEERAERTS, *THEORIES OF LEXICAL SEMANTICS* 230 (2010) (“[N]ew word senses emerge in the context of actual language use.”).

instance, because so many new motorized conveyances have come on the market since 1964, the meaning of *vehicle* itself has evolved, evidencing *linguistic dynamism*.²⁰ In some of these situations, such as criminal laws where the audience for the statute is itself evolving, compelling reasons may exist for insisting that the statutory language means something different in 2021 than in 1964.²¹ A similar phenomenon occurs when the application of old statutes is in tension with new social or constitutional norms. In such situations, the judicial process of accommodating new norms, and thereby producing a dynamic interpretation, is typically unconscious or implicit, although there are no compelling reasons why it must be.²²

What is our evidence for these assertions? We document our language-based claims with empirical evidence that is vastly superior to the usual dictionary shopping and personal-intuition methods ordinarily deployed by judges. Specifically, we use corpus linguistics to help demonstrate how changes to language and society over time combine to make statutory meaning inevitably dynamic. Corpus linguistics is typically based on “the statistical analysis of data from a corpus,” which is “a [machine-readable] compilation of written and transcribed spoken language used in authentic communicative contexts” (such as in newspapers, novels, books, etc.).²³ If performed competently, corpus linguistics meets the scientific standards of generalizability, reliability, and validity.²⁴ Recently, various academics and judges have argued that corpus linguistics can help judges approach public meaning in a more systematic and objective manner.²⁵ While some of the leading approaches to corpus linguistics in the legal context have serious shortcomings, as we address, corpus linguistics does have the potential to help judges make better, empirically based judgments about how words are used, both today and historically.

Through the application of linguistic theory, we offer three important contributions to a better understanding of the significance of the Court’s

20. See *infra* Section II.E. (describing how the term *vehicle* has evolved since 1964).

21. See Lawrence M. Solan, *Law, Language, and Lenity*, 40 WM. & MARY L. REV. 57 (1998) (discussing dynamic interpretation in relation to criminal statutes).

22. See William N. Eskridge, Jr., *Gadamer/Statutory Interpretation*, 90 COLUM. L. REV. 609 (1990) (arguing that statutory interpretation is, in the deepest cases, an occasion for the interpreter to interact with the text and everything coming after the text).

23. Brief for *Amici Curiae* Corpus-Linguistics Scholars Professors Brian Slocum, Stefan Th. Gries & Lawrence Solan in Support of Emps. at 7, *Bostock v. Clayton Cnty.*, 140 S. Ct. 1731 (2020) (No. 17-1618).

24. Haoshan Ren, Margaret Wood, Clark D. Cunningham, Noor Abbady, Ute Römer, Heather Kuhn & Jesse Egbert, “Questions Involving National Peace and Harmony” or “Injured Plaintiff Litigation”? *The Original Meaning of “Cases” in Article III of the Constitution*, 36 GA. ST. U. L. REV. 535, 540 (2020) (explaining the scientific nature of corpus linguistics).

25. See, e.g., Thomas R. Lee & Stephen C. Mouritsen, *Judging Ordinary Meaning*, 127 YALE L.J. 788 (2018) (arguing that corpus linguistics can make legal interpretation more empirical).

movement toward emphasizing original public meaning when interpreting statutes. To begin with, as explained in Part I, *Bostock* illustrates how statutory interpretation in federal courts has shifted focus away from language production to language comprehension. Given the Court's movement toward original *public* meaning, there is now less focus on legislators' expectations when drafting statutes and more on the understanding and expectations of the public expected to comprehend statutory directives. This is a more important shift than scholars and courts have recognized. Descriptively, the shift demands that judges improve their skills at interpreting texts, and that has created a legal as well as a judicial audience for expert historical analysis and linguistic theory (hence, this Article). The interpretive shift from language production to language consumption has also diminished the importance of congressional deliberation and has marginalized knowledge about the legislative process and how to research legislative history, which have been traditional legal skills since the New Deal.²⁶ Normatively, the shift is away from legitimacy based on representative democracy and good governance and toward legitimacy based on a neutral rule of law. The judicial debate in *Bostock* reflects the Roberts Court's ongoing efforts to exhibit expertise and neutrality in its application of textual materials to new facts and legal controversies.²⁷ The critical analysis in this Article suggests that the Court faces major difficulties when the justices try to identify original public meaning: they do not reveal impressive expertise in language analysis, and the cherry-picked and closeted norms of their historical analyses undermine their aspirations toward neutrality.

A second contribution of our Article, also developed in Part I, is a theoretical grounding for the Gorsuch versus Alito/Thomas/Kavanaugh debate over precisely what original public *meaning* entails.²⁸ Justice Gorsuch takes what linguists might call a more 'intensional' approach to meaning, which determines the general concept defining the relevant statutory term and applies it to the objects in question (in *Bostock*, lesbians, gay men, transgender persons, and other sexual and gender minorities). In contrast, the dissenting opinions take a more 'extensional' approach to meaning, which asks what things fall within the statutory category at a certain point in time.²⁹ Thus, Gorsuch applies the concepts entailed in *discriminate* and *because of* and *sex* to modern gay men, lesbians, and transgender persons—while Alito and Ka-

26. As this Article partially demonstrates, it appears judges are currently not as good at historical and language analysis as they once were with legislative history analysis (which was uneven at best). See *infra* Sections I.A, I.B.

27. Expertise and neutrality in application at least seem to be the central agenda of Neil Gorsuch and John Roberts, two unexpected votes for LGBT rights.

28. For all the justices, the reference point is 1964, which is a mistake considering that Title VII has been amended multiple times. See *infra* Section III.C.2.

29. See *infra* Section I.B.1 (explaining the distinction between extensional and intensional meaning).

vanaugh insist that the (empirically based) inquiry must be whether gays and lesbians would have been listed under the ‘sex’ concept in Title VII in 1964. This may be a long-term division within the Court—Gorsuch and Roberts versus Alito, Thomas, and Kavanaugh, with the Court’s more liberal pragmatists still looking at legislative history and purpose.³⁰ Regardless of the methodological division within the Court, we argue that only an intensional approach to statutory meaning can coherently account for change over time. Indeed, we maintain that the dissenters’ only originalist argument that was not beset by anachronism would have rested upon an intensional approach that understood the meaning of *sex* in light of natural law norms widely shared in 1964.

Our third contribution is a demonstration in Parts II and III of the reality of dynamic interpretation even when jurists are trying to apply an original-public-meaning approach. The no-vehicles-in-the-park hypothetical illustrates our theory of dynamic meaning, but our main objective is to shed light on super-statutes like Title VII. The insights are straightforward, even if judicially unrecognized, and start with an understanding of societal dynamism. If you apply a stable public meaning to ever-evolving social facts, political and economic contexts, and even groups of people, the statute will evolve beyond the original expectations.³¹ In fact, even Justices Alito and Thomas would not apply extensional meaning without some accommodation of new things in the world or old things that change. Their mentor Justice Scalia (cited numerous times in *Bostock*) certainly did not, nor have Thomas and Alito done so in the context of the Second Amendment’s protection of the right to “keep and bear arms,” which they (like Scalia) apply to modern (fire)arms.³² If new weapons are protected under a 1791 constitutional provision, why cannot a new or changed social class be protected under a 1964 statute? What the justices did not appreciate is that in the fifty years after the enactment of Title VII there came to be things in the world (what Alito calls “gays and lesbians”)³³ that, in the eyes of society, did not exist in 1964 or have radically changed. As we shall demonstrate, the justices would have been tipped off if they had looked beyond dictionary definitions or if their intense search into dictionaries of the 1960s had been more thorough.³⁴

30. Cf. Stuart Minor Benjamin & Kristen M. Renberg, *The Paradoxical Impact of Scalia’s Campaign Against Legislative History*, 105 CORNELL L. REV. 1023, 1024 (2020) (showing empirically that textualist critiques of legislative history have had the effect of causing some judges “to (re)examine their treatment of legislative history but not . . . to avoid citing it”).

31. See Farber, *supra* note 17, at 287–93; *infra* Part III (arguing that even an original-public-meaning approach to the interpretation of Title VII must recognize that the application of the statute will change over time).

32. See *infra* notes 157–158 and accompanying text.

33. *Bostock v. Clayton Cnty.*, 140 S. Ct 1731, 1769 (2020) (Alito, J., dissenting).

34. *Id.* at 1784–89 (reporting definitions of *sex* in the leading dictionaries of the 1960s); see also *Hively v. Ivy Tech Cmty. Coll.*, 853 F.3d 339, 362–63 (7th Cir. 2017) (en banc) (Sykes,

A deeper problem besets all three *Bostock* opinions. As we establish via corpus analysis in Part III, the public meaning of the term *sex* in 1964 cannot be limited to ‘biological distinctions between male and female.’ *Sex* had a broader, more catch-all meaning than it usually does today, where terms like *gender* and *sexual orientation* (and other terms like *sexuality*) denote concepts that once could be referred to as *sex* (on its own and in compounds). Thus, all three *Bostock* opinions appeared oblivious to linguistic dynamism: none of the opinions acknowledged how pervasively and deeply the regulatory term *sex* had changed in the last half century. Yet, as we demonstrate, that is precisely what happened. Indeed, the regulatory term evolved both descriptively and normatively: the broad and undifferentiated term *sex* gave way to the meteoric rise of *gender* as a way of talking about social roles for men and women that were not driven by biology. This twin evolution of language and norms describes and justifies the arc of EEOC and Supreme Court precedents interpreting Title VII’s sex-discrimination bar to an expanding array of gendered decisionmaking by employers. Indeed, it explains the subtle shifts in rhetoric of Justice Gorsuch’s opinion for the Court: he starts with ‘sex as biology,’ having stipulated to the narrow meaning of *sex*, but early in the opinion starts writing about ‘sex as gender’ as though they were part of the same concept—which they were, in the 1960s.³⁵ As the dissenters vaguely perceived, Gorsuch was deploying ‘sex as gender’ normatively, reflecting the understanding held by the EEOC and the Court that the project of Title VII was to police employer insistence on traditional gender roles.³⁶

Among our other contributions, we thus hope to demonstrate that even an understanding of statutory interpretation that focuses exclusively on the ordinary meaning of words cannot be viewed as merely the delivery of the public meaning that would have been found at the time of enactment.³⁷ *Original* public meaning requires a deep understanding of history that is hard for generalist judges to master and may be an uphill struggle even for historians. As Geoffrey Hawthorn has observed, “even if one manages to play old music on old instruments, one cannot hear it with old ears.”³⁸ The music of old

J., dissenting) (insisting that *sex* was limited to biological difference between men and women but citing only three dictionaries cherry-picked to that effect).

35. Compare *Bostock*, 140 S. Ct. at 1739 (proceeding under the assumption that *sex* refers “only to biological distinctions between male and female”), with *id.* at 1741 (describing examples of sex discrimination in which a woman is fired because she is “insufficiently feminine” and a man is fired because he is “insufficiently masculine”).

36. *Id.* at 1761 (Alito, J., dissenting).

37. Of course, such an understanding is also implausible given our legal culture’s commitment to *stare decisis*, respect for legislative deliberations, deference to agency views, and substantive canons such as the canon of constitutional avoidance.

38. GEOFFREY HAWTHORN, ENLIGHTENMENT AND DESPAIR: A HISTORY OF SOCIAL THEORY, at ix (2d ed. 1987) (paraphrasing BERNARD WILLIAMS, DESCARTES: THE PROJECT OF PURE ENQUIRY, at xiii (Routledge 2005) (1978)). We are indebted to Kristin Luker for this reference.

statutes will be heard by interpreters who cannot entirely escape their own social and normative frames.

Within the foregoing limitations, we make a modest suggestion. The rhetoric of original public meaning is an opportunity for judges to explore approaches to statutory text that require them to think about language more systematically and objectively. If the linguistic meaning of a statute is to be privileged, judges should embrace knowledge and insights from linguistics and philosophy of language, rather than dictionary definitions and ad hoc linguistic judgments. Doing so would help judges escape their own linguistic idiosyncrasies and substantive biases and apply text in ways that are more genuinely neutral.³⁹ In this way, judicial interpretations that conceal evolutive judgments or ideological biases behind poor textual, linguistic, and historical analyses can be brought out of the closet and evaluated for what they are—dynamic through and through, but in ways that fail to comport with how language functions. We add a less modest suggestion for originalist judges: please be aware that you are filtering old language through your own linguistic and normative lenses. Your role as a neutral arbiter requires you to internalize the linguistic and normative lenses that the broader society, and not just your social or political cohort, has come to accept.

I. A FRAMEWORK FOR UNDERSTANDING ORIGINAL PUBLIC MEANING IN A CHANGING SOCIETY

It is remarkable that the biggest statutory-interpretation case of the Court's 2019 Term contained no great debates between textualist and pragmatic justices, as there often were during Justice Scalia's tenure.⁴⁰ But there was a great debate among the three opinions, all of which claimed the mantle of Justice Scalia, textualism, and original public meaning. In varying degrees, the three opinions in *Bostock* address language issues raised by original-public-meaning theory, such as (1) the interpretive question posed by the public-meaning standard, (2) the linguistic and other context relevant to the interpretation of the statutory phrase at issue, and (3) temporal issues involving how the passage of time affects the meaning of the text. Our main objective is to address the fundamental flaw in all three opinions: their rejection of the proposition that a statute is a dynamic entity and societal, normative, and linguistic evolution might cause its application to change over time. We focus on the third category of issues, but the three categories are interre-

39. See LAWRENCE M. SOLAN, *THE LANGUAGE OF JUDGES* 62 (1993) (“[J]udges do not make good linguists because they are using linguistic principles to accomplish an agenda distinct from the principles about which they write.”).

40. See, e.g., *W. Va. Univ. Hosps., Inc. v. Casey*, 499 U.S. 83 (1991). This case is a prototypical example of such Scalia-era debates. Justice Scalia, writing for the Court, interpreted the phrase “a reasonable attorney’s fee” to have a plain meaning that did not allow for the recovery of expert fees, *id.* at 88, which Justice Stevens rejected as a “literal approach” inconsistent with the “congressional purpose,” *id.* at 112–13 (Stevens, J., dissenting).

lated, and our insights also address issues involving the framing of public meaning and the evidence relevant to its determination.

Determining the original public meaning of a text is a notoriously difficult endeavor. Judges have struggled to establish public meaning through historical analysis, consultation of dictionaries, searches of newspaper and academic articles, as well as unsupported assertions about what the public, or some reasonable person, would have believed about the meaning of the text at the time of enactment.⁴¹ Today, there are various corpora, or databases of public texts, that can be searched for particular terms and some context. To utilize these databases effectively, the interpreter must channel the linguistic evidence into an organizing conceptual framework that represents valid linguistic choices.⁴² A coherent conceptual framework is crucial because complex temporal aspects of meaning are implicated when the statutory application arises decades after the law was enacted. *Bostock* illustrates both the undertheorized judicial approach to the temporal aspects of interpretation and the difficulties of applying any interpretive theory to a statute enacted long ago. Every opinion considered the statutory text critically important and insisted that it yielded one unambiguous meaning. Yet the six majority justices endorsed a plain meaning rejected by the three dissenting justices, and none of the opinions offered an adequate theory of language in accomplishing the task of applying that text to a new problem. In fact, because all the justices conceded or acquiesced in the view that Title VII has an unchanging public meaning, no particular legal relevance was given to whether the ‘objects’ of that meaning (‘gays and lesbians’ and ‘transgender persons’) or their constitutional status had changed over time.⁴³ As we shall see in Part III, all three opinions in *Bostock* assumed a static society and constitutional regime.

In this Part, we address crucial theoretical issues surrounding the understanding and application of original public meaning from the perspective of linguistic theory. We start with what is ‘public’ about public meaning, then address the concept of public ‘meaning,’ and finally explain how none of the

41. One problem with speculating about how some ‘reasonable person’ (or community) would have understood the meaning of a specific provision at the time of enactment is that there is no way of directly measuring that (hypothetical) understanding and the interpreter may, even if unintentionally, substitute her understanding for that of the reasonable person. See Lawrence Solan, Terri Rosenblatt & Daniel Osherson, Essay, *False Consensus Bias in Contract Interpretation*, 108 COLUM. L. REV. 1268, 1268–69 (2008) (explaining the concept of “false consensus bias,” which describes the propensity to believe that one’s views about meaning are the predominant views).

42. See Mark C. Suchman, *The Power of Words: A Comment on Hamann and Vogel’s Evidence-Based Jurisprudence Meets Legal Linguistics—Unlikely Blends Made in Germany*, 2017 BYU L. REV. 1751, 1758 (2017) (“[T]o transmute a collection of empirical observations into a body of empirical knowledge requires both an organizing conceptual framework and a purposeful investment in synthesis.”).

43. See *supra* notes 10–11 and accompanying text.

opinions in *Bostock* described a persuasive version of the ‘public meaning’ concept.⁴⁴ The discussion is intended to provide an understanding of how temporal issues involving the passage of time affect the meaning of legal texts. The potential for term and object meanings to change over time creates various combinations of language evolution that present distinct issues for legal interpreters. Sometimes this evolution reflects societal dynamism rather than language change, which can nevertheless require changes in how a statute is applied.⁴⁵ At other times, linguistic dynamism occurs when the meaning of the statutory language itself has evolved over time.⁴⁶ To illustrate how both societal and linguistic dynamism can result in statutory dynamism, we shall consider the following three scenarios:

- (1) the meaning of a statutory term is deemed to be fixed at enactment, in accordance with an originalist view of interpretation, but the object of interpretation did not exist at the time of statutory enactment;
- (2) the meaning of a statutory term is deemed to be fixed at enactment, in accordance with an originalist view of interpretation, and the object of interpretation did exist at the time of statutory enactment, but its features have significantly changed; and
- (3) the meaning of a statutory term has changed over time.

The first two scenarios involve societal dynamism; the third, linguistic dynamism. We discuss the three scenarios in this Part and then illustrate them via the no-vehicles-in-the-park hypothetical in Part II. As we explain below, the third scenario is at odds with most originalist theories, but originalists sometimes accept the first two.

44. We save our criticisms of the Court’s opinion until Part III, *infra*.

45. We thus distinguish between situations where a court recognizes the changed meaning of some word or phrase in a statute and situations where the court applies the original meaning to some new or changed object or concept. There is debate within the philosophical literature about whether the application of a statute to an object or concept changes the meaning of the statute. See generally ANDREI MARMOR, INTERPRETATION AND LEGAL THEORY (Hart Publ’g rev. 2d ed. 2005) (1992) (discussing the constructive model of interpretation and the semantic natural law theory of interpretation). Certainly, some applications of a statute change the statute’s meaning, such as ones where the court must precisify the statutory language in order to apply the statute. BRIAN G. SLOCUM, ORDINARY MEANING: A THEORY OF THE MOST FUNDAMENTAL PRINCIPLE OF LEGAL INTERPRETATION 6 (2015). Nevertheless, we refer in this Article to a narrower notion of ‘meaning’ that is synonymous with the linguistic meaning of a statute’s terms.

46. Of course, both societal and linguistic dynamism might occur simultaneously, as is the case with Title VII. See *infra* Part III. In Part II, we explore the importance of normative dynamism. See *infra* Part II.

A. Framing the ‘Public’ of Original Public Meaning

Legal interpretation generally seeks to measure the beliefs or actions of some particular class of people. Sweeping broadly, courts sometimes focus on the language *production* of the legislature and at other times on language *comprehension*, typically of the ordinary person or interpretive community.⁴⁷ Notwithstanding differing interpretive perspectives, most judges today agree that, to some degree at least, language comprehension should be prioritized.⁴⁸ That is, courts presume that language in legal texts should be given its ordinary meaning, determined by general principles of language usage that apply outside the law.⁴⁹ The ordinary-meaning standard is justified in part on the basis that it is consistent with fundamental principles of legal interpretation, such as the notions that the public should be able to read and understand legal texts and that the law should be predictable and objective in its application.⁵⁰ But do judges trained in the doctrines and language of law and drawn from an unrepresentative slice of society have a comparative advantage in figuring out how ordinary people would understand statutory language?

1. The Basic Concept of ‘Ordinary Meaning’

The ordinary-meaning concept typically focuses on how an average reader—the typical member of the public—would understand the relevant

47. Judge Frank Easterbrook, for example, believes that “the significance of an expression depends on how the interpretive community alive at the time of the text’s adoption understood those words.” Frank H. Easterbrook, *Foreword* to ANTONIN SCALIA & BRYAN A. GARNER, *READING LAW: THE INTERPRETATION OF LEGAL TEXTS*, at xxv (2012). See also Richard H. Fallon, Jr., *The Statutory Interpretation Muddle*, 114 *Nw. U. L. REV.* 269, 289–96 (2019) (describing how intentionalists and textualists frame the objective of interpretation).

48. E.g., Harvard L. Sch., *The 2015 Scalia Lecture: A Dialogue with Justice Elena Kagan on the Reading of Statutes*, YOUTUBE, at 08:29 (Nov. 25, 2015), <https://www.youtube.com/watch?v=dpEtszFT0Tg> (“We are all textualists now.”).

49. See SLOCUM, *supra* note 45, at 3 (“[C]ourts typically seek to determine the ordinary meaning of legal texts when deciding cases.”); see also *District of Columbia v. Heller*, 554 U.S. 570, 576–77 (2008) (“In interpreting this text, we are guided by the principle that ‘[t]he Constitution was written to be understood by the voters; its words and phrases were used in their normal and ordinary as distinguished from technical meaning.’” (quoting *United States v. Sprague*, 282 U.S. 716, 731 (1931))).

50. See Herman Cappelen, *Semantics and Pragmatics: Some Central Issues*, in *CONTEXT-SENSITIVITY AND SEMANTIC MINIMALISM: NEW ESSAYS ON SEMANTICS AND PRAGMATICS* 3, 19 (Gerhard Preyer & Georg Peter eds., 2007) (“When we articulate rules, directives, laws and other action-guiding instructions, we assume that people, variously situated, can grasp that content in the same way.”); see also WILLIAM N. ESKRIDGE JR., *INTERPRETING LAW: A PRIMER ON HOW TO READ STATUTES AND THE CONSTITUTION* 33–55 (2016) (making a normative case for the key role played by ordinary meaning).

language, as opposed to the legislature's intent or purpose in creating it.⁵¹ In that sense, it measures the 'public' meaning of the text, as all three opinions in *Bostock* recognized.⁵² Justice Holmes famously opined that the interpreter's role is not to ask what the author meant to convey but instead to determine "what those words would mean in the mouth of a normal speaker of English, using them in the circumstances in which they were used."⁵³ By its very nature, the 'ordinary' meaning of a provision must consist of elements that cut across contexts and are external to the interpreter's preferences.⁵⁴ This may sound pretty simple, but distinguishing between the linguistic meaning of language and subjectively perceived purpose is often difficult; and, in any case, determining that linguistic meaning is typically not the end of the interpretive process.

From a linguistic perspective, considerations of context and purpose are ineliminable aspects of the ordinary meaning determination. With natural-language understanding, and particularly with legal texts, the goal is to determine what a sentence means in a given context of utterance rather than just what it could mean in general.⁵⁵ Thus, in addition to conventions of language, an ordinary meaning must be informed by contextual and purposive evidence, which is sometimes extratextual in nature. For example, in determining whether a 'no vehicles' law prohibits bicycles from the park, the interpreter (like an ordinary person) might consider the perceived purpose of the law: if it is to cleanse the park of noxious fumes and motor noises, bikes would be okay—but probably not if it is to make the park safe for the elderly and small children.⁵⁶

51. See Thomas W. Merrill, Essay, *Textualism and the Future of the Chevron Doctrine*, 72 WASH. U. L.Q. 351, 351–52 (1994) (explaining that textualism seeks objectivity by focusing on "what the ordinary reader of a statute would have understood the words to mean at the time of enactment" as opposed to the legislature's intent in creating the statute). Certain Supreme Court opinions also focus on the likely interpretation of an ordinary person. See, e.g., *Bond v. United States*, 572 U.S. 844, 861 (2014) ("When used in the manner here, the chemicals in this case are not of the sort that an ordinary person would associate with instruments of chemical warfare.").

52. See James A. Macleod, *Ordinary Causation: A Study in Experimental Statutory Interpretation*, 94 IND. L.J. 957, 957, 961 (2019) (using "ordinary meaning" and "public meaning" interchangeably).

53. Oliver Wendell Holmes, *The Theory of Legal Interpretation*, 12 HARV. L. REV. 417, 417–18 (1899).

54. See Brian G. Slocum & Jarrod Wong, *The Vienna Convention and the Ordinary Meaning of International Law*, 46 YALE J. INT'L L. (forthcoming 2021).

55. See ESKRIDGE, *supra* note 50, at 3–11 (discussing the importance of statutory purpose and other context to interpretation).

56. See Hart, *supra* note 15, at 607 (indicating that bicycles may or may not be included in a no-vehicles law); see also ESKRIDGE, *supra* note 50, at 4–5 (explaining that statutory purpose would determine whether to include bicycles); cf., e.g., *State v. Barnes*, 403 P.3d 72, 73–75 (Wash. 2017) (holding that a riding lawn mower was not a "motor vehicle" within the meaning

Even when it can be ascertained, ordinary meaning often (typically?) underdetermines the actual interpretations made by even its most ardent judicial adherents.⁵⁷ Often, precise binary distinctions are required to resolve interpretive disputes, which the ordinary meaning of language typically does not provide, forcing judges to look elsewhere for interpretive resolution.⁵⁸ Furthermore, it might be clear that the relevant textual language should be given a special legal or technical meaning, or even some meaning that is not technical or legal but is seldom used (and thus an unordinary meaning).⁵⁹ For instance, Justice Alito argued in his *Bostock* dissent that “discriminate because of sex” was a term of art used in previous statutes and orders, which had an accepted legal meaning in 1964.⁶⁰ In addition, a judge’s understanding of ordinary meaning will be influenced or even controlled by prior decisions; you cannot have a theory of statutory interpretation or legal meaning without having a theory of precedent.⁶¹ All the *Bostock* opinions made some effort to justify their interpretations of Title VII as consistent with precedent, and the Gorsuch opinion secured most of its persuasive power by invoking the Court’s interpretation of Title VII to reach sexual harassment of working women, coworkers’ homosexual harassment, and gender stereotyping.⁶² Finally, the commonsense, person-on-the-street meaning of the textual language may be legally unacceptable for some reason, such as a meaning that would raise a serious constitutional issue or result in absurdity.⁶³ In such

of a motor-vehicle-theft statute because the statute was enacted to combat the high rate of automobile theft).

57. See LUDLOW, *supra* note 19, at 65 (“The words used by lawmakers are just as opened as words used in day-to-day conversation.”). The extent to which ordinary meaning underdetermines a court’s interpretation depends, obviously, on how broadly ‘ordinary meaning’ is defined. While a very narrow definition of ordinary meaning may be unsatisfactory because it underdetermines interpretations in every case, an unduly broad definition will lead to incoherence because it serves merely as a conclusory label for whatever interpretation a court finds to be most persuasive.

58. See Brian G. Slocum, *Replacing the Flawed Chevron Standard*, 60 WM. & MARY L. REV. 195, 238–39 (2018) (explaining how legal interpretation’s reliance on bivalency, “the idea that interpretative questions have ‘yes’ or ‘no’ answers,” is in tension with the prototypical structure of language).

59. Thus, ordinary meaning is defeasible. See, e.g., *Taniguchi v. Kan Pac. Saipan, Ltd.*, 566 U.S. 560, 569 (2012) (“[T]he word ‘interpreter’ can encompass persons who translate documents, but because that is not the ordinary meaning of the word, it does not control unless the context in which the word appears indicates that it does.”).

60. *Bostock v. Clayton Cnty.*, 140 S. Ct. 1731, 1764–76 (2020) (Alito, J., dissenting).

61. See ESKRIDGE, *supra* note 50, at 139–90; MICHAEL J. GERHARDT, *THE POWER OF PRECEDENT* 97 (2008); David A. Strauss, *Common Law Constitutional Interpretation*, 63 U. CHI. L. REV. 877 (1996).

62. *Bostock*, 140 S. Ct. at 17443 (“All that the statute’s plain terms suggest, this Court’s cases have already confirmed.”).

63. The absurdity doctrine may be the clearest example of a situation where a court has rejected the meaning of the text (whether communicative or otherwise) in favor of some other meaning. See John F. Manning, *The Absurdity Doctrine*, 116 HARV. L. REV. 2387, 2389 (2003).

cases, a court's interpretation will be based on principles that reflect normative legal commitments but that arguably reflect neither language production nor comprehension.⁶⁴

2. Public Meaning as an Empirical Question or a Linguistic Question

The justices in *Bostock* might have all agreed on the proper objective of interpretation, 'original public meaning,' but how is the language comprehension of the public to be measured? Not a single justice in *Bostock* offered direct evidence of whether the average American would have read in 1964, or would read today, the language of Title VII to protect gay, lesbian, or transgender employees.⁶⁵ In fact, the opinions largely ended up talking past each other because the majority's conception of public meaning differed from that of the dissenting opinions. In turn, this divergence led to conflict regarding which interpretive sources help determine public meaning.⁶⁶

The reasoning of the Court's opinion focused on *compositional public meaning*. The principle of compositionality states that "the meaning of a complex linguistic expression is built up from the meanings of its composite parts in a rule-governed fashion."⁶⁷ A sentence is compositional if its meaning is the sum of the meanings of its parts and of the relations of the parts.⁶⁸ Thus, the Court's opinion did not focus on perceived public views about the meaning of Title VII, or gay men, lesbians, and transgender persons. Rather, the Court addressed the individual meanings of Title VII's terms, "discrimination," "because of," and "sex," maintaining that the overall meaning of the provision would be the sum of its composite parts.⁶⁹

The avoidance canon is another example where the interpretation chosen by the court might not conform to the intended meaning of the statute or the meaning an ordinary reader would give it. See Eric S. Fish, *Constitutional Avoidance as Interpretation and as Remedy*, 114 MICH. L. REV. 1275, 1275 (2016).

64. See Fish, *supra* note 63.

65. Cf. Macleod, *supra* note 52 (analyzing how an ordinary reader would understand Title VII's language by asking ordinary readers to apply that language in context, drawing on a set of nationally representative survey experiments); Shlomo Klapper, Soren Schmidt & Tor Tarantola, *Ordinary Meaning from Ordinary People*, U.C. IRVINE L. REV. (forthcoming 2021) (using surveys to measure how ordinary people apply statutes to specific interpretive disputes).

66. See SLOCUM, *supra* note 45, at 36–37 (describing the constituent and evidential questions of statutory interpretation).

67. M. LYNNE MURPHY & ANU KOSKELA, KEY TERMS IN SEMANTICS 36 (2010).

68. See *id.* Describing "compositionality" in a general sense is sufficient for our purposes, although different versions of the concept are stronger or weaker and can take more or less context into account. See ZOLTÁN GENDLER SZABÓ & RICHMOND H. THOMASON, PHILOSOPHY OF LANGUAGE 58 (2019) (describing various forms of compositionality, including "weak compositionality (with context)").

69. *Bostock v. Clayton Cnty.*, 140 S. Ct. 1731, 1744 (2020).

Justice Kavanaugh responded, in dissent, that the Court was focusing on “literal meaning rather than ordinary meaning.”⁷⁰ He introduced phrases such as “American flag,” “cold war,” and “washing machine,” which have conventional (and thus ordinary) meanings that cannot easily be determined from combining the meanings of the individual words (and thus are not compositional based on the sum of the composite parts).⁷¹ Justice Kavanaugh is correct that courts should interpret words in light of the overall meaning of a sentence rather than acontextually.⁷² But Justice Kavanaugh must also establish that Title VII’s phrase, “discriminate against any individual . . . because of such individual’s . . . sex,” has some conventional meaning that differs from the compositional public meaning explicated by Justice Gorsuch.⁷³ Note that this conventional, public meaning would have to be based on language usage outside of the Title VII context at the time of statutory enactment in 1964 (to be conventional and consistent with originalism),⁷⁴ as opposed to a meaning that developed after statutory enactment or that was based on the specific context of Title VII.⁷⁵ Without such a showing, his linguistic arguments about literal meaning versus ordinary meaning, even if correct, would not refute the Court’s reasoning (which was flawed for other reasons).

In contrast to the majority opinion, the two dissenting opinions viewed the public meaning question as involving what could be termed *empirical public meaning*.⁷⁶ Both dissenting opinions agreed that the answer to the fol-

70. *Id.* at 1824 (Kavanaugh, J., dissenting).

71. *Id.* at 1826.

72. See SLOCUM, *supra* note 45, at 106–08 (arguing that the ordinary meaning determination should focus on sentence meaning rather than the meaning of individual words).

73. 42 U.S.C. § 2000e-2(a)(1). The Court responded to Justice Kavanaugh’s arguments by pointing out that “the competing dissents [do not] offer an alternative account about what these terms mean either when viewed individually or in the aggregate.” *Bostock*, 140 S. Ct. at 1750.

74. Otherwise, Justice Kavanaugh would be making arguments about the specific meaning of Title VII (based on congressional intent or public understanding) rather than an argument about conventional meaning and the literal meaning versus ordinary meaning debate.

75. As a matter of linguistics, Justice Kavanaugh’s arguments about compound words are correct. Christiane Fellbaum explains that phrases, such as “*fire sale*,” that “are not straightforwardly (de)composed . . . constitute lexical units despite their multi-word make-up.” Christiane Fellbaum, *The Treatment of Multi-word Units in Lexicography*, in THE OXFORD HANDBOOK OF LEXICOGRAPHY 411, 411 (Philip Durkin ed., 2015). Thus, the phrases used by Justice Kavanaugh, such as “cold war,” may be understood as single linguistic units rather than separate words whose meanings combine in a predictable way. For his examples to be useful, however, there must be some demonstration that the language in Title VII somehow operates as a single “lexical unit” with an identifiable conventional meaning. Of course, this understanding would have had to be present in 1964 and based on evidence outside of Title VII.

76. Other than his arguments about literal meaning versus ordinary meaning, Justice Kavanaugh’s evidence was largely relevant to his framing of the ultimate interpretive question of how ordinary people at the time of enactment would have construed Title VII’s terms, not to

lowing question should decide the case: How would the terms of a statute have been understood and applied by ordinary people at the time of enactment?⁷⁷ Unlike the case with compositional public meaning, where any empirical inquiry is focused on conventional meanings at the word or phrasal level, empirical public meaning purports to focus the inquiry on the actual views that the American public would have had about the ultimate interpretive question in 1964. It assumes that Congress must have enacted exactly what the public *thought* it enacted. If taken seriously, however, the question posed may lead to results that would surprise the dissenting justices. Justice Alito's dissenting opinion accused the Court's opinion of being like a "pirate ship" because it falsely "sails under a textualist flag,"⁷⁸ but the interpretive question posed by the dissenting opinions is not necessarily textualist. The dissenting justices pose in essence an empirical question about 'ordinary people,' but existing empirical evidence (consistent with linguistic theory) suggests that ordinary people use normative and purposive reasoning when interpreting statutory provisions.⁷⁹

In fact, actual surveys of ordinary people demonstrate a much broader public understanding of Title VII's terms than the dissenting justices acknowledge.⁸⁰ Indeed, much of the evidence offered by the dissenting opinions was more purposive than textualist in nature, including arguments about the "social context" in which Title VII was enacted⁸¹ and "the societal norms of the day,"⁸² as well as "congressional practice,"⁸³ which instructed

establishing the conventional meaning of Title VII's terms as of 1964. *Bostock*, 140 S. Ct. at 1828 (Kavanaugh, J., dissenting).

77. *Id.* at 1767 (Alito, J., dissenting) ("[I]t is imperative to consider how Americans in 1964 would have understood Title VII's prohibition of discrimination because of sex."); *id.* at 1828 (Kavanaugh, J., dissenting) ("[C]ourts heed how 'most people' 'would have understood' the text of a statute when enacted." (quoting *New Prime Inc. v. Oliveira*, 139 S. Ct. 532, 539 (2019))).

78. *Id.* at 1755 (Alito, J., dissenting).

79. Klapper et al., *supra* note 65.

80. Compare Macleod, *supra* note 52, at 999–1001 (finding that ordinary readers interpret Title VII to cover instances when sex discrimination is not the but-for cause of the firing), with *Bostock*, 140 S. Ct. at 1755 (Alito, J., dissenting), and *id.* at 1828 (Kavanaugh, J., dissenting) (asserting that ordinary people in 1964 would not have interpreted Title VII to ban firing an employee because of sexual orientation). While the dissenting justices might object that these surveys are recent, rather than from 1964, we argue in Part III that societal dynamism, which should be accepted by originalists, has caused the meaning of Title VII to change over time. See *infra* Part III.

81. *Bostock*, 140 S. Ct. at 1767 (Alito, J., dissenting) (explaining that the social context "may have an important bearing on what [a statute's] words were understood to mean at the time of enactment" because "[s]tatutes consist of communications between members of a particular linguistic community, one that existed in a particular place and at a particular time, and these communications must therefore be interpreted as they were understood by that community at that time").

82. *Id.* at 1769.

83. *Id.* at 1829 (Kavanaugh, J., dissenting).

the dissenters that in 1964 discrimination on the basis of sexual orientation or transgender status “would not have been evil at all.”⁸⁴ The dissenting opinions also relied on dictionary definitions (Justice Alito compiled an appendix of more than a dozen contemporary dictionary definitions of *sex*), but dictionary definitions provide the sort of acontextual word meanings that Justice Kavanaugh condemned and, in any case, provide at best very indirect and conflicting evidence regarding how ordinary people would have understood and applied Title VII in 1964.⁸⁵

We do not aim to offer a comprehensive account of the ‘public’ in ‘public meaning,’ but we note some problems with empirical public meaning as it is applied by the dissenting opinions. Perhaps most importantly, even if it is accepted as a legitimate way to frame public meaning, original empirical public meaning underdetermines any legal interpretation. By definition, determining in 2021 how an ordinary person would have understood and applied a statute in 1964 ignores intervening judicial and agency interpretations and, as we argue later, important legal, societal and linguistic evolution.⁸⁶ Furthermore, the standard undervalues the extent to which legal training and knowledge are integral to statutory interpretation. Statutory interpretation is typically a multilayered process that involves normative decisions, specialized legal competence, and inferences from context. For instance, judges are generally more competent at evaluating and understanding legislative history or inferences from related provisions than ordinary people.⁸⁷ The empirical-public-meaning approach does raise important questions about empiricism and statutory interpretation, but it poses a question that cannot be answered directly (How would the terms of a statute have been understood and applied by ordinary people at the time of enactment?), as though a straightforward answer is possible and should constitute the court’s interpretation.⁸⁸

3. Corpus Linguistics as a Tool that Offers Evidence of Public Meaning

Regardless of whether a compositional or an empirical approach to public meaning is chosen, judges typically gather information external to them-

84. *Id.* at 1774 (Alito, J., dissenting).

85. As we shall demonstrate in Part III, Justice Alito, who staked most of his opinion on dictionaries, used them selectively and then failed to understand the entries that he reported—indeed, he failed to understand the best ‘originalist’ argument suggested by the dictionaries. *See infra* Part III.

86. *See infra* Part III.

87. It would likely be a legal fiction to assume that ordinary people would consult legislative history when interpreting a statute.

88. *Cf.* Gregory C. Keating, *Reasonableness and Rationality in Negligence Theory*, 48 STAN. L. REV. 311, 339 (1996) (arguing that the “average” in the average-reasonable-person doctrine “is a normative one, established by an *objective* community standard that may or may not be representative of actual human actors”).

selves about word meanings. As lavishly illustrated in *Bostock*,⁸⁹ judges frequently consult dictionary definitions, although such use has been devastatingly criticized by scholars.⁹⁰ The criticisms tend to focus on how dictionaries are misused by courts, such as the arbitrary selection of a definition within one of many dictionaries.⁹¹ A more fundamental criticism is that judicial reliance on dictionaries in general is problematic.⁹² A dictionary definition provides a general description of the concept involved but is often prescriptive rather than descriptive and does not always aim to provide a necessary and sufficient set of features for membership in the category at issue.⁹³ In fact, “the dictionary takes words away from their common use in their customary settings,” which “can be highly misleading if used as a basis of theorizing about what words and their meanings are.”⁹⁴ Considering dictionaries’ limitations, alternative sources of information about the public meaning of words such as corpus linguistics will inevitably receive increasing attention.

Corpus analysis may be a useful source of information about communications that occur outside of the law, and the sort of information produced via corpus linguistics is relevant to public meaning.⁹⁵ Corpus searches can illustrate such things as “the number of senses (i.e., meanings) a linguistic expression may have” and the most frequently used meaning (in general or per context).⁹⁶ Corpus searches can also provide information about “the most prototypical meaning of an expression.”⁹⁷ Importantly, in providing information about public meaning, corpus analysis can account for context in ways that dictionary definitions cannot. For instance, “[u]nlike dictionaries, corpus linguistics allows for the meanings of words to be investigated” in

89. *Bostock*, 140 S. Ct. at 1740 (majority opinion); *id.* at 1756–58, 1784–91 (Alito, J., dissenting).

90. See, e.g., James J. Brudney & Lawrence Baum, *Oasis or Mirage: The Supreme Court’s Thirst for Dictionaries in the Rehnquist and Roberts Eras*, 55 WM. & MARY L. REV. 483 (2013) (citing and expanding upon prior critiques).

91. Ellen P. Aprill, *The Law of the Word: Dictionary Shopping in the Supreme Court*, 30 ARIZ. ST. L.J. 275, 297–300 (1998) (stating that the level of linguistic analysis performed by courts rarely rises above “dictionary shopping”).

92. Brudney & Baum, *supra* note 90.

93. See Slocum & Wong, *supra* note 54, at 3; Kevin P. Tobia, *Testing Ordinary Meaning*, 134 HARV. L. REV. 726 (2020) (illustrating through empirical evidence that dictionaries give broad definitions that may not correspond with the ordinary meanings of words); see also Nick Riemer, *Word Meanings*, in THE OXFORD HANDBOOK OF THE WORD 305, 315 (John R. Taylor ed., 2015) (“A striking feature of dictionary definitions is their variability.”).

94. M.A.K. HALLIDAY & COLIN YALLOP, LEXICOLOGY: A SHORT INTRODUCTION 24–25 (2007).

95. See Stefan Th. Gries & Brian G. Slocum, *Ordinary Meaning and Corpus Linguistics*, 2017 BYU L. REV. 1417, 1422–33 (2017).

96. *Id.* at 1441.

97. *Id.*

terms of other words in which they co-occur in natural and authentic contexts of ordinary language use.⁹⁸

One of the leading historical databases for American English is the one we use in this Article—the Corpus of Historical American English (COHA), which contains more than 400 million words of text from the 1810s to the 2000s (making it 50–100 times as large as other comparable historical corpora of English).⁹⁹ COHA is balanced by genre and by decade. Thus, a contemporary judge interpreting a 1964 law barring “vehicles” from the park can focus her search on sources from the 1950s and 1960s or can look more broadly (to include the 1940s and 1970s perhaps). She could even engage in a search of thousands of public documents from the 1850s and 1860s if she were applying an 1864 no-vehicles-in-the-park regulation to an object found in the park this year. For the researcher, COHA is therefore particularly useful because it allows comparisons of word usage across decades.

For very old legal documents, like the Constitution of 1789, originalists have been hampered by the antiquity of the text, which they have tried to translate to solve modern issues—usually to be embarrassed by evidence from legal historians that they have fallen prey to gross anachronism, source cherry-picking, and result-oriented research and reasoning.¹⁰⁰ Their efforts to apply original-public-meaning methodologies to old statutes have been even less successful.¹⁰¹ A central problem has been that the founding generation spoke a different language than what we speak today, and the task of understanding or translation is conceptually as well as linguistically complicated. As we shall see in Part III, even justices who came of age in the 1960s made elementary mistakes in understanding that decade (and their reliance on contemporary dictionaries did nothing to ameliorate their anachronisms). Historical corpus research, conducted via scientifically valid principles, might therefore be a mechanism for judges to approach some questions

98. *Id.*

99. See CORPUS HIST. AM. ENG., <https://www.english-corpora.org/coha> [<https://perma.cc/CJ6L-DSBV?type=image>].

100. See Jonathan Gienapp, *Historicism and Holism: Failures of Originalist Translation*, 84 FORDHAM L. REV. 935 (2015); Jack N. Rakove, *Joe the Ploughman Reads the Constitution, or, The Poverty of Public Meaning Originalism*, 48 SAN DIEGO L. REV. 575 (2011); William Michael Treanor, *Taking Text Too Seriously: Modern Textualism, Original Meaning, and the Case of Amar’s Bill of Rights*, 106 MICH. L. REV. 487 (2007).

101. For example, the textualist assault on *Church of the Holy Trinity v. United States*, 143 U.S. 457 (1892), by Justice Scalia and his allies, see ANTONIN SCALIA, A MATTER OF INTERPRETATION: FEDERAL COURTS AND THE LAW 18–23 (Amy Gutmann ed., new ed. 2018), has been met with strong and persistent criticism. See Carol Chomsky, *Unlocking the Mysteries of Holy Trinity: Spirit, Letter, and History in Statutory Interpretation*, 100 COLUM. L. REV. 901 (2000); William N. Eskridge, Jr., *Textualism, the Unknown Ideal?*, 96 MICH. L. REV. 1509 (1998) (reviewing SCALIA, *supra*).

of public meaning more objectively and neutrally—or at least to check their intuitions against outside evidence.¹⁰²

B. *Framing the ‘Meaning’ of Original Public Meaning*

Understanding the flawed approaches to public meaning in *Bostock*, as well as how the interpretation of super-statutes like Title VII should be conducted, also requires a framework for the ‘meaning’ part of original public meaning. Here especially, insights and knowledge from linguistics and the philosophy of language can improve the theory and practice of legal interpretation. Original public meaning is, after all, framed by its advocates as a linguistic concept rather than a normative one dependent on judicial ideology.¹⁰³ As a linguistic concept, the public meaning of a text raises issues of categorization, which have been of particular interest to linguists.¹⁰⁴ In fact, virtually every issue of legal interpretation involves categorization: whether a certain intangible concept or concrete object falls within the boundaries of the category created by the regulatory provision.¹⁰⁵ The process of categorization requires an ability to cognitively accommodate both similarities and differences.¹⁰⁶ It is part of inductive generalization, where, for example, knowing that a creature has (many) features similar to recognized members of the category ‘dogs,’ and few relevant features shared by non-dogs, enables one to categorize the creature as a dog.¹⁰⁷

102. For an example of excellent corpus linguistic research applied to a legal problem, see Tammy Gales & Lawrence M. Solan, *Revisiting a Classic Problem in Statutory Interpretation: Is a Minister a Laborer?*, 36 GA. ST. L. REV. 491 (2020) (providing corpus research bearing on the iconic *Holy Trinity* case, discussed in the previous note).

103. See Lawrence B. Solan, *Triangulating Public Meaning: Corpus Linguistics, Immersion, and the Constitutional Record*, 2017 BYU L. REV. 1621, 1626 (2017) (describing “[p]ublic meaning originalism” and its connection to the linguistic meaning of the legal text).

104. See JOAN BYBEE, *LANGUAGE CHANGE* 196 (2015) (“[W]ords designate categories. For this reason, research on categories in both psychology and linguistics is relevant to the study of word meaning.”).

105. In addition to being essential to the operation of the law, categorization is an integral aspect of human development. See Vladimir M. Sloutsky, *The Role of Similarity in the Development of Categorization*, 7 TRENDS COGNITIVE SCIS. 246 (2003); see also ZEKI HAMAWAND, *SEMANTICS: A COGNITIVE ACCOUNT OF LINGUISTIC MEANING* 135 (2015) (“Categories mirror human sensory modalities [T]he conceptual system is organized in terms of categories, which relate to entities experienced in the world.”).

106. In general, categorization is beneficial because it allows for the organization of knowledge through the creation of taxonomies that include smaller classes within larger ones (e.g., Specific Creature → Yorkipoo → Dogs → Animals).

107. In fact, early in their development humans demonstrate the ability to countenance differences in order to generalize and form categories based on similarities. Sloutsky, *supra* note 105, at 246–47.

1. Extensional Versus Intensional Meaning

In making categorization decisions, judges act in part as quasi lexicographers.¹⁰⁸ So lexicographical standards and principles might be useful for judges, although many of the choices faced by lexicographers are fairly straightforward for judges.¹⁰⁹ One crucial, but nonobvious and currently unrecognized, distinction relevant to legal interpretation is between intensional and extensional ways of analyzing meaning.¹¹⁰ The ‘extensional’ meaning of a term is the collection of things that fall within the scope of the term.¹¹¹ Thus, the extensional meaning of *planet* consists of the objects to which the term may be correctly applied (the set of Mercury, Venus, and so on).¹¹² In contrast, the ‘intensional’ meaning of *planet* consists of the set of attributes shared by all and only those objects to which the term refers, namely, celestial bodies of a certain size and gravity that orbit a star.¹¹³ Terms have both an extensional and intensional meaning, where the intension determines the extension but not vice versa.¹¹⁴ Most terms, being noneternal, have different

108. Judges are quasi lexicographers at least for the purposes of resolving an interpretive dispute and justifying that decision in a written opinion.

109. See generally Dirk Geeraerts, *Meaning and Definition*, in A PRACTICAL GUIDE TO LEXICOGRAPHY 83 (Piet van Sterkenburg ed., 2003) (describing some of the choices faced by lexicographers). For instance, one typical choice for the legal interpreter is to focus on determining referential, descriptive meaning (“denotational meaning”), as opposed to something like “emotive meaning” (describing the emotional overtone of the word, e.g., pejorative). See *id.* at 86–87.

110. The distinction is similar to the sense/reference distinction made famous by Gottlob Frege. See Gottlob Frege, *Über Sinn und Bedeutung* [On Sense and Reference], 100 ZEITSCHRIFT FÜR PHILOSOPHIE UND PHILOSOPHISCHE KRITIK 25 (1892), translated in THE FREGE READER 151 (Michael Beaney ed., 1997). The sense/reference distinction has been proposed as a theory of originalism in constitutional law. See, e.g., Christopher R. Green, *Originalism and the Sense-Reference Distinction*, 50 ST. LOUIS U. L.J. 555, 564 (2006).

111. See Luca Gasparri & Diego Marconi, *Word Meaning*, STAN. ENCYC. PHIL. (Mar. 21, 2021), <https://plato.stanford.edu/archives/spr2021/entries/word-meaning> [https://perma.cc/ETH8-D292]. Complex expressions also have extensions. David Braun, *Extension, Intension, Character, and Beyond*, in THE ROUTLEDGE COMPANION TO PHILOSOPHY OF LANGUAGE 9 (Gillian Russell & Delia Graff Fara eds., 2012).

112. See Gasparri & Marconi, *supra* note 111.

113. See *id.*; see also BYBEE, *supra* note 104, at 196 (describing intension as “a statement of the defining features of the category the word designates”). For instance, consider NASA’s definition of a planet:

- (1) It must orbit a star (in our cosmic neighborhood, the Sun).
- (2) It must be big enough to have enough gravity to force it into a spherical shape.
- (3) It must be big enough that its gravity cleared away any other objects of a similar size near its orbit around the Sun.

What Is a Planet?, NAT’L AERONAUTICS & SPACE ADMIN., <https://solarsystem.nasa.gov/planets/in-depth> [https://perma.cc/8BS3-763N].

114. Francesco Orilia, *Meaning and Circular Definitions*, 29 J. PHIL. LOGIC, 155, 163 (2000).

extensions at different times.¹¹⁵ For example, in 1920 the extension of *airplane* did not include any jets, but its extension in 2021 does.¹¹⁶ In contrast, even though its extension will change constantly over short periods of time, the intensional meaning of *airplane* might, theoretically, remain stable for long stretches of time.¹¹⁷ Thus, two expressions with the same intension have the same extension, but two expressions with the same extension may have different intensions.¹¹⁸ For example, the term *renate* has the same extension as the term *cordate*, but the intension of *renate* is ‘animal with a kidney’ whereas the intension of *cordate* is ‘animal with a heart.’¹¹⁹

In a legal context, it may seem intuitive that meaning should be framed in terms of intension, which is consistent with the typical judicial process of determining the intensional meaning (by reference to a statutory definition, a precedent, or a dictionary) of the term at issue before applying that meaning to the facts of the case.¹²⁰ Although fraught with difficulties, it is not uncommon to approach interpretive disputes by determining only the extension of an expression, and using corpus linguistics may facilitate this process.¹²¹ For example, Justice Thomas Lee and Stephen Mouritsen used corpus analysis to consider whether airplanes and bicycles are ‘vehicles’ regulated by a Hartian no-vehicles-in-the-park statute.¹²² Their paper examined collocation, which reveals “the words that are statistically most likely to appear in the same context as *vehicle* for a given period,”¹²³ and concordance data, which “allows [] users to review a particular word or phrase in hundreds of contexts, all on the same page of running text.”¹²⁴ From this information, the authors concluded that airplanes and bicycles “are attested in the data as possible examples of *vehicle*” but are “unusual—not the most frequent and not even common.”¹²⁵

Lee and Mouritsen thus did not offer an intensional definition of *vehicle* based on their corpus research but, instead, focused on the frequency with

115. See Wayne A. Davis, *On Nonindexical Contextualism*, 163 PHIL. STUD. 561, 562 (2013).

116. See *id.*

117. See *id.* This would obviously depend on the lexicographical approach taken by the interpreter.

118. See Braun, *supra* note 111, at 10.

119. See *id.*

120. Some would argue that extensions are not plausible candidates for the meanings of expressions because expressions that have the same extension (coextensive expressions) can differ in meaning. *Id.* at 10. See Geeraerts, *supra* note 109, at 89 (explaining that intensional meanings are the ones generally used in dictionaries).

121. An interpretive dispute is resolved once it is determined whether the statutory term includes within its scope the object or concept in question; determining the extension of the statutory term necessarily resolves that dispute.

122. See Lee & Mouritsen, *supra* note 25, at 836, 859.

123. *Id.* at 837.

124. *Id.* at 832.

125. *Id.* at 859.

which the word *airplane* occurs around *vehicle*.¹²⁶ With an extensional approach to meaning, the interpreter must sort through the collocation, concordance, and other data and make a determination about whether the producers of the texts being searched demonstrated a belief (even if indirectly) that some concept falls within the scope of the category at issue. This determination will thus be based on the “evaluation of some kind of frequencies.”¹²⁷ There must therefore be some standard above which the frequency of instances can be said to represent category membership. If, for example, airplanes are not mentioned in the same contexts as “vehicles,” the interpreter might conclude that airplanes likely do not fall under the ‘vehicle’ concept.¹²⁸ But frequencies of co-occurrence alone are an insufficient basis on which to determine category membership.¹²⁹ Furthermore, with a corpus analysis focused on extensional meaning, the researcher will seek information regarding whether an object such as an airplane or a bicycle is referred to as a vehicle or occurs in the vicinity of *vehicle* in a text, but such research will not likely capture all the objects that might be considered vehicles.¹³⁰ Additional research would be required to determine whether any of these other objects (perhaps some new skateboard-like mechanism) is a vehicle.¹³¹

In contrast, an intensional approach seeks to create a definition for a given concept. Thus, an intensional approach that understands ‘vehicle’ in terms of the most salient attributes of the category is particularly useful to a judge whose decision may set the legal standard for future cases.¹³² If the term is defined in terms of its necessary and sufficient or its salient fea-

126. *Id.* at 837–38. Thus, the focus was on whether “[some noun] is a vehicle.” Gries & Slocum, *supra* note 95, at 1466. Note, though, that this inquiry does not necessarily include investigation into whether a particular corpus file included an assertion that, for example, an airplane *is* a vehicle but merely collects data about whether the two terms appear together.

127. Stefan Th. Gries, *What Is Corpus Linguistics?*, 3 LANGUAGE & LINGUISTICS COMPASS 1225, 1226 (2009).

128. See Lee & Mouritsen, *supra* note 25, at 859.

129. Stefan Th. Gries, *Corpus Linguistics and the Law: Extending the Field from a Statistical Perspective*, 86 BROOKLYN L. REV. (forthcoming 2022) (manuscript at 19) (on file with the Michigan Law Review).

130. Likely, there are too many objects to research and, in any case, advances in technology will create new objects to evaluate.

131. The Segway is a two-wheeled, self-balancing personal transporter brought to market in 2001 that has an electric motor and a maximum speed of 12.5 miles per hour. Matt McFarland, *Segway Was Supposed to Change the World. Two Decades Later, It Just Might*, CNN BUS. (Oct. 30, 2018, 1:04 PM) <https://www.cnn.com/2018/10/30/tech/segway-history/index.html> [<https://perma.cc/KY32-C4MG>].

132. See *infra* notes 190–197 and accompanying text (describing the attributes of ‘vehicle’); see also Gries & Slocum, *supra* note 95, at 1468 (discussing how the category ‘vehicle’ can be defined in terms of its attributes).

tures,¹³³ those features can be compared to the features of a given concept or object, and a category determination can be made.¹³⁴ For instance, a prototype for the ‘vehicle’ category may be created and the attributes of objects such as airplanes and bicycles can be compared in order to determine membership in the category.¹³⁵ Although the specification is likely to be underdetermined—will fail to provide criteria that will uncontroversially determine in all situations whether the concept or object in question falls under the relevant category¹³⁶—an intensional approach, unlike an extensional one, will apply generally to concepts that were not specifically investigated by the interpreter.¹³⁷ Additionally, the interpreter can combine the two approaches by identifying core examples covered by the statutory term and capping the exemplars with an inclusive ellipsis (‘and other things having such-and-such qualities’).¹³⁸

Deciding these categorization questions via an intensional approach to meaning, with the intension fixed at the time of enactment, presents some challenges for the interpreter. The most important consideration is the determination of the constituent, and therefore defining, features of the relevant statutory term. As researchers have established through

133. See *infra* note 181 (explaining that the most salient attributes for a category are those with a high cue validity for the category).

134. See *infra* Section II.C. (analyzing whether a Segway is a vehicle).

135. See Gries & Slocum, *supra* note 95, at 1468–69. Although the ‘prototype’ concept can be defined in different ways, one way to do it is by viewing a prototype as an abstract entity, rather than a concrete exemplar, which consists of the combination of the most salient attributes of the category. See Brian G. Slocum & Stefan Th. Gries, *Judging Corpus Linguistics*, 94 S. CAL. L. REV. POSTSCRIPT 13, 28 (2020).

136. Underdeterminacy “does not entail that there is no fact of the matter as regards the proposition expressed, but rather that it cannot be determined by linguistic meaning alone.” ROBYN CARSTON, THOUGHTS AND UTTERANCES: THE PRAGMATICS OF EXPLICIT COMMUNICATION 20–21 (2002). In contrast, ‘underspecificity’ involves situations where it is undetermined which of several determinate meanings were intended. See Una Stojnić, Matthew Stone & Ernie Lepore, *Distinguishing Ambiguity from Underspecificity*, in PRAGMATICS, TRUTH AND UNDERSPECIFICATION: TOWARDS AN ATLAS OF MEANING 149, 149–50 (Ken Turner & Laurence Horn eds., 2018). Thus, one way of treating ambiguity is to assert that a term, such as *bank*, has a single lexical entry with an underspecified meaning because the word itself does not specify which of the typical meanings was intended (e.g., a river bank or a financial institution). See Mixingmemory, *Polysemy Is Like Homonymy, Only Different*, SCIENCEBLOGS (Nov. 3, 2006), <http://scienceblogs.com/mixingmemory/2006/11/03/polysemy-is-like-homonymy-only> [https://perma.cc/BW36-BQK4]. Of course, sentential context often can help specify the correct meaning.

137. Thus, neither societal dynamism nor linguistic dynamism can be accounted for under an extensional approach unless it is nonoriginalist.

138. Notice the relevance of the foregoing analysis for statutory drafting and interpretation. Most statutes contain a provision containing definitions of key statutory terms. But definitions can be either extensional or intensional. The former kind of definition would list the items falling within the statutory term. The latter would describe the features found in all objects that fall within the intended definition. Some definitions include elements of both—lists of included items together with a broad residual phrase (‘including other stuff’).

psycholinguistic theories of how people perceive categories, in many situations a category cannot be defined by means of a single set of necessary and sufficient attributes.¹³⁹ Instead, “categories [often] exhibit a family resemblance structure” that may consist of “a radial set of clustered and overlapping readings.”¹⁴⁰ Instead of ‘behaving’ as if defined by a simple and clear-cut set of criterial (i.e., necessary and sufficient) features, categories exhibit a wide range of prototype effects, the most relevant of which is that they often appear not to have sharply delimited borders with clear demarcations. Thus, “categories . . . are [often] only unambiguously defined in their focal points,” the so-called prototypes, and have one or more sets of properties or attributes that are characteristic and not defining.¹⁴¹

2. The Advantages of Intensional Meaning for Legal Interpretation

Notwithstanding the challenges involved for the interpreter (which are normal aspects of legal interpretation), there are significant benefits to an intensional approach, as compared to an extensional approach, in framing originalism for statutory or constitutional interpretation. Unlike an extensional approach, an intensional approach can accommodate changes to society over time while still hewing to originalist premises.¹⁴² Consider the

139. By the 1970s, the classical view of categorization began suffering sustained criticisms. See Eleanor H. Rosch, *Natural Categories*, 4 COGNITIVE PSYCH. 328 (1973); Eleanor H. Rosch, *On the Internal Structure of Perceptual and Semantic Categories*, in COGNITIVE DEVELOPMENT AND THE ACQUISITION OF LANGUAGE 111 (Timothy E. Moore ed., 1973); Eleanor Rosch, *Cognitive Representations of Semantic Categories*, 104 J. EXPERIMENTAL PSYCH. 192 (1975). Rosch and others such as William Labov, *The Boundaries of Words and Their Meanings*, in NEW WAYS OF ANALYZING VARIATION IN ENGLISH 340 (Charles-James N. Bailey & Roger W. Shuy eds., 1973), are typically credited with severely undermining the classical view. In contrast to the traditional view, Rosch argued that perceptually based categories do not have sharply delimited borders with clear demarcations between equally important concepts. From her field experiments, Rosch concluded that defining categories in a rigid manner is inconsistent with psychological reality. Unsurprisingly, prototype theory has had a significant impact on conceptual analysis. Patrick Hanks, for instance, has deemed it “[p]robably the most influential development of the twentieth century from the point of view of conceptual analysis.” PATRICK HANKS, LEXICAL ANALYSIS: NORMS AND EXPLOITATIONS 340 (2013).

140. GEERAERTS, *supra* note 19, at 187. Famously, Ludwig Wittgenstein argued that the concept ‘game’ cannot be defined by properties that are shared by all other games. Instead of being capable of being defined by necessary and sufficient conditions, the different members of the category share properties with various other members. LUDWIG WITTGENSTEIN, PHILOSOPHICAL INVESTIGATIONS §§ 53–67, at 30–36 (P.M.S. Hacker & Joachim Schulte ed., G.E.M. Anscombe, P.M.S. Hacker & Joachim Schulte trans., rev. 4th ed. 2009).

141. GEERAERTS, *supra* note 19, at 185, 189–90. Some legal scholars have recognized these features of meaning. Most famously, Hart argued that most legal rules have a “core of settled meaning” but are surrounded by a “penumbra of debatable cases.” Hart, *supra* note 15, at 607.

142. Even when the originalism constraint is eliminated an intensional approach offers an advantage, because the concept defined in terms of its constituent features can be applied to new and changed situations without revisiting the definition. An extensional approach requires

Eighth Amendment's prohibition of "cruel and unusual punishments."¹⁴³ An originalist extensional meaning, such as that championed by Justice Scalia, would include those punishments that were "cruel and unusual" in 1791 and exclude those that were not.¹⁴⁴ By doing so, the list of known punishments in 1791 would be fixed as either prohibited or allowed. Yet Justice Scalia also acknowledged the necessity of recognizing some form of societal dynamism.¹⁴⁵ He realized that determining the meaning of a constitutional provision solely in terms of its original extension is wholly inadequate to adjudicate cases that will inevitably arise due to new practices and technologies.¹⁴⁶ On Justice Scalia's view, the Eighth Amendment is therefore also an "abstract principle," "rooted in the moral perceptions" of 1791, that can be applied to "all sorts of tortures quite unknown at the time the Eighth Amendment was adopted."¹⁴⁷

Thus, while Justice Scalia recognized societal dynamism to some extent, his position that the extension of the Eighth Amendment should be considered both fixed in 1791 (to address punishments that then existed) and not fixed in 1791 (to allow for consideration of punishments that did not then exist) is an undertheorized mixture of intensionalist and extensionalist views of meaning. The evaluation of "tortures quite unknown at the time the Eighth Amendment was adopted," as Justice Scalia advocates, requires an intensional meaning, even if schematic.¹⁴⁸ Consider an intensional meaning that defines "cruel and unusual" in terms of its features. For instance, "unusual" might mean "contrary to 'long usage' or 'immemorial usage.'"¹⁴⁹ This understanding could then be applied to newer punishments that exist in 2021 (but did not in 1791). But why should the amendment be limited to those applications?¹⁵⁰ For instance, what about punishments that were well

that the same analysis (is this object within the scope of the concept) be performed from scratch each time the concept is applied to a new or changed situation.

143. U.S. CONST. amend. VIII. ("Excessive bail shall not be required, nor excessive fines imposed, nor cruel and unusual punishments inflicted.")

144. See SCALIA, *supra* note 101, at 145.

145. *Id.* Yet Justice Scalia believed that having to choose between intensional and extensional meaning (of course, he did not use those terms) presented a "false dichotomy." *Id.*

146. *Id.*

147. *Id.* In his 2012 book, Justice Scalia reiterated his view that "[i]n their full context, words mean what they conveyed to reasonable people at the time they were written—with the understanding that general terms may embrace later technological innovations." SCALIA & GARNER, *supra* note 47, at 16.

148. SCALIA, *supra* note 101, at 145.

149. John F. Stinneford, *The Original Meaning of "Unusual": The Eighth Amendment as a Bar to Cruel Innovation*, 102 NW. U. L. REV. 1739, 1745 (2008) ("[T]he word 'unusual' was a term of art that referred to government practices that are contrary to 'long usage' or 'immemorial usage.'"). In turn, "cruel" could mean "unjustly harsh," not "motivated by cruel intent." See John F. Stinneford, *The Original Meaning of "Cruel,"* 105 GEO. L.J. 441 (2017).

150. Cf. JACK M. BALKIN, *LIVING ORIGINALISM* 7 (2011) (discussing the theory of original expected applications); see also John F. Stinneford, *Experimental Punishments*, 95 NOTRE

known and not “unusual” in 1791 but were “unusual” by 2021?¹⁵¹ Justice Scalia does not offer a convincing account of why originalism cannot countenance the sort of societal dynamism where punishments become “unusual” over time.¹⁵² It may be possible to defend a mixed intensionalist-extensionalist approach, but accounting for social dynamism explains Supreme Court precedents better than Justice Scalia’s version of originalism.¹⁵³

With the above discussion in mind, recall the interpretive question posed by the dissenting opinions in *Bostock*: How would the terms of a statute have been understood and applied by ordinary people at the time of enactment?¹⁵⁴ It is simple to see that the dissenting opinions had an empirical-public-meaning approach (as discussed in the last section) that sought to determine the extensional meaning of Title VII as it existed in 1964.¹⁵⁵ In con-

DAME L. REV. 39 (2019) (addressing the constitutionality of “experimental punishments” that did not exist in 1791).

151. Alternatively, the features of the punishment (capital punishment, for instance) may have changed over time, thereby demonstrating societal dynamism and (potentially) changing the application of the “cruel and unusual” standard. *See supra* note 149 (offering a definition of “cruel”).

152. Still, apart from the merits of Justice Scalia’s claims, if the public meaning of a provision is being determined, inferences from surrounding provisions may be relevant to its interpretation. Thus, even if Justice Scalia’s view of the simultaneously fixed and unfixed extension of the Eighth Amendment is rejected, an intensional meaning must be determined that takes account of both semantic evidence regarding the meaning of “cruel and unusual” and pragmatic evidence of the broader context of the provision. *See infra* note 163 (describing ‘pragmatic’ evidence). A better argument for Justice Scalia, then, would be that the pragmatic evidence he cites modulates the semantic meaning of “cruel and unusual” (and thus the public meaning of the provision) and narrows the range of things to which the term applies so that it does not include capital punishment.

153. *See, e.g.,* *Roper v. Simmons*, 543 U.S. 551 (2005) (ruling that execution of minors was “cruel and unusual” punishment, over a heated Scalia dissent arguing, *inter alia*, that there was no national consensus sufficient to render this “unusual”); *Graham v. Florida*, 560 U.S. 48 (2010) (ruling that life sentence without parole for minors in noncapital cases was “cruel and unusual” punishment over an Alito/Thomas/Scalia dissent).

154. *See supra* note 77 and accompanying text; *Bostock v. Clayton Cnty.*, 140 S. Ct. 1731, 1766 (2020) (Alito, J., dissenting).

155. *See supra* notes 77–85 and accompanying text. An intensional approach does not have to correspond to the compositional approach adopted by the majority in *Bostock*. For instance, a term or phrase can be defined in terms of its intension, even though it is not compositional. An idiomatic expression would be such an example (‘He kicked the bucket’—the meaning of this idiomatic expression cannot be determined by combining the meanings of the individual words). Similarly, one or more of the terms in a provision can be given a special meaning that fits the relevant context, even though it would be given a different meaning in other contexts. In the same way, an empirical approach to interpretation does not have to follow the extensional approach taken by the dissenting opinions in *Bostock*. The dissenting opinions adopted an empirical-public-meaning approach that viewed the empirical question in terms of the extension of Title VII (or section 703(a)(1)), but the empirical question could be defined more narrowly and generally, such as ‘What would ordinary people have thought was included within the scope of the term *sex* in 1964?’ Thus, both the majority and dissenting

trast, Justice Gorsuch's opinion for the Court showed very little interest in what categories of Americans were protected by Title VII in 1964 but saw it as his task to figure out the intensional meaning of the Title VII language in 1964.¹⁵⁶ This replicates the contrasting approaches to meaning followed by Justice Scalia (extensional) and the Court majority (intensional) in the Eighth Amendment cases. It might be an originalist tenet that the meaning of regulatory terms should be fixed as of the time of enactment ("what they conveyed to reasonable people at the time," in the words of Justice Scalia),¹⁵⁷ but that expression of the tenet leaves open the question of whether you are talking about extensional meaning (Alito) or intensional meaning (Gorsuch).

The choice between intensional and extensional meaning should not be a difficult one for originalists. It is hard to take seriously a constitutional or statutory-interpretation theory that valorizes exclusively the extensional meanings of provisions the year they were adopted. Neither Justice Alito nor Justice Thomas has followed an extensional approach in Second Amendment cases. In *McDonald v. City of Chicago*,¹⁵⁸ Justice Alito wrote the plurality opinion holding that the Second Amendment applied to the states under the Due Process Clause;¹⁵⁹ Justice Thomas's concurring opinion accomplished the same result through the Privileges or Immunities Clause.¹⁶⁰ Both justices assumed that the amendment assured Chicago residents the use of weapons unheard of in 1791 (or 1868, when the Fourteenth Amendment was added). Justice Gorsuch made the same point in *Bostock* for Title VII: the list of activities the American public would have considered 'discrimination because of sex' in 1964 might not have included the "sexual harassment" of working women, the refusal to promote a woman who was too masculine, or the "homosexual hazing" of a man by his male coworkers.¹⁶¹ Yet, with an intensional approach to meaning, social dynamism can change the coverage of Title VII, even under an originalist perspective. As we shall demonstrate in Part III, moreover, Justice Alito missed his best argument because he declined to apply an intensional approach to Title VII that incorporated a normative dimension into original public meaning.

opinions adopted certain combinations of the compositional/empirical and intensional/extensional concepts, but other combinations are also possible.

156. See *Bostock*, 140 S. Ct. at 1738–41. That is, other than the meaning of "sex" that the Court adopted for purposes of the opinion.

157. See SCALIA & GARNER, *supra* note 47, at 16.

158. 561 U.S. 742 (2010).

159. *McDonald*, 561 U.S. at 791 (applying *District of Columbia v. Heller*, 554 U.S. 570 (2008), to state and local governments).

160. *Id.* at 806 (Thomas, J., concurring in part and concurring in the judgment).

161. *Bostock*, 140 S. Ct. at 1751 ("[A]pplying protective laws to groups that were politically unpopular at the time of the law's passage—whether prisoners in the 1990s or homosexual and transgender employees in the 1960s—often may be seen as unexpected.").

II. DEMONSTRATING THE EVOLUTION OF PUBLIC MEANING OVER TIME (THE NO-VEHICLES HYPOTHETICAL)

Thus far, we have outlined our views of ‘public’ and ‘meaning,’ which require that the interpreter make various choices about how to frame public meaning, such as between intensional and extensional meaning.¹⁶² Regardless of the approach selected, the interpretive dispute will likely involve an issue of categorization requiring an interpreter to consider a range of evidence, including both information about word meanings that cuts across contexts and information regarding the specific context of the statute.¹⁶³ The cross-contextual information informs the general meaning of the statutory language, which the other evidence helps situate within the specific context and purpose of the statute.¹⁶⁴ Ultimately, the interpreter must synthesize the general and specific information into criteria for determining category membership. The task is often not easy, as the foregoing analysis suggests. In fact, judges have long struggled to give undefined terms in legal texts meanings that are general, unconnected to their policy preferences, and sufficiently flexible to adapt to new circumstances.¹⁶⁵

The difficulties associated with attempts to define even commonplace words like *vehicle* were classically presented by H.L.A. Hart’s famous hypothetical, which “forbids you to take a vehicle into the public park.”¹⁶⁶ The issues of meaning raised by the no-vehicles-in-the-park hypothetical are relevant to interpretation generally, and we start with Justice Kavanaugh’s

162. See *supra* Part I.

163. Information about word meanings that cut across contexts is often referred to as ‘semantic’ information, while information about how words are used in specific contexts is often referred to as ‘pragmatic’ information. Semantics concerns the conventional meaning of the representation and pragmatics the “contributions of the ambient circumstances.” PRASHANT PARIKH, LANGUAGE AND EQUILIBRIUM 6 (2010). The traditional conception is that semantics “first underspecifies content that is later filled in by pragmatics.” *Id.* Semantics therefore accounts for meaning by relating, via the rules of the language and abstracting away from specific contexts, linguistic expressions to the world objects to which they refer. See MIRA ARIEL, DEFINING PRAGMATICS 6 (2010) (describing the “semantics/pragmatics division of labor”). Thus, the semantic meaning of a sentence consists of the “common core of meaning shared by every utterance of it.” DAN SPERBER & DEIRDRE WILSON, RELEVANCE: COMMUNICATION AND COGNITION 9 (2d ed. 1995). In turn, pragmatics accounts for meaning by reference to the language user (producer or interpreter), and it involves inferential processes. See ARIEL *supra*, at 24–28. Pragmatics takes account of contextual factors, such as the mutual knowledge shared by the speaker and addressee, even if such information is not explicitly reflected in the syntactic properties of the sentence. See *id.* at 28.

164. See ARIEL, *supra* note 163, at 28.

165. Ordinary people in nonlegal situations are also susceptible to biases when categorizing objects. See Theodore J. Noseworthy & Miranda R. Goode, *Contrasting Rule-Based and Similarity-Based Category Learning: The Effects of Mood and Prior Knowledge on Ambiguous Categorization*, 21 J. CONSUMER PSYCH. 362 (2011) (describing how a person’s “mood” can influence categorization decisions).

166. See Hart, *supra* note 15, at 607.

use of that enduring hypothetical in *Bostock*. Our main focus, though, remains the temporal issues created by long-standing laws. We apply our notion of intensional meaning, along with corpus linguistics, to address some of the temporal complications involved in determining original public meaning.¹⁶⁷ Specifically, we illustrate three interconnected circumstances under which judges committed to neutrality and restraint ought to apply the no-vehicles statute differently in 2021 than they would have in 1964: (1) societal dynamism, where the object of interpretation did not exist at the time of statutory enactment or where the object of interpretation did exist at the time of statutory enactment but its features have significantly changed; (2) linguistic dynamism, where the meaning of a statutory term has changed over time; and (3) normative dynamism, where a new constitutional or social moral context changes the applicability of statutory terms.¹⁶⁸ Our distinction between societal and linguistic dynamism appears to be significant to many originalists, but we question whether the distinction can be coherently maintained by judges, even those who view themselves as originalist.¹⁶⁹ Normative dynamism may be a deeper challenge for originalists, but we join the late Justice Scalia in arguing for the relevance that new constitutional limits or social norms might have for the current application of statutes.

A. *Difficulties with the Basic No-Vehicles Hypothetical, Involving No Time Gap Between Enactment and Application*

Hart's no-vehicles hypothetical classically frames the challenges caused by the difficulties of categorizing objects and defining words (such as *vehicle*) and the consequent fuzziness (often labeled as vagueness) associated with such attempts.¹⁷⁰ Hart's hypothetical reflects an underlying belief that a word's semantic meaning is to some degree generalizable across contexts and not based on any specific interpretive clues that can be traced to the drafter of the text. Thus, Hart asserted that the rule clearly "forbids an *automobile*."¹⁷¹ Yet, as Hart also recognized, the inherent flexibility of words means that there will be "a penumbra of debatable cases," making it uncertain whether things such as *bicycles* are included within the domain of *vehi-*

167. As we have suggested above, evidence of public understanding from decades or even centuries ago is harder to find or create (you cannot run in-person experiments on the Founding Fathers), and any evidence found will be hard to translate into modern language. See *supra* note 103 and accompanying text.

168. See *supra* notes 45–46 and accompanying text.

169. At least some forms of societal dynamism are accepted by originalists and thus distinguished from linguistic dynamism. See *supra* Section I.B.2.

170. See generally Eleanor Rosch, *Principles of Categorization*, in COGNITION AND CATEGORIZATION 27 (Eleanor Rosch & Barbara B. Lloyd eds., 1978) (describing the challenges of categorization); Sloutsky, *supra* note 105, at 246 (describing how categorization works).

171. Hart, *supra* note 15, at 607 (emphasis added).

cle.¹⁷² Hart did not explain, however, how an interpreter identifies the “core of settled meaning” or the parameters of the category.¹⁷³ That is, he did not explain how a judge should identify criteria for determining membership in a category like *vehicle*.

The hypothetical has intrigued some textualists who want to ‘solve’ it by relying on the determinacy of language. Most prominently, Justice Scalia and Bryan Garner addressed the hypothetical in their 2012 book.¹⁷⁴ Despite indicating that judges “should consult (without apology) what the lexicographers say,” the authors found dictionary definitions of *vehicle* to be too broad and inclusive (implicitly based on their view that such a statute would not be intended or understood to include everything that would fall under a dictionary definition).¹⁷⁵ Instead, Scalia and Garner created (without citing any linguistic authority or analysis) their own definition: “The proper colloquial meaning in our view (not all of them are to be found in dictionaries) is simply a *sizable* wheeled conveyance (as opposed to one of any size that is motorized).”¹⁷⁶ Armed with this self-created definition, they announced that “remote-controlled model cars, baby carriages, [and] tricycles” would not fall under it.¹⁷⁷ Apart from the paucity of identified features characteristic of a *vehicle*, how does one decide whether an object is sufficiently “sizable”? If the definition of *vehicle* sets forth necessary and sufficient conditions that include anything that is (1) sizable, (2) wheeled, and (3) a conveyance, then there must be some size threshold for the category. But Scalia and Garner do not offer any standard for evaluating what is “sizable.”¹⁷⁸ Notwithstanding their goal of demonstrating an interpretive methodology that will produce consistent answers across judges, Scalia and Garner express uncertainty concerning the application of their definition to bicycles, indicating that they are

172. *Id.* The “domain” refers to the objects to which the word at issue should be applied.

173. *See id.*

174. *See* SCALIA & GARNER, *supra* note 47, at 36 (claiming that “judges who use the fair-reading method will arrive at fairly consistent answers” because the “relevant line of inquiry is pretty straightforward”).

175. *See id.* at 36–37 (conceding that “[a]nything that is ever called a *vehicle* (in the relevant sense) would fall within these definitions”).

176. *Id.* at 37.

177. *Id.* at 37–38.

178. Justice Scalia’s failure to provide some criterion for judgments about the “sizable” threshold undoubtedly benefits his analysis, considering that any attempt to precisify “sizable” would reveal the arbitrary and discretionary nature of a cutoff that is based on language alone. Certainly, what is “sizable” depends on context, as does the meaning of any gradable adjective (e.g., *tall*, *fast*). *See generally* DIANA RAFFMAN, UNRULY WORDS: A STUDY OF VAGUE LANGUAGE (2014). The relevant context most importantly includes the object that the adjective sizable modifies. A “sizable building” is different from a “sizable human,” but what is a “sizable conveyance”? Does any car qualify, even though cars vary dramatically in size? Considering that Justice Scalia does not list cars as objects to be considered under the statute, *see* SCALIA & GARNER, *supra* note 47, at 36, it would appear he would assert that any sort of car (only if designed for travel on public roads or to transport humans?) would qualify as a vehicle.

“perhaps” not vehicles (albeit confirming later that they are not vehicles), and Segways, indicating that they are “perhaps” vehicles.¹⁷⁹

Justice Kavanaugh’s analysis in *Bostock* reflects a similar belief that the ordinary meaning of a term within a specific context can be known even without any supporting evidence or empirical analysis. He asserts that “[a] statutory ban on ‘vehicles in the park’ would literally encompass a baby stroller” but that “the word ‘vehicle,’ in its ordinary meaning, does not encompass baby strollers.”¹⁸⁰ As a general matter, it is true that a traditional baby stroller may well not be a vehicle. Certainly, as our corpus analysis reveals, a baby stroller is not a prototypical vehicle because it does not exhibit the salient characteristics for the category ‘vehicle.’¹⁸¹

As our analysis of the Corpus of Historical American English (COHA) reveals, the relevant prototype and features of ‘vehicle’ seem to be an automobile with an engine, wheels, and tires that transports at least one person, and perhaps other goods (often for economic reasons and on roads), for which licensing might be required. A baby stroller, though, is not self-propelled in the sense that it does not move on its own or because of actions by the person being conveyed. Rather, it moves because of force applied by a person other than the passenger,¹⁸² has no engine or motor of any kind, typically moves on sidewalks and not roads, has a speed that corresponds to that of a pedestrian as opposed to more typical vehicles that surpass that speed, and has a limited capacity for conveying goods in addition to the passenger(s) it conveys. Is a baby stroller nevertheless a vehicle? It depends on the importance one attaches to the above criteria, but it is less likely to be considered a vehicle than motorized wheelchairs or even regular wheelchairs.

Justice Kavanaugh’s assertion that the “literal meaning” of *vehicle* includes baby strollers is puzzling.¹⁸³ We think he is equating “literal meaning” with the intensional approach taken by the majority and is trying to demonstrate the problems with such an approach. That is, a broad dictionary defi-

179. See SCALIA & GARNER, *supra* note 47, at 38.

180. *Bostock v. Clayton Cnty.*, 140 S. Ct. 1731, 1825 (Kavanaugh, J., dissenting).

181. Regarding salient features,

[t]he most salient attributes for a category are those with a high *cue validity* for the category. The cue validity of an attribute *A* of object *X* with regard to a category *C* is the conditional probability of *X* being a member of category *C* if or given that *X* has attribute *A*: $p(C|A)$. In other words, a robin (the object *X*) is a “good” bird (the category *C*) because it has many of the attributes $A_{1..n}$ that are highly predictive of something being a bird (e.g., if something has a beak (A_1), it is most likely a bird; if something (also) has feathers (A_2), it is most likely a bird), not because we encounter it so frequently or talk about it so frequently (although frequency and even dispersion *may* of course help in making something seem prototypical).

Gries & Slocum, *supra* note 95, at 1468 & n.207.

182. We could call this person the ‘driver’ (i.e., the person responsible for the speed and direction of movement).

183. *Bostock*, 140 S. Ct at 1825 (Kavanaugh, J., dissenting).

inition of *vehicle* or *stroller* can be found, converted into necessary and sufficient conditions for membership in the ‘vehicle’ category, and then applied to the features of baby strollers.¹⁸⁴ If so, he is right that such a methodology will not deliver the ordinary meaning of a term (as Justice Scalia learned). If Kavanaugh means that a baby stroller is sometimes (often? usually?) referred to as a vehicle as a general matter (as one might expect if ordinary meaning is what he is after), but not in the specific context of a no-vehicles-in-the-park prohibition, he offers no proof or analysis of these assertions.

B. *New Things in the World*

Whatever the normal difficulties of applying a no-vehicles statute soon after its enactment, the passage of time will present temporal issues that judges typically do not acknowledge or handle well. Those applying our 1964 no-vehicles statute will be confronted with new things or circumstances over time, and many of these instances of social dynamism could not have been anticipated. Consider Segways: are they barred from the park by our 1964 statute (recall that Justice Scalia says “perhaps” even without the temporal issue being present)? Segways did not exist on the market until 2001 and thus were unknown in 1964.¹⁸⁵ In COHA the first mention of Segways occurs in 2002 (in an article on legislating Segways’ use of sidewalks).¹⁸⁶ Segways today may fit the statutory language, even if not as snugly as automobiles: they have battery-powered motors and convey people from one place to another, at the stately speed of around ten to twelve miles an hour.¹⁸⁷ Does original public meaning nevertheless require that Segways be dismissed from the statutory coverage out of hand (meaning that they can never be considered vehicles), simply because they could not have been within the extension of the statute when enacted? (Justice Alito suggested as

184. See SOLAN, *supra* note 39, at 66–70 (describing how judges often inappropriately convert dictionary definitions into necessary-and-sufficient tests for membership within the category). So we looked up *stroller* in the 1961 print of *Webster’s Second* and found that it might include ‘baby carriage.’ WEBSTER’S NEW INTERNATIONAL DICTIONARY 2499 (2d ed. 1961). *Webster’s* defines *carriage* as, among other things, “[a] wheeled vehicle for persons.” *Id.* at 411. Make of this what you will . . .

185. See *supra* note 131. In fact, Segways are no longer being built, making it likely that they will eventually cease to be an extensional category member of ‘vehicle.’ Rachel Treisman, *After Nearly Two Bumpy Decades, the Original Segway Will Be Retired in July*, NPR (June 23, 2020, 6:26 PM), <https://www.npr.org/2020/06/23/882536320/after-nearly-two-bumpy-decades-the-original-segway-will-be-retired-in-july> [<https://perma.cc/555V-WZLQ>].

186. Robert Zielinski, Letter to the Editor, *Sidewalk Is No Place*, CHI. SUN-TIMES, Apr. 19, 2002, at 42.

187. E.g., *Segway x2 SE*, SEGWAY, <https://www.segway.com/segway-x2-se> [<https://perma.cc/AR49-MW2U>]. Thus, it is likely that anyone who considers a bike a *vehicle* would have to consider a Segway one.

much for transgender persons when he complained that the word *transgender* did not exist in the English language in 1964.)¹⁸⁸

SEGWAYS IN WASHINGTON, D.C.



Any theory of original public meaning that would exclude Segways out of hand would be a highly impractical theory of interpretation, for it would make many regulatory statutes ineffective. Recall that Justice Scalia, the godfather of original public meaning, was open to including new things in long-standing legal provisions, and he joined Justices Thomas and Alito in thinking that the Second Amendment protects thousands of firearms that did not exist in 1791 or 1868.¹⁸⁹ Certainly, from the 1960s features of *vehicle*, it seems that, on the basis of semantics alone, one could consider a Segway a vehicle in the sense that it is a conveyance with wheels/tires and an engine that transports one human with maybe some ‘luggage,’ sometimes on (shared) roads, sometimes on bike paths.¹⁹⁰ If so, the original intensional meaning of *vehicle* has remained constant even though its extensional meaning has expanded. Now, if one adds legal considerations to the mix (the speed at which Segways travel, their likelihood of causing harm in accidents, the degree to which they affect other traffic in a park, and so forth), then of course statutory purpose might resolve any doubt as to whether Segways fall within the statute.

188. *Bostock v. Clayton Cnty.*, 140 S. Ct. 1731, 1772–73 (2020) (Alito, J., dissenting).

189. See *District of Columbia v. Heller*, 554 U.S. 570 (2008) (Scalia, J.); *supra* notes 158–161 and accompanying text. We are not aware of any originalist who would disagree.

190. Such a conclusion would depend in part on how *engine* is defined. See *infra* note 210 (discussing the definition of an internal-combustion engine).

C. *Old Things That Have Changed*

How might our hypothetical statute apply to a mechanism that existed in 1964 but whose features have significantly changed since enactment? Consider, for instance, wheelchairs. They were well known in 1964, but it is doubtful they would have been considered vehicles under the statute, whatever its purpose. Would the 1964 answer change if a motorized wheelchair entered the park? COHA data from the 1960s reveal only a single reference to a motorized wheelchair, suggesting that such a mechanism did exist but was not salient at the time. Using the 1960s prototype from the Segway analysis, and considering ordinary-meaning semantics alone, a judge in 1964 may well conclude that a wheelchair is not a vehicle even in the unusual situation where it is equipped with a motor. The judge might reason that even if the motorized wheelchair is a conveyance with wheels or tires and an engine that transports one human with maybe some luggage, the 1964 version is not intended for use on roads (or even bike paths).

Of course, this general sense of *vehicle* and *motorized wheelchair* must be applied in light of the entire context of the statute, which might include the purpose of the legal prohibition, the statute creating or regulating the park itself, the ambit of the state's vehicles code, agency application of the law to these mechanisms *vel non*, and so forth.¹⁹¹ Nevertheless, after the judge in 1964 considers the semantic and contextual evidence, she would probably conclude that the statute does not bar motorized wheelchairs.¹⁹² Beyond the 'use on roads' issue, they are just too distant from the core of the statute—fast-moving cars, motor scooters, and even bicycles.

191. The motorized-wheelchair examples are from ESKRIDGE, *supra* note 50, at 127–36.

192. Although we address the issues from an intensional perspective, the result would likely be the same regardless of whether an intensional or extensional approach were used. See *supra* Section I.B.1.

MOTORIZED WHEELCHAIR



Fast forward half a century. Motorized wheelchairs have come a long way, and one nifty new model is the Otto Bock SuperFour motorized wheelchair, depicted below. Yes, it is a wheelchair, designed by a leading European wheelchair manufacturer to allow people with disabilities to venture into uneven paths and rough terrain—but it also looks like a small car and can travel fifteen kilometers per hour, about as fast as a Segway but slower than a motor scooter.¹⁹³

193. Christopher Snowbeck, *All-Terrain Wheelchair Offers Mobility in Rugged Settings*, ST. PAUL PIONEER PRESS (Nov. 13, 2015, 6:30 PM), <https://www.twincities.com/2008/09/11/all-terrain-wheelchair-offers-mobility-in-rugged-settings> [<https://perma.cc/GRU3-YCLW>]; Barbara Jung-Arntz, *MOBILE: Autoscooter im Gelände*, FOCUS MAGAZIN (Nov. 15, 2013, 11:17 PM), https://www.focus.de/auto/neuheiten/mobile-autoscooter-im-gelaende_aid_339980.html [<https://perma.cc/C54G-HT3E>].

OTTO BOCK SUPERFOUR MOTORIZED WHEELCHAIR



No one in 1964 would have anticipated the Otto Bock SuperFour. Because of the changed features of the object in question, the original public meaning of *vehicle* requires at the very least a fresh analysis before applying it to the souped-up wheelchair. Unlike the application of the 1964 statute to a motorized wheelchair, a judge may well find that the Otto Bock SuperFour is a vehicle due to its larger footprint, its greater similarity to the prototypical vehicle (e.g., by having a roof), and its enhanced capabilities, which include the ability to travel on some roads and bike paths. Thus, even though the Otto Bock SuperFour is a motorized wheelchair, its changed features from the 1964 version of a motorized wheelchair may require a different application of the statute, even when applying the 1964 features of *vehicle*. Like the Segway example, the original intensional meaning of *vehicle* remains constant even though its extensional meaning has evolved over time, even when a certain instantiation of the concept at issue—motorized wheelchairs—existed at the time of statutory creation.

Note that we are not arguing that the semantic, features-based analysis is inevitably the one that would be used by the court. It may be that old statutes are applied to new circumstances through a process by which the judge or lawyer reasons by analogy from established applications (perhaps comparing some of the relevant features of the objects in question) and by reference to the statutory purpose.¹⁹⁴ If, for instance, the purpose of the law was protect-

194. See *supra* Section I.B.1.

ing small children from being run over and if judges had already applied the law to Segways, the decisionmaker is much more likely to apply it to the Otto Bock SuperFour. In any case, if intensional original meaning finds the Segway to be a vehicle, the Otto Bock SuperFour is an even easier case. If the originalist wants to save face by calling it a small car rather than a motorized wheelchair, well, it's a free country.

D. *New Social, Statutory, or Constitutional Norms*

The wheelchair hypotheticals explored above suggest a further dynamic analysis. Even if the normal linguistic meaning of words and phrases does not change and even if there are no new things in the world, the application of legal terms to existing things will change as social, statutory, and constitutional norms evolve. Recall that we did not foreclose the possibility that a no-vehicles law would have been applied to motorized wheelchairs in 1964, and such application of the original statute would seem likely to the newer and more car-like Otto Bock SuperFour. Since 1964, however, norms regarding wheelchair accommodation have changed. American society today would not tolerate rules that excluded people with disabilities from enjoying the park—citizens, police, and even judges would no longer view a motorized wheelchair as just a vehicle but also as a means to accommodate people who could not walk around the park. (If the park had rugged terrain, even the SuperFour might be viewed in this way).

Perhaps surprisingly, dedicated originalists like Justice Scalia conceded the fact that a statute enacted in 1964 can mean something different today because of new norms. As the late justice wrote, statutory interpretation is a “holistic” endeavor, and statutory meaning may change to remain “compatible with the rest of the law.”¹⁹⁵ The Rehabilitation Act of 1973 requires programs receiving federal funds to accommodate people with disabilities.¹⁹⁶ The Americans with Disabilities Act of 1990 more broadly prohibits public accommodations, including parks, from failing to include and accommodate people with disabilities.¹⁹⁷ Accommodation for people with mobility problems would probably require parks to allow motorized wheelchairs. However a Scalian judge would have interpreted our no-vehicles law in 1964 when it was enacted, after 1973 that judge would be more willing to view motorized wheelchairs as outside the purview of the 1964 law.

Additionally, Justice Scalia and his colleagues aggressively interpreted statutes to avoid serious constitutional difficulties—typically without making a firm determination that a broad interpretation would actually have been

195. *United Sav. Ass'n of Texas v. Timbers of Inwood Forest Assocs., Ltd.*, 484 U.S. 365, 371 (1988).

196. Rehabilitation Act of 1973, 29 U.S.C. §§ 701–797b.

197. Americans with Disabilities Act of 1990, 42 U.S.C. §§ 12101–12213.

unconstitutional.¹⁹⁸ An interpretation of a no-vehicles law that unreasonably excluded a class of citizens from enjoying public parks would raise serious equal protection concerns for many judges, and that would be a further (normative) reason why the no-vehicles law might mean something different in 2021 than it meant in 1964.

E. *New Meaning for the Regulatory Term*

Our hypothetical has illustrated changes to both society (societal dynamism) and social, legal, or constitutional norms (normative dynamism). Now we consider how the meaning of language itself evolves (linguistic dynamism), that is, how the intensional meaning of a term, and thus its extension, may change over time. Original public meaning, as applied in all three *Bostock* opinions, seems to reject or assume away the relevance of linguistic dynamism to legal interpretation.¹⁹⁹ And for a significant number of judges, the distinction between societal and linguistic dynamism is often crucial to the resolution of interpretive disputes. We question, however, whether judges can coherently maintain this distinction.²⁰⁰ Certainly, society and language are related: as society introduces new things and changes old things, the extensional meaning of the word or phrase will change; as the new examples pile up, the intensional meaning will change as well.²⁰¹ Maintaining a distinction between the two, as the *Bostock* dissenters suggest is crucial, requires a consistent and sophisticated methodology of determining the semantic meaning of words. Such efforts must pay close attention to the generality at which word meanings are framed. If the level of generality is manipulated by judges (perhaps unconsciously), it becomes difficult to persuasively distinguish between an originalist application of public meaning set at a high level of generality and a finding that a more precise meaning of the term has evolved over time (as we demonstrate below).

A simple example of linguistic dynamism would be the following. If our park statute were adopted in 1864 and barred vehicles, it would apply somewhat differently in 1964 to some things that existed in 1864 and had not changed at all. A good example would be horses. In the nineteenth century, vehicle, understood as a means of transportation, could have included horses, and for many Americans the prototypical vehicle would have been a horse or a horse-drawn carriage.²⁰² For instance, as late as 1926, Congress

198. See, e.g., *Rapanos v. United States*, 547 U.S. 715, 738–39 (2006) (Scalia, J.) (plurality opinion); ESKRIDGE, *supra* note 50, at 311–13 nn.9–12; *id.* at 320.

199. See *supra* notes 9–10 and accompanying text (explaining that the three opinions in *Bostock* claimed to follow original-public-meaning principles).

200. At least some forms of societal dynamism are accepted by originalists and thus distinguished from linguistic dynamism. See *supra* Section I.B.2.

201. See TAYLOR, *supra* note 19, at 59–60.

202. See Andrew Nikiforuk, *The Big Shift Last Time: From Horse Dung to Car Smog*, THE TYEE (Mar. 6, 2013), <https://thetyee.ca/News/2013/03/06/Horse-Dung-Big-Shift> [<https://>

enacted a law defining vehicles in the District of Columbia to include “street cars, draft animals, and beasts of burden.”²⁰³ But eventually very few Americans got from one place to another on horses; those who do consider the animals pets, not vehicles. Thus, the modal form of transportation in 1864 was eventually transformed into a show animal. Because of advances in technology, the extension of *vehicle* changed so pervasively that its intensional meaning changed as well. Linguistic theory tells us this is inevitable, because language adapts to society, and society is highly dynamic.²⁰⁴

Consider the evolution of *vehicle* as demonstrated through COHA research.²⁰⁵ The data from the 1960s decade of COHA suggest a main sense (or meaning) of *vehicle* which involves the meaning of car or automobile.²⁰⁶ This is reflected in sets of collocates such as types of vehicles (*car(s)*, *automobile(s)*, *bus(es)*, *trucks(s)*, *armored cars*, *auto*, *wagon*), their parts (*motor(s)*, *engine(s)*, *wheel(s)*, *tires*), locations where they are found (*road(s)*, *streets*, *highways*), what they transport (*driver(s)*, *passenger*, *occupants*, *users*, *police*, *goods*) and the economic connections (*transport*, *convoy(s)*, *operating*, *tariff*, *traffic*, *routes*, *license/licensed*).²⁰⁷ The research thus revealed a prototype of *vehicle* with features that seem to be an automobile with an engine, wheels, and tires that transports at least one person and perhaps other goods (often for economic reasons and on roads), for which licensing might be required.²⁰⁸ By the 2000s this picture had diversified.²⁰⁹ There is still a sense

perma.cc/WYP9-ZN3K] (tracing the rise and fall of horses as major modes of transportation). Indeed, horses would have been more readily identified as vehicles in 1864 than 1764, when they were prizes limited to wealthy colonists; most people just walked. *Id.*

203. Act of July 3, 1926, ch. 739, sec. 1, § 2(k), 44 Stat. 812.

204. See *supra* note 19.

205. The analysis involved, in a nutshell, a retrieval of *vehicle(s)* from the 1960s COHA data (excluding fiction) with a 300 characters context window (772 instances), the identification of all 10,557 word types ever in *vehicle(s)*'s context (those words are called ‘collocates’ in linguistics), and the computation of a statistical measure of association (the log-likelihood ratio *LLR*). See Stefan Th. Gries & Philip Durrant, *Analyzing Co-occurrence Data*, in *A PRACTICAL HANDBOOK OF CORPUS LINGUISTICS* 141 (Magali Paquot & Stefan Th. Gries eds., 2021), that reveals for each word how much it is ‘attracted’ by *vehicle(s)*. Then, we computed for each of the 10,557 collocates of *vehicle(s)* how often it occurred with other collocates of *vehicle(s)* and performed a hierarchical cluster analysis on all collocates with *LLR*-scores >50. The data for the 2000s decade of COHA were analyzed in the same way.

206. See MURPHY & KOSKELA, *supra* note 67, at 151 (“[S]ense is the semantic aspect of meaning—the definitional properties that determine which things are referred to when an expression is used.”).

207. See *supra* note 123 and accompanying text (describing the meaning of collocates); see also ALAN CRUSE, *A GLOSSARY OF SEMANTICS AND PRAGMATICS* 27 (2006) (explaining that a collocation is a sequence of words that co-occur more often than would be expected by chance). Collocations thus refer to the statistically significant co-occurrence of words (rather than co-occurrence due to chance).

208. There was also a second sense of *vehicle* that was strongly related to space exploration. Collocate sets included words associated with the Apollo program (*Apollo*, *Saturn*, *Gemini*, *lunar* and *moon*, *astronaut(s)*, *docking*, *(un)manned*) and related technology (*spacecraft*,

that is compatible with the sense from the 1960s, and it still comes with collocate sets regarding the parts of cars. But there are also new collocate sets relating to environmental issues (*hydrogen, carbon, standards, hybrid, pollution, engine, gas(oline), emissions, energy, reduce, fleet, mileage*) and safety (*rollover, collision, accidents, crash, headlights*). There is also an increase in the number of different words for types, adding these to the ones from above: (*midsized, sedan(s), SUVs, sports utility vehicle, pickup, minivan*). The corpus data thus reveal that diversification of *vehicle* occurred not only in the types of vehicles that exist but also in what propels the prototypical vehicle: that category evolved to include alternative means of propulsion and their perceived environmental benefits.

The data also help illustrate that the distinction between societal and linguistic dynamism can depend on how the interpreter frames the inquiry. Consider a layperson's narrative of how the public's perceptions of *vehicle* may have changed since 1964. At the time of enactment of the no-vehicles provision (or soon thereafter), mechanisms operating on batteries might not have been included in the prohibition (and hence allowed in the park) because they were not powered (motored) by an internal-combustion engine.²¹⁰ Today, Americans are more likely to understand vehicles as including a variety of motors, including those powered by electrical motors

satellite(s), booster(s), rocket, missile, radar, orbital/orbiting, module), words that are more varied but clearly related to this semantic group (*entry, atmosphere, space, exploration, mission(s), rendezvous, force, earth*), and words that interestingly highlight the connection between space exploration and military objectives at the time (*Russians, MIRV, Titan, ballistic*). This second sense of *vehicle* might thus be described as 'a spacecraft suitable for leaving but also reentering the atmosphere, possibly with the goal of carrying one or more humans as well as other vehicles to land on the moon.' One conclusion of this research is that an extensional corpus-linguistics approach may sometimes lead to questionable conclusions. See *supra* notes 117–127 and accompanying text. For instance, Lee and Mouritsen indicate that "*vehicle* is never used to refer to *bicycle* or *airplane* in the corpus data." Lee & Mouritsen, *supra* note 25, at 840. Lee and Mouritsen argue that "based on its absence from any of our corpus data, we might ask if *airplane* is even a possible sense of *vehicle*." *Id.* at 844. Of course, the proper question is not, as Lee and Mouritsen frame it, whether "*airplane* is even a possible sense of *vehicle*," since no one is arguing that '*vehicle* means *airplane*'; the question is whether *airplane* can be said to fall within the extension of *vehicle*. But Lee and Mouritsen's narrow search for instances where the word *vehicle* is used to refer to an airplane will miss the spacecraft-sense collocates listed above. When collocates are used in a more nuanced way—using both frequency and association as diagnostics—'flying stuff' is a strong second main sense of *vehicle* in COHA's 1960s data. While this analysis does not prove that an airplane is a vehicle, our results, arrived at with better methods and a more nuanced conception of meaning, provide a firmer basis for such a conclusion.

209. Cf. BYBEE, *supra* note 104, at 195 ("There is an interesting tension between the need for words to be stable in their meaning so that language users understand each other and the tendency and need to adapt old words to new uses.").

210. Charles Lafayette Proctor, *Internal-Combustion Engine*, ENCYCL. BRITANNICA (June 10, 2020), <https://www.britannica.com/technology/internal-combustion-engine> [<https://perma.cc/YR4C-AKSU>].

rather than gas-fueled motors.²¹¹ Hence, the evolution of what we mean by *vehicle* makes way for the potential regulation of Segways once they came on the market in 2001.²¹²

Now consider how a linguist might think about how the concept ‘vehicle’ may have changed since 1964. We will have to get into the weeds a bit over the following two paragraphs, but please bear with us. Recall that we question whether the distinction between societal and linguistic dynamism can be coherently maintained by judges. To illustrate our assertion (and have the concluding paragraph of this section be compelling), we first need to give a short description of how a linguist might analyze linguistic changes over time.

The linguist would not necessarily center on *vehicle*. Virtually everyone would agree that a car is a vehicle and that *car* is a far more common term than *vehicle*. Both are categories of course, but some category types are more commonly used than others. In fact, categories can be divided into three levels: the subordinate level, the basic level, and the superordinate level.²¹³ So for the 1964 statute, *vehicle* is a superordinate term and *car* (or *automobile*) is a basic-level term and the prototype of ‘vehicle.’²¹⁴ Things like *sedan*, *coupe*, and *station wagon* were subordinate terms, which refer to the ‘form aspect’ of the car. At the time, *car* implied without question the existence of an internal-combustion engine. The prototypical car was probably a sedan in the three-box form.²¹⁵

In 2021, *vehicle* is still a superordinate term and *car* (or *automobile*) is still a basic-level term and the prototype of ‘vehicle.’ Certainly, though, the number of subordinate terms has increased, including things like *SUV*, which refer to the form aspect of the car. Also, and more significantly, the subordinate terms include things like *electric car*, *gas-electric hybrid*, and *fuel-cell car*. These latter terms refer to the form of propulsion, which is no longer limited to the internal-combustion engine. What time did to the category of ‘car,’ and therefore ‘vehicle,’ is introduce a new family of subordinate types. Formerly, it was mostly ‘shape’ plus maybe things like ‘what gets

211. We can imagine that in 2064 solar-powered mechanisms could fall under the park exclusion for vehicles. In fact, the city might have changed its view about the point of the statute—away from fume control toward safety for older folks and kids in the park.

212. See *supra* note 131 and accompanying text. Of course, this narrative is simplified for the purpose of focusing on language issues. The circumstances of statutory enactment (e.g., the law was adopted to combat noxious fumes), would undoubtedly influence its application, such as the lack of a combustion engine being a convenient reason not to include motorized wheelchairs in 1964.

213. See TAYLOR, *supra* note 19, at 48–53.

214. Many other terms would also have basic-level term status, such as *motorcycle*.

215. Mike Colias, *America Has Fallen Out of Love with the Sedan*, WALL ST. J. (Aug. 25, 2018, 12:01 AM), <https://www.wsj.com/articles/america-has-fallen-out-of-love-with-the-sedan-1535169698> [<https://perma.cc/WTS2-A9ZM>].

transported.²¹⁶ In 2021, we also have a family of propulsion-related terms. The prototype is probably still a sedan in the three-box form, or now an SUV, with an internal-combustion engine, simply because that's the most frequent case and probably unmarked (in the sense that one wouldn't mention the car's means of propulsion if it had an internal-combustion engine).²¹⁷ Nevertheless, the change to the category of 'car' percolates up to the category of 'vehicle' because its prototype now has a new structure.

You made it! You now understand that both the layperson and linguist would recognize that circumstances changed between 1964 and 2021, albeit at different levels of analysis. As the linguist's analysis demonstrates, it is possible to view the changed circumstances as being characterized by linguistic dynamism based on the changed features of *car* (and therefore *vehicle*).²¹⁸ Imagine, though, a more basic, layperson analysis that would view the features of *car* (and therefore *vehicle*) at a higher level of generality. This analysis views a *car* as having an 'engine' (or, even more generally, a 'means of propulsion'). If viewed in this way, the meaning of *vehicle* has not changed over time and including a Segway within the statute is instead an example of societal dynamism.²¹⁹ (It may also be an example of normative dynamism, as environmental concerns have changed the way Americans think a car should be powered.) The originalist position may therefore be more difficult to maintain than its proponents acknowledge. If originalists concede, as they must, that the extension of a term may change over time due to societal dynamism, they must provide both a normative theory of why that extension should not also change due to linguistic or normative dynamism and some coherent methodology for distinguishing among the forms of dynamism. Neither requirement has been convincingly satisfied thus far. And, as we

216. Thus, if the transportation is primarily of 'people,' *sedan* and *coupe*, and if it is primarily of 'goods,' *pick up*, *truck*, etc.

217. In this case, 'unmarked' refers to distributional markedness, where "the unmarked term occurs in a wider range of contexts than the marked term." CRUSE, *supra* note 207, at 99.

218. In an important sense, the categorization determination is a probabilistic evaluation. Thus, a lexical category *C* does not have definitional structure but has instead a probabilistic structure in the sense that an item falls under *C* if it satisfies a sufficient number of properties encoded by *C*'s constituents. More precisely, if one considers that a basic level itself has a prototype structure, a class *C* will be a subcategory of superordinate class *S*, provided that the prototype for *C* is sufficiently similar to the prototype for *S*. See James A. Hampton, *Similarity-Based Categorization: The Development of Prototype Theory*, 35 *PSYCHOLOGICA BELGICA* 103, 105 (1995). Possessing the similarity criteria is thus both necessary and sufficient for category membership.

219. This latter analysis, where features are viewed at a higher level of generality, may be more likely to occur when a judge considers the meanings of terms in a much earlier enacted statute (say in 1964). The judge, perhaps viewing the linguistic issues in normative terms, has the benefit of seeing how technological innovations have demonstrated that an earlier depiction of the concept is unduly narrow. The judge may then retroactively frame the features in more general ways. Thus, for the judge, one feature of a car has always been 'engine' (or, more generally, a 'means of propulsion'), rather than 'internal-combustion engine.'

now demonstrate, the three opinions in *Bostock* suggest that none of the Court's originalists has a persuasive theory along these lines.

III. CHANGED CIRCUMSTANCES, EVOLVING LANGUAGE, AND TITLE VII

We conclude our analysis by showing how the evolution of language, society, and norms describes and justifies the arc of EEOC and Supreme Court precedents interpreting Title VII's bar to sex discrimination, culminating in *Bostock*. Justice Gorsuch's majority opinion in *Bostock* attempted to elide the issues of societal, normative, and linguistic dynamism by stipulating, for the purposes of the opinion, to a definition of *sex* that limited it to "biological distinctions between male and female."²²⁰ Doing so had the antiseptic effect of focusing attention on purely legal issues regarding the scope of the causal "because of" language and eliminating discussion of more socially controversial issues about the meaning of *sex* and the evolving status of gay men, lesbians, and transgender persons.²²¹ (Over)simplifying the interpretive issues in such a manner, however, raises questions about the coherence of the Court's interpretive approach. The Court should have more explicitly recognized the inescapable social and even normative dynamism implicated in its decision. For the Court to pretend that it would have interpreted Title VII similarly in 1964 was disingenuous and unnecessary.

We first address the meaning of *sex* in Title VII and argue that its public meaning in 1964 was decidedly not limited to 'biological distinctions between male and female' and included what would later be dubbed 'gender roles,' which lower court judges have recently understood when applying Title VII to sexual and gender minorities. *Sex* was a broad, catchall term in 1964, used in circumstances where we would use terms such as *gender*, *sexuality*, and *sexual orientation*. At the same time, the various meanings of *sex* in 1964 were more tightly linked than they are today.²²² Today, *gender* is a commonly used word that reflects women's increasingly prominent role in society and serves as a linguistic rejection of the older view that 'sex as biology' and 'sex as gender' are closely linked.

In other words, the intensional meaning of *sex* (and 'discriminate because of sex') has changed in the last half century—indeed, it changed right in the middle of the majority opinion! Justice Gorsuch launched his opinion for the Court with the assumption of sex as biology, full stop.²²³ He made his but-for causation argument (i.e., you can't say *gay* without saying *sex*) but then the opinion went on for another fifteen pages. When Justice Gorsuch

220. *Bostock v. Clayton Cnty.*, 140 S. Ct. 1731, 1739 (2020).

221. *See id.* at 1734.

222. In 1964, at least according to Justice Alito's dissenting opinion, dictionaries assumed that there were just two sexes and that there were widely recognized traits associated with each sex. *Id.* at 1789 (Alito, J., dissenting).

223. *Id.* at 1739 (majority opinion).

addressed a hypothetical (the Hannah and Bob scenario, discussed below) where the employees were discriminated against because they were not feminine or masculine enough, he linguistically shifted from sex as biology to sex as gender, and he normatively shifted from the natural law assumptions of sex binarism to the feminist assumption that sex as biology ought not dictate sex as gender.²²⁴ In fact, all three justices writing opinions were caught in a linguistic time warp, where they were reading today's language back into 1964, which would seem to be quite *unoriginalist* (indeed, anachronistic). Justices Alito and Kavanaugh both assailed the majority for confusing *sex* and *sexual orientation*, but in 1964 *sexual orientation* was not a common word in the public vocabulary. *Gender* was not a common word in the public vocabulary. Why not? Because terms like *gender* and *sexual orientation* (and other terms like *sexuality*) now denote concepts that once could be and were typically referred to as *sex*.

Assume away, as Gorsuch did, the possibility of linguistic dynamism in *Bostock*. What about societal dynamism, which originalists readily acknowledge?²²⁵ An important mistake made by all three opinions was the failure to recognize the legal significance of societal evolution. None of the opinions viewed as legally significant the status of what the dissenters dubbed "gays and lesbians" as a new social group that is not transhistoric.²²⁶ As a class of people not extant in 1964, gays and lesbians are much like the Segway or, alternatively, a class that had changed so much that it bore as much resemblance to the 1964 class (whatever it was) as the Otto Bock SuperFour bears to the old-fashioned wheelchair.²²⁷ Thus, as we explain below, one can embrace an original-public-meaning approach to Title VII and still find that the statute prohibits discrimination against today's 'gays and lesbians.'

A. *The Meaning of Sex*

The linguistic meaning of *sex* has dramatically changed between 1964 and the present, which may have been part of the reason why the three opinions in *Bostock* failed to accurately comprehend *sex* as the term was used in 1964. Specifically, *sex* was a catchall term with a broader meaning in 1964 than the Court's assumed definition of *sex* as the biological differences between men and women ('sex as biology,' for short). Specifically, in 1964, *sex* included concepts that today we call 'sex as gender' and 'sex as sexuality.' Indeed, Justice Alito's appendix of dictionary definitions of *sex* was at war with his claim that *sex* in 1964 was limited to the biological categories of men and

224. See *infra* notes 265–266 and accompanying text.

225. See *supra* notes 145–146 and accompanying text.

226. See *Bostock*, 140 S. Ct. at 1764, 1769 (Alito, J., dissenting).

227. See *supra* Sections II.B, II.C.

women. His first listed dictionary was the 1953 print of *Webster's Second*.²²⁸ This dictionary defines *sex* to include the following:

- “[o]ne of the two divisions of organisms formed on the distinction of male and female,” or ‘sex as biology’ (man, woman);
- “[t]he sphere of behavior dominated by the relations between male and female,” or ‘sex as gender’ (masculine, feminine);
- “the whole sphere of behavior related even indirectly to the sexual functions and embracing all affectionate and pleasure-seeking conduct,” or ‘sex as sexuality.’²²⁹

Other dictionary definitions reported in Justice Alito’s appendix defined *sex* to include ‘eunuchs’ and ‘hermaphrodites,’ as well as ‘men and women.’²³⁰ Thus, even if limited to the interpretive methodologies promoted by the Court and Justice Alito, *sex* in 1964 could not be limited to sex as biology. Far be it from us to rest our analysis on dictionaries, for historical corpus linguistic research demonstrates both the breadth and the evolution in the meaning of *sex*. Consider some of our findings.

1. In the 1960s, *Gender* and *Sexual Orientation* Were Uncommon Words

When evaluating word meanings and their evolution, it is often instructive to consider whether some possible meanings are “generally expressed using language other than the language in the disputed statute.”²³¹ With Title VII and *sex*, the obviously relevant term is *gender*, which today means secondary traits traditionally associated with men and women (hence, ‘masculine’ or ‘feminine’ traits).²³² In 1964, *gender* was a word with a long and mostly obscure history, but it was not a common word in everyday usage, what Justices Kavanaugh and Alito referred to as “common parlance.”²³³ And things that might be referred to as *gender* characteristics in 2021 were covered by *sex* in 1964.

228. We have a personal copy of the 1961 print, with the same quoted definitions. Our references to *Webster's Second* are from our 1961 print, which of course is closer in time to 1964.

229. WEBSTER'S NEW INTERNATIONAL DICTIONARY 2296 (2d ed. 1953), as reprinted in *Bostock v. Clayton Cnty.*, 140 S. Ct. 1731, 1784–85 (2020).

230. *Bostock*, 140 S. Ct. at 1787, 1789 (Alito, J., dissenting).

231. Lawrence M. Solan & Tammy Gales, *Corpus Linguistics as a Tool in Legal Interpretation*, 2017 BYU L. REV. 1311, 1315 (2017).

232. *Gender*, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/gender> [<https://perma.cc/A9D3-JV4S>] (defining *gender* as “the behavior, cultural, or psychological traits typically associated with one sex”).

233. *Bostock*, 140 S. Ct. at 1772 (Alito, J., dissenting) (analyzing whether terms are within “common parlance”); *id.* at 1826 (Kavanaugh, J., dissenting).

The 1960s component of COHA returned only 18 relevant matches for *gender*.²³⁴ All but two instances of *gender* are from a very specialized source, *Journal from Ellipsia*, an avant-garde science fiction novel about genderless aliens written by a feminist author, who provides several highly unusual uses of the term.²³⁵ This assessment of the rarity of the word *gender* in the 1960s can be supported both linguistically and statistically. As for the former, one can identify words that have the same frequency in the corpus data of that time period.²³⁶ As for the latter, we use a more advanced and precise statistical analysis of what is called ‘dispersion.’

Linguistically, the following is a list of random words, each one beginning with a different letter of the alphabet, that have the same frequency as the term *gender* in the 1960s COHA data (all homogenized to lower case): *avanti, bailing, callas, darien, explication, fightin, garters, hard-headed, idolized, jailing, kayano, leprosy, metromedia, nightgowns, oscillation, pan-american, ques, rhubarb, sambuco, three-cornered, untamed, vassall, widder, x2, yaks, and zarzuela*. While some of the words seem quite ordinary (*nightgowns, pan-american, and rhubarb*, for instance), it is clear that many are extremely rare words that even highly educated native speakers of English may have never heard of, let alone used. But frequency of occurrence, while very easy to compute, is too likely to overestimate a word’s commonness, which is why the second approach, involving dispersion, is also needed.

Statistically, dispersion quantifies the way a word is distributed in a corpus in a manner that goes beyond frequency. A word *X* can be distributed very evenly in a corpus, which means that the chance of seeing *X* in a randomly chosen part of the corpus (such as a file or a text) is high. Conversely, *X* can be distributed very unevenly, which means that the chance of seeing it in a randomly chosen part of the corpus (such as a file or a text) is very low. Examples of the former include most function words such as determiners (*the, a*), prepositions (*of, in*), and conjunctions (*and, or*). Examples of the latter include highly specialized terms of art (*potassium permanganate*), rare proper names, or even typos (such as *eparate* or *commisisoner*).

When we applied the notions of frequency and dispersion (DP) to the 1960s decade of COHA, we obtained the results in Figure 1, which illustrates the relation between word frequency (logged, on the *x*-axis) and dispersion (on the *y*-axis) for the approximately 316,000 different word forms in that

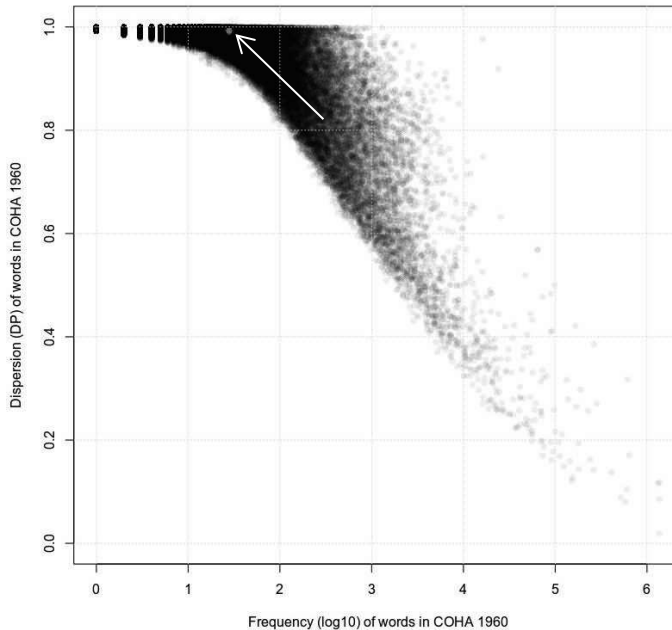
234. This involved a case-insensitive search for the string *gender* (a methodological overview is on file with the *Michigan Law Review*). In the relevant sense, *gender* occurs 18 times in the 1960s part of COHA: *gender* (15), *genders* (1), *genderless* (1), and *gendering* (1). See CORPUS HIST. AM. ENG., *supra* note 99.

235. HORTENSE CALISHER, *JOURNAL FROM ELLIPSIA* (1965). Calisher was one of the original 53 signatories of a 1972 reproductive-freedom campaign in the liberal feminist *Ms.* magazine. See Barbaralee D. Diamonstein, *We Have Had Abortions*, *Ms.*, Spring 1972, at 34, <https://images.nymag.com/images/2/promotional/11/11/week1/mrs-abortionsb.pdf>

236. Note that raw-frequency comparisons, while widespread, are in fact too coarse an approach. See Appendix B for an account of dispersion, which addresses the issue of frequency.

decade of COHA.²³⁷ On the top left of the plot, we find words that are overall infrequent and occur in only a single file of the more than 10,100 corpus files, such as *janizaries*, *bayonetting*, and *mooniness*, whereas the rightmost words are the kinds of function words discussed in Appendix B.²³⁸

FIGURE 1: FREQUENCIES AND DISPERSIONS OF WORDS IN COHA 1960



Words that are more frequent tend to be more evenly dispersed, but the crucial finding is the dispersion of *gender*, which is represented by the dot indicated by the arrow in Figure 1.²³⁹ The following is a list of random words (one beginning with each letter of the alphabet) that have the same dispersion as *gender* in the 1960s COHA data (all homogenized to lower case):

237. The plot represents on the *x*-axis the frequency of words (logged to the base of 10) and on the *y*-axis the DP-values of the same words. Each word is represented by a grey point.

238. Obviously, there is an overall negative correlation, but the crucial aspect to realize is the extremely wide range of dispersion/*y*-axis values for certain ranges of frequency/*x*-axis values. For example, for word frequencies around 10,000 (i.e., when $x \approx 4x \approx 4$), the DP-/*y*-axis values vary extremely between around 0.3 and 0.8 or more, illustrating the big potential mismatch between frequency and dispersion that most research does not account for.

239. The research assumed that *gender* includes *gender*, *genders*, *gendering*, *gendered*, and *genderless*.

aky., *brilliantp250that*, *caricatured*, *drambuic*, *emilythen*, *five-and-ten-cent*, *grittiness*, *homeroom*, *invitedher*, *jamaican-based*, *klai*, *lepage*, *mlf*, *nierkusii*, *out-but*, *puses*, *quibbles*, *revealedp251by*, *supra-rational*, *topologically*, *unrhetorical*, *vincentdo*, *wiic-tv*, *x/2o*, *yearth*, and *zautla*. While there are somewhat ordinary words in this list (*caricatured* or *quibbles*), it speaks to the rarity of *gender* in the 1960s that it is as well dispersed in the data as are text-processing errors in the corpus like *brilliantp250that* (which should be *brilliant that*, omitting the extraneous page number). The dispersion of *gender* in 1960s American English thus indicates that it was an extremely uncommon word.²⁴⁰

Similar results obtain for *sexual orientation*. Data from the 1960s to the 2000s COHA sections indicate that *sexual orientation* is a fairly infrequent and very unevenly distributed expression (even when the search is extended to *bi-/hetero-/homosexual*). Given the low frequencies of occurrence (162 total occurrences over 50 years of corpus data), statistical claims need to be made with caution. All that can be safely said is that the term increased in usage in three respects: its overall frequency, its distribution across the four COHA registers (fiction, magazines, news, and nonfiction), and its dispersion over time.²⁴¹ Even in the latest decade studied, the 2000s, we still only found 70 occurrences in COHA in approximately 30 million words of text. It may be that usage has increased significantly in the last decade, but it is clear that *sexual orientation* was not a common term in 1964.

2. In the 1960s, *Sex* Was Used in Place of Terms Like *Gender* and Was Sometimes Used in Ways that Were Not Binary

The previous Section demonstrated that *gender* and *sexual orientation* were essentially non-words in the 1960s.²⁴² In terms of both frequency and, more importantly, dispersion, their distribution is on a par with extremely rare words, typos, and scanning errors. Consider one important and representative question raised by the data: if in 1964 one wanted to talk about

240. Why are these results so extreme? All examples of *gender* in the relevant sense (i.e., excluding the ‘grammatical gender’ sense and excluding one example from a *Time* magazine article on Title VII) but two were from a single one of more than 10,100 corpus files. In other words, had *Journal from Ellipsia*, see *supra* note 235, published a year after Title VII was enacted, not been sampled, there might not have been a single obvious and countable example in a twenty-four-million-word corpus covering ten years of American English. CORPUS HIST. AM. ENG., *supra* note 99.

241. As measured with Deviation of Proportions. See Appendix B for explanation.

242. By “non-words” we do not mean that the words had never been used but merely that they were extremely rare in 1964. Cf. Dirk Geeraerts, *How Words and Vocabularies Change*, in THE OXFORD HANDBOOK OF THE WORD 416 (John R. Taylor, ed. 2015) (discussing the unclear issue of what “sufficient number of users of the language” must use a word in order for it to be recognized).

what is referred to as *gender* today, what lexical choices would one make?²⁴³ The corpus data from the 1960s section of COHA offer remarkably clear answers to that question. As we looked at the 1960s concordance data for *sex* in COHA, it became obvious that a sizable number of uses of *sex* and its derivatives were indeed ones that today would involve the word *gender* today.²⁴⁴ In fact, it turns out that such uses of *sex* predate the 1960s. For instance, in 1946 an *American Journal of Sociology* article entitled *Cultural Contradictions and Sex Roles* makes clear from just its abstract that what it refers to as “sex roles” would today be deemed “gender roles” (all bold emphases in the following examples are ours):

A study of women college Seniors shows that they commonly face mutually exclusive expectations of their adult **sex roles**. In particular, a girl's family and her male friends are the agencies through which she meets the inconsistency between the ideal of homemaker and that of “career girl.” Some girls play vacillating roles, corresponding to the pressures of the movement; all suffer from the uncertainty and insecurity that are the personal manifestations of cultural conflict.²⁴⁵

From the 1960s COHA data, one of the richest sources of examples of *sex* as *gender* is a book excerpt which contains many such instances of *sex* and derivatives (we include additional examples from magazines and fiction below).²⁴⁶ The following are just two examples involving uses of *sex*, both of which involve what is today referred to as *gender*; notice that our second example also deploys *sex* as sexuality.

1. “Although **sex-role** identification has been discussed in part in the section dealing with **psychosexual adjustment**, it will be given fuller treatment in this section dealing with identity. Identification is considered either in general terms as meaning personal identity or as sex-role identification.”²⁴⁷
2. “But the Rorschach tells of his being immature in **psychosexual development**, lacking in sensuality and eroticism and showing some of the effeminate traits of the feminine-passive character.”²⁴⁸

These two examples suggest that *psychosexual* was used for the semantic subfield of *sex*, which would later become referred to as *gender*.

243. Conceivably, one could perform a full analysis with various other words, but in the interests of concision we focus primarily on *gender* and *sexual orientation*.

244. See Lee & Mouritsen, *supra* note 25, at 832 (describing “concordance data”).

245. Mirra Komarovsky, *Cultural Contradictions and Sex Roles*, 52 AM. J. SOCIO. 184, 184 (1946).

246. See PERCIVAL M. SYMONDS WITH ARTHUR R. JENSEN, FROM ADOLESCENT TO ADULT (1961).

247. *Id.* at 139.

248. *Id.* at 132.

In the spirit of taking dispersion into consideration, we do not just note examples from this one reference. Other sources from other registers/genres exhibit similar uses, as in (3) through (6), involving what today are discussed as “gender roles”:

3. “The activities which characterize the nuclear family may be seen therefore to favour a **sexual division** of labour and to favour the adoption by the woman of the family-oriented role, and the performance of this role would seem to militate against continued employment and to diminish a woman’s career prospects.”²⁴⁹

4. “The setting is Manhattan’s Upper West Side, the people a middle-class family. From the beginning, much of the humor revolves around an inversion of **sexual roles**. The men, father, son and photographer-fiancé, are towers of Jello. The women, wife and daughter, are ice picks.”²⁵⁰

5. “But to be *truly* happy, I think you must both begin to think a little bit about changing your **sexual attitudes**, becoming more open, less limited, abandoning old-fashioned stereotypes of what is manly and what is feminine.”²⁵¹

6. “[Boys/men] prove their masculinity by sexual prowess. Girls prove their femininity in other ways, more passive and often independent of their **sex roles**. Freud’s term ‘sublimation’ is now out of fashion, but the phenomenon it refers to—a transformation and redirection of sexual energy into other channels—is very real.”²⁵²

Interestingly, in addition to these examples from nonfictional writing, magazines, and fictional writing, there is another strand of evidence for the 1960s use of *sex* and derivatives covering what today is *gender*, and that is how academic writing on these topics evolved and, over time, influenced more mainstream or less-specialized public discourse. One kind of discourse—that of *transsexual* and *transgender*—is, in a sense, a microcosm in which the *sex-to-gender* evolution can be traced. A 1966 *Time Magazine* article entitled *A Body to Match the Mind*, for instance, discusses the topics of “transsexuals” and “transvestites” using sex-as-sexuality terms, as shown in examples (7) and (8).

7. “Both types of **transsexuals** are likely to be **transvestites**, preferring the clothing of the ‘opposite’ sex. There is no explanation in heredity or hormones. A possible cause in some cases is that a boy was born when his mother wanted a girl, and she treated him as a girl.”²⁵³

249. C.C. HARRIS, *THE FAMILY: AN INTRODUCTION* 125 (1969).

250. *Satirical Sniper Fire*, *TIME*, Jan. 17, 1969, at 69.

251. GORE VIDAL, *MYRA BRECKINRIDGE* 158 (1968).

252. Joyce Brothers, *On Being a Woman: Women Who Don’t Need Men*, *GOOD HOUSEKEEPING*, Nov. 1969, at 52, 54.

253. *A Body to Match the Mind*, *TIME*, Dec. 2, 1966, at 52, 52.

8. “By adulthood, says Dr. Benjamin, the crossover of emotion and thought may be so deeply ingrained that ‘true **transsexuals** feel that they belong to the other sex, they want to be and function as members of the opposite sex, not only to appear as such.’”²⁵⁴

Today, the above two examples would not represent the preferred terminology. Consider the development of the vocabulary around the *T* in *LGBTQ*. The *T* is usually considered to mean ‘trans,’ which can stand on its own but can also be taken to represent either ‘transsexual’ or ‘transgender.’²⁵⁵ But while *transsexual* is a term that is still in use, today’s discourse relies more heavily on the broader term *transgender* because transsexuality may focus more on physical aspects of one’s sex, whereas *transgender* focuses on psychological aspects of one’s gender disposition, including perceived societal expectations about gender roles.²⁵⁶ Thus, consistent with the above, we find a very similar development for *sex* and derivatives and *transsexual*: a recognition that in the 1960s *sex* was used so broadly as to be imprecise for discussion, leading towards an acceptance of different and more specialized terms such as *gender*.

In addition, *sex* was used in such a broad sense in compounds that it would encompass even *sexual orientation*. For instance, Kinsey’s Institute for Sex Research was certainly interested in what is today sexual orientation,²⁵⁷ and the following examples illustrate more uses of *sex* in compounds:

9. “Obscene publications mock the marriage vow, scorn chastity and fidelity, and glorify adultery, fornication, prostitution and unnatural **sex relations**.”²⁵⁸

10. “I am very strongly attracted by members of my own sex. I believe in a life hereafter. I have never indulged in any **unusual sex practices**.”²⁵⁹

254. *Id.* (quoting HARRY BENJAMIN, *THE TRANSSEXUAL PHENOMENON* 13 (1966)).

255. The term *transsexual* was created in German in 1923, HEIKE BAUER, *THE HIRSCHFELD ARCHIVES: VIOLENCE, DEATH, AND MODERN QUEER CULTURE* 171 n.12 (2017), and then imported into English in 1949, see D.O. Cauldwell, *Psychopathia Transsexualis*, *SEXOLOGY*, Dec. 1949, at 274, 274. The term *transgender* only emerged twenty-two years later. Stephen Whittle, *A Brief History of Transgender Issues*, *GUARDIAN* (June 2, 2010, 6:49 AM), <https://www.theguardian.com/lifeandstyle/2010/jun/02/brief-history-transgender-issues> [<https://perma.cc/3D3L-SKNF>].

256. See Nova A. Swanstrom, *Developing and Implementing a Scale to Assess Attitudes Regarding Transsexuality* (2006) (unpublished M.A. thesis, University of North Carolina Wilmington) (on file with authors).

257. Hallie Lieberman, *Desexing the Kinsey Institute*, N.Y. REV. (Mar. 20, 2018) <https://www.nybooks.com/daily/2018/03/20/desexing-the-kinsey-institute> [<https://perma.cc/Z478-F68G>].

258. IRVING WALLACE, *THE SEVEN MINUTES* 149 (1969).

259. James Ridgeway, *The Snoops: Private Lives and Public Service*, *NEW REPUBLIC*, Dec. 19, 1964, at 13, 14.

Pretty clearly, the two examples include “unusual” homosexual practices, just as the expression *sex life* in the 1960s would also include homosexual activities (as it would today). Thus, *sex* in compounds frequently replaced *sexual orientation*, which supports the dictionaries that had by the 1960s already included the very broad sex-as-sexuality sense.

Given these empirical findings, it is not surprising that dictionaries in the 1960s would list senses of *sex* that are much broader than a mere binary biological-sex, male-female distinction (e.g., sense 2 of the 1953 print of *Webster’s Second*).²⁶⁰ In 1964, *gender* and *sexual orientation* were uncommon words, and *sex* included concepts that today we might refer to as *gender* and *sexual orientation* (as well as other terms like *sexuality*).²⁶¹ Since 1964, the world has changed, and those changes have driven evolution in the English language. The big change in society, reflected in corpus documents, is the more prominent role assumed by women, which has driven the rise of a discourse about gender and about sexuality, gender, and the law. Joan Wallach Scott’s classic 1986 paper, *Gender: A Useful Category of Historical Analysis*, gave a normative edge to what was occurring in the English language: sex as biology was being contrasted with gender as social role, and the latter was a source of intense critique by regular people as well as academics.²⁶² In fact, as revealed in COHA, *gender* was becoming a substantially more frequently used term over time. It was becoming more frequent in simple absolute terms (measured as frequency per million words), in comprehensive relative terms (measured as how many words are more frequent than *gender*), and in its dispersion throughout the corpus.²⁶³ During the same time, *sex* did not change much in terms of frequency or dispersion.²⁶⁴

3. The Meaning of *Sex* in *Bostock*

The fascinating evolution of American society and language described above was substantially lost on the authors of the *Bostock* opinions. Justice Alito cited the definition of *sex* from six leading dictionaries, which revealed a great variety of meanings in the 1960s.²⁶⁵ For example, the *American Heritage Dictionary* (1969) defined *sex* to include “the condition or character of being male or female”; “the physiological, functional, and psychological differences that distinguish the male and the female”; “the sexual urge or in-

260. WEBSTER’S NEW INTERNATIONAL DICTIONARY 2293 (2d ed. 1953). What should be surprising is that Justice Alito’s dissent managed to overlook that fact.

261. See *supra* notes 228–262 and accompanying text.

262. See Joan W. Scott, *Gender: A Useful Category of Historical Analysis*, 91 AM. HIST. REV. 1053 (1986).

263. See Gries, *supra* note 129.

264. *Id.* at 127 fig.3.

265. *Bostock v. Clayton Cnty.*, 140 S. Ct. 1731, 1784–89 (2020) (Alito, J., dissenting) (listing full definitions of “sex” in dictionaries in use in the 1960s).

stinct as it manifests itself in behavior; and “sexual intercourse.”²⁶⁶ Yet he and Justice Thomas boiled it down to sex as biology, full stop. They just could not see (or chose not to see) the variety in meanings revealed by the dictionaries they consulted. But they were onto something. When they insisted that sex was limited to biology, they were actually arguing that sex was biological and binary (two sexes) and that everything about sex revolved around one’s identity as a man or as a woman. Thus, their reading was prescriptive as much as descriptive: they were invoking dictionaries to claim that, in 1964, ordinary Americans would have believed that everyone was biologically a man or a woman and that their gender and sexuality matched their biology—masculine men inserting penises into feminine women.

Justice Gorsuch went along with the dissenters’ poorly articulated understanding of *sex* as a static term—but his opinion integrated the linguistic pluralism in Justice Alito’s dictionaries with the modern normative understanding of gender pioneered in public law by Justice Ginsburg. Responding to the employers’ argument that antigay discrimination treats gay men and gay women the same and so is not sex discrimination, Gorsuch opined that

an employer who fires a woman, Hannah, because she is insufficiently feminine and also fires a man, Bob, for being insufficiently masculine may treat men and women as groups more or less equally. But in *both* cases the employer fires an individual in part because of sex. Instead of avoiding Title VII exposure, this employer doubles it.²⁶⁷

At this point in his opinion, Gorsuch was importing sex as gender and ‘gender’ as disaggregated from ‘biology’ into the analysis—a move made clear when several pages later he said that “just as an employer who fires both Hannah and Bob for failing to fulfill traditional sex stereotypes doubles rather than eliminates Title VII liability, an employer who fires both Hannah and Bob for being gay or transgender does the same.”²⁶⁸ Likewise, the majority’s discussion of the Court’s Title VII precedents relied on sex as gender as much as sex as biology, and at the end of the opinion Gorsuch lumped together all sorts of discriminations he and his colleagues believed were ‘because of sex’: firing based on “sexual stereotypes”; firing “men who do not behave in a sufficiently masculine way around the office”; firing “women who are attracted to women, or persons identified at birth as women who later identify as men,” and so forth.²⁶⁹

As the foregoing examples illustrate, Gorsuch and the majority differed from Alito and the dissenters not only by taking an intensional rather than extensional approach to public meaning but by (implicitly) liberating the in-

266. *Id.* at 1789 (cleaned up) (quoting THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE 1187 (William Morris ed., 1969)).

267. *Id.* at 1741 (majority opinion).

268. *Id.* at 1742–43.

269. *Id.* at 1749.

tensional meaning of *sex* from the linguistic and normative tyranny of the binary sex norm. In the world of the majority, there are more than two biological sexes, people do not adhere to the gender roles associated with their biological sexes, folks abandon or equivocate their sex at birth, and adults who cannot procreate together are now married everywhere in the country. Unfortunately, the Court obscured what it was doing behind a cloud of originalist rhetoric. In our view, there is no escape from the fact that the majority justices were updating Title VII's language to reflect feminist norms and language use. Notwithstanding their own anachronisms, the dissenters had a legitimate beef with the majority opinion, and they had a pretty good intensional case for their views based upon 1964 norms even if not 1964 words. But, as we now demonstrate, the dissenters fell into a deeper language trap that revealed their historical analysis to be anachronistic.

B. *Sex and Societal Dynamism*

Despite evidence of a broad public meaning of *sex* as a general matter in 1964, the best reading of the Alito dissent is the claim that *sex* was a normative word and that the consensus norm was that sex as gender and sex as sexuality had to flow from the man–woman binary entrenched in that era's assumptions about sex as biology. Thus, the dissenters probably believe that even if *sex* is (properly) understood as a broad term in 1964, only conceptions of *sex* that are considered by society to be nondeviant (or perhaps non-criminal) might be included within its scope. Suppose, for instance, that Justice Alito had argued something like the following:

Yes, *sex* in the 1960s was a very broad term, and a term that included what we would call *gender* and *sexual orientation* today, but *sex* as a term in our language, and especially within the context of Title VII, emphasized the man–woman biological binary and especially left no space for deviations of the sort raised by the plaintiffs in *Bostock* (two gay men and a transgender woman).

Such a formulation would have integrated Alito's what-did-*sex*-mean argument with his the-gays-were-criminals-and-deviants argument.²⁷⁰ Most members of the public in 1964 could not have imagined having people in the workplace who violated the powerful binary sex norm—whether they were “homosexuals” or “transsexuals” (to use 1960s terms).

Thus, the Alito argument might be that the ‘nondeviant’ feature is an aspect of the intensional meaning of *sex* in Title VII. This claim has some larger constitutional problems, but set those aside for now. Like the no-vehicles-in-the-park hypothetical, the extension of the statute will undoubtedly evolve over time due to societal dynamism.²⁷¹ As we demonstrate below, the

270. See *id.* at 1769–73 (Alito, J., dissenting). And the formulation would give Alito's dissent a depth that it needed to avoid suspicions of gay bashing.

271. See *supra* Part II.

significant social dynamism associated with lesbians and gay men (as well as transgender persons) is sufficient to bring them within the protection of Title VII, even if a contrary conclusion would have been made about a different but related social group in 1964.

Drawing from a richly researched survey of the pre- and post-enactment legislative history, precedents, governmental practice, and social context, Alito's dissenting opinion argued that no one in 1964 would have interpreted "discriminate because of sex" to include *sexual orientation*.²⁷² It was a remarkable opinion because its factual account was both historically well-documented and wildly anachronistic, and because its legal account was compelling to those willing to close their eyes to the moral and constitutional squalor of the history thus presented. As a matter of political philosophy, Sam Alito was making the same kind of mistake Roger Taney made in *Dred Scott v. Sandford*: because free Black persons were (allegedly) treated as degraded and unworthy of citizenship in many states at the founding, Taney read the Constitution to mean that no person of African heritage could ever be a citizen for purposes of Article III's diversity jurisdiction.²⁷³ Similarly, the *Bostock* dissenters focused on the negative cultural depictions of a group they called 'gays and lesbians' in the 1960s but did so unmindful of the massive social and normative changes that have since occurred.

There is also a simple descriptive answer to the dissenters: in 1964, there was no social group of 'gays and lesbians' that could have been considered for protection, and there was a coherent theory for justified discrimination, resting not on 'sexual orientation' but on predation and psychopathy, that would have rendered Title VII irrelevant for the social group that was publicly recognized in 1964. Examine the 1964 language evidence in greater detail than the dissenters thought to do. Neither legislators nor the population at large would have recognized the term *gay men and lesbians*, nor would the notion of discrimination because of sexual orientation have been intelligible to them. Although we are quite critical of the judiciary's reliance on dictionary definitions, it is worthwhile to note that *Webster's Second* did not have an entry for *sexual orientation*, and defined *gay* as "merry" or "gleeful" or "licentious."²⁷⁴ Surprisingly, there was no entry for *homosexual*, though *lesbian* was defined as a "homosexual woman."²⁷⁵ But there were a lot of entries for *perversion*, *sexual perversion*, *invert*, and *pervert*.²⁷⁶ *Sexual perversion* was de-

272. See *supra* notes 77–85 and accompanying text.

273. See *Dred Scott v. Sandford*, 60 U.S. (19 How.) 393, 410–16 (1857) (enslaved party), superseded by constitutional amendment, U.S. CONST. amend XIV; Brief of William N. Eskridge Jr. & Andrew M. Koppelman as *Amici Curiae* in Support of Emps. at 17–18, *Bostock*, 140 S. Ct. 1731 (No. 17-1618).

274. WEBSTER'S NEW INTERNATIONAL DICTIONARY, *supra* note 184, at 1040.

275. *Id.* at 1418.

276. E.g., *id.* at 1305 (defining "invert"); *id.* at 1830 (defining "perversion" as "maladjustment of the sexual life"); *id.* (defining "pervert").

fined as “[a]n abnormality or eccentricity of sexual desire and behavior, as fetishism, masochism, or sadism.”²⁷⁷

Lengthy historical examinations have been made of the systematic government campaign, conducted in the 1940s through the 1960s, that was designed to stigmatize, destroy, and (at the very least) drive from public visibility people labeled as “homosexuals and other sex perverts,” persons “afflicted with psychopathic personality,” “degenerates,” and “inverts,” to identify the most popular legal terms.²⁷⁸ Those accounts reported not a single federal statute, executive order, state law or municipal ordinance, or court opinion before 1964 that used the term *gay men* or *gay men and lesbians* or even *sexual orientation*.²⁷⁹ That social class, linked by the *Bostock* dissenters to original public meaning, would have ‘meant’ nothing to the ‘public’ as ‘originally’ constituted in 1964. This is a textbook example of anachronism.

COHA data from the 1960s support our hypothesis that the social group described by the dissenting justices was ‘sex criminals and predators’ and decidedly not ‘gay men and lesbians’ as we understand that class today. In more than 10,100 text sources of COHA data for the 1960s, there were few, if any, references to ‘gay’ men as ‘homosexuals’ and a lot of references to ‘gay’ as ‘joyful.’ In fact, COHA searches reveal *virtually no* mentions of ‘homosexual orientation’ in the 1960s.²⁸⁰ The class that ordinary speakers would have associated Mr. Bostock with would have been ‘homosexuals and other sex perverts,’ and the classification they would have invoked would have been ‘sex deviance’ or ‘sex perversion.’ (Notice the use of sex as sexuality.) This terminology was used in both legislative and executive documents and was widespread in common parlance. Employers pervasively refused to hire ‘sex perverts,’ and no one—not a single example that we can find in government documents, in COHA searches, or elsewhere—ever said this was discrimination because of sexual orientation because (1) no one used the term *sexual orientation* and few could have guessed at its meaning as we understand it today, (2) no one would have considered purges of ‘perverts’ and other sex criminals to have been ‘discrimination,’ and (3) everyone would have felt it their moral and even legal duty to expunge predators from their firms.²⁸¹

277. *Id.* at 2297.

278. See WILLIAM N. ESKRIDGE, JR., *GAYLAW: CHALLENGING THE APARTHEID OF THE CLOSET* 68–70 (1999); ESKRIDGE, *supra* note 7, at 90, 156–57.

279. See ESKRIDGE, *supra* note 278; ESKRIDGE, *supra* note 7.

280. A query for “homosexual orientation” in the 1960s, CORPUS HIST. AM. ENG., *supra* note 99, reveals two sources. One (with three mentions) is an academic research monograph, SYMONDS WITH JENSEN, *supra* note 246; the other (with one mention) is a *Time Magazine* article, *Homosexuality: Coming to Terms*, TIME (Oct. 24, 1969), <http://content.time.com/time/subscriber/article/0,33009,901599,00.html> [<https://perma.cc/KLQ8-F9HY>].

281. See ESKRIDGE, *supra* note 278, at 70. Certainly, some employers looked the other way, but employers in general would not have admitted to employing ‘homosexuals and other sex perverts.’ See *id.* at 98–99.

Our corpus search discovered that the terms associated with ‘homosexuals’ in the 1950s and 1960s include words like *mentally ill*, *predatory*, *child molesters*, *psychopathic*, *prisons*, *police*, and so forth. A corpus search for *homosexual* in COHA, 1950s and 1960s (combined), identified all the collocates (associated terms), and their association to *homosexual* (LLR) was computed. Among many others, the following collocates (and collocate groupings) can be found:

- *psychoanalytically, psychiatrists, mental, clinical*
- *deviants, deviation, unnatural, perverts, normality, acceptable*
- *venereal, impairment*
- *adultery, hostility, suffering, withheld, demeaning, risks*
- *crime, obscene.*²⁸²

The result of that analysis suggests that the representation of ‘homosexuals’ in the 1960s was indeed much more hostile than that of sexuality in general in the 1960s. In 1964, the word *homosexuals* was not associated with families, employees, reliability, collegiality, and other traits considered necessary or desirable by employers. An employer would not have seen itself as ‘discriminating’ because of the applicant’s sex or even his dating history when it declined to hire the ‘homosexual.’ The employer would have filtered the ‘homosexual’ job applicant through the lens of its associated nouns, namely, *psychopath*, presumptive *criminal*, *predator*, or *child molester*.

Today, neither statutes nor legislative, judicial, or administrative documents would refer to ‘homosexuals and other sex perverts.’ The term has virtually disappeared in public discourse such as newspapers, media discussion, and official records—even the term *homosexuals* is being superseded by ‘gay men and lesbians’ (or lesbians, gay men, bisexuals, etc.). An exploration of COHA from the 2000s along the lines above shows that the collocates of *homosexual* are much less colored by the above negative or evaluative connotation: *perversion(s)* or *pervert(s)* are not attested at all, words like *deviant* or *unnatural* are attested but are extremely rare, and even roots such as *perv* are used in more neutral and less degrading ways.²⁸³ None of these terms exhibits the same kinds of high co-occurrence frequencies and association to *homosexual* in the 2000s.

Moreover, the term *gay men and lesbians* was entirely absent from public discourse in 1964. A COHA search for the 1950s and 1960s reveals some mention of *lesbians*, but no mention in public sources for *gay men* or for *gay*

282. These groupings are our heuristic classification based off a query for *homosexuals* in the 1950s and 1960s. CORPUS HIST. AM. ENG., *supra* note 99.

283. CORPUS HIST. AM. ENG., *supra* note 99 (query for *homosexuals* in the 2000s).

men and lesbians as a social group.²⁸⁴ In fact, seventy-three instances of *lesbian*, *lesbians*, or *lesbianism*, were found but zero instances of *gay men*. ‘Gay men and lesbians’ are thus an entirely new class of people, as distant from the old group (‘homosexuals and other sex perverts’) as today’s class of vehicles are from those of the 18th century. Equally anachronistic is to apply ‘sexual orientation’ discrimination to 1960s discourse. *Sexual orientation* is not a term that was used in public documents in 1964, and our COHA searches found no coherent understanding of the concept.

Even if the relevance of linguistic dynamism is disputed, the fundamental societal dynamism associated with the status of gays and lesbians means that the interpreter cannot coherently find an *original* public meaning for application of the 1964 law to a social group that did not exist in 1964. One reason the 1964 social group had disappeared was normative and constitutional: consenting adults enjoying sex with persons of the same sex in private places could not be criminals after *Lawrence v. Texas*.²⁸⁵ Well before *Lawrence*, medical professionals had renounced the view that ‘homosexuality’ was a mental illness, such as a ‘psychopathic’ condition.²⁸⁶ As with our hypothetical no-vehicles-in-the-park statute, this employment super-statute is necessarily applied to new circumstances and in light of new norms over a long period of time. Even if a distantly related group of despised Americans were considered enemies of the people and presumptively unemployable in 1964, societal dynamism may fundamentally change the objects of interpretation, and thus statutory application, even if it is assumed that linguistic dynamism is not also present. Arguments for exclusion that appeal to the original public meaning of the text, and what the public would have thought in 1964, are thus unresponsive and unpersuasive.

C. *The Evolution of Sex and the Dynamic Meaning of Title VII*

Thus far, our account of language, interpretation, and Title VII has focused generally on issues of originalism, public meaning, and dynamic interpretation, rather than attempting to show that our analysis and conclusions follow from the Court’s Title VII precedents. Yet our account helps explain Title VII’s statutory (including precedential) history, which illustrates the linguistic dynamism associated with *sex* and the concomitant societal and normative dynamism associated with the rise of gays and lesbians as a respectable social group. This evolution of language, society, and norms describes and justifies the arc of EEOC and Supreme Court prece-

284. CORPUS HIST. AM. ENG., *supra* note 99 (query for *lesbians*, *gay men*, or *gay men and lesbians* in the 1950s and 1960s).

285. See 539 U.S. 558 (2003).

286. Jack Drescher, *Out of DSM: Depathologizing Homosexuality*, 5 BEHAV. SCI. 565, 565 (2015) (“In 1973, the American Psychiatric Association (APA) removed the diagnosis of ‘homosexuality’ from the second edition of its Diagnostic and Statistical Manual (DSM).”).

dents interpreting Title VII's bar to sex discrimination. In turn, the arc of EEOC and Supreme Court precedents interpreting Title VII indicate that the Court cannot, consistent with *stare decisis* and the rule of law, pretend to return to a 1964 view of the meaning of Title VII. By ignoring unmistakable societal and normative dynamism, and by failing to acknowledge that Title VII would not have been interpreted in the same way in 1964, the Court missed a chance to offer a coherent public meaning approach to how super-statutes like Title VII evolve.

1. Linguistic Dynamism and Title VII's Evolution

The Supreme Court's first Title VII sex-discrimination case, *Phillips v. Martin Marietta Corp.*,²⁸⁷ illustrates how 'discriminate because of sex' was understood broadly as early as 1971. The Court unanimously overturned an employer policy discouraging employment of women (but not men) with preschool-age children.²⁸⁸ The employer had argued that it did not violate the law: its policy was based upon experience where women (but not men) with children tended to miss work because they handled the bulk of child-care responsibilities.²⁸⁹ Title VII, the Court replied, requires that persons of like qualifications be given employment opportunities "irrespective of their sex,"²⁹⁰ understood broadly: the employer was not discriminating exclusively based upon sex as biology (75–80 percent of those hired were women), but was primarily discriminating because of sex as gender (stereotyping): women like Ida Phillips would probably have shirked work duties to take care of the kids, as the employer assumed they should have done.²⁹¹ Congress was aware of *Martin Marietta* when it expanded Title VII to state and local government employers (such as Clayton County) in its 1972 Amendments.²⁹² Congressional deliberations reaffirmed Title VII's commitment to discouraging job discrimination based upon what we would call 'gender stereotyping' but which Justice Marshall termed "stereotyped characterizations of the sexes."²⁹³

287. 400 U.S. 542 (1971) (per curiam).

288. *Martin Marietta*, 400 U.S. at 544.

289. Brief for Respondent at 20–28, *Phillips v. Martin Marietta Corp.*, 400 U.S. 542 (1971) (No. 73-1058).

290. *Martin Marietta*, 400 U.S. at 544 (per curiam).

291. *Id.* at 544–45 (Marshall, J., concurring) (relying on EEOC guidance).

292. Education Amendments of 1972, Pub. L. No. 92-318, 86 Stat. 235) (codified as amended at 20 U.S.C. § 1681–1688); see H.R. REP. NO. 92-238, at 5 n.1 (1971) (referring to *Martin Marietta* to confirm that courts are taking workplace sex discrimination seriously). Six years later Congress overrode the Court when it declined to view pregnancy-based discrimination as "discriminat[ion] because of sex." Pregnancy Discrimination Act of 1978, Pub. L. No. 95-555, 92 Stat. 2076 (codified at 42 U.S.C. § 2000e to e-2).

293. *Martin Marietta*, 400 U.S. at 544–45 (Marshall, J., concurring) (relying on EEOC guidance); H.R. REP. NO. 92-238, at 30.

By the 1970s, not only was sex as gender taking on an important role in public discourse and critique, but ‘homosexuals’ were coming out of the closet, rejecting social stereotypes and icky medical names, and were claiming a new identity as ‘gay and lesbian’ persons. The fresh name did not persuade many Americans to like this new group, but ‘gay men and lesbians’ were salient in ways that mattered. One reason they mattered was that women’s voices were also raising questions about sex as gender and sex as sexuality, and those questions came together with claims of gay people in a pre-mature constitutional moment. The same Congress that enacted the 1972 Amendments also passed the Equal Rights Amendment, which would have barred governmental discrimination “on account of sex.”²⁹⁴ In 1970, Professor Paul Freund told Congress that, by analogy to *Loving v. Virginia*, the different-race marriage case, the ERA would bar states from discriminating against same-sex couples in their marriage laws.²⁹⁵ In 1972, the nation’s leading constitutional scholars agreed that the ERA would require state toleration of homosexuality and homosexual relationships.²⁹⁶ This argument did not prevent Congress from passing the ERA, but it was persuasive to many state legislators and voters, who prevented the ratification of the ERA.²⁹⁷ The cartoon below captured, better than any dictionary could, the connections made by Mrs. Schlafly and other social conservatives among sex as biology (women and men), sex as gender role (a child’s need for women as mothers), and sex as sexuality (abortion on demand and “homosexual marriages”).²⁹⁸



294. Proposed Amendment to the United States Constitution, Pub. L. No. 92-607, 86 Stat. 1523 (1972).

295. William N. Eskridge Jr., *Title VII's Statutory History and the Sex Discrimination Argument for LGBT Workplace Protections*, 127 YALE L.J. 322, 349 (2017).

296. See *Equal Rights 1970: Hearing on S.J. Res. 61 and S.J. Res. 231 Before the S. Comm. on the Judiciary*, 91st Cong. (1970).

297. Eskridge, *supra* note 295, at 350.

298. Gillian Frank, *Phyllis Schlafly's Legacy of Anti-gay Activism*, SLATE (Sept. 6, 2016, 5:52 PM), <https://slate.com/human-interest/2016/09/phyllis-schlaflys-legacy-of-anti-gay-activism.html> [<https://perma.cc/P9U8-RPNU>].

The foregoing analysis provides important linguistic context for the Supreme Court's holding in *Price Waterhouse v. Hopkins*²⁹⁹ that an employer can 'discriminate because of sex' by demanding that employees conform to "sex stereotyping," or conformity to gendered expectations (e.g., the employer's expectation that Ann Hopkins needed to act more "feminine" in order to be promoted).³⁰⁰ "In forbidding employers to discriminate against individuals because of their sex, Congress intended to strike at the entire spectrum of disparate treatment of men and women resulting from sex stereotypes."³⁰¹ In 1991, Congress responded to the Court's conservative approach to the burden of proof in *Hopkins* with an override on that issue but with an implicit consensus agreement that the Court had been right to hold that "evidence of sex stereotyping is sufficient to prove gender discrimination."³⁰²

The evolution of Americans' language about sex seems to have proceeded in tandem with the evolution of the justices' interpretations of Title VII, immediately ratified and expanded by congressional amendments. In 1979, Catherine MacKinnon published *Sexual Harassment of Working Women: A Case of Sex Discrimination*, and a year later the EEOC adopted her sexual harassment guidelines.³⁰³ In 1986, the Supreme Court agreed with the EEOC that 'discrimination because of sex' includes sexual harassment, and Congress implicitly ratified that broad understanding in its 1991 amendments.³⁰⁴

An interesting capstone was Justice Scalia's opinion in *Oncale v. Sundowner Offshore Services, Inc.*³⁰⁵ Joseph Oncale had been subjected to repeated episodes of male-on-male harassment of a (homo)sexual nature.³⁰⁶ The lower court held that homosexual harassment fell outside the ambit of Title VII, which Oncale challenged as unsupported by Title VII's text (i.e., "discriminate against any individual . . . because of . . . sex").³⁰⁷ Sundowner re-

299. 490 U.S. 228 (1989).

300. *Hopkins*, 490 U.S. at 235, 244–45 (plurality opinion); *id.* at 266 (O'Connor, J., concurring). For an excellent analysis, see Mary Anne C. Case, *Disaggregating Gender from Sex and Sexual Orientation: The Effeminate Man in the Law and Feminist Jurisprudence*, 105 YALE L.J. 1 (1995).

301. *City of L.A. Dep't of Water & Power v. Manhart*, 435 U.S. 702, 707 n.13 (1978), *quoted and relied on in Hopkins*, 490 U.S. at 251 (plurality opinion).

302. H.R. REP. NO. 101-644, pt. 1, at 29 n.17 (1990).

303. Guidelines on Discrimination Because of Sex, 45 Fed. Reg. 74,677 (Nov. 10, 1980), adopting the proposals set forth in CATHERINE A. MACKINNON, *SEXUAL HARASSMENT OF WORKING WOMEN: A CASE OF SEX DISCRIMINATION* (1979).

304. See *Faragher v. City of Boca Raton*, 524 U.S. 775, 804 n.4 (1998) (holding that the Court's sexual harassment decision in *Meritor Sav. Bank v. Vinson*, 477 U.S. 57 (1986), was entitled to super-strong stare decisis because the 1991 Amendments "conspicuous[ly]" left it in place, suggesting that Congress agreed with the Court about "the proper allocation of the costs of harassment").

305. 523 U.S. 75 (1998).

306. *Oncale*, 523 U.S. at 77.

307. Title VII, 42 U.S.C. § 2000e-2(a)(1).

sponded that Oncale's interpretation "would expand Title VII beyond its language and legislative purpose by conflating sex discrimination with sexual orientation discrimination."³⁰⁸ (By the 1990s, *sexual orientation* was on its way to becoming a widely known term, and some jurisdictions had already barred 'discrimination because of sexual orientation.'³⁰⁹) Sundowner demonstrated that Congress had repeatedly declined to enact proposals to protect against 'sexual orientation' discrimination and harassment in the workplace; indeed, such a proposal was rejected on the floor of the Senate in 1996.³¹⁰

A unanimous Supreme Court held that there was nothing in the text or structure of Title VII that precluded relief for same-sex workplace harassment and remanded the case to the lower courts to allow the plaintiff to make his case.³¹¹ Justice Scalia provided some evidentiary routes available to Mr. Oncale on remand, which also illuminate what 'discriminate because of sex' might mean.³¹² Thus, the complainant might offer "direct comparative evidence about how the alleged harasser treated members of both sexes in a mixed-sex workplace."³¹³ Oncale presumably could have argued that a female employee complaining to the company that she was being sexually hazed and assaulted would have been taken seriously, while his complaints of male-on-male sexual abuse had not been ("boys will be boys").³¹⁴ If Oncale had made this kind of showing, he would have established that the company was more intolerant of, and willing to remedy, 'heterosexual' assaults (men on a woman) than 'homosexual' assaults (men on a man).³¹⁵ After 1998, employer tolerance of 'homosexual' abuse was actionable under Title VII, as interpreted in *Oncale*. Justice Scalia offered another route toward a finding of 'discriminat[ion] because of sex':

A professional football player's working environment is not severely or pervasively abusive, for example, if the coach smacks him on the buttocks as he heads onto the field—even if the same behavior would reasonably be

308. Brief for Respondents, *Oncale*, 523 U.S. 75 (No. 96-568), 1997 WL 634147, at *5.

309. See *Bostock v. Clayton Cnty.*, 140 S. Ct. 1731, 1831–32 & nn.7–8 (2020) (Kavanaugh, J., dissenting) (listing state statutes and executive orders barring job discrimination because of sexual orientation).

310. Brief for Respondents, *supra* note 308, at *12. See generally *supra* note 282 and accompanying text.

311. *Oncale*, 523 U.S. at 75, 82.

312. *Id.* at 81–82.

313. *Id.* at 80–81.

314. See Brief for Petitioner, *Oncale*, 523 U.S. 75 (No. 96-568), 1997 WL 458826, at *4–6. Long a justification for male sexual assault against women, "boys will be boys" is a justification for (homo)sexual hazing by purported "straight" males against gay males, effeminate males, or male newcomers to the workplace.

315. Oncale represented himself as straight. Should his case have come out differently if Oncale were gay? Surely not, in light of the avoidance canon, which provides that statutes should be interpreted to avoid serious constitutional difficulties. See Fish, *supra* note 63, at 1275.

experienced as abusive by the coach's secretary (male or female) back at the office.³¹⁶

While the late justice was not aware of the sexual complexities of coach-jock butt-smacking, he was recognizing the realities of the office as a sexual minefield. Note that Scalia included male as well as female secretaries. If the coach smacks the buttocks of his male secretary and thereby creates a hostile environment for him, we do not see why the secretary's or the coach's sexual orientation should make a difference, nor did the Scalia opinion. Indeed, if the coach knows that he is not supposed to smack the buttocks of his female secretary but feels free to manhandle the rear end of his male secretary, this conduct ought to be a Title VII violation—regardless of the coach's or the secretary's sexual orientation. The key inquiry is whether the touching upends the workplace because it is sex-based and unwelcome. The male secretary may consider the buttocks-smacking unwelcome because it is demeaning or effeminizing, because it is homosexually aggressive, or because it is homophobic—or some combination of all three perceptions.

Reflecting social and linguistic developments in the preceding two decades, *Hopkins* and *Oncale* represent the Supreme Court's application of the broad statutory language to situations where gender-benders and homosexual touching were front and center. During the same period, openly lesbian and gay persons, joined by bisexual and transgender persons in the course of the 1990s, were flourishing in America. These were citizens no longer ashamed of their sexual and gender orientations, no longer considered psychopathic or even mentally ill by doctors (indeed, 'homophobia' was considered a mental illness), and no longer alone cowering in their closets.³¹⁷ They had families, children, houses, and jobs. To be sure, they were still subject to prejudice and stereotyping: most Americans considered them strange, some hated them, and a few were obsessed by a group they still considered 'homosexuals and other sex perverts.'

Gay people were still outlaws in almost half the states when *Oncale* was decided—and in many states consensual oral and anal sex was only a crime if accomplished between persons of the same sex. The Texas Homosexual Conduct Law was typical: it (to this day) criminalizes "deviate sexual intercourse with another individual of the same sex."³¹⁸ In *Lawrence v. Texas*,³¹⁹ the Court rendered this law unenforceable as inconsistent with the Fourteenth Amendment. Although the Court treated the statute as one that per-

316. *Oncale*, 523 U.S. at 81.

317. See ESKRIDGE, *supra* note 278, at 132–37 (discussing gay people being absolved of psychopathic personalities by medical profession in 1970s); ESKRIDGE, *supra* note 7, at 265–69 (discussing gay people streaming out of closets after *Bowers* and increasingly accepted by other Americans in the 1990s).

318. TEX. PENAL CODE ANN. § 21.06 (2019).

319. 539 U.S. 558 (2003).

vatively harmed “homosexual persons,” the statutory text said nothing about sexual orientation and, instead, rested upon a distinction “between the sexes insofar as concerns the partner with whom the sexual acts are performed: men can violate the law only with other men, and women only with other women.”³²⁰ The Court’s own rhetoric and reasoning prompted the logic of the gay plaintiffs’ challenges in *Bostock*: you can’t say *gay* without saying *sex*, in all its senses!

After *Lawrence*, gay and lesbian Americans could no longer be treated as presumptive outlaws, and medical science had cleared them of mental illness. Because gay Americans were normal citizens by the 1990s but also subject to ongoing prejudice, a new wave of laws protected against ‘sexual orientation’ discrimination, the first federal law coming the same year as *Oncale*.³²¹ At the same time, the *T* was being added to *LGBT*; in the new millennium trans Americans were also recognized as decent, normal people yet subject to prejudice.³²² As a result, federal statutes enacted during the Obama Administration added gender identity as well as sexual orientation to statutes that already barred discrimination because of sex.³²³ While at least some of the *Bostock* justices thought that sex, sexual orientation, and gender identity are separate grounds for antidiscrimination protection,³²⁴ we have empirically demonstrated that this was not the case: once ‘homosexuals and other sex perverts’ vanished as a linguistic and social class and a new class of ‘lesbians, gay men, bisexuals, and transgender persons’ was normalized, it also became politically possible to talk about ‘sexual orientation’ and ‘gender identity’ discrimination. All these forms of discrimination depended on society’s (and its language’s) rejection of the Alito-Thomas assumption that gender role and sexuality are normatively determined by one’s biological sex.

2. “Unexpected” Interpretations and Normative Dynamism

Notwithstanding our demonstration of societal and linguistic dynamism, illustrated and entrenched into law by the evolving Title VII precedents, the *Bostock* Court insisted on its originalist bona fides: its interpretation would *not* have been “totally unexpected” in 1964, and “the limits of the drafters’ imagination supply no reason to ignore the law’s de-

320. *Lawrence*, 539 U.S. at 567, 575; *id.* at 599–600 (Scalia, J., dissenting).

321. Higher Education Amendments of 1998, Pub. L. No. 105-244, § 486(e)(1)(A), 112 Stat. 1581, 1743.

322. Jonathan Capehart, *Time to Talk About the T in LGBT*, WASH. POST (June 2, 2014, 4:36 PM), <https://www.washingtonpost.com/blogs/post-partisan/wp/2014/06/02/time-to-talk-about-the-t-in-lgbt> [<https://perma.cc/RG95-GSP2>].

323. Violence Against Women Reauthorization Act of 2013, Pub. L. No. 113-4, § 3(b)(4), 127 Stat. 54, 61; Matthew Shepard & James Byrd, Jr. Hate Crimes Prevention Act, Pub. L. No. 111-84, §§ 4704(a)(1)(C), 4707(a), 123 Stat. 2835, 2837, 2838 (2009) (codified at 34 U.S.C. § 10101).

324. See *Bostock v. Clayton Cnty.*, 140 S. Ct. 1731, 1777–78 (2020) (Alito, J., dissenting).

mands.”³²⁵ Gorsuch’s majority opinion thus implied that the Court would have decided the interpretive issues the same way in 1964, but this faces a mountain of contrary evidence supplied by the dissenting opinions.³²⁶ The incongruity of the Court’s position mobilizes Judge Posner’s concerns, expressed in his concurring opinion in *Hively v. Ivy Tech Community College*, regarding judicial efforts to interpret Title VII to protect gay men and lesbians without acknowledging interpretive dynamism in some way.³²⁷ That is, “an explanation is needed for how 53 years later the meaning of the statute has changed and the word ‘sex’ in it now connotes both gender *and* sexual orientation.”³²⁸ According to Posner, “[w]e understand the words of Title VII differently not because we’re smarter than the statute’s framers and ratifiers but because we live in a different era, a different culture.”³²⁹ Given that “[h]omosexuality” today is widely regarded “as normal,” “[a] broader understanding of the word ‘sex’ in Title VII than the original understanding is thus required.”³³⁰

Judge Posner’s response to judicial denials of interpretive dynamism in the interpretation of Title VII raises the issue of how normative commitments shape language meaning and its application. Judge Posner is correct in suggesting that normative commitments influence how language is understood and used by individuals and speech communities.³³¹ Thus, the best reading of Alito’s dissent in *Bostock* is not that *sex* in 1964 meant just biological sex, but that the public assumed or believed that sex as biology dictated what was appropriate for sex as gender role and sex as sexuality and that these beliefs were so central to Congress’s adoption of Title VII as to require a congressional amendment along the same lines as statutory amendments adding ‘sexual orientation’ and ‘gender identity’ to statutes during the Obama Administration.³³² Our problem with this reading is that it engrafts onto Title VII assumptions acceptable in 1964 but unconstitutional today. Recall the *Dred Scott* problem, based on the Supreme Court opinion holding that free African Americans could never be citizens because the original public meaning of Article III had to take account of the pervasively racist laws of 1789, which treated Black people as nonpersons.³³³ As we argued in a *Bostock* amicus brief, *Dred Scott* was not only constitutionally wrong in 1857,

325. *Id.* at 1737, 1751 (majority opinion).

326. Justice Alito, understandably, viewed the Court’s assertion as disingenuous. *See id.* at 1773 (Alito, J., dissenting).

327. 853 F.3d 339, 352–53 (7th Cir. 2017) (Posner, J., concurring).

328. *Hively*, 853 F.3d at 353.

329. *Id.* at 357.

330. *Id.* at 353–55.

331. *See supra* note 19 (describing the different ways in which language evolves).

332. *See supra* note 323 and accompanying text.

333. *See Dred Scott v. Sandford*, 60 U.S. (19 How.) 393, 410 (1857) (enslaved party), *superseded by constitutional amendment*, U.S. CONST. amend. XIV.

but it is the star of the constitutional anticanon. In our view, its methodology is no more persuasive to subtract rights from gay people than it was to do that to Black people.³³⁴

The *Dred Scott* argument, essentially, is that courts should enforce extant norms at the time of statutory or constitutional enactment as part of the meaning of the text. Consider how such an argument fits into the interpretive theories we have discussed. One way is via the Alito-Kavanaugh extensional approach that frames the interpretive question in empirical-public-meaning terms.³³⁵ Thus, the question to be answered is always something like: How would the terms of the law have been understood and applied by ordinary people at the time of enactment?³³⁶ But the date for ascertaining the relevant normative commitments is itself a normative question. Title VII has been repeatedly amended: it was not even applicable to Clayton County until the 1972 Amendments; the 1991 Amendments added section 703(m), text material to any resolution of the LGBT employee cases.³³⁷ So should the inquiry have been original public meaning in 1972 or 1991? By 1991, gender nonconformity was baked into the statute, and most Americans believed that gay persons should not be penalized in the workplace.³³⁸ In any case, as we addressed earlier, the Alito-Kavanaugh extensional framing of public meaning is not a coherent approach to the interpretation of laws over time.³³⁹

Alternatively, normative commitments can influence the intensional meanings of the terms in a legal provision and also the objects of interpretation. This is most easily accomplished through explicit definitions, but the specific context of the provision also shapes the meanings of the terms. Thus, recall that we earlier considered the possibility that within the context of Title VII, which offers protection to employees from invidious discrimination, only conceptions of *sex* that are considered by society to be ‘nondeviant’ are covered.³⁴⁰ Furthermore, the sexual and gender minorities that were publicly recognized in 1964 were “perverts,” “degenerates,” and “inverts,” illustrating how normative views help create the perceived features of social groups.³⁴¹ Even if it is accepted that ‘nondeviant’ is a feature of *sex* in Title VII, and deviancy was a feature of persons having sex with persons of the same sex in 1964, the dynamic nature of normative commitments can change the coverage of Title VII (as well as other statutes and constitutions). The modern social groups ‘gay men and lesbians’ and ‘transgender persons’ no longer suffer

334. See Brief in Support of Emps., *supra* note 273, at 17–18.

335. See *supra* notes 73–77 and accompanying text.

336. See *supra* notes 73–77 and accompanying text.

337. 42 U.S.C. § 2000e-2(m).

338. Paul R. Brewer, *The Shifting Foundations of Public Opinion About Gay Rights*, 65 J. POL. 1208, 1213 (2003).

339. See *supra* Section I.B.2.

340. See *supra* notes 270–271 and accompanying text.

341. See *supra* Section III.B.

under the stigma of ‘deviancy’ as a matter of constitutional norms, which themselves followed and reflected social and linguistic evolution.³⁴² As the theory of societal dynamism illustrates, it is incorrect that a broader understanding of *sex* than existed in 1964 is required in order to protect the parties at issue in *Bostock*.³⁴³ By understanding the *Bostock* issues through the clarifying lens of societal dynamism, the Court’s approach to Title VII becomes coherent, and the dissenting opinions’ fixation on the state of things in 1964 becomes nondecisive.

CONCLUSION

Bostock has received enormous attention because it represents an advance of substantive justice for a disparaged minority. While recognizing Title VII protections for sexual and gender minorities was overdue, the interpretive issue was neither trivial nor novel. In an odd twist reflecting the methodological commitments of the Court’s evolving membership, the justices authoring all three opinions in *Bostock* claimed to be doing nothing more than implementing original public meaning—the interpretation most consistent with people’s understanding of the 1964 statute. Determined to announce an unambiguous ‘plain meaning’ baked into the law in 1964, each justice elevated anachronism into analysis that substantially misunderstood the social groups affected by the statute, played word games with the statutory language, and substantially ignored or marginalized judicial precedents and congressional amendments. *Bostock* was a great judicial debate, but from the perspective of rigorous legal reasoning it was something of a train wreck.

The fundamental interpretive issue we have described is quite straightforward. If a long-standing statute (or constitution) is applied over time to ever-evolving social facts, political and economic contexts, and novel groups of people, the statute will evolve beyond its original applications. All three of the *Bostock* opinions stubbornly sought to closet this reality behind an in-

342. The Alito understanding of sex is also a plausible view of the constitutional assumptions of the America of homophobic Earl Warren—but not of the America of the gender egalitarian Ruth Ginsburg. The Supreme Court’s sex-discrimination jurisprudence (consistent with *Hopkins*) has rejected as unconstitutional requirements that sex as biology determine gender role, *see, e.g.*, *Sessions v. Morales-Santana*, 137 S. Ct. 1678, 1689–93 (2017) (invalidating gender-based discrimination normatively acceptable when statute was enacted but inconsistent with Court’s strong sex-equality jurisprudence), its privacy jurisprudence has rejected sex as biology to limit one’s enjoyment of sex as sexuality to conjugal sex, *see Lawrence v. Texas*, 539 U.S. 558, 571–76 (2003) (overruling Court’s prior allowance of laws criminalizing nonprocreative sex and rejecting arguments that such laws could be justified as preferring traditional sex-based ‘conjugal’ relationships), and its jurisprudence of homosexuality has applied the equivalent of heightened scrutiny to laws excluding sexual and gender minorities from normal government programs and benefits, *see Romer v. Evans*, 517 U.S. 620 (1996); *United States v. Windsor*, 570 U.S. 744 (2013); *Obergefell v. Hodges*, 576 U.S. 644 (2015) (declaring marriage rights for all same-sex couples).

343. *See supra* Section III.B.

sistent ‘originalist’ methodology. Pseudohistorical and anachronistic analyses do not work, and they don’t give America any clue about what is really going on when originalists interpret super-statutes. Although not professional historians, judges can do better, and justices have the staff and resources to do a lot better. If the Supreme Court’s ascendant majority wants to shift attention away from modern language and norms and toward historical language and norms, they need to develop greater sophistication about American social, political, and normative history. And they need to figure out how originalism handles issues that were beyond the imagination of the Congress that enacted a statute and the public that received it. It would also be helpful if the originalists could figure out what to do with a statute that changes as a result of administrative experience, binding judicial precedents, and legislative amendments. We find it astonishing that the original-public-meaning debate in *Bostock* was stuck in 1964 when the relevant statutory text clearly was not.

If the Supreme Court’s originalists want to shift attention away from evidence about the production of statutes (e.g., legislative history) to the comprehension of statutes (e.g., ordinary meaning), they also need to develop greater sophistication about language and communication. To begin with, originalists should accept, as they have in Second Amendment jurisprudence, that the extension of a legal text cannot be considered fixed at its time of enactment. Instead, an intensional approach is needed: the judge determines the features of the relevant regulatory concept and then decides what things fall within the category at the relevant point in time. In this way, the application of a statute will change over time, even if the meaning of its terms is held constant (via originalism). This view of the interpretive process seems virtually incontestable with respect to the famous no-vehicles-in-the-park hypothetical; any reasonable judge ought to agree with us that Segways, car-like wheelchairs, and other modern vehicles are not excluded from a 1964 law simply because they emerged in society decades after the statute was enacted. Rather, people expect that a court will apply the meaning of *vehicle* in light of changed circumstances, even if choosing to fix its intensional meaning as of 1964. Our core insight, that public statutes are designed to be effective over time, not obsolete and anachronistic, is just as applicable to super-statutes like Title VII.

Additionally, it has now become a professional embarrassment for judges to pretend that public meaning (original or not) can be revealed by simplistic dictionary shopping. Dictionaries can provide excellent clues, but anyone serious about this methodology should be equally serious about the nuances and realities of language. Justice Gorsuch is right to say that the authoritative text says more than its authors intended,³⁴⁴ but Justice Kavanaugh is right to say that you cannot just define each of the words and put them to-

344. *Bostock v. Clayton Cnty.*, 140 S. Ct. 1731, 1749 (2020).

gether, as Gorsuch did.³⁴⁵ You need to understand the words in the context of phrases, sentences, and even society, as Justice Alito insisted.³⁴⁶ But words and language, like the societies in which they are embedded, evolve over time—and judges who don't understand that will fall into linguistic anachronism and grammatical confusion.

Finally, normative commitments inform both the meanings of words and the objects of interpretation—and therefore statutory coverage over time. Justice Alito was descriptively wrong to say that *sex* meant only biology in 1964, but he was arguably onto something prescriptively: sex as biology (and the specific view that everyone was either a man or a woman) drove people's understanding of sex as gender and sex as sexuality. Should the nation remain tethered to a normative assumption that society now rejects? One that is now unconstitutional? An originalist theory that can justify the *Bostock* dissents along these lines is objectionable for the same basic reason *Dred Scott* is objectionable (though the earlier decision is uniquely reprehensible): it entrenches a historical norm the country now rejects and creates social turmoil that undermines the Supreme Court's own legitimacy. Even as a matter of a conservative understanding of doctrine, the normative assumptions of the *Bostock* dissenters got it wrong, because they were at odds with the Court's own precedents and with Congress's amendments to Title VII. The new statutory language added in 1972 reflected the norms undergirding *Martin Marietta*, the statutory language added in 1991 reflected the norms undergirding *Hopkins*, and *Oncale* confirmed the new regime—a regime reflected in Justice Gorsuch's Bob-and-Hannah hypothetical.

Language is exciting; history is fascinating. Those disciplines have much to offer legal interpretation by judges, and we implore jurists to engage with their critics. We hope we have deepened and not just criticized the remarkable original-public-meaning debate in *Bostock*.

345. *Id.* at 1826–27 (Kavanaugh, J., dissenting).

346. *Id.* at 1771–72 (Alito, J., dissenting).

APPENDIX A—COLLOCATES

Much of previous legal corpus linguistics work over the last few years has approached the notion of ordinary, or prototypical, meaning of a word *W* on the basis of the following indices:

- frequency of a sense of *W* as determined from a concordance display of the uses of *W* in their original context;
- the frequency distribution of *W*'s collocates (i.e., the words that occur in a user-defined window—of often 4 or 5 words—around *W* in the corpus).

For example, Lee and Mouritsen discuss the no-vehicles-in-the-park hypothetical on the basis of, among other things, the 50 most frequent collocates of vehicle in the News-on-the-Web (NOW) corpus.³⁴⁷ With regard to the question of whether an airplane is a vehicle, they observe that “[a]irplane does not appear, though two particular types of aircraft are attested”;³⁴⁸ they then proceed with more such top-50 collocate lists (e.g., for the data representing the 1950s and the 1910s–1930s in the Corpus of Historical American English (COHA)).³⁴⁹ However, as has been argued in detail by Gries,³⁵⁰ analyses of collocates conducted like this alone are risky.

First, it seems as if their collocates are just the most common collocates, meaning their decision on what collocates to include or discuss in the first place is based solely on co-occurrence frequency. This is a remarkable shortcoming because, first, most corpus linguists use not only frequency but, minimally, also association measures for such purposes (if not also dispersion);³⁵¹ and, second, because the corpus interface they used actually provides one such association measure (namely Mutual Information (MI)).³⁵² This is problematic because, as in fact their own data show, it is not like the two measures—frequency and association/MI—measure the same thing anyway: a linear correlation between frequency and MI in their own 100 collocates of vehicle is very low ($R^2 = 0.036$), indicating that the two measures are not reflecting the same thing, meaning choosing to work with only one is suboptimal.³⁵³ This is why all our collocate-based analyses in-

347. Lee & Mouritsen, *supra* note 25, at 837–40.

348. *Id.* at 838.

349. *Id.* at 839.

350. Gries, *supra* note 129 (manuscript at 19); Slocum & Gries, *supra* note 135, at 29.

351. See Stefan Th. Gries, *15 Years of Collostructions: Some Long Overdue Additions/Corrections (to/of Actually All Sorts of Corpus-Linguistics Measures)*, 24 INT'L J. CORPUS LINGUISTICS 385, 386–88 (2019).

352. See, e.g., Stefan Th. Gries & Anatol Stefanowitsch, *Extending Collostructional Analysis: A Corpus-Based Perspective on 'Alternations'*, 9 INT'L J. CORPUS LINGUISTICS 97, 101 (2004).

353. Slocum & Gries, *supra* note 135, at 26.

volved computing co-occurring frequencies as well as a measure called *log-likelihood* / G^2 , but normalized for co-occurrence frequency.

Second, even if a word *W* (like *airplane*) is frequent around a node word of interest (like *vehicle*) and associated with it, that does still not mean one can infer the exact nature of *W*'s semantic relation to the node word (without circularly using one's prior knowledge of *W*). More specifically, it is not obvious what to infer from the presence or absence of certain collocates. For example, their collocates of *vehicle* in the contemporary NOW corpus include a variety of straightforward automobile terms (e.g., *motor*, *car*, *traffic*, *fuel*), from which they conclude that (proto)typical vehicles have motors and, together with the other collocates, vehicles are typically cars.³⁵⁴ But for two reasons, it's not that simple. On the one hand, things can be absolutely integral to prototypical vehicles or cars yet not be a frequent collocate: For instance, the words *wheel(s)* or *tires* are not among the collocates Lee and Mouritsen list,³⁵⁵ although the vast majority of vehicles have them,³⁵⁶ and probably just about all cars have them.

On the other hand, a collocate can also often occur with a node word precisely because the node word on its own would *not* imply the collocate in a straightforward way: The reason *electric* is so frequently used around *vehicle* in their data³⁵⁷ is precisely that the prototypical vehicle is still a car with an internal-combustion engine, not an electric motor, so if one means to refer to an electric vehicle, one has to add *electric*. In the same vein, note that one of the strongest collocates of *vegetarian* is *meat*. In other words, *electric* is a frequent collocate of *vehicle* precisely because prototypical vehicles are not (yet) electric.

In sum, relying on collocation—co-occurrence—information on its own is risky. Words can co-occur for many semantic relations—targeted ones or others—and neither the presence nor the absence of a collocate around a node word is an unambiguous diagnostic for a meaning component of a node word; if anything, collocates can, but need not, highlight semantic dimension(s) relevant to a term, but not necessarily also the value of a word on that dimension.

Finally, simple collocates can be misleading if one does not address the effect of other, functionally similar words. For instance, one often needs

354. Lee & Mouritsen, *supra* note 25, at 837–40.

355. *Id.*

356. Contrary to Justice Scalia's definition, not all vehicles have wheels—at least not in the sense that it is the wheels' direct contact with the ground that creates propulsion—unless he would want to claim that tanks, defined as “enclosed heavily armed and armored combat vehicle[s] that move[] on tracks,” *Tank*, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/tank> [https://perma.cc/2BZ9-SY5B], or snowmobiles, defined as “any of various automotive vehicles for travel on snow,” *Snowmobile*, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/snowmobile> [https://perma.cc/2AVT-XN4Y], are not vehicles.

357. Lee & Mouritsen, *supra* note 25, at 837.

what Gries refers to as ‘distinctive collocates.’³⁵⁸ For example, in a case like the present where it is critical to be able to determine to what degree a word such as *homosexual* has negative connotations, it helps to not just compute *homosexual*’s collocates, but account for the fact that some of the negative collocates one finds among those (e.g., *perversion*) are actually also collocates of *sexual*. That means, one has to be careful with regard to what one attributes a certain negative connotation to—how much of *homosexual*’s negative connotations are also (to a certain degree) also due to *sex* or *sexual*’s negative connotations. In sum, the allure of a sorted-collocate display notwithstanding, for complex cases many more considerations need to come into play.

358. See Stefan Th. Gries, *Testing the Sub-Test: An Analysis of English -ic and -ical Adjectives*, 8 INT’L J. CORPUS LINGUISTICS 31 (2003); Kenneth Ward Church, William Gale, Patrick Hanks, Donald Hindle & Rosamund Moon, *Lexical Substitutability*, in COMPUTATIONAL APPROACHES TO THE LEXICON 153 (B.T.S. Atkins & A. Zampolli eds., 1994).

APPENDIX B—DISPERSION

Most of legal corpus linguistics, much like most of corpus linguistics in general, has based most of its arguments on frequency information, specifically (1) the frequency of occurrence of certain words, of words in certain contexts, or of one or more senses of words, and (2) frequency of co-occurrence of words with other words or words with a specific sense of a word. In particular, and now focusing on legal corpus linguistics, ordinarieness of meaning is regularly operationalized via commonness, or ‘widespreadness’ of use, which in turn is operationalized via frequency of occurrence; recall our discussion of how Lee and Mouritsen utilize only co-occurrence frequency of collocates, but not also association measures.³⁵⁹

While this kind of approach is widely used in (legal) corpus linguistics, there is a growing body of research indicating that there is a corpus statistic—dispersion—that could either replace frequency as a diagnostic of commonness or, better, that could augment frequency (in a way similar to how both frequency and association should be considered for collocations). The reason why dispersion should be used in tandem with frequency is two-fold. First, on a theoretical or methodological level, words can have identical corpus frequencies yet vary significantly in their dispersion.³⁶⁰ For example, the words *staining* and *enormous* have the exact same frequency (37) in the Brown corpus of written American English (which consists of one million words in 500 corpus parts of approximately 2,000 words), but all instances of *staining* occur in a single one of the 500 files whereas the 37 instances of *enormous* are spread out over 36 of the 500 files.³⁶¹ Any corpus analysis that relies only on frequency and does not consider dispersion can fall prey to such distributional facts. The second reason to use dispersion and frequency together is that dispersion has by now been shown to be more correlated with psycholinguistic indicators of commonness.³⁶² But until approximately 12 years ago, too little was known about dispersion and its effects, and the computation of dispersion measures can be computationally quite demanding (computing the dispersions of all words in a corpus can, depending on the measure used and the size of the data, require many hours to complete,

359. See *supra* notes 122–131 and accompanying text.

360. See *supra* Figure 1.

361. See Andrew Hardie, *CQPweb—Combining Power, Flexibility and Usability in a Corpus Analysis Tool*, 17 INT’L J. CORPUS LINGUISTICS 380 (2012); W.N. Francis & H. Kučera, *Brown Corpus Manual*, INT’L COMPUT. ARCHIVE MOD. & MEDIEVAL ENG. (last updated Sep. 11, 1997), <http://icame.uib.no/brown/bcm.html> [<https://perma.cc/DKE6-UQL5>].

362. See James S. Adelman, Gordon D.A. Brown & José F. Quesada, *Contextual Diversity, Not Word Frequency, Determines Word-Naming and Lexical Decision Times*, 17 PSYCH. SCI. 814 (2006); R.H. Baayen, *Demythologizing the Word Frequency Effect: A Discriminative Learning Perspective*, 5 MENTAL LEXICON 436 (2010); Stefan Th. Gries, *Dispersions and Adjusted Frequencies in Corpora: Further Explorations*, in CORPUS-LINGUISTIC APPLICATIONS: CURRENT STUDIES, NEW DIRECTIONS, 197 (Stefan Th. Gries, Stefanie Wulff & Mark Davies eds., 2010).

even on clusters of computers). The measure of dispersion we are using here is called *DP* (Deviation of Proportions) and was first proposed by Gries in 2008.³⁶³ It ranges from 0 for words that are extremely widely and evenly distributed throughout the corpus (try to find an English corpus file that does not contain *the*, *a*, *of*, etc.) to 1 for words that are unevenly distributed (like the above of *staining* occurring in only $1/500$ th of the Brown corpus).

363. Stefan Th. Gries, *Dispersions and Adjusted Frequencies in Corpora*, 13 INT'L J. CORPUS LINGUISTICS 403 (2008); Jeffrey Lijffijt & Stefan Th. Gries, *Correction to Stefan Th. Gries' Dispersions and Adjusted Frequencies in Corpora*, 17 INT'L J. CORPUS LINGUISTICS 147 (2012); see also Gries, *supra* note 351.