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Private Environmental Nudges

Anthony Moffa*

ABSTRACT

A few years ago, before the onset of a global pandemic, I noticed that my preferred Portland, ME coffee shop—Tandem Coffee Roasters—implemented a new policy. Upon ordering a beverage, the barista asked if I brought my own mug. They informed me that, if had I not, I could purchase a paper, disposable vessel from the shop for twenty-five cents. Some might (understandably) ask, “Does coffee not come in a cup anymore?”

The shop implemented what this paper dubs a “private environmental nudge,” a subset of policies that define private environmental governance (PEG)—the actions taken by non-governmental entities to achieve traditional governmental ends regarding environmental protection. This subset of PEG, pioneered by small businesses, relies on insights from behavioral ec-

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onomics, particularly Richard Thaler and Cass Sunstein’s famous theory of “nudges.” In my coffee example, the economics for the business are identical to the more common nominal discount for bringing a reusable cup; the only difference is in choice architecture.

This paper includes a brief empirical case study of this emblematic example. It fills two gaps in the PEG literature with respect to small businesses and behaviorally informed policies. It further provides a typology of private environmental nudges, describing four archetypes, which will inform and guide future studies.

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“[T]he trouble is, humans do have a knack of choosing precisely those things which are worst for them.”¹

INTRODUCTION

Imagine you are on a weekend getaway to the charming, sea-side city of Portland, Maine. You step into a critically acclaimed local coffee shop and bakery. Excited to try a cup of coffee brewed from their meticulously curated and freshly roasted beans, you step up to the counter. The barista asks if you brought your own mug, to which you politely reply that it did not fit in your carryon luggage.

1. J.K. ROWLING, HARRY POTTER AND THE SORCERER’S STONE 297 (Arthur A. Levine Books 1998) (quoting Albus Dumbledore).

They inform you that you can purchase a paper, disposable vessel from the shop for twenty-five cents. You think: Does coffee no longer come with a cup? You find out that the shop recently decreased the price of coffee by twenty-five cents and implemented the charge for a cup. What is this pricing scheme? Why not just offer a discount if a customer brings a cup? Because they have instead chosen a nudge—a private environmental nudge to be precise.

In recent years, the environmentalist outcry against single-use plastics has rapidly translated into private and public governance. In the public sphere, bans and taxes on plastic bags,² and, to a lesser extent, policies targeting plastic food/drink containers³ and plastic straws,⁴ have popped up in various parts of the country. Many large national corporations, including Disney and Hyatt, to name a prominent couple, have also taken steps to reduce the number of single-use plastics that their customers add to the waste stream. And before those household names changed their policies, smaller shops, cafes, and retailers experimented more aggressively with environmentalism.

Two ongoing discussions in the environmental law scholarship parallel these innovations in policy. The first re-examines the proper role for subnational governments in environmental policymaking, reviving a debate about environmental federalism that dates back decades. Some of my recent work contributed to that debate, arguing for more coordination amongst subnational climate policy advocates.⁵ The second strain of scholarship, to which this

2. States that have enacted some form of legislation against plastic bag use and/or in favor of paper bag use include: California, Connecticut, Delaware, Maine, New York, Oregon, and Vermont. Prominent municipalities with outright bans on single-use plastic bags include: Boston, Boulder, Chicago, Los Angeles, New York, San Francisco, Portland, Maine, Seattle, and Washington, D.C. According to the Surfrider Foundation, in 2019, over 450 laws and ordinances across the country impose either a ban or a tax on single-use plastic bags. See Jennie Romer, *The Latest Plastic Bag Laws and Maps*, SURFRIDER FOUND. (Oct. 10, 2019), <https://bit.ly/3sbRamt> [<https://perma.cc/68GD-4D5V>].

3. Maryland and Maine have recently enacted bans on food and drink containers made of polystyrene (commonly known as Styrofoam). See MD. CODE ANN., ENV'T §§ 9-2201–2207 (LexisNexis 2022); ME. REV. STAT. ANN. tit. 38, § 15-A (West 2022).

4. California law now restricts the use of plastic straws statewide. See CAL. PUB. RES. CODE § 42271 (LexisNexis 2022). A number of municipalities including Washington, D.C., Seattle, Portland, Oregon, and Fort Lauderdale, Florida have recently restricted plastic straw use by businesses as well. See Sarah Gibbens, *A Brief History of How Plastic Straws Took over the World*, NAT'L GEOGRAPHIC (Jan. 2, 2019), <https://on.natgeo.com/3TF42wT> [<https://perma.cc/5F5E-NHHR>].

5. See generally Anthony Moffa, *Uniform Climate Control*, 54 U. RICH. L. REV. 993 (2020).

work adds, examines the role for what Professor Michael Vandenbergh dubbed “private environmental governance.”⁶ Vandenbergh and others have focused on the efforts of some of the world’s largest corporations with respect to greenhouse gas emissions reporting⁷ and reductions,⁸ among other contributions to improving planetary health. But small, locally owned businesses, particularly in the food service sector, can contribute positively to private environmental governance, too.⁹ These smaller entities can play valuable roles not only by reducing their own waste and life-cycle emissions but also by influencing policy development and norms. In the nascency of private environmental governance scholarship, Vandenbergh wrote that it was “easy to miss the significance of [private environmental governance activities] if we assume[d] government is the relevant actor for resolving collective action problems.”¹⁰ Now, as the strain of scholarship matures, it is easy to miss the significance of small-firm private governance activities if we assume large corporations are the relevant actors for resolving collective action.

This work specifically focuses on innovations in corporate policy rooted in Richard Thaler and Cass Sunstein’s famous behavioral economics theory of “nudges.”¹¹ Their basic insight was that the way choices are presented (“choice architecture”) greatly influences the quick valuation calculations and decisions humans

6. See generally Michael P. Vandenbergh, *Private Environmental Governance*, 99 CORNELL L. REV. 129 (2013) [hereinafter Vandenbergh, *PEG*].

7. See *id.* at 156.

More than 3,000 corporations reported environmental performance data to GRI in 2010, and the reporting involved many of the largest firms in industries with substantial environmental impacts. Similarly, more than 1,000 corporations, including more than eighty percent of the 500 largest firms on a global level, reported their carbon emissions to the CDP in 2012.

Id.; see generally Michael P. Vandenbergh & Ben Raker, *Private Governance and the New Private Advocacy*, 32 NAT. RES. & ENV’T. J. 45 (2017).

8. See, e.g., Simon Dietz et al., *An Assessment of Climate Action by High-Carbon Global Corporations*, 8 NATURE CLIMATE CHANGE 1072, 1073 (2018).

9. This is not to suggest that *all* measures characterized as private environmental governance have a net positive effect on the health of the environment. Undoubtedly, some private actors, just like their public counterparts, will take actions that influence behavior in a direction that increases emissions, extraction, or various other negative externalities. This work, however, focuses on those private governance approaches designed to greater protect or improve environmental health.

10. Vandenbergh, *PEG*, *supra* note 6, at 137.

11. See generally RICHARD H. THALER & CASS R. SUNSTEIN, *NUDGE* (2008) [hereinafter THALER I]; CASS R. SUNSTEIN, *WHY NUDGE?* (2014) [hereinafter SUNSTEIN]; RICHARD H. THALER & CASS R. SUNSTEIN, *NUDGE: THE FINAL EDITION* (2022) [hereinafter THALER II].

make.¹² Thaler, Sunstein, and behavioral economists in their wake have thoroughly cataloged and analyzed (quantitatively and qualitatively) efforts by governments to utilize nudge theory in policy design. This work fills an important gap, demonstrating how nudges can, and should, be part of private environmental governance as well. Measures herein dubbed “private environmental nudges” are efforts by private firms to govern the commons by tinkering with the architecture of the choices they present to consumers. Such policies fit squarely within the field of private environmental governance. Indeed, they act as its leading edge.

Small businesses serving customers whose preferences they have come to know well sit in an ideal position to innovate with private environmental nudges. Behaviorally informed policy has only recently, and tentatively, been accepted as part of the public governance landscape. Theoretical concerns about paternalism and practical constraints around data collection and calibration have led to a cautious approach. Large, multinational corporations seem to, at least in part, share that reluctance. Thus, this work argues that smaller firms deserve the attention of legal scholars studying private environmental governance *and* behavioral economists studying nudges.

Part I tells the story of our local coffee shop in greater detail, presenting it as a visible test case of private governance and nudge theory in practice. Parts II and III explain the underlying defining characteristics and scholarly treatment of private environmental governance and nudges, respectively. In addition to situating this work within those two fields of scholarship, those parts point to more prominent examples to concretize the concepts *and* highlight how the foci of prior works have left a glaring gap. Part IV establishes that nudges constitute a previously understudied form of private environmental governance, introducing the concept of a “private environmental nudge” as a distinct approach. The final part then sets forth a taxonomy of private environmental nudges.

I. A COFFEE CASE STUDY

The coffee shop in our story is real—Tandem Coffee Roasters. The shop implemented a private environmental nudge to incentivize use of reusable cups, thereby reducing single-use cups. The nudge involved lowering all posted drink prices by 25 cents and charging 25 cents to any customer needing a single-use cup. In other

12. See THALER II, *supra* note 11, at 103–07; *see generally* THALER I, *supra* note 11.

words, this entity has created a private environmental tax in lieu of a private environmental subsidy. The economics for the business are identical to the much more common nominal discount for bringing a reusable cup; the only difference is in choice architecture. Customers have grown accustomed to seeing small discounts for use of reusable products—grocery stores, such as Whole Foods, discount five or ten cents per reusable bag. The interesting question is whether the reframing of the choice, making the default that the customer provide their own receptacle and charging a penalty to those who neglect to do so, proved a more effective tool of private environmental governance than the more common discount incentive. Thaler and Sunstein’s insights on loss aversion, mindless choosing,¹³ and framing¹⁴ suggested it would. The data collected demonstrates empirically that the approach has in fact been effective in changing behavior.¹⁵ The case study not only shows how an effective private environmental nudge works in the field, but it further demonstrates, by way of an anecdotal comparison to a similar large corporate initiative, why small business should be the leading edge of policy innovation.¹⁶

Single-use consumer products significantly impact the environment in a number of ways—increasing waste disposed on land and at sea, endangering wildlife, and enlarging the carbon footprint of our food systems. Confining the issue narrowly to simply the greenhouse gas impact of coffee cups, a recent study by the International

13. See THALER II, *supra* note 11, at 38 (“The combination of loss aversion and mindless choosing implies that if an option is designated as the default, it will usually (but not always!) attract a large market share.”).

14. See *id.* at 39–40 (describing how the choice to engage in energy conservation could alternatively be framed as action that “save(s) \$350 per year” or as inaction that “lose(s) \$350 per year” and how the loss framing is more effective at changing behavior); see also Amos Tversky & Daniel Kahneman, *Rational Choice and the Framing of Decisions*, in MULTIPLE CRITERIA DECISION MAKING AND RISK ANALYSIS USING MICROCOMPUTERS 81 (Birsen Karpak & Stanley Zionts eds., 1989) (“Alternative descriptions of a decision problem often give rise to different preferences, contrary to the principle of invariance that underlines the rational theory of choice.”).

15. See Tandem Coffee (@tandemcoffeeroasters), *Percentage of Drinks Served in Single-Use Cups*, INSTAGRAM (Aug. 19, 2019) [hereinafter *Percentage of Drinks 2019*], <https://bit.ly/3eVzjgj> [<https://perma.cc/KGP7-Z54A>]; Tandem Coffee (@tandemcoffeeroasters), *Percentage of Drinks Served in God Awful Single-Use Cups*, INSTAGRAM (Oct. 7, 2022), <https://bit.ly/3eMaVVO> [<https://perma.cc/6DQU-26VA>]; Interview with William Pratt, Owner, Tandem Coffee Roasters, in Portland, ME (Apr. 27, 2022).

16. The fact that data informs the comparative analysis is not meant to imply that the studies, either together or independently, are scientifically or statistically sound. The data do nothing more than help tell the story. A story that involves an illustrative, but imperfect, comparison.

Reference Centre for the Life Cycle of Products, Processes, and Services (CIRAIG) found that over a one-year span, a reusable mug (used between 20–100 times) outperforms single-use cardboard coffee cups with plastic lids.¹⁷ Innovative private environmental governance by small and large businesses alike has the potential to help ensure that those greenhouse gas reductions are realized.

Tandem, a successful local coffee shop with two locations in Maine,¹⁸ desires to incentivize use of reusable cups, thereby reducing single-use cups. That, in and of itself, is not a new idea; coffee shops have been offering discounts for consumers bringing their own cups for years. The policy innovation was to frame the price difference not as a discount for “good” environmental behavior, but as a price increase, a penalty, for “bad” behavior. To achieve this, in 2019, the shop lowered all its posted prices by 25 cents and began charging 25 cents to any customer needing a single-use cup. In other words, this entity created a private environmental tax in lieu of a private environmental subsidy. The economics for the business are identical; the only difference is in choice architecture. And data suggests that the approach has been effective in changing behavior.¹⁹

For the year 2018, during which no private environmental nudge was in place but customers could bring reusable cups on their own initiative, 70 percent of the drinks sold by Tandem Coffee Roasters were sold in disposable single-use cups.²⁰ After the shop implemented the nudge described above in 2019, monthly data from April to December showed a decrease of about 30 percentage points—more than half of the shop’s customers opted to bring a reusable cup.²¹ The magnitude and immediacy of the nudge’s effect is quite remarkable and provides a nice example of how behaviorally informed policy can make a difference in private governance. The figure below shows the stark change visually.

17. See Pierre-Olivier Roy, *Reusable or Disposable: Which Coffee Cup Has a Smaller Footprint?*, ANTHROPOCENE (July 2017), <https://bit.ly/3e6fnqF> [<https://perma.cc/5E37-HYQ7>].

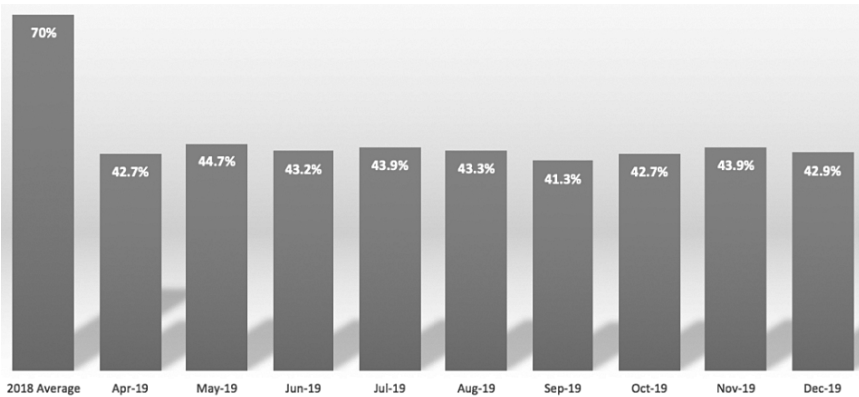
18. See *Locations*, TANDEM COFFEE ROASTERS, <https://bit.ly/3fxq3PA> [<https://perma.cc/T6FD-9W48>] (last visited Nov. 3, 2022).

19. See Interview with William Pratt, *supra* note 15.

20. See Tandem Coffee, *Percentage of Drinks 2019*, *supra* note 15.

21. Unfortunately, due to the COVID-19 pandemic, the shop had to temporarily close in 2020 and then reopen in a COVID-safe way, including serving all drinks in disposable containers. See Tandem Coffee (@tandemcoffeeoasters), *Percentage of Drinks Served in God Awful Single-Use Cups*, INSTAGRAM (Apr. 22, 2020), <https://bit.ly/3z0YuFd> [<https://perma.cc/EC48-2JCB>].

FIG. 1: PERCENTAGE OF DRINKS SOLD IN SINGLE-USE CUPS AT TANDEM COFFEE ROASTERS 2018–19



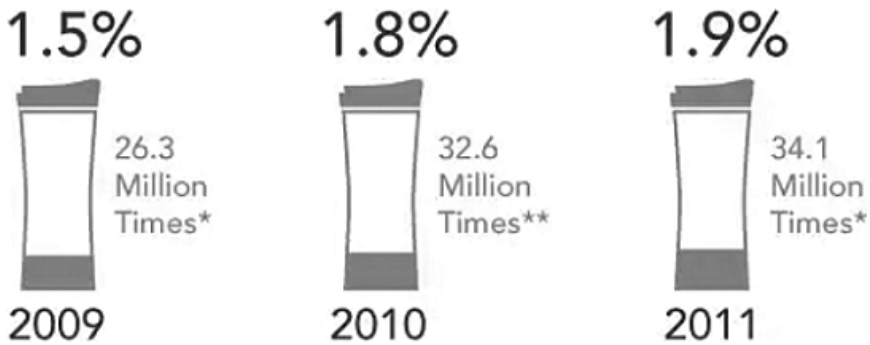
Starbucks, the largest coffee shop chain in the world with over 25,000 locations, shares concerns about the waste produced by single-use cups. Starbucks, though, took a more conservative approach to private environmental governance. In the United States, Starbucks implemented a discount, rather than a fee, of just ten cents for customers who brought a reusable cup.²² The stated goal of this policy was initially to serve 25 percent of beverages in reusable cups. After hovering around just two percent in the early years of the policy, Starbucks, instead of adopting a private environmental nudge of the sort described above, just revised their goal downward to five percent.²³ Eventually, in 2018–19, the company tested a charge of five pence for single-use cups in some United Kingdom locations. Prior to the COVID-19 pandemic, Starbucks indeed projected, based on preliminary results, that the fee-based nudge would attain the five-percent goal.²⁴ The poor performance of Starbucks' nominal discount-based approach is visually depicted in their own graphic, reproduced in part below.

22. See *Starbucks Brings Back Personal Reusable Cups to Starbucks Cafes in the U.S.*, STARBUCKS STORIES & NEWS (June 8, 2021), <https://bit.ly/3fESNGm> [<https://perma.cc/U7DM-L8V4>].

23. See *id.*

24. See *Starbucks Rolls Out 5p Paper Cup Charge to All Stores Across Britain*, STARBUCKS STORIES & NEWS EMEA (July 9, 2018), <https://bit.ly/3BYHGzr> [<https://perma.cc/M5LS-SX48>].

FIG. 2: PERCENT OF DRINKS SOLD IN REUSABLE CUPS AT STARBUCKS 2009–11



Starbucks and other coffee shops have many reasons why they maintain disposable single-use cups as the default option and, at best, offer nominal discounts to customers who bring reusable receptacles. One prior academic study of private environmental nudging in this area cited efficiency and uniformity in product delivery, as well as sanitation, as among the primary reasons that disposable cups remain the default choice.²⁵ Unfortunately, the COVID-19 pandemic increased the concern around spread of disease²⁶ and put a halt to innovation on this specific topic of private environmental governance altogether. In 2022, Tandem restarted its program and convinced three other local coffee shops to implement the same private environmental nudge.²⁷ As broader society emerges from the pandemic, the world's coffee shops could take a lesson from the case study described here and embrace private environmental nudges if they want to reduce the waste they generate.

II. WHAT IS PRIVATE ENVIRONMENTAL GOVERNANCE?

A. *Origins and Theory*

Private environmental governance represents a relatively novel field of *legal theory*,²⁸ studying the role of private entities (e.g., cor-

25. See Julie Metta, *Promoting Discount Schemes as a Nudge Strategy to Enhance Environmental Behaviour*, FRENCH ASS'N ENV'T & RES. ECONOMISTS WORKING PAPERS 10–12 (May 4, 2020), <https://bit.ly/3A5eFIB> [<https://perma.cc/L7U8-GKY9>].

26. *Cf. id.* at 10 (describing “the societal trauma caused by the severe acute respiratory syndrome (SARS) contamination episode of 2003”).

27. See Tandem Coffee (@tandemcoffeeroasters), *We Now Charge 25¢ for Single-Use Cups*, INSTAGRAM (June 11, 2022), <https://bit.ly/3fCybOE> [<https://perma.cc/8JR4-R8MU>].

28. See Joshua Ulan Galperin, *Board Rooms and Jail Cells: Assessing NGO Approaches to Private Environmental Governance*, 71 ARK. L. REV. 403, 403

porations) in helping solve the great collective action problem of protecting our environment. Vandenberg, the legal scholar who first embraced the term “private environmental governance,” explains that it describes “actions taken by non-governmental entities that are designed to achieve traditionally governmental ends such as managing common pool resources, increasing the provision of public goods, controlling environmental externalities, or more justly distributing environmental amenities.”²⁹ These actions can take many familiar forms. Importantly, those forms mirror the traditional roles of governmental agencies and/or legislative bodies.³⁰ Corporations thus engage in private environmental governance when they set standards, monitor performance, enforce compliance, and adjudicate related disputes.³¹

Taking a step back in abstraction, we can understand private environmental governance as a subset of the larger category of private governance. Private governance describes the way that non-governmental entities impose rules and structures that ultimately shape human behavior—individual and collective.³² “Private” (as opposed to “public”) signifies that the entity crafting and implementing the behavior-influencing policy is not of-and-about the government.³³ And “governance” (as opposed to the more benign “activity”) signifies that the means *and* the ends of the private pol-

(2018) (tracing the first use of the term “private environmental governance” in legal scholarship to Michael P. Vandenberg’s 2007 article *The New Wal-Mart Effect: The Role of Private Contracting in Global Governance*, 54 UCLA L. REV. 913, 925 (2007), but carefully noting, as Vandenberg had, that the term appeared in other disciplines for some years prior); *see also* Vandenberg, *PEG*, *supra* note 6, at 146 (describing private environmental governance as “a new model of legal and extralegal influences on the environmentally significant behavior of corporations and households”).

29. Vandenberg, *PEG*, *supra* note 6, at 146.

30. *See generally* Sarah E. Light & Eric W. Orts, *Parallels in Public and Private Environmental Governance*, 5 MICH. J. ENV’T & ADMIN. L. 1 (2015).

31. *See* Vandenberg, *PEG*, *supra* note 6, at 146 (describing these functions as traditional functions of governments); *see also id.* at 147 (“The common feature of the activities that I characterize as private environmental governance is the development and enforcement by private parties of requirements designed to achieve traditionally governmental ends.”).

32. Tracey M. Roberts, *Innovations in Governance: A Functional Typology of Private Governance Institutions*, 22 DUKE ENV’T L. & POL’Y F. 67, 67 (2011) (defining private governance as the “rules and structures by which individuals, communities, firms, civic organizations, and other entities govern their interests without the direct involvement of the state or its subsidiaries”).

33. *See* Joshua Ulan Galperin, *Environmental Governance at the Edge of Democracy*, 39 VA. ENV’T L.J. 70, 81 (2021) [hereinafter Galperin I] (“Where PEG differs more from public governance is that it occurs in a more crowded field, not with one state, or even a few states, but hundreds or thousands of non-state participants.”).

icy mimic those of government institutions (e.g., regulation of choices for the public good).³⁴ Government institutions, and private actors engaged in governance, seek to control the behavior of multiple constituents indiscriminately. That feature separates governance by entities from everyday actions of individuals, even those made by so-called “influencers.”³⁵ These features make private governance an important topic of study for legal theorists—particularly those concerned with the design of efficient and effective solutions to collective problems. And thorny collective action problems define the field of environmental law. Thus, private ordering aimed at curbing environmental harms emerged as an important, and fruitful, theoretical branch for environmental legal study.³⁶

More than just a thought experiment, the growing number of private actors engaged in some form of pro-environment policymaking (alongside a largely stagnant United States federal government) made salient the practical importance of private environmental governance. This came on the heels of decades of what might have been characterized as anti-environment policymaking for private gain, a more predictable and less remarkable pattern. The shift of corporate orientation, at least in part, towards the public good rightly drew scholarly attention. Even eight years ago, before the recent national political turmoil, Vandenberg observed that “private-private interactions now generate many of the environmental requirements that affect corporate and household behavior, and ultimately environmental quality.”³⁷ He, and other scholars in his wake, have set out to catalog, categorize, and evaluate attempts at private environmental governance. As with any emerging field, significant gaps in research and understanding per-

34. Jonathan M. Gilligan, *Carrots and Sticks in Private Climate Governance*, 6 TEX. A&M L. REV. 179, 182 (2018) (“Private governance occurs when private entities—businesses, not-for-profit organizations, individuals, etc.—pursue a goal traditionally associated with public governance, such as reducing greenhouse gas emissions, through actions that produce broad influence over others.”).

35. See BRITTANY HENNESSY, *INFLUENCER: BUILDING YOUR PERSONAL BRAND IN THE AGE OF SOCIAL MEDIA 2* (2018) (describing the difference between influential celebrities and paid content creators). This is not to say that corporations cannot use celebrities, or paid “influencers,” as part of governance measures designed to control the behavior of their customers. Indeed, that describes a large swath of modern-day marketing. However, the individual celebrity does not engage in governance by simply speaking. *See id.*

36. See, e.g., Symposium, 9 GEO. WASH. J. ENERGY & ENV'T L. 1 (2018), a symposium issue devoted entirely to the topic of private environmental governance.

37. Vandenberg, *PEG*, *supra* note 6, at 133.

sist.³⁸ This work sits at the junction of two important, yet understudied, aspects of real-world private environmental governance—small business and policy informed by behavioral economics.

B. Practical and Scholarly Treatment to Date

In the United States of America, and frankly across the globe, big business is king. Naturally, when attention turns to the activity of non-governmental actors, global, multinational corporations dominate the view. Early work on private environmental governance proved no exception to this big-business bias. Consequently, while much of the focus has been on a few, large individual actors (“whales”), the decisions of those actors in the real world have in turn constrained the theoretical frameworks applied to the study of private environmental governance. The result is a still incomplete picture of what private environmental governance is already doing, and, more importantly, what it has the capacity to do in the future.

In his seminal article, Vandenberg employed just two core categories of examples of private environmental governance—collective standard-setting and bilateral standard-setting.³⁹ These broad categories indeed describe many important types, particularly early instances, of private environmental governance, such as ecolabels, green building standards, and supply chain agreements.⁴⁰ The specific illustrative examples, though, indicate the prominence of certain massive global industries and related associations, like

38. See, e.g., David E. Adelman & Graeme W. Austin, *Trademarks and Private Environmental Governance*, 93 NOTRE DAME L. REV. 709, 756 (2018). Noting that:

Implementing private environmental governance has proved to be more nuanced and conditional than anticipated when it emerged in the 1990s, but over the succeeding two decades ecolabels and other forms of private governance have flourished. For a variety of reasons specific to the context and politics of intellectual property law, trademark law and scholarship have not kept pace.

Id.

39. See Vandenberg, *PEG*, *supra* note 6, at 148; see also Galperin I, *supra* note 33, at 53 (describing the tools familiar to private environmental governance as including “economic and market-based programs, corporate partnership and collaboration, regulatory flexibility, avoidance of litigation, and so-called ‘win-win’ solutions”).

40. See Vandenberg, *PEG*, *supra* note 6, at 148–56 (describing the following general types of collective standard setting: Certification and Labeling Systems; Lending Standards; Commodities Roundtables; Green Building Standards (LEED); Environmental Management Standards; Clean Development Mechanism (CDM) Gold Standard; Environmental Disclosure Standards, and describing the following general types of bilateral standard-setting: Supply Chain Contracting; Other Commercial Agreements; Resource Agreements; Good Neighbor Agreements).

the Forest Stewardship Council,⁴¹ Wal-Mart and McDonald's,⁴² the Roundtable on Sustainable Palm Oil,⁴³ and the International Organization for Standardization (ISO).⁴⁴ The outsized influence of these institutions likely justified the initial focus on them.⁴⁵ And much can still be learned from the examples that follow. Almost a decade later, though, the practical and scholarly focus must turn to examine the far corners and dark crevices of the picture.

The theoretical universe of private governance interventions has expanded. The tools available to non-governmental actors include not just partnerships and collective collaboration but also less formal and more informed mechanisms. And that is a tremendously good thing, especially for small and medium-sized firms who have no ability or desire to engage in industry-wide standard-setting and no leverage to make meaningful demands of their own supply chains.⁴⁶ And not to mention the capital required to invest in some of the more traditional environmental governance measures.⁴⁷ The new tools of private environmental governance have allowed a growing number of firms—of varying sizes—to enter the space. For

41. *See id.* at 149.

42. *See id.* at 150.

43. *See id.* at 152.

44. *See id.* at 154–55.

45. *See* Jonathan M. Gilligan & Michael P. Vandenbergh, *A Framework for Assessing the Impact of Private Climate Governance*, 60 ENERGY RSCH. & SOC. SCI. 101400, Feb. 2020, at 1, 3 tbl.1 (describing the business sector component of the private environmental governance research agenda as focusing on large buyers that have coercive power over supply chains and investor and lender power for publicly traded corporations).

46. *See generally id.* (discussing the leverage large, multinational firms can employ against their suppliers). *See also* Vandenbergh, *PEG*, *supra* note 6, at 157, stating that

[T]he potential influence of supply-chain contracting requirements is huge. At least 65,000 multinational corporations (MNCs) operate roughly 850,000 affiliates around the world, and supply-chain contracting occurs among these affiliates as well as with millions of third-party firms. Wal-Mart alone does eighteen billion dollars per year in business with China, has over 10,000 Chinese suppliers, and would be China's eighth largest trading partner if it were a country.

Id.

47. *See* Vandenbergh, *PEG*, *supra* note 6, at 135–36 n.29 (citing Michael B. Gerrard, *A Proposal to Use Transactions to Leverage Environmental Disclosure and Compliance*, in *MOVING TO MARKETS IN ENVIRONMENTAL REGULATION: LESSONS FROM TWENTY YEARS OF EXPERIENCE* 420, 422 (Jody Freeman & Charles D. Kolstad eds., 2006)) (noting the amount spent on Phase I environmental assessments). Research suggests that firms spend upwards of \$500 billion annually (more than the budget of the Environmental Protection Agency's enforcement division) to assess their environmental impacts. *Id.*; *see also* Michael P. Vandenbergh, *The Private Life of Public Law*, 105 COLUM. L. REV. 2029, 2049 (2005) (noting the size of the EPA's enforcement budget).

many of these tools, the entities with the most financial capital dictate the terms and the form of the governance measure. As one indication of this growth, the Global Reporting Initiative published data showing that by 2018, almost 13,000 companies worldwide had issued over 50,000 sustainability reports.⁴⁸ To the small extent environmental reporting of this kind is standardized, large financial and consulting industry firms have done that work,⁴⁹ and big corporations have enjoyed relative freedom to control the format and depth of disclosures.⁵⁰ Nonetheless, the thousands of reports themselves continue to stream in from firms of all sizes across various industries.

The largest players, and those that have attracted the most scholarly and popular media attention, remain the usual suspects of big business. Many have long written about Wal-Mart's efforts to reduce environmental impacts all the way down its supply chain, which now include quantifiable greenhouse gas emissions reductions thanks to a partnership with the Environmental Defense Fund.⁵¹ The world's largest automakers have also been the subject of some positive attention related to their electric vehicle initiatives. Scholars have pointed to the move to phase out combustion engines as a privately driven initiative that got out ahead of the public regulation (i.e., Corporate Average Fuel Economy (CAFE) standards).⁵² And that type of industry-leader-driven climate progress,

48. Maha Faisal Alsayegh et al., *Corporate Economic, Environmental, and Social Sustainability Performance Transformation Through ESG Disclosure*, 12 SUSTAINABILITY 3910, May 2020, at 1, 2 (citing a 2018 report by the Global Reporting Initiative reporting the precise numbers as 12,964 firms issuing 50,197 sustainability reports on a voluntary basis).

49. See, e.g., Sara Bernow et al., *More than Values: The Value-Based Sustainability Reporting that Investors Want*, MCKINSEY SUSTAINABILITY (Aug. 7, 2019), <https://mck.co/3CxXFpG> [<https://perma.cc/AXN5-FQKD>].

50. See Kenneth P. Pucker, *Overselling Sustainability Reporting*, HARV. BUS. REV. (May–June 2021), <https://bit.ly/3FRIMBA> [<https://perma.cc/5GEU-MQHM>] (“Most companies have complete discretion over what standard-setting body to follow and what information to include in their sustainability reports. In addition, although 90% of the world’s largest companies now produce CSR reports, a minority of them are validated by third parties.”).

51. See Gilligan, *supra* note 34, at 183 (reporting that from 2010 to 2015, Wal-Mart achieved a reduction in greenhouse gas emissions from its supply chain of 28 million metric tons of CO₂ and pledged “a total of one billion tons” of reductions by 2030).

52. See *id.* at 187–88; see also Rob Arnott et al., *Big Market Delusion: Electric Vehicles*, RSCH. AFFILIATES (Mar. 2021), <https://bit.ly/3WxIEMo> [<https://perma.cc/4CVZ-KBK3>] (“Ford has pledged to be completely all-electric in Europe by 2030. General Motors has pledged to phase out all gasoline- and diesel-powered vehicles by 2035 and to be carbon-neutral in all global operations by 2050. Volkswagen plans for 20% of its total sales to be electric cars by 2025.”).

filling a void left by federal inaction, spans across markets with less and less direct connection to greenhouse gas emissions.⁵³

As international negotiations between governments stalled in recent years, negotiations among industry leaders blossomed. A declaration, cheekily named “We Are Still In,” expresses the continued commitment of, among others, over 2,000 American businesses to the reductions in greenhouse gas emissions embodied in the Paris Agreement, despite the backtracking of the United States government.⁵⁴ The declaration specifically acknowledges the “dangerous and costly effects of climate change” and touts commitment to actions that will “multiply and accelerate in the years ahead, no matter what policies Washington may adopt.”⁵⁵ The list of signatories includes household names like 3M and Best Buy, alongside a growing number of smaller, lesser-known businesses.⁵⁶

On the international scale, the financial industry’s stance on climate issues has attracted a good amount of attention. Institutional investors have a tremendous amount of power in the global marketplace. And almost all major economic projects require financing, generally provided by banks looking to make a profit. Thus, the impacts of climate change on *all* sectors indirectly impact the decisions, and the bottom line, of financial institutions. Scholars have noted that the rational choice for these institutions, particularly those with long-term investment prospects, is to impose their own environmental parameters on new projects when government standards are inadequate or nonexistent.⁵⁷ This has borne out in

53. See Jennifer A. Dlouhy, *As Trump Steps Back from Climate Talks, Coke and HP Move In*, BLOOMBERG (Nov. 8, 2017, 10:43 AM), <https://bloom.bg/3fzLm32> [<https://perma.cc/U75X-53KQ>].

54. See *Who’s In*, WE ARE STILL IN, <https://bit.ly/3CmhXST> [<https://perma.cc/7PF8-236F>] (last visited Nov. 20, 2022).

55. “*We Are Still In*” Declaration, WE ARE STILL IN, <https://bit.ly/3Ssp5m9> [<https://perma.cc/CR47-TCH7>] (last visited Nov. 20, 2022).

56. See WE ARE STILL IN, *supra* note 54.

57. See Kristen van de Biezenbos, *Enforcing Private Environmental Governance Standards Through Community Contracts*, 9 GEO. WASH. J. ENERGY & ENV’T L. 45, 46 (2018). The author stated:

[I]f the long-term future for carbon-heavy fossil fuels like coal is bleak, and if a number of countries are still complying with aggressive domestic environmental policies and the Paris Agreement, it makes sense that large companies taking the long view in their investments might impose their own pro-environmental guidelines for the firm and its clients.

Id.; see also Lisa Benjamin, *Institutional Investors in the UK and “Carbon-Major” Companies: Private Environmental Governance Post-Paris*, 9 GEO. WASH. J. ENERGY & ENV’T L. 5, 11 (2018) (“In a letter to the Chairperson of the SEC in 2015, institutional investors representing over \$1.9 trillion in assets stated that they were concerned that oil and gas companies were not disclosing sufficient information about their capital expenditures and exploration plans, therefore omitting material

practice through both collective group action and bilateral agreements on individual deals. With respect to the former, a group of large institutional investors, collectively managing over \$25 trillion in assets, publicly lobbied the countries of the G7 to “rapidly phase out . . . coal, eliminate fossil fuel subsidies, and . . . [tax] greenhouse gas emissions.”⁵⁸ With respect to individual deals, data suggests that more and more of them include environmental conditions. As far back as 2005, more than 70 percent of loan agreements, more than 70 percent of merger and acquisition agreements, and more than 80 percent of commercial lease agreements filed with the Securities and Exchange Commission (SEC) included such conditions, which in many cases required going beyond mere compliance with environmental laws and regulations.⁵⁹ The transactional legal community confirms this trend, with partners at top firms engaging in the negotiation and enforcement of environmental provisions in major commercial contracts.⁶⁰

Perhaps unsurprisingly, much of the legal scholarship discussing private environmental governance has thus far focused on how multinational corporations function in similar ways to national governments in the aforementioned efforts to protect the environment. The size and scope of the international trade system makes it an attractive leverage point and provides an entry point into parts of the world with relatively dysfunctional public environmental governance.⁶¹ The corporations who dictate global market prices (and other product attributes) have all of the regulatory power in this iteration of private environmental governance. Smaller entities that simply respond to market forces have almost no policymaking role to play. Markets are decidedly not democratic governments controlled by participants. The potential for pro-environment market-

risks for investors to consider.”). *But see* Benjamin, *supra*, at 8 (reporting that “companies in the financial sector recently ranked just ahead of the worst performers—energy companies—on the list of Fortune 500 companies with climate targets”).

58. *See* Gilligan, *supra* note 34, at 181.

59. *See* Vandenberg, *supra* note 47, at 2045–56.

60. *See id.* at 2066–67 (describing how a 2002 study revealed that almost all of “the top fifty [private] law firms in the [U.S.] by profits per partner” have lawyers engaged in the types of environmental “transactional practice” that involves the supervision of these environmental investigations and the negotiating, drafting, and enforcing of the provisions in these agreements).

61. *See* MICHAEL P. VANDENBERGH & JONATHAN M. GILLIGAN, *BEYOND POLITICS: THE PRIVATE GOVERNANCE RESPONSE TO CLIMATE CHANGE* 119–76 (2017).

ing, and actual positive impact, has not gone unnoticed by the larger players and scholars studying them.⁶²

Those who study other institutional actors have to some extent embraced the market-influence paradigm as well. Some draw parallels to large multinational corporations when making the case for private environmental governance activities by different types of entities. For example, scholars have written about the potential for private environmental governance by religious⁶³ and educational⁶⁴ institutions. The treatment of these private environmental governance activities justifies them based, in some part, on similarities to the world of big business. On this view, religious institutions, such as the Catholic Church, have the “size” and “reach” of large corporations,⁶⁵ and thus could play “a significant role in shaping ‘global regulatory norms.’”⁶⁶ And educational institutions are motivated by “cost savings” and “long planning and investment horizons.”⁶⁷ However, these pseudo-corporate traits are only part of the picture in terms of the potential impact of private environmental governance. The influence of religion on individual morality, for instance, presents a unique and powerful opportunity for positive impact.⁶⁸

62. See, e.g., Gilligan, *supra* note 34, at 197 (describing an “opportunity to provide a more optimistic message than is sent by a narrow focus on the harmful things large corporations do”).

63. See, e.g., Albert C. Lin, *Pope Francis’ Encyclical on the Environment as Private Environmental Governance*, 9 GEO. WASH. J. ENERGY & ENV’T L. 33, 37 (2018).

64. See, e.g., Light & Orts, *supra* note 30, at 57–74.

65. See Lin, *supra* note 63, at 41–42. The author stated:

[P]rivate environmental governance typically refers to the development and application of standards by private actors, including transnational corporations (“TNCs”). The Catholic Church resembles a TNC in its size and reach, a fact that suggests their potential comparability in analyses of private environmental governance.

...

... Large religious organizations, like TNCs, are powerful and far-reaching institutions. The various avenues by which TNCs engage in environmental governance—shaping environmental policies, implementing environmental regulations, and adopting environmental management systems—could offer a useful blueprint for religious institutions.

Id.

66. *Id.* at 37.

67. Michael P. Vandenberg et al., *The Gap-Filling Role of Private Environmental Governance*, 38 VA. ENV’T. L.J. 1, 46 (2020).

68. See, e.g., Pope Francis, *Encyclical Letter Laudato si’ of the Holy Father Francis on Care for Our Common Home*, HOLY SEE (May 24, 2015), <https://bit.ly/3dWcl0n> [<https://perma.cc/S8RN-8HEU>] (acknowledging that religion sets out to apply moral pressure on the highest levels of civic and economic power); see also Pam McVety, *Guide to Going Carbon Neutral*, PRESBYTERIAN MISSION 9 (2006), <https://bit.ly/3FPnzaw> [<https://perma.cc/6NMW-PUAJ>] (explaining how the Presbyterian Church resolved to encourage carbon neutrality among its more than one

The educational mission and connection to students and alumni add extra weight to university actions as well.

The features and effectiveness of private environmental governance activities by non-corporate actors demand more scholarly attention. Aggregated, these actors significantly affect our planet. And, regardless of individual impact, the hyper-responsive and morally informed approaches of specific actors to collective problems present opportunities for experimentation.⁶⁹ For essentially the same reasons, as described more fully in the next section, small- and medium-sized businesses, those that serve defined sets of stakeholders, are similarly worthy of study.⁷⁰

C. *Small Business Perspective*

The little guy can have a big impact. The dispute on that particular point has waned in recent years. Acknowledging that the scholarly and popular media attention has focused on “large corporations like Facebook, Google, and Walmart,” scholars have begun to take notice of the efforts of companies of all sizes.⁷¹ By 2016, Vandenbergh and others found that almost half of the bottom quintile of the Fortune 500 had made environmental commitments that could be characterized as private environmental governance.⁷² Even that focus, though purporting to be more inclusive of smaller entities, treats America’s 500 largest corporations⁷³ as the relevant universe of actors. Such a perspective leaves out many important and innovative players. For instance, enterprises with fewer than 250 employees comprise most companies in the European Union.⁷⁴

million American members and their churches pursuant to “the Christian mandate to care for creation”).

69. See Light & Orts, *supra* note 30, at 57 (“[E]xperiments in private environmental governance can serve as ‘laboratories of experimentation’ not only for other private actors but also for public policy makers seeking to design public law at both the federal and subfederal levels.”); see also Erik G. Hansen & Johanna Klewitz, *The Role of an SME’s Green Strategy in Public-Private Eco-Innovation Initiatives: The Case of Ecoprofit*, 25 J. SMALL BUS. & ENTREPRENEURSHIP 451, 451 (2012) (describing “characteristics [of small companies] that are both advantageous for eco-innovation (flexibility to market demands) and disadvantageous (lack of financial capital)”).

70. See Hansen & Klewitz, *supra* note 69, at 451 (“Undertaking more research with small and medium-sized enterprises (SMEs)—here defined as companies with fewer than 250 employees (TCEC, 2003)—is important.”).

71. See Vandenbergh et al., *supra* note 67, at 40.

72. See *id.*

73. See *Fortune 500*, FORTUNE, <https://bit.ly/3y7TcHq> [<https://perma.cc/QHW7-GZB2>] (last visited Nov. 20, 2022) (“Together, the 500 corporations on this year’s list generated a record \$16.1 trillion in revenue and \$1.8 trillion in profits.”).

74. Hansen & Klewitz, *supra* note 69, at 451; see also Juan Pablo Sánchez-Infante Hernández et al., *Moderating Effect of Firm Size on the Influence of Cor-*

More scholarly attention directed at smaller, for-profit actors is important for two primary reasons: (1) Their aggregated impact is potentially significant, and (2) their unique features and motivations allow them to push the bounds of private environmental governance (particularly, for our purposes here, in a behaviorally informed direction).

The majority of the world's private entities can be defined as small- and medium-sized enterprises ("SMEs"). Among Organisation for Economic Co-operation and Development (OECD) countries, SMEs constitute over 99 percent of all enterprises.⁷⁵ The majority of the world's workforce likewise is employed by these SMEs,⁷⁶ and these businesses account for a majority of the value added on a yearly basis to OECD economies.⁷⁷ To put it bluntly, small business, in some sense, rules the world. Thus, when the topic of interest, as here, is *how* private businesses make rules (i.e., private governance), small- and medium-sized companies must not go overlooked. Indeed, from an environmental and innovation perspective, these entities arguably have an even more outsized influence.

Just in terms of impact on the planet, estimates suggest that small firms deserve attention. In Europe, SMEs generate roughly two-thirds of industrial pollution.⁷⁸ On the positive side, these firms disproportionately strive for environmental responsibility and contribute to developments in sustainability. "Eco-innovators, for example, can pioneer or lead new green industries, especially in local and emerging market contexts that may be unappealing or unfeasible for large corporations."⁷⁹ The evidence supports this hypothesis that small firms punch above their weight when it comes to green

porate Social Responsibility in the Economic Performance of Micro-, Small- and Medium-Sized Enterprises, 151 *TECH. FORECASTING & SOC. CHANGE* 119774, Feb. 2020, at 1, 1 (explaining the importance of a focus on micro-, small-, and medium-sized enterprises (MSMEs) as twofold: (1) "very few works have analyzed [corporate social responsibility] in micro-, small- and medium-sized enterprises" and (2) "due to the economic and social importance of MSMEs, 99% of all European businesses are MSMEs").

75. SHASHWAT KOIRALA, *SMEs: KEY DRIVERS OF GREEN AND INCLUSIVE GROWTH* 4 (2018), <https://bit.ly/3DC8OVz> [<https://perma.cc/7C2W-5AZ3>] (reporting that in 2013, 99.7 percent of the OECD world's businesses were SMEs).

76. *See id.* (reporting that in 2013, SMEs were responsible for 60 percent of the OECD world's employment).

77. *See id.* ("[SMEs] are also major engines of value creation, accounting for between 50% and 60% of value-added in OECD economies.").

78. *See id.* ("SMEs, on aggregate, have a high environmental footprint. In fact, literature estimates that SMEs contribute 60–70% of industrial pollution in Europe.").

79. *Id.*

technologies and environmental responsibility. One study of patents in the United States found that across all “green technologies,” small firms patented about twice as much technology as one would expect based on output across all patent categories.⁸⁰ Perhaps unsurprisingly, the majority of new and emerging companies fit within the SME definition. Many of those companies are increasingly entering the environmental niches of existing markets⁸¹ and engaging in private environmental governance.

With respect to innovation in private environmental governance, data from studies of other types of innovation suggest that small firms can, and should, be leaders here as well. On the ground, the differences in innovation capacity between small and large firms is more complex than initial, anecdotal observation might suggest. No one size firm can accurately be characterized as dominating across all aspects of innovative behavior. The advantages small firms have demonstrated, however, lend themselves particularly well to private environmental governance in general, and nudging more specifically. For instance, while large firms generally excel at producing fundamentally new technologies, small firms excel at implementing those technologies in new ways.⁸² So, one might expect small firms to be the first to use new software or hardware to present alternatives to consumers that make salient environmental

80. See Anthony Breitzman & Patrick Thomas, *Analysis of Small Business Innovation in Green Technologies*, SBA OFF. ADVOC. 5 (2011), <https://bit.ly/3E1aYiW> [<https://perma.cc/T2XS-EJAM>] (“In all green technologies combined, small firms account for 14 percent of the patents, almost twice as many as one would expect given the overall level of small firm patent output.”). The authors also determined:

Overall, small firms account for approximately 8 percent of all patents in the U.S. innovative firm database. However, in both smart grids and solar energy, small firms account for more than 32 percent of the patents. Small firms also account for more than 15 percent of the patents in batteries and fuel cells.

Id.

81. See Koirala, *supra* note 75, at 4 (acknowledging that market sociotechnical niches create space for SMEs to enter the market and innovate and reporting that “in the United Kingdom and Finland, SMEs represent more than 90% and 70% of clean tech enterprises respectively”).

82. See Bart Nooteboom, *Innovation and Diffusion in Small Firms: Theory and Evidence*, 6 SMALL BUS. ECON. 327, 340–42 (1994); see also Jeroen P.J. de Jong & Orietta Marsili, *The Fruit Flies of Innovations: A Taxonomy of Innovative Small Firms*, 35 RSCH. POL'Y 213, 222 (2006) (reporting results of a survey of 1,234 small firms, of which 92 percent had implemented process innovations, while only 24 percent considered themselves “first mover innovators”); Helena Forsman & Ulla Annala, *Small Enterprises as Innovators: Shift from a Low Performer to a High Performer*, 56 INT'L J. TECH. MGMT. 154, 154 (2011) (finding incremental innovations, rather than radical innovations, more common among small businesses).

costs (i.e., framing or priming nudges).⁸³ Furthermore, as the discussion thus far already suggests, small firms have proven more successful innovators in niche markets.⁸⁴ In many sectors, the environmentally conscious market segment still remains a niche.⁸⁵ In those sectors, small firms will push the bounds of private environmental governance, including with nudges. The most effective examples will then diffuse to the broader market, especially as the boundaries between the niche and conventional blur over time.⁸⁶

In 2013, Vandenberg wrote that it was “easy to miss the significance of [private environmental governance activities] if we assume[d] government is the relevant actor for resolving collective action problems.”⁸⁷ Now, it is easy to miss the significance of small firm private governance activities if we assume large corporations are the relevant actors for resolving collective action. Previous work focused on the impact of individual consumers, rather than the companies that serve them, illustrates this point. Many consumers frequent companies of all shapes and sizes. Retail investors similarly own equity in a wide variety of entities.⁸⁸ Other research has focused on bilateral business relationships in areas that are not characterized by the activity of large corporations, such as leasing of commercial property⁸⁹ and community contracts.⁹⁰

83. See discussion *infra* Part V.

84. See Nooteboom, *supra* note 82, at 340–42 (describing large firms as better at the large scale, efficient production versus small firms at specialty production for niche markets).

85. See Saugat Neupane et al., *Strategic Profile for Positioning Eco-Apparel Among Mainstream Apparel Consumers*, 12 J. GLOB. FASHION MKTG. 229, 229–44 (2021) (“Only a niche segment of consumers valued the quality of life and chemical-free life. . . . Focusing on environment-friendly value factors may work for a niche segment of highly environment-friendly consumers, not the mainstream consumers who expect apparel to be fashionable, stylish and colourful.”); see also Nathaniel Dafydd Beard, *The Branding of Ethical Fashion and the Consumer: A Luxury Niche or Mass-Market Reality?*, 12 J. DRESS, BODY & CULTURE 447, 447–68 (2008).

86. See David Gibbs & Kirstie O’Neill, *Rethinking Sociotechnical Transitions and Green Entrepreneurship: The Potential for Transformative Change in the Green Building Sector*, 46 ENV’T & PLAN. A: ECON. & SPACE 1088, 1089 (2014) (“We discovered that individuals move between ‘green’ and ‘conventional’ business, evolving over time, such that this is a fluid and blurred, rather than static, state.”).

87. Vandenberg, *PEG*, *supra* note 6, at 137.

88. See Benjamin J. Richardson, *Financial Markets and Socially Responsible Investing*, in COMPANY LAW AND SUSTAINABILITY: LEGAL BARRIERS AND OPPORTUNITIES 228 (Beate Sjøfjell & Benjamin J. Richardson eds., 2015) (calling investors “unseen polluters” because the focus generally is on the companies they invest in).

89. See Darren A. Prum, *Commercial-Property Leases as a Means for Private Environmental Governance*, 35 GA. ST. U. L. REV. 727, 763 (2019) (“As explained by a standard law-and-economics approach, the landlord and tenant view the envi-

Energy generation and use provide a nice frame to demonstrate the importance of drilling down to the consumer and/or small firm level. Much has been made of Wal-Mart's commitment to stocking compact fluorescent and LED bulbs rather than traditional incandescent bulbs.⁹¹ But that initiative would fall flat without consumer cooperation. The success of the initiative then says something more important about how to influence consumer behavior than it does about the benevolence of Wal-Mart.⁹² Consumers purchase energy-saving products at small retailers as well, some tailored specifically to that market segment.⁹³ Those entities engage in private environmental governance, impacting consumer behavior and affecting the overall energy consumption. Individual regional energy providers and utilities have also attempted to influence consumer behavior with energy conservation programs.⁹⁴ Widespread adoption of some minor behavioral interventions by electric utilities has the potential to abate almost 13 million metric tons of CO₂ annually, as well as save Americans more than 2 billion dollars in yearly energy costs.⁹⁵

Study of the efficacy of private environmental governance measures has proved somewhat elusive and remains incomplete,

ronment—in this situation the parcel of land—as a common pool of resources that allows for its overuse because the parties gain all of the advantages and share the costs.”).

90. See van de Biezenbos, *supra* note 57, at 49 (“While more limited in scope compared to other private environmental governance measures, community contracts are an important tool for protecting local environmental resources.”). The author discussed these private contracts as follows:

Two examples are community benefits agreements (“CBAs”) and good neighbor agreements (“GNAs”). CBAs are considered proactive and emerged as a response to large-scale real estate projects that displaced low-income residents and changed the character of communities. For communities dealing with environmental damage caused by chemical plants and other facilities, GNAs are reactive in that they provide a way to bypass litigation

Id. at 47.

91. See, e.g., Katherine Tweed, *Wal-Mart Turns Up the Heat in \$10 LED Bulb Pricing War*, ENERGY NEWS NETWORK (Oct. 4, 2013), <https://bit.ly/3Sx7c5L> [<https://perma.cc/WEL2-583B>].

92. See Gilligan, *supra* note 34, at 186.

93. See, e.g., ECO LIGHTING USA, <https://bit.ly/3SuIS4z> [<https://perma.cc/VP3K-TDPW>] (last visited Nov. 19, 2022).

94. See SUSAN MAZUR-STOMMEN & KATE FARLEY, ACEEE FIELD GUIDE TO UTILITY-RUN BEHAVIOR PROGRAMS 1–5 (2013), <https://bit.ly/3hawI30> [<https://perma.cc/NE6Y-77WN>] (reporting that there were 281 behavior-based energy conservation programs offered between 2008 and 2013 by 104 different energy providers and third parties).

95. See Hunt Allcott & Sendhil Mullainathan, *Behavior and Energy Policy*, 327 SCIENCE 1204, 1204 (2010).

even for the largest actors.⁹⁶ Many things account for the lack of reliable data. One important contributor also presents as a reason to expand the universe of research subjects—the variance in environmental impact across industries.⁹⁷ Different industries embody different market structures—from monopoly (e.g., utilities) to oligopoly (e.g., oil and gas) to monopolistic competition (e.g., food service) to near-perfect competition (e.g., commodities). Those industries characterized by more competition necessarily have more relevant smaller players. Some of those industries, such as food service, nonetheless have tremendous collective environmental impact. The private governance activities of the individual participants thus carry real, tangible importance. The lack of conclusive data on the precise effects of private environmental governance does not mean scholars have to throw up their hands when debating its worth. The consensus based on the studies so far conducted—and the background attributes of markets, industries, and public governments—holds steadfastly that these efforts can have a significant effect on overall environmental health.⁹⁸ Thus, continued and expanded study remains warranted.

For public governance in the United States, federalism provides an organizing framework and one theory of effective policymaking. Imbue smaller governmental units with power to regulate and the freedom to innovate in doing so, and the result will produce optimal policies at all levels—retaining variation when desired and achieving uniformity when certain policies prove most effective. Or so the story goes. This work does not present an occasion for debating the truth of that narrative. All that one need acknowledge here is that policy variation can, and does, in some

96. See Noriko Kusumi, Book Review, 19 *GLOB. ENV'T POL.* 129, 129, 130 (2019) (reviewing VANDENBERGH & GILLIGAN, *supra* note 61) (“[E]ven though the data and cases about voluntary practices by the private sector provided in the book (between chapters 4 and 7) are numerous, they are somewhat anecdotal, and the entire picture of the proliferation of private regimes and their efficacy can be difficult to deduce.”).

97. See *id.* (“[T]he environmental impact of business activities tremendously varies based on industry—from IT, services, and manufacturing to infrastructure and extractive industries.”).

98. See, e.g., Gilligan & Vandenberg, *supra* note 45, at 4 (“The technical potential and behavioral plasticity for private governance measures appear significantly smaller than for public governance, but are large enough, nonetheless, to make meaningful contributions to mitigating global greenhouse gas emissions.”). Most importantly, the initiative feasibility for many private governance measures seems far more favorable than for public governance. This raises the possibility that private governance can move quickly, so that modest, but rapid reductions in emissions from a business-as-usual trajectory can buy time for public governance to enact more sweeping and powerful measures.

significant amount, occur. The same holds true in markets where smaller firms are empowered. And, perhaps paradoxically more than voters, consumers influence exactly how, when, and where that variation manifests. Heterogeneous incentives and market pressures influence firm behavior differently depending on the size of the firm. Large firms care primarily about the majority national (or international) preferences. Small firms respond to subsets of consumers with potentially very different values and preferences. Their behavior is thus not dissimilar from other institutions that respond to more than just aggregate market forces, such as educational institutions or non-governmental organizations.⁹⁹

Sarah Light compellingly made the case that “[p]rivate governance scholarship should look beyond business firms, industry associations, and the non-governmental organizations (NGOs) that target the behavior of business firms.”¹⁰⁰ She argued that responsive, mission-driven institutions are well-suited to policy experimentation and diffusion—exactly the sort imagined by federalism.¹⁰¹ This is particularly true when the mission of the institution is consistent with those federalism-esque goals.¹⁰² Although most small private businesses likely do not make education their mission, many do have values-based missions that go beyond profit maximization.¹⁰³ And some of those missions, including not explicitly environmental ones—such as community-building—resonate with the concepts of policy experimentation and diffusion.

The type of policy experimentation most rapidly gaining attention in the past decade or so involves the integration of behavioral economics. Although much of the attention has been on the federal government’s embrace of behavioral economics,¹⁰⁴ the private sector has not lost step. In some ways, the private sector is better equipped to experiment with behavioral economics in private environmental governance. For instance, public government lacks an ef-

99. See Light & Orts, *supra* note 30, at 66.

100. *Id.* at 59.

101. See *id.* at 66.

102. See *id.*

103. See Ke Cao et al., *Standing Out and Fitting In: Charting the Emergence of Certified B Corporations by Industry and Region*, in 19 *ADVANCES ENTREPRENEURSHIP, FIRM EMERGENCE & GROWTH, HYBRID VENTURES* 1, 16 (Andrew C. Corbett & Jerome A. Katz eds., 2017) (examining data from B Lab on certified B Corporations—businesses that sought and achieved certification for high social and environmental performance—and finding, among other things, that B Corporations tended to be smaller in terms of employees and annual sales figures).

104. See, e.g., Tanya Basu, *The White House Is Now Using Behavioral Economics to Improve Policy*, *TIME* (Sept. 24, 2015, 3:06 PM), <https://bit.ly/3fQReFi> [<https://perma.cc/2UDR-YHHV>].

ficient feedback mechanism for its policy innovations—if constituents do not respond as the behavioral theory predicted, the ability to take notice of the poor performance and change course is limited.¹⁰⁵ Private firms, particularly small ones, have the immediate feedback mechanism of the market—consumers change behavior or exit the market or choose a competitor. Furthermore, businesses, especially retail and other consumer-facing entities, can draw on more past experience—having dabbled in influencing behavior through marketing for over half a century. For these reasons and others, there are some who argue that nudges—the purest incarnation of behavioral economics in policy design¹⁰⁶—should be left to the private sector.¹⁰⁷ One need not subscribe to a theory of nudges that excludes public governance, however, to recognize that interesting private environmental policies based on nudge theory exist and deserve further study. An objective comprehensive look at even existing, let alone theoretical, nudges reveals successful efforts in both the public and private spheres.

III. WHAT IS A NUDGE?

Behavioral economics starts with the goal of improving the accuracy of economic explanations for human decisions by incorporating generally observed physiological tendencies.¹⁰⁸ Behavioral economists have observed that the way choices are presented (“choice architecture”) greatly influences the quick valuation calculations and decisions humans make.¹⁰⁹ Cass Sunstein and Richard Thaler coined the term “nudge” over a decade ago to describe “any aspect of the choice architecture that alters people’s behaviour in a predictable way without forbidding any options or significantly

105. Richard Williams, *Conclusion: Behavioral Economics and Policy Interventions*, in *NUDGE THEORY IN ACTION: BEHAVIORAL DESIGN IN POLICY AND MARKETS* 317, 325 (Sherzod Abdukadirov ed., 2016) (“‘Government choice architects do not face comparable ‘market tests’ and thus face greater problems overcoming their imperfections,’ which means that poor government products are not removed from the market. No doubt, once in place, government policies gain adherents who profit from them and lobby to keep the policies in place.”).

106. See *infra* Part III.

107. See Sherzod Abdukadirov, *Who Should Nudge?*, in *NUDGE THEORY IN ACTION*, *supra* note 105, at 159, 159–60.

108. See Colin F. Camerer & George Loewenstein, *Behavioral Economics: Past, Present, Future*, in *ADVANCES IN BEHAVIORAL ECONOMICS* 3, 3 (Colin F. Camerer, George Loewenstein & Matthew Rabin eds., 2004) (“Behavioral economics increases the explanatory power of economics by providing it with more realistic psychological foundations.”).

109. Richard H. Thaler et al., *Choice Architecture*, in *THE BEHAVIORAL FOUNDATIONS OF PUBLIC POLICY* 428, 430 (Eldar Shafir ed., 2013).

changing their economic incentives.”¹¹⁰ Nudge theory builds on the foundational insight that created the subfield of behavioral economics—humans are not rational actors. In other words, humans do not act as traditional economic theory would predict. Human beings, for instance, imbue choices with different values even when the measurable economic outcome is the same. Nudge theory goes two steps beyond this initial insight. First, it asserts, and supports with data, that humans make choices that actually *decrease* their overall welfare in the long run because of the aforementioned irrationality of human behavior. Behavioral economists consider these types of choices the product of flawed decisionmaking. Second, it sets out to correct that problem by identifying the flaws in decision-making processes and utilizing them to influence behavior.¹¹¹

More specifically, humans tend to be myopic and impulsive, putting extra weight on short-term benefits when making decisions (and undervaluing or outright ignoring long-term benefits and costs).¹¹² In real-world experience, this should be quite familiar—it is much harder to ignore the fries once they are in front of your dining partner than it was when you declined to order your own. In technical parlance, economists describe less immediate features as lacking salience. When one such feature carries an important consequence, either positive or negative, it becomes problematic that human beings tend to nonetheless ignore it.¹¹³ In that situation, inefficient decisions generate less welfare for individuals and society.

As one might expect, the notion of secretly influencing people’s behavior has raised some hackles. Paternalism, particularly in the United States, is generally frowned upon.¹¹⁴ And nudges, if unchecked and taken to their extreme, certainly venture deep into

110. THALER I, *supra* note 11, at 6.

111. Daniel M. Hausman & Brynn Welch, *Debate: To Nudge or Not to Nudge*, 18 J. POL. PHIL. 123, 126 (2010) (“[Nudges] are called for because of flaws in individual decision-making, and work by making use of those flaws.”).

112. See SUNSTEIN, *supra* note 11, at 9.

113. *Id.* (“If an important feature of a situation, an activity, or a product lacks salience, people might ignore it, possibly to their advantage (perhaps because it is in the other room, and fattening) and possibly to their detriment (if it could save them money or extend their lives).”).

114. See Nicolas Cornell, *A Third Theory of Paternalism*, 113 MICH. L. REV. 1295, 1296 (2015) (remarking that “paternalism carries a very negative connotation in legal and public policy discourse” and citing the examples of seat belt laws and soft drink ordinances as examples); see also *id.* (“Both sides of the political aisle routinely characterize the other side as paternalistic.”); *id.* at 1297 (“[T]he fact that an action, law, or policy would count as paternalistic is at least a prima facie reason against adopting it—if a paternalistic action, law, or policy is permissible, it is permissible only in spite of its paternalism.”).

that realm. Nudging as policy, in its strongest form, might contradict John Stuart Mill's famous "harm principle." Mill posited that the only acceptable reason for regulation of a citizen's behavior (i.e., restriction of choice) is to prevent harm to *others*.¹¹⁵ Nudge theory directly challenges that principle—and the related concept of "consumer sovereignty"—by claiming that "in certain contexts, people are prone to error, and paternalistic interventions would make their lives go better."¹¹⁶ In other words, from a utilitarian perspective, the improvement in people's lives created by nudge-improved decisions outweighs the accompanying loss of complete autonomy of choice. If that tradeoff is not compelling enough, one need simply look at the real context of human choices to find that the complete autonomy idealized by Mill more than a century ago never truly exists. Choice architecture (i.e., the way choices are presented), even absent nudging, is almost always a product of some intentional design in the modern world. Whether we are selecting what to eat for lunch in a restaurant or which doctor to visit in a health care system or which benefits to apply for, someone has carefully manicured the environment where that choice is made.¹¹⁷ Against that background, would it not be preferable for the choice architect to operate informed by behavioral economics research, so that individuals make optimal choices (*measured by their own preferences*) more often? An affirmative response to that rhetorical question is all that is required to accept some form of nudging as sound policy.

As the above suggests, policies informed by behavioral economics can range from a mere tap to an overbearing shove. A nudge connotes the appropriate balance in between, recognizing that powerful actors like governments and corporations have the potential to err and cause widespread harm when they do. Nudges

115. JOHN STUART MILL, ON LIBERTY 16 (1859).

That principle is, that the sole end for which mankind are warranted, individually or collectively, in interfering with the liberty of action of any of their number, is self-protection. That the only purpose for which power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others.

Id.

116. SUNSTEIN, *supra* note 11, at 4–5.

117. *Id.* at 14–15.

Choice architecture exists whenever we enter a cafeteria, a restaurant, a hospital, or a grocery store; when we select a mortgage, a car, a health care plan, or a credit card; when we turn on a tablet or a computer and visit our favorite websites (including government websites), which highlight some topics and downplay others; and when we apply for drivers' licenses or building permits or social security benefits.

Id.

represent “the mildest and most choice-preserving” of regulatory interventions, “initiatives that maintain freedom of choice while also steering people’s decisions in the right direction (as judged by people themselves).”¹¹⁸ Sunstein thus proclaims the “First (and only) Law of Behaviorally Informed Regulation: In the face of behavioral market failures, nudges are usually the best response, at least when there is no harm to others.”¹¹⁹ In this law, we find a harkening back to Mill’s harm principle but now amended to account for the realities of human behavior and choice.

Other scholars have drilled down further and characterized different categories of nudges as more or less preferable. Two such useful extremes are the “Pareto nudge” and the “rent-seeking nudge.” A Pareto nudge is one that both maximizes profit for the nudger and maximizes long-term utility for the nudged.¹²⁰ Pareto nudges represent the ideal of behaviorally informed governance—of the public or private variety. A “rent-seeking nudge,” on the other hand, is one that creates profit for the nudger at the cost of long-term utility for the nudged. These nudges would make inefficient policy that fails to maximize overall social utility. The universe of potential nudges includes many in between these extremes, presenting a fruitful field on which academics, policymakers, and consumers can debate.

IV. NUDGES AS PRIVATE ENVIRONMENTAL GOVERNANCE

At the outset, it is worth reiterating that private actor nudges, like any private environmental governance measure, when utilized most effectively, serve as a complement or a precursor to public regulation.¹²¹ In other words, neither private nor public actors working alone will abate a “super wicked” environmental policy

118. *Id.* at 17.

119. *Id.*

120. Jodi N. Beggs, *Private-Sector Nudging: The Good, the Bad, and the Uncertain*, in *NUDGE THEORY IN ACTION*, *supra* note 105, at 125.

121. Magda Osman et al., *Sustainable Consumption: What Works Best, Carbon Taxes, Subsidies and/or Nudges?*, 43 *BASIC & APPLIED SOC. PSYCH.* 169, 171 (2021) describing that:

It is a widely shared view in the behavioral change community that “soft” interventions be applied as a complement to rather than replacement of more traditional policy tools in the context of climate change. . . . [And] . . . behavior change research targeting pro-environmental behaviors . . . concluded that the most effective interventions included both financial and behavioral components.

Id. But see Galperin I, *supra* note 33, at 73 (“[T]his Article tries to prove that private environmental governance pulls all the same democratic triggers as public governance. These triggers are politics, choice, and liberty.”).

problem like climate change.¹²² Just because a particular tool cannot wholly solve a monumental global commons problem does not render that tool irrelevant from the perspective of legal scholars and governance experts—or, frankly, the world. A central question of this work, though, confronts the characterization of nudging policies in the private sector. Do such policies fit under the relatively newly considered umbrella of private environmental governance? For the reasons that follow, the answer is yes.

Let's begin by breaking down the phrase private environmental governance into separate components—private, environmental, governance.¹²³ If nudges by private actors check these three boxes, scholars, and society writ large, can appropriately analyze them as private environmental governance measures. Importantly, the answer may differ for specific nudges—one need not conclude that every nudge of any shape or size meets the criteria for analysis. This work will take a generalized approach, examining whether at least a good portion of them meet the criteria for analysis.

The middle requirement—that a policy be environmental—is easily dispensed with. The environmental definitional dimension simply exists to separate private governance measures focused on issues of planetary health (e.g., climate change) from those focused on other concerns (e.g., human rights). There certainly exists a long list of nudges aimed at improving decisionmaking along the dimension of environmental consequences, and those are the focus of this work. The more difficult definitional question comes with a broader philosophical question about what makes a corporate action private governance.

Vandenbergh admirably confronts this question head-on in his seminal work. He rightly observes that “the boundary between private governance and simple market activity is often unclear.”¹²⁴ Others following in his wake have tried to bring more clarity to the field. Surveying the existing scholarship, Joshua Galperin points out that “private” simply serves as a descriptor of the locus of the relevant decisionmaking.¹²⁵ In other words, if a private actor is com-

122. Richard J. Lazarus, *Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future*, 94 CORNELL L. REV. 1153, 1160 (2009).

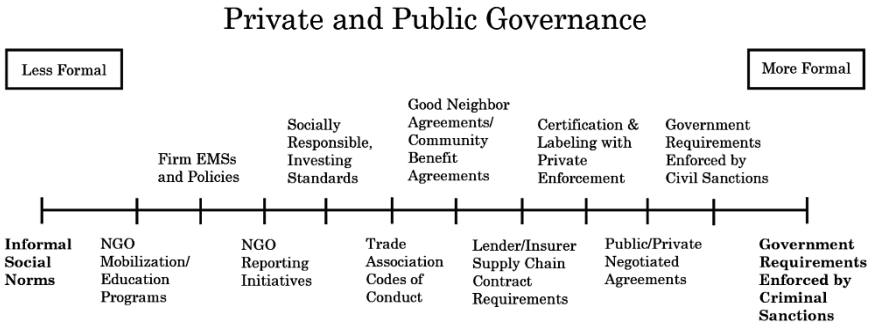
123. For a longer and more insightful trip down this particular road (or rather three forks in the road), see Joshua Ulan Galperin, *Private, Environmental, Governance*, 9 GEO. WASH. J. ENERGY & ENV'T L. 1 (2018) [hereinafter Galperin II]. See also Vandenbergh, *PEG*, *supra* note 6, at 178–79 (“To constitute private environmental governance, an activity must be ‘private’ and must involve ‘governance.’”).

124. Vandenbergh, *PEG*, *supra* note 6, at 178–79.

125. See Galperin II, *supra* note 123, at 1.

pelled to adopt a policy (perhaps a pricing nudge) by a public regulation (perhaps a plastic bag or plastic cup ordinance), one could not classify the policy as *private* environmental governance activity. If, on the other hand, the private actor adopted the same policy absent government compulsion, one could classify the policy as private environmental governance.

The following spectrum, as depicted by Vandenbergh,¹²⁶ helps to illustrate the point:



At the right, formal end of the spectrum are activities that are best categorized as public governance, even public-private negotiated rulemaking. As one moves toward the center, one finds activities most easily classified as private governance. Then, at the left, less formal end exist activities that push on the final requirement—governance.

Legal scholars writing about private environmental governance have probably spent the most time debating about the governance edge of the definition.¹²⁷ It carries particular salience in our field because of the rich literature on the distinction between laws and norms, and because of the simple truth that *legal* scholarship should probably have law as its primary subject. Vandenbergh describes how the institutionalization and formalization of private governance activities separate them from traditional social norms.¹²⁸ And the animating foci of private governance activities distinguish them from ordinary market behavior.

Rather than reflecting a desire to maximize profits (or minimize costs), “[private governance activities] reflect private preferences for: [1] the management of common pool resources, [2] the creation of public goods, and [3] the reduction of negative external-

126. Vandenbergh, *PEG*, *supra* note 6, at 179.

127. *See generally* Galperin I, *supra* note 33.

128. Vandenbergh, *PEG*, *supra* note 6, at 170.

ities.”¹²⁹ Such governance activities go beyond ordinary free market, commercial behavior in that they restrict individual behavior (of firms and consumers) for collective benefit (in one of those three aforementioned forms). Indeed, one straightforward definition of “governance” describes it as restriction on behavior.¹³⁰ Thus, at the most basic level, private restrictions for public benefit are governance.

However, norms also constrain behavior and embody collective values. And norms decidedly exist outside of the category of governance, even if they do shape collective behavior. Private governance differs from other norm-based forms of private ordering along two important dimensions—creation and enforcement. While norms develop organically and exist in the ether of the social conscience, private governance gets developed intentionally and memorialized.¹³¹ Importantly, formalized governance policies communicate their content to all—not just the players in the market.¹³² Transgression of norms may lead to ad hoc social or economic consequences; violation of formalized environmental commitments carries more certain sanction, often backed by legal remedies (e.g., an action for breach of contract).¹³³

Ecolabels and certifications—such as MSC,¹³⁴ FSC,¹³⁵ LEED¹³⁶—help concretize the just-described attributes of private environmental governance. To designate a product with one of these marks, the producer must adhere to a set of published standards. The mark conveys information to all consumers, even those that choose other products or opt out of the market. A third-party non-governmental entity polices the use of the label and/or certifies particular products. Ecolabels and certifications draw on, formalize, and make enforceable norms of environmental performance,¹³⁷

129. *Id.*

130. Galperin II, *supra* note 123, at 3 (citing Vandenbergh, *supra* note 28, at 916).

131. Vandenbergh, *PEG*, *supra* note 6, at 165.

132. *See id.*

133. *See id.*

134. MARINE STEWARDSHIP COUNCIL, <https://bit.ly/3fTyHrN> [<https://perma.cc/2XHP-3W3Y>] (last visited Nov. 20, 2022).

135. FOREST STEWARDSHIP COUNCIL, <https://bit.ly/3EqOmcn> [<https://perma.cc/49U4-DAM4>] (last visited Nov. 20, 2022).

136. *Value of LEED*, U.S. GREEN BLDG. COUNCIL, <https://bit.ly/3CCGdQO> [<https://perma.cc/HL3V-CPS6>] (last visited Nov. 20, 2022).

137. Vandenbergh, *PEG*, *supra* note 6, at 166–67 (“[L]abeling systems begin by drawing on a reservoir of preferences or norms about environmental harms among the individuals who buy the goods whose production or use causes environmental harm. Information about the provenance or performance of goods will change buying behavior.”).

such as sustainable tree selection in logging.¹³⁸ The objective of these labeling activities is to influence consumer and industry behavior to better conserve collective resources (e.g., fish, trees, etc.) and decrease the environmental harms of consumption.

Interestingly, as policy tools, ecolabels and certifications also can represent (light) nudging in practice. They influence consumer behavior by making salient an attribute of a product that might otherwise go ignored or undervalued. Other recently cited examples of private environmental governance focused on informing consumers about meal choices also fit this mold, such as efforts by companies like Google and WeWork to reduce meat consumption.¹³⁹ Thus, without much further analysis, it is clear that at least some types of nudging are private environmental governance.

Zooming back out to the more theoretical, the existence of a whole subcategory of behaviorally informed private environmental governance emerges—what I call “private environmental nudges.” These nudges exhibit all the characteristics of private environmental governance discussed above. They exist independent of government mandates, like plastic bag taxes or soda bans. They have as their primary goals the conservation of common resources (e.g., water and air) and/or the reduction of negative externalities (e.g., solid waste). The nudges attempt to steer individual consumers to the more collectively beneficial choice.¹⁴⁰ Lastly, and most importantly, the nudges that fit into this subcategory of private governance have been formalized in things like pricing policies, menu and packaging designs, and physical infrastructure. Admittedly, some nudges with environmental aims likely lack the requisite level of institutionalization to be labeled governance activities.¹⁴¹ Scholars of private governance have already implicitly recognized some

138. See *Forest Managers*, FOREST STEWARDSHIP COUNCIL, <https://bit.ly/3eiizji> [<https://perma.cc/2LCS-CKHG>] (last visited Nov. 20, 2022).

139. See Gilligan & Vandenberg, *supra* note 45, at 4 (“In 2018, WeWork took the drastic step of forbidding meat at corporate events and reimbursed business meals. Taking a different approach, Google is using its corporate cafeterias to conduct a data-driven investigation into what incentives and menu choices will persuade its employees to voluntarily reduce their meat consumption.”).

140. Accord Williams, *supra* note 105, at 318 (describing the idea of nudging as “providing people with well-ordered information that helps them match their inherent preferences with their actual choices” and, because as discussed above, inherent preferences tend to value long-term consequences more highly than expressed preferences, nudging (hopefully) results in higher levels of collective welfare); SUNSTEIN, *supra* note 11, at 164 (“[S]ocial welfare is the master concept, and in some cases, a stronger response may be justified after careful consideration of benefits and costs.”).

141. For example, the provision of information about products or menu items provided by individual employees could function as a nudge. However, unless

nudges as governance, listing them as policies worthy of consideration alongside more traditional regulatory tools like bans or mandates.¹⁴²

Nudges also embody the innovative spirit of private environmental governance.¹⁴³ As Joshua Galperin aptly described it, “[private environmental governance] is about developing new tools for limiting harms, expressing good behaviors, and capitalizing on consumer preference.”¹⁴⁴ That statement could apply with equal force to the nudges described in more detail in the next section. Like private environmental governance, nudges aim to accomplish the goal of improved overall welfare differently than traditional regulation. “Rather than mandating reallocation of resources through product bans or mandated expenditures, the same goals might be accomplished by simply helping people to make choices aligned with what they might choose if they were perfectly rational.”¹⁴⁵ Private firms, large and small, are uniquely well-positioned (when compared to public governments) to experiment with behaviorally informed policy. And many have done just that.

V. IMPLEMENTING PRIVATE ENVIRONMENTAL NUDGES

Though the moniker “private environmental nudge” may be novel, the practical application of behavioral economics by consumer-facing private firms has been around for some time. This experience, viewed for the first time here through a specific theoretical lens, provides a window into the future of private environmental governance. With the tools that follow, corporate execu-

done pursuant to a policy of providing that information to every consumer, that activity does not constitute governance.

142. See, e.g., Philipp Hacker, *Personalizing EU Private Law: From Disclosures to Nudges and Mandates*, 25 EUR. REV. PRIV. L. 651, 651 (2017) (setting forth, based on behavioral economics, a “a comprehensive framework for the personalization of EU private law across different regulatory tools such as disclosures, nudges, and mandates”); see also Robert Baldwin, *From Regulation to Behaviour Change: Giving Nudge the Third Degree*, 77 MOD. L. REV. 831, 831 (2014).

The compatibility of nudging with other control devices cannot be assumed and, when contemplating nudging, it is essential to be transparent about its philosophical basis, as well as to be aware that different modes of intervention may operate with clashes of logic that threaten not only effectiveness but also the serving of representative and ethical ends.

Baldwin, *supra*, at 831.

143. Galperin II, *supra* note 123, at 3 (“In the context of PEG, there is an awkward balance between the modernist promise of innovation, demands for personal responsibility, and the importance of a ubiquitous environment. PEG is, after all, the study of innovations in governance.”).

144. *Id.*

145. Williams, *supra* note 105, at 318.

tives and scholars can analyze, categorize, and strategize private environmental nudges with more precision. The result will hopefully redound to the benefit of the planet and its human (and corporate) inhabitants.

A. *Features and Dimensions of Control*

Private environmental nudges, especially the most innovative, serve important roles in the broader global effort to govern the commons. Nudges by small- and medium-sized firms perhaps best exemplify the gap-filling role of private governance¹⁴⁶—going where no level of government or larger corporate policy has gone before. And in filling those gaps with new policy interventions, pioneering firms can also provide the first level of experimentation that federalism envisions.¹⁴⁷ Policies embracing specific nudge tactics diffuse from firms tinkering with behaviorally informed interventions to other, larger firms (after proof of concept) to subnational government entities (i.e., cities, towns, counties, states) to the federal government. Thus, although entities of all shapes and sizes engage in all types of private environmental governance, the private environmental nudges, implemented first by pioneering smaller companies, deserve independent consideration.

The public governance approach to commons problems, in particular control of externalities, is well-defined (command and control), but unfortunately inadequate alone. Private environmental nudges, as a subset of private governance, provide an entirely distinct, more subtle approach. Instead of restricting choice by regulation, these nudges influence behavior while preserving more freedom of choice.¹⁴⁸ Preserving some level of choice allows for direct feedback on the effect of a particular nudge, which either helps prove the case for policy diffusion or spurs further innovation. Firms with leaner financials and less infrastructure (physical and human) occupy a good position to respond to these kinds of signals and calibrate behaviorally informed policy. This reality shares some

146. Vandenbergh et al., *supra* note 67, at 3 (“Private environmental governance provides a valuable response by identifying viable new tools that can fill gaps in federal and state regulatory regimes.”).

147. *Accord Light & Orts*, *supra* note 30, at 69 (“Federalism, which promotes policy experimentation by decentralized actors, offers a theoretical framework through which to view private environmental governance in a positive light for its experimental role.”).

148. See SUNSTEIN, *supra* note 11, at 53 (contrasting government coercion and constraint with more subtle tools, ranging from large and small monetary penalties to the use of education, warnings, default rules, and time, place, and manner restrictions).

strain of logic with one theory of democratic governance—dubbed “New Federalism,” which essentially holds that the government that governs best is the one that is closest to the people.¹⁴⁹ Empirical work continues to challenge the merits of that particular political theory in practice, but this work is not in that tradition. It is enough here to point out that smaller entities have attributes that allow them to respond to finer resolution inputs, even down to the individual consumer level. In private governance, that means smaller entities have a unique perspective for initial policy design as well; they have the potential to identify specific behavioral market failures (i.e., situations when consumers make choices that are inconsistent with long-term preferences) and construct targeted nudges to correct them. For private environmental governance to contribute to overall planetary health, it will need to be comprised of “policies that reflect behavioral and social science insights.”¹⁵⁰

Sarah Light highlighted university policies to illustrate some of the federalism dynamics that private environmental governance contributes to.¹⁵¹ Of particular relevance are the policies informed by behavioral economics insights, such as internal carbon pricing. Carbon pricing, implemented publicly through a carbon tax, has long been a darling of the environmental economist, who champions it as the efficient greenhouse gas mitigation strategy. Unfortunately, such policies have enjoyed little political support in the public governance space. However, Light points out that universities have, at least internally, begun to price carbon and impose a charge on business units based on consumption.¹⁵² This policy looks like a nudge because the “price” of carbon is part of an internal accounting scheme—almost more a heuristic than literal cost. The results of these policies serve as a proof case for even soft carbon pricing (i.e., something less than a mandated fee or tax) in other sectors. At Yale, for instance, 20 separate units of the university reduced their carbon emissions by almost 5 percent.¹⁵³

149. See Donald R. Songer, *Government Closest to the People: Constituent Knowledge in State & National Politics*, 17 *POLITY* 387, 387 (1984) (describing this conception of “New Federalism” and attributing it to President Ronald Reagan).

150. Michael P. Vandenbergh et al., *Implementing the Behavioral Wedge: Designing and Adopting Effective Carbon Emissions Reduction Programs*, 40 *ENV'T. L. REP.* 10547, 10551 (2010).

151. See Light & Orts, *supra* note 30, at 57.

152. See *id.* at 67 (“Although Yale was the first university to pilot test a private carbon pricing scheme, it was not the first private institution to employ a private carbon charge.”).

153. See *id.* at 67–68.

The [Presidential Carbon Charge] Task Force recommended that the price be set at the social cost of carbon, which was then approximately

Nudge theory provides a framework for analyzing a particular nudge that describes a continuum from hard to soft paternalism.¹⁵⁴ Private environmental nudges fit neatly within this dynamic. A hard paternalistic nudge is one that imposes a real material cost on particular choices (e.g., a tax or fee), while a soft paternalistic nudge imposes an immaterial or psychological cost to nonetheless influence behavior.¹⁵⁵ Returning to the university example just discussed, because the carbon prices are an accounting device between business units within the same umbrella entity, one might understand it as tending toward the soft end of the spectrum (despite having a material dollar value attached). Another example of environmental nudging that covers both ends of the spectrum comes from the automotive industry, where fuel economy labels (i.e., information about the emissions of a vehicle) represent soft paternalism and fuel economy standards or pledges (i.e., limiting inventory only to vehicles that meet certain criteria) represent hard paternalism.¹⁵⁶ When experimenting with private environmental nudges, firms should begin at the soft end of the spectrum. The move toward hard paternalism should then follow only if necessary and if supported by data.¹⁵⁷

Another useful framework for understanding types of nudges groups them based on the method of decisionmaking they target. The first group of nudges target automatic thinking, and the second group target more deliberative thinking.¹⁵⁸ Nudges that alter de-

\$40/ton of carbon dioxide-equivalent. . . . In total, the 20 participating units reduced their carbon emissions by 4.9% below the baseline, while buildings in the control group reduced their emissions by 1.4% below the baseline.

Id.

154. See SUNSTEIN, *supra* note 11, at 55–58.

155. See *id.* at 56–58.

[A] statement that paternalism is “hard” would mean that choice architects are imposing large costs on choosers, whereas a statement that paternalism is “soft” would mean that the costs are small. All costs, material or non-material, would count, and to assess the degree of hardness, we would inquire into their magnitude.

Id.

156. See *id.* at 71–72 (presenting the following table).

157. See *id.* at 72 (“Where behavioral market failures justify corrective action, the government should be inclined to stay in the upper-left quadrant [utilizing soft means paternalism], unless strong empirical justifications, involving relevant costs and benefits, support a more aggressive approach.”). *But see* Katrina Fischer Kuh, *When Government Intrudes: Regulating Individual Behaviors that Harm the Environment*, 61 DUKE L.J. 1111, 1173 (2012) (arguing that concerns about intrusion on autonomy when regulating individuals’ actions are overstated).

158. See Pelle Guldberg Hansen & Andreas Maaløe Jespersen, *Nudge and the Manipulation of Choice: A Framework for the Responsible Use of the Nudge Approach to Behaviour Change in Public Policy*, 4 EUR. J. RISK REGUL. 3, 14–15

fault selections (e.g., the provision (or not) of a plastic bag at check-out) tend to be in the first group, while those that provide information (e.g., printing a carbon footprint nutrition label for food) tend to be in the second group. The archetypes of private environmental nudges described in the next section can be feasibly classified along this dimension. The policy design on this dimension does not implicate the philosophical concerns of paternalism with respect to autonomy. Instead, designing a nudge based on the method of decisionmaking requires some understanding of not just typical consumer behavior but typical thought processes at the point of sale. A private entity can attempt to deduce based on some rather obvious product variables—industry, price, sales approach—which method of decisionmaking to nudge. Even better, though, is the real consumer feedback that firms, particularly local and regional firms, can collect through formal and informal means. Individual consumers vary in how they decide when confronted with identical choices. Generally, while environmental product attributes tend to enter only deliberative decisionmaking, automatic decisions also have significant environmental costs. Therefore, there exist private environmental nudges that target both processes. And, importantly, those nudges need not be mutually exclusive. For example, a default-changing nudge can be accompanied by an information-providing nudge. While less targeted, a multiple nudge approach ensures a wider swath of decisionmakers feel some influence.

Scholars that have examined the use of behaviorally informed private efforts to reduce energy consumption have observed the above-described attributes in practice. Tactics focused on informing consumers exemplify a soft paternalism approach targeting deliberative decisionmaking. These tactics include a range of communication from social media to classroom instruction.¹⁵⁹ A harder approach couples information about energy performance with economic incentives.¹⁶⁰ Notably, neither of these broad approaches treat decisions about energy consumption as automatic. And that likely leaves some potentially environmental gain on the table,

(2013) (“[T]ype 1 nudges are those influencing behaviours that do not involve deliberation, judgment, and choice. Type 2 nudges, on the other hand, are those influencing behaviours best characterized as actions, the results of deliberation, judgment, and choice.”).

159. See Sofie E. Miller & Brian F. Mannix, *One Standard to Rule Them All: The Disparate Impact of Energy Efficiency Regulations*, in *NUDGE THEORY IN ACTION*, *supra* note 105, at 251, 272 (describing “cognition programs” targeted at reducing energy consumption).

160. See *id.* (describing “calculus programs” targeted at reducing energy consumption).

there for the taking if an innovative clean energy provider comes along. Choices ranging from which utility provider one uses to what temperature to set climate control when one is out likely are the product of automatic, rather than deliberative, decisionmaking for most people. Indeed, smart thermostats attempt to capture some energy savings from precisely that insight.¹⁶¹

Energy transition presents a near-perfect opportunity for private environmental nudging. Not only because it involves a ubiquitous product and the full range of decisionmaking but also because a good number of nudges in this space will be Pareto nudges.¹⁶² Fossil fuel energy production generates classic negative externalities—conventional air pollutants and greenhouse gases. The price of energy to the consumer also increases as production increases. Additionally, aging infrastructure and diminishing fossil fuel reserves will continue to make conventional generation more costly relative to renewable generation.¹⁶³ Thus, a nudge that induces the consumer to choose solar or wind power and/or reduce their consumption reduces the negative externalities (i.e., societal cost) *and* reduces the cost to the individual consumer and the energy provider (thereby increasing relative rent collected). Companies could, and should, think about ways all the nudge archetypes described below might work to confront environmental problems, such as energy production and consumption, and how those archetypes operate on the axes of paternalism and decisionmaking processes. Many of these private environmental nudges could likewise prove to be Pareto nudges.

B. *Private Environmental Nudge Archetypes*

In discussing nudges as policy tools more broadly, Sunstein describes three typical categories of appropriate response (i.e., types of nudges) to identified behavioral market failures—disclosures, warnings, and default rules.¹⁶⁴ Other scholars have developed more

161. See, e.g., Ruchi Desai, *The New Nest Thermostat: More Energy Savings for More People*, GOOGLE KEYWORD (Oct. 12, 2020), <https://bit.ly/3Rr0exP> [<https://perma.cc/ZJ6Z-SRLR>] (“[T]he new Nest Thermostat can help find ways to save that aren’t possible with your traditional one. . . . Nest Thermostat is constantly looking for small optimizations that will help you save energy in your home. . . . [T]he Nest Thermostat can help you avoid heating or cooling an empty house.”).

162. See *supra* Part II.A.; see also Beggs, *supra* note 120, at 127–35.

163. See *Projected Costs of Generating Electricity: 2020 Edition*, INT’L ENERGY AGENCY 13 (2020), <https://bit.ly/3FIWJ3H> [<https://perma.cc/GX6L-AA8N>] (“The key insight from this 2020 edition is that the levelised costs of electricity generation of low-carbon generation technologies are falling and are increasingly below the costs of conventional fossil fuel generation.”).

164. SUNSTEIN, *supra* note 11, at 164.

detailed systems of description and categorization of behaviorally informed policies.¹⁶⁵ The archetypes that follow add a new dimension to these existing frameworks. The four archetypes laid out herein, while not unique to environmental governance, attempt to encompass the field of private environmental nudges. In other words, any effective private governance policy that could accurately be called a private environmental nudge likely fits into one of these categories—a default change (to a more environmentally responsible option), a small fee (for environmentally irresponsible product components), a primer (on the environmental attributes of a product), or a reframing of the choice (emphasizing the more environmentally responsible option).

1. *Changing Defaults*

Due to the existence of many automatic decisions in daily life, default options can have a significant impact on the environment. Thus, a very straightforward private environmental nudge involves changing the default option to the one that has the least environmental impact. This type of nudge capitalizes on Sunstein and Thaler's insights around risk aversion and "mindless choosing," which suggest why the default option almost uniformly ends up as the most popular.¹⁶⁶ That most popular choice may not reflect the majority of choosers' actual long-term preferences for lighter environmental impact, especially between two otherwise very similar options. The nudge of a default change attempts to correct that failure. However, because the current default option comes with demonstrated market performance, it takes an innovative company with a tolerance for risk to make the switch.

A salient example of this strategy would be a GPS program that first provides not the fastest but the most fuel-efficient route.¹⁶⁷ Large technology companies like Google or Apple have hesitated—until recently—to encode that kind of private environmental nudge into their software,¹⁶⁸ but lesser-known GPS applications

165. See, e.g., Susan Michie et al., *The Behaviour Change Wheel: A New Method for Characterising and Designing Behaviour Change Interventions*, 6 *IMPLEMENTATION SCI.* 42, Apr. 23, 2011, at 1; Hansen & Jespersen, *supra* note 158, at 3.

166. See THALER II, *supra* note 11, at 38 ("The combination of loss aversion and mindless choosing implies that if an option is designated as the default, it will usually (but not always!) attract a large market share.").

167. See SUNSTEIN, *supra* note 11, at 62 (discussing a "coercive GPS" as a hard paternalist nudge).

168. See *Google Maps Will Soon Default to 'Greenest Route' Helping Reduce Your Carbon Footprint*, ABC7 EYEWITNESS NEWS (Mar. 30, 2021), <https://abc7.ws/3LZusXz> [<https://perma.cc/PJ8R-9GFV>] ("Google Maps may no longer default to

(importantly, not ones preloaded onto mobile phones) have been doing it for years.¹⁶⁹

Another hypothetical example comes from the energy sector. As discussed above, the generator of a particular utility customer's electricity is often an automatic decision. Thus, the default mix for new utility customers has the potential to greatly affect the overall amount of clean, renewable energy contracted for and ultimately produced. A study tested the effectiveness of a nudge that expressed the default energy contract as 50 percent renewable and 50 percent conventional energy.¹⁷⁰ If the customer in the study wanted a different mix (e.g., 100 percent conventional) they actively choose a non-default contract.¹⁷¹ The study found the nudge to be effective at getting a greater proportion of consumers to purchase renewable energy.¹⁷² Absent government regulation mandating this change in defaults, companies that have a vested interest in renewable energy generation will be the most likely to employ this nudge. And in the energy sector, it has historically been small, regional utilities that best fit that description.¹⁷³

Default changes as private environmental nudges can work in many fields beyond fossil fuel consumption and renewable energy.

the fastest route. The company says its navigation algorithm will soon select the most fuel-efficient route to take. . . . Expect to see changes later [in 2021].”).

169. See, e.g., Jackson Parker, *Green GPS System Finds Most Fuel Efficient Driving Routes*, FIELDLOGIX (June 8, 2011), <https://bit.ly/3Crg1s6> [<https://perma.cc/YV7L-R22Q>].

The Green GPS system runs on a regular cell phone, which links to a car's computer using an inexpensive, off-the-shelf wireless adapter. The car's onboard diagnostics system uploads information about engine performance and fuel efficiency to the phone, which uses the data to compute the greenest route. A grant through the National Science Foundation is funding a large-scale deployment of the service via the University of Illinois' car fleet. The Green GPS units will be installed on up to 200 University vehicles, including full-size vans that could be carrying 1,000 pounds or more in tools and equipment.

Id.

170. Katharina Momsen & Thomas Stoerk, *From Intention to Action: Can Nudges Help Consumers to Choose Renewable Energy?*, 74 ENERGY POL'Y 376, 378 (2014).

171. See *id.* (“They can actively choose between this default contract and a contract consisting entirely of conventional energy. If they do not make an active choice, however, they will keep the default contract and use renewable energy.”).

172. See *id.* at 380.

173. See Katherine Blunt & Sarah McFarlane, *The New Green Energy Giants Challenging Exxon and BP*, WALL ST. J. (Dec. 11, 2020, 11:00 AM), <https://on.wsj.com/3SAdvFz> [<https://perma.cc/ZEU2-MVRG>] (“A decade ago, NextEra, Iberdrola and Enel were sleepy regional utilities with little name recognition. . . . Their early lead in the global transition away from oil has put these companies on track to become the major energy companies of the coming decades—the ‘green energy majors.’”).

Any automatic decision that has significant environmental impacts has the potential to benefit from this type of private environmental nudge. It appears elegantly simple at first blush. However, it requires correct identification of a decision as a relatively mindless one *and* correct identification of an environmentally preferable default option. Changing defaults is something that newer firms will consistently lead the way on, establishing—via their success (or failure)—what the market is willing to bear (i.e., whether old defaults performed well because of true consumer preference or just the combination of risk aversion and mindless choosing).

2. *Nominal Fees*

A second type of private environmental nudge draws on the behavioral influence of loss aversion and recalibrates a time-tested policy tool to do it. Governments have, for centuries, imposed taxes on goods and activities that generate negative externalities. Indeed, as mentioned above, environmental economists advocate for a carbon tax precisely because it adopts a proven policy design. Two features distinguish a fee-based private environmental nudge from a tax—the source of the charge (private versus public) and the size of the charge (small versus significant). The reason a small private fee works as a nudge is that, as studies have shown, even miniscule, financially immaterial costs have a measurable effect on behavior due to a phenomenon known as loss aversion.¹⁷⁴ Loss aversion describes the observable reality that in the human mind potential losses loom larger than potential gains of exactly the same size.¹⁷⁵ Put simply, “[p]eople don’t want to lose money, even if the amount is trivial.”¹⁷⁶ The private environmental nudge that capitalizes on this imposes a small, nominal fee on the less environmentally re-

174. See SUNSTEIN, *supra* note 11, at 56 (“I have noted that even very small costs—say, a five-cent charge for a bag at a grocery store—may have a big effect on behavior. A careful analysis shows such an effect, in part because of the power of loss aversion.”).

175. See Amos Tversky & Daniel Kahneman, *Loss Aversion in Riskless Choice: A Reference-Dependent Model*, 106 Q.J. ECON. 1039, 1047 (1991) (“The basic intuition concerning loss aversion is that losses (outcomes below the reference state) loom larger than corresponding gains (outcomes above the reference state).”).

Loss aversion is an important component of a phenomenon that has been much discussed in recent years: the large disparity often observed between the minimal amount that people are willing to accept (WTA) to give up a good they own and the maximal amount they would be willing to pay (WTP) to acquire it.

Id. at 1054.

176. THALER II, *supra* note 11, at 36 (further urging “environmentalists” to remember this precise point).

sponsible choice. The nudge is in theory a form of hard paternalism in that there is a real economic cost involved; but, because the cost is so low that it is rationally immaterial, the nudge actually feels softer.

The classic example of this private environmental nudge in practice is a few-cent fee for a disposable plastic shopping bag. This is a nudge that originated in the private sector but ultimately evolved to public governance through municipal ordinances.¹⁷⁷ It has consistently proven effective in reducing disposable bag use.¹⁷⁸ Behavioral economics scholars have gone further to demonstrate just how much more effective a nominal fee is than a nominal discount of the same magnitude. One such study found that a plastic bag fee of just five cents had a significant effect on behavior, while a five-cent bonus for bringing a reusable bag had no significant effect.¹⁷⁹ Similar nudges targeting plastic food/drink containers¹⁸⁰ and plastic straws¹⁸¹ have likewise seen policy diffusion from private to public environmental governance all over the country.

The opportunities for nominal fee nudging are in one way more expansive than default changes; these fees can influence behavior even when a decision involves more deliberation. Indeed,

177. See Jennie Romer, *Round-Up of Statewide Bag Laws and Preemption*, SURFRIDER FOUND. (Feb. 24, 2021), <https://bit.ly/3fCEX7h> [<https://perma.cc/2W2W-JDBW>] (indicating that “over 500 local plastic bag ordinances ha[d] been adopted” by early 2021).

178. See, e.g., Tatiana Homonoff, *Preliminary Study Suggests Chicago’s Bag Tax Reduces Disposable Bag Use by over 40 Percent*, IDEAS42 (Apr. 2017), <https://bit.ly/3E8zfUR> [<https://perma.cc/YJ2S-LSWZ>]; Tatiana A. Homonoff, *Can Small Incentives Have Large Effects? The Impact of Taxes Versus Bonuses on Disposable Bag Use* (Princeton Univ. Indus. Rels. Section, Working Paper No. 575, 2013) [hereinafter Homonoff, *Small Incentives*].

179. See Christian Schubert, *Green Nudges: Do They Work? Are They Ethical?*, 132 *ECOLOGICAL ECON.* 329, 335–36 (2017) (“The power of loss aversion is also nicely illustrated by Homonoff (2013), finding that charging a \$0.05 tax on grocery bags had a significant negative effect on bag use, while a \$0.05 bonus for using reusable bags had essentially zero impact.” (citing Homonoff, *Small Incentives*, *supra* note 178)).

180. Maryland and Maine have recently enacted bans on food and drink containers made of polystyrene (commonly known as Styrofoam). See Gianluca Mezzofiore, *Maine Becomes the First State to Ban Styrofoam*, CNN (May 1, 2019, 10:46 AM), <https://cnn.it/3MbAnsP> [<https://perma.cc/A9X4-UHL8>]; Elliott Davis Jr., *Maryland Foam Food Container Ban Takes Effect*, U.S. NEWS & WORLD REP. (Oct. 1, 2020, 1:44 PM), <https://bit.ly/3rwzp0G> [<https://perma.cc/T9B2-AYDP>].

181. California law now restricts the use of plastic straws statewide, and a number of municipalities including Seattle, Washington and San Francisco, California have recently restricted plastic straw use by businesses as well. See Adam Redling, *California Passes Law Restricting Plastic Straw Offerings in Restaurants*, RECYCLING TODAY (Sept. 24, 2018), <https://bit.ly/3C6yp8q> [<https://perma.cc/KUF7-7CYP>].

the nudge works because it takes advantage of a skewed valuation that humans place on the loss of something of value (versus an equivalent gain). That valuation is part of a decisionmaking process that is at the very least more involved than automatic. Nominal fee private environmental nudges are in another way more limited in their potential application. They work only with consumer products when there is a clear environmental cost that can be easily avoided by a small behavior change. To put it another way, these nominal fees can be quite useful in reducing waste. From the perspective of the nudging firm, these fees have a Pareto advantage over the outdated discount-based approach; they cost less to implement and achieve a better result.

3. *Priming*

Ecolabeling—a classic example of a collective standard-setting private environmental governance measure—also serves as a private environmental nudge for consumers. Ecolabels and other measures designed to provide consumers with relevant environmental performance information about products and services are private environmental nudges targeting more deliberative decisions. These nudges work by priming the chooser with relevant information that is otherwise not readily available at the time and place where the choice is made. Information-based private environmental nudges can be characterized as soft paternalism because, rather than just provide accurate information about all relevant product attributes, these instruments highlight only environmental attributes.¹⁸² In making the environmental performance of a particular choice more salient, the nudge corrects for the prior lack of available and/or reliable information on that dimension. In the absence of accompanying nudges for other easily overlooked or hard-to-quantify attributes, the private environmental nudge can be subtler or have a stronger effect than mere correction of failure in the decisionmaking process.¹⁸³ Identifying the relevant environmental performance

182. See SUNSTEIN, *supra* note 11, at 69.

[If] disclosure policy is selective, in the sense that it requires disclosure with respect to one attribute (that people care about) but not others (that people also care about), it is again engaging in a form of soft paternalism about means and also ends—unless it can be shown that the selected attribute is, distinctly, one on which people now lack and need information.

Id.

183. See *id.* at 68.

[If a government] provided people with accurate information about everything that they cared about and did not provide information about things that they did not care about . . . disclosure would not be paternalistic at all. It would be entirely means-focused, and it would not attempt to

metrics and presenting the information in an understandable way are crucial to this nudge having any measurable effect. Ecolabels and certifications (i.e., other private environmental governance measures) help to make that part of policy design easier. Again, firms that are closer to their customers (and thus better understand relevant decisional inputs) will likely enjoy more success in selecting which labels, certifications, scores, or facts to disclose in order to have maximal effect.

Drawing from other successful nudges based on nutritional labeling, a recent spring of informational private environmental nudges have emerged around food. For food manufacturers, privately audited carbon footprint labels are now available, and innovative companies like the meatless food maker Quorn have begun adopting them for consumer product packaging.¹⁸⁴ For dining establishments, the World Resources Institute helped pioneer the concept of “Cool Food” to help reduce the carbon footprint of meals.¹⁸⁵ The associated “Cool Food Meals” label lets restaurants designate meals that meet a threshold of per-meal greenhouse gas (GHG) emissions and a threshold of nutritional quality.¹⁸⁶ Some eco-conscious, pioneering restaurants and restaurant groups have already signed on, including Panera Bread.¹⁸⁷ Panera is not a local diner, but it is not McDonald’s either, with around 2,000 total restaurants in the United States.¹⁸⁸ Panera, as an innovative, still-growing chain of “fast casual” restaurants, has the potential to help

influence choices except insofar as it would promote accurate beliefs, which is not a paternalistic endeavor.

Id.

184. See Beauty Kumari, *Carbon Labeling Comes to Food Menus*, OPEN-GROWTH (Apr. 5, 2021), <https://bit.ly/3rOCedT> [<https://perma.cc/VD4D-7PBK>] (“Quorn claims to be the first meat-free food manufacturer to inaugurate carbon labels on its products and have their emission charts verified by Carbon Trust.”).

185. See COOL FOOD, <https://bit.ly/3rztesP> [<https://perma.cc/J237-75KA>] (last visited Nov. 6, 2022) (“Food production is a significant contributor to climate change, accounting for a quarter of global greenhouse gas (GHG) emissions. . . . Enjoying more plant-based foods is an important way to reduce pressure on the climate.”).

186. See Richard Waite & Stacy Blondin, *Identifying Cool Food Meals*, WORLD RES. INST. 4 tbl.1 (Oct. 2020), <https://bit.ly/3STSAx7> [<https://perma.cc/V44E-ZNDR>].

187. Emily Laurence, *Eco-Conscious Carbon Footprint Scores Are Coming to a Fast-Casual Menu Near You*, WELL+GOOD (Nov. 9, 2020), <https://bit.ly/3V0yNOF> [<https://perma.cc/8ZF6-MV9S>].

188. See *id.* (describing Panera Bread as having over 2,000 locations in the U.S.); S. Lock, *Number of McDonald’s Restaurants in North America from 2012 to 2021, by Country*, STATISTA (Aug. 9, 2022), <https://bit.ly/3CybuEx> [<https://perma.cc/SN4T-7HSN>] (reporting almost 14,000 McDonald’s locations in the U.S.).

this type of priming environmental nudge permeate the food service industry. Indications are that widespread policy diffusion across the whole market could significantly cut food-related emissions to the tune of 25 percent by 2030.¹⁸⁹

Some social science studies confirm the effectiveness of private environmental nudges that prime the chooser with additional information. One impressive field experiment involved approximately 9,000 households in Norway, measuring the share of their waste recycled.¹⁹⁰ Among the studied households, those who received the nudge—a letter providing information on recycling—increased their share of recycled waste by an average two percentage points over the seven months following the intervention.¹⁹¹ Another field study primed students with signs asking them to recycle plastic cups, including information about the importance of recycling to environmental protection.¹⁹² The percentage of plastic cups recycled increased by around 30 percent with this simple priming nudge.¹⁹³ Yet another study found that sending out “home energy reports” with electricity bills reduced consumption by an average of two percent.¹⁹⁴ The cost of priming private environmental nudges like these is fairly low, especially for operators with minimal brick-and-mortar presence (or none whatsoever). When consumers have even a short amount of time to consider their decision, providing information that will lead to a better decision—measured by their own long-term preferences *and* the health of the planet—stands out as a crucially important private environmental nudge. Creative for-

189. See Waite & Blondin, *supra* note 186, at 2.

If all food providers everywhere signed up to the Cool Food Pledge and achieved the collective targets, their absolute food-related emissions would fall by 25 percent by 2030, relative to a 2015 baseline. However, because food demand is projected to grow by 21 percent during that period, food-related emissions *intensity* (measured per calorie) would need to fall even more—by 38 percent by 2030—to achieve the absolute 25 percent emissions reduction.

Id. (citations omitted).

190. See Anna Birgitte Milford et al., *Nudges to Increase Recycling and Reduce Waste*, NORWEGIAN AGRIC. ECON. RSCH. INST. 2 (2015), <https://bit.ly/3C3uuJw> [<https://perma.cc/NFU8-WZ4U>].

191. See *id.*

192. See Ajla Cosic et al., *Can Nudges Affect Students' Green Behaviour? A Field Experiment*, 2 J. BEHAV. ECON. FOR POL'Y 107, 109–10 (2018) (“For treatment 1, we created a message showing signs soliciting participation in a recycling programme. The message, which was designed to reflect the importance of recycling and the environment protection, was not only used to raise awareness, but included an external descriptive social norm.”).

193. See *id.* at 110 fig.4.

194. See Miller & Mannix, *supra* note 159, at 272–73.

ward-thinking firms can spearhead the best methods to prime decisionmakers with this type of information.

4. *Reframing*

Reframing, the final archetype of private environmental nudge, differs from priming only in that the intervention adds no new information. Rather, a reframing nudge simply changes the way a menu of options is presented to the decisionmaker. A variety of techniques fit under this umbrella of private environmental nudge—everything from font and color changes to vocabulary to the size of physical infrastructure. Here, the reframe literally changes the visual architecture of the choice. This type of nudge can take aim at the full range of decisionmaking processes, though it is first and foremost targeted at more automatic, or at least very quick, choices. The reframing intervention draws the consumer's attention to different choices that they may have previously overlooked. The chooser may then just automatically opt for a more responsible choice because of the aesthetic presentation or may at least pause to give the decision additional consideration. Like priming nudges, the cost depends on the amount of physical infrastructure involved for the firm adopting a reframe. Again, firms with less infrastructure (or none at all) are well-positioned to test and tweak this type of private environmental nudge.

The simplicity of reframing a choice belies the potential importance of the strategy. A World Resources Institute study showed just how much vocabulary, for instance, affected whether consumers chose plant-rich (i.e., more environmentally friendly) food items on menus.¹⁹⁵ Over two years, researchers identified descriptive language that definitively appealed to mainstream diners (e.g., “flavor”) and language that definitively did not (e.g., “meat-free”).¹⁹⁶ Another example comes from the same study of student recycling of plastic cups discussed above. There, the reframe simply involved changing the relative size of the recycling and garbage bins.¹⁹⁷ When combined with the priming nudge, the reframe added another 65 percent to the total amount of cups recycled, producing a

195. See Jonathan Wise & Daniel Vennard, *It's All in a Name: How to Boost the Sales of Plant-Based Menu Items*, WORLD RES. INST. (Feb. 5, 2019), <https://bit.ly/3RFdhMI> [<https://perma.cc/ATQ5-92XV>]; Sophie Attwood, *23 Behavior Change Strategies to Get Diners Eating More Plant-Rich Food*, WORLD RES. INST. (Jan. 7, 2020), <https://bit.ly/3rB2ckE> [<https://perma.cc/U5BM-5F5X>].

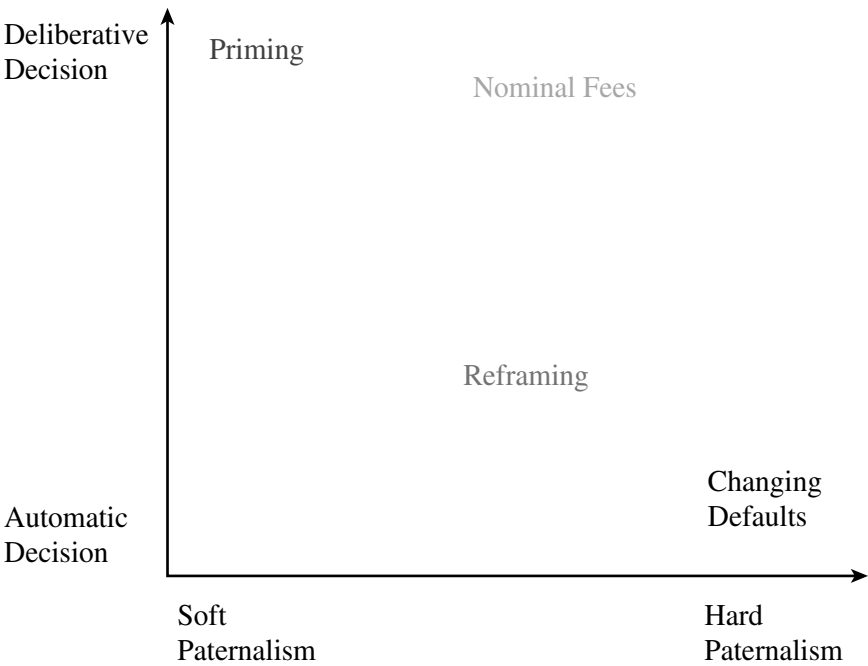
196. See Wise & Vennard, *supra* note 195 (suggesting that restaurants should use language highlighting “provenance,” “flavor,” and “look and feel” while avoiding “healthy restrictive” language like “meat-free,” “vegan,” or “vegetarian”).

197. See Cosic et al., *supra* note 192, at 109–110.

recycling rate above 95 percent.¹⁹⁸ These examples demonstrate how changing the visual architecture of a choice can affect how individuals behave. Consumer-facing entities no doubt spend countless hours designing the visual elements of their businesses. The private environmental nudge comes from adding the effect on the environmental performance of consumer decisions to the list of design considerations.

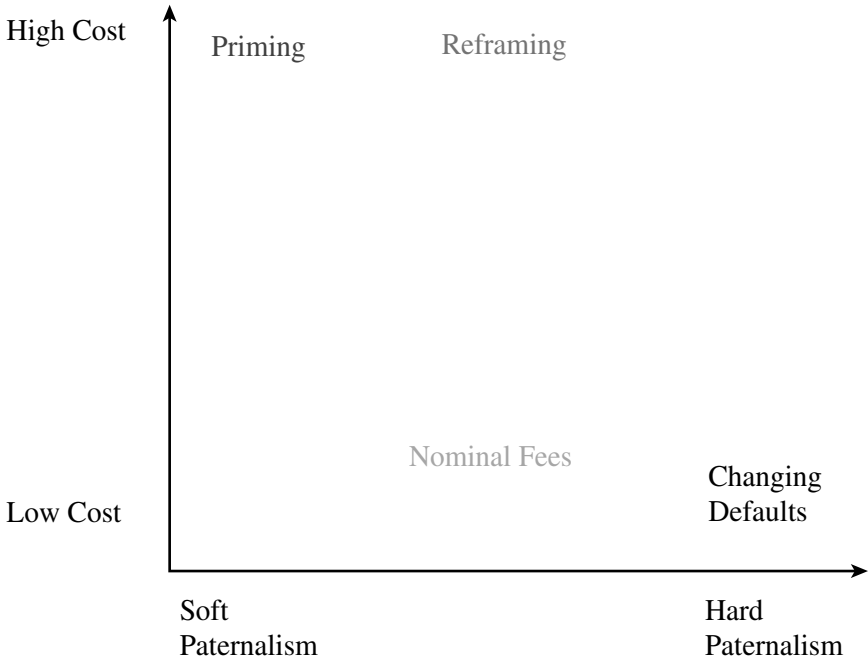
The figures below represent visually how the four private environmental nudge archetypes differ across the relevant dimensions discussed above—the type of consumer decision targeted, the degree of paternalism involved in the nudge, and the cost of the nudge.

FIG. 3: NUDGE ARCHETYPES BY DECISION DELIBERATION AND DEGREE OF PATERNALISM



198. *Id.* at 110 fig.4.

FIG. 4: NUDGE ARCHETYPES BY COST TO FIRM AND DEGREE OF PATERNALISM



Importantly, the four archetypes of private environmental nudge are not mutually exclusive. One entity presenting one decision to consumers (e.g., what type of appliance to purchase—electric or gas) could use all four in combination. The business could make the default (base model) the electric version; they could also charge a small fee for the gas version; they could provide literature with environmental performance metrics; they could make the electric model more prominent on the showroom floor. Indeed, the study of students recycling cups mentioned twice already provides support for the idea that multiple private environmental nudges can complement each other and are not necessarily redundant. Returning to our coffee cup from Part I, the story illuminates how a small business aggressively pursued a private environmental nudging strategy. Tandem, and undoubtedly other small shops like it around the world, combined two of the nudge archetypes—default change and a nominal fee—to outpace larger firms in the same industry in terms of developing effective private environmental governance.

CONCLUSION

Environmentalists have long argued that small actions, when accumulated, can make a big difference—in either direction.¹⁹⁹ Herein, the discussion has doubled down on that idea. The theory and practical experience discussed above demonstrate that scholars of private environmental governance and behavioral economists should not overlook nudges implemented by businesses of any size. Private environmental nudges have the potential to improve the environment on their own. Importantly, they also have the demonstrated potential to trickle up and exponentially increase their impact. They deserve more scholarly attention. If nothing else, the terminology and typology provided here laid the foundation for healthy debate about the future of behaviorally informed private environmental governance.

199. See, e.g., Keith H. Hirokawa, *At Home with Nature: Early Reflections on Green Building Laws and the Transformation of the Built Environment*, 39 ENV'T L. 507, 562 (2009) (“Actions that may not have previously appeared to be worthy of regulation have been found to cause significant adverse impacts cumulatively, over time, and in context—heading us toward a certain death by a thousand cuts.”); Hope M. Babcock, *Assuming Personal Responsibility for Improving the Environment: Moving Toward a New Environmental Norm*, 33 HARV. ENV'T L. REV. 117, 120–21 (2009) (asserting that individual sources are responsible for approximately “a third of the chemicals that form low-level ozone or smog,” and “[h]ouseholds discharge as much mercury to wastewater as do all large industrial facilities combined”).
