

RECONCEIVING THE INTERNAL AND SOCIAL
ENFORCEMENT EFFECTS OF EXPRESSIVE REGULATION

ALEX GEISINGER*

ABSTRACT

As political resistance to traditional forms of regulation has increased, regulators have turned to the social and behavioral sciences to identify new and better regulatory tools. One of these new tools is expressive regulation. Expressive regulation harnesses the internal and social enforcement mechanisms of community norms as a means of changing individual behavior. Expressive regulation holds significant promise for influencing many different types of behaviors, and its low administrative and enforcement costs are particularly appealing in the current political climate. However, the use of expressive regulation is hampered by a well-entrenched belief in legal scholarship that social enforcement of norms is available only in small, close-knit communities and ineffective in the case of large-group cooperation problems.

This Article reconsiders the divide between social and internal enforcement. It argues that regulatory intervention can overcome the limitations to social enforcement in large groups, and describes the way in which such regulation can do so. The insights it generates are readily adaptable to a wide variety of situations in which large-group cooperation problems exist.

* Professor of Law, Thomas R. Kline School of Law, Drexel University. The author would like to thank Michael Pappas, John Echeverria, Michael P. Vandenberg, Richard Frankel, Deborah Gordon, Pamela Quinn Saunders, and Roger Dennis for their thoughtful comments. The Article greatly benefited from the input of participants at the Vermont Law School Fifth Annual Colloquium on Environmental Scholarship. Valuable research support was provided by Mica Iddings and Patrick Woolford.

TABLE OF CONTENTS

INTRODUCTION.....	3
I. SEPARATING THE SOCIAL AND INTERNAL ENFORCEMENT MECHANISMS.....	8
<i>A. A Brief Introduction to Norms.....</i>	8
<i>B. Norm Formation.....</i>	12
<i>C. Distinguishing Between Internal and Social Enforcement.....</i>	15
II. SOCIAL AND INTERNAL ENFORCEMENT MODELS.....	16
<i>A. The Social Enforcement Mechanism.....</i>	16
<i>B. The Internal Enforcement Mechanism.....</i>	22
III. APPLYING THE SOCIAL AND INTERNAL ENFORCEMENT MODELS TO REGULATION OF LARGE, LOOSE-KNIT GROUPS.....	25
<i>A. The Limits of Internalized Regimes: The Opower Example.....</i>	27
<i>B. External Enforcement of Norms in Large Groups: The Carbon Registry Example.....</i>	30
IV. IMPLICATIONS OF THE LARGE-GROUP SOCIAL ENFORCEMENT MODEL.....	36
CONCLUSION.....	40

INTRODUCTION

Today, stories of the failed regulatory state are ubiquitous in both politics and legal scholarship.¹ Regulation is criticized as inefficient,² ineffective,³ and sometimes paternalistic.⁴ Rulemaking has ossified and, as agency budgets decrease, the ability to enforce existing regulations becomes more and more limited.⁵ These circumstances place significant pressure on agencies to identify new, efficient ways to regulate that control behavior with minimal ad-

1. See Brett McDonnell, *Don't Panic! Defending Cowardly Interventions During and After a Financial Crisis*, 116 PENN ST. L. REV. 1, 2 (2011); Sidney A. Shapiro, *Administrative Law After the Counter-Reformation: Restoring Faith in Pragmatic Government*, 48 U. KAN. L. REV. 689, 748-49 (2000); Karly Zande, *Raising a Stink: Why Michigan CAFO Regulations Fail to Protect the State's Air and Great Lakes and Are in Need of Revision*, 16 BUFF. ENVTL. L.J. 1, 4 (2009).

2. See Robert P. Barlett III & Justin McCrary, *Trying to Force the S.E.C.'s Hand on High-Speed Trading*, N.Y. TIMES (Dec. 18, 2015), <http://www.nytimes.com/2015/12/19/business/dealbook/trying-to-force-the-secs-hand-on-high-speed-trading.html> [<https://perma.cc/KJZ5-U2XN>]; Mike Konczal, *Making Government Simpler Is Complicated*, WASH. POST (Oct. 26, 2013), <https://www.washingtonpost.com/news/wonk/wp/2013/10/26/making-government-simpler-is-complicated/> [<https://perma.cc/TAU8-VPQR>]; Brendan Sasso, *The Legal War Over Net Neutrality Has Begun*, ATLANTIC (Apr. 14, 2015), <http://www.theatlantic.com/politics/archive/2015/04/the-legal-war-over-net-neutrality-has-begun/456501/> [<https://perma.cc/R5JA-D6EQ>].

3. See Jennifer Fujawa, *The FCC's Sponsorship Identification Rules: Ineffective Regulation of Embedded Advertising in Today's Media Marketplace*, 64 FED. COMM. L.J. 549, 572-73 (2012); Donald M. Marcus & Arthur P. Grollman, *The Consequences of Ineffective Regulation of Dietary Supplements*, 172 ARCHIVES INTERNAL MED. 1035, 1036 (2012); Tyler Cowen, *Too Few Regulations? No, Just Ineffective Ones*, N.Y. TIMES (Sept. 13, 2008), <http://www.nytimes.com/2008/09/14/business/14view.html> [<https://perma.cc/KM9V-4SZ5>].

4. See Mark Joseph Stern, *Laws to Protect Women Often Do Just the Opposite*, SLATE (Feb. 9, 2016), http://www.slate.com/articles/double_x/doublex/2016/02/laws_to_protect_women_often_do_just_the_opposite.html [<https://perma.cc/M6CD-REDL>]; Andrew Westney, *Tribal Leader Slams CFPB Over Payday Lending Proposal*, LAW360 (Feb. 11, 2016), <http://www.law360.com/articles/758474/tribal-leader-slams-cfpb-over-payday-lending-proposal> [<https://perma.cc/4GA8-TU22>].

5. See Frank Pasquale, *The Sharing Economy Doesn't Need to Be Full of Monopolies*, ATLANTIC (Oct. 28, 2015), <http://www.theatlantic.com/business/archive/2015/10/the-sharing-economy-doesnt-need-to-be-full-of-monopolies/412876/> [<https://perma.cc/BC69-SLGC>]; Jim Tozzi, *Regulatory Deossification Revisited*, YALE J. ON REG.: NOTICE & COMMENT (Jan. 25, 2016), <http://www.yalejreg.com/blog/regulatory-deossification-revisited-by-jim-tozzi> [<https://perma.cc/QNL5-26ZL>].

ministrative cost. Thus, the demand for new and better regulatory forms has never been greater.

In response, many nations have turned to behavioral theory as a means of rethinking regulation. Almost all of Europe and the United States now have behavioral regulation units dedicated to identifying new ways to regulate behavior efficiently.⁶ Many of these new offices have been dubbed “nudge” offices;⁷ however, the insights into regulation provided by the social and behavioral sciences go well beyond the “nudge” construct. Thaler and Sunstein first developed the concept of nudging in their eponymous book, *Nudge*.⁸ Nudges are regulations that change an individual’s choice architecture but do not mandate any particular behavior as would traditional command and control mechanisms.⁹ Arguably, nudges are more politically

6. *Behavioural Economics*, ORG. FOR ECON. CO-OPERATION & DEV., <http://www.oecd.org/gov/regulatory-policy/behavioural-economics.htm> [<https://perma.cc/5L8H-WZBG>] (“The use of behavioural economics by governments and regulators is a growing trend globally, most notably in the United Kingdom and United States but more recently in Australia, Canada, Columbia, Denmark, Germany, Israel, Netherlands, New Zealand, Norway, Singapore, South Africa, Turkey and the European Union.”); see also Cass R. Sunstein, *The Ethics of Nudging*, 32 YALE J. ON REG. 413, 414 & n.3 (2015) (“The last decade has seen a remarkably rapid growth of interest in choice-preserving, low-cost regulatory tools.”).

7. Alberto Alemanno, *Nudge: Hype or Genuine Revolution in Policymaking?*, ALBERTO ALEMANNI BLOG (Sept. 6, 2014, 12:00 AM), <http://albertoalemanno.eu/articles/nudgehype> [<https://perma.cc/RZ9V-3P4F>] (discussing the launch of TEN—The European Nudge Network); Donald Marron, *Obama’s Nudge Brigade: White House Embraces Behavioral Sciences to Improve Government*, FORBES (Sept. 16, 2015, 3:32 PM), <http://www.forbes.com/sites/beltway/2015/09/16/obama-nudge-government/#79e0168211f3> [<https://perma.cc/G82P-EHJP>] (discussing President Obama’s “Nudge Brigade” and the U.S. effort to use behavioral science to better regulate); *Nudge Nudge, Think Think*, ECONOMIST (Oct. 18, 2014), <http://www.economist.com/news/britain/21625871-behavioural-economics-changing-regulation-payday-lending-target-nudge-nudge-think-think> [<https://perma.cc/P35A-HV38>] (discussing U.K. behavioral regulation unit known “affectionately as the ‘nudge unit’”).

8. See RICHARD H. THALER & CASS R. SUNSTEIN, *NUDGE* 6-8 (Yale Univ. Press 2008). For recent scholarship on nudging see, for example, Ryan Calo, *Code, Nudge, or Notice?*, 99 IOWA L. REV. 773, 775 (2014); Brian Galle, *Tax, Command . . . or Nudge?: Evaluating the New Regulation*, 92 TEX. L. REV. 837, 839 (2014); Jacob Goldin, *Which Way to Nudge? Uncovering Preferences in the Behavioral Age*, 125 YALE L.J. 226, 228-29, 235-36 (2015) (discussing *NUDGE*, *supra*); Anil Kovvali, *Who Are You Calling Irrational?*, 110 NW. U. L. REV. ONLINE 33, 33 (2015); Cass R. Sunstein, *Nudges vs. Shoves*, 127 HARV. L. REV. F. 210, 210 (2014); Lauren E. Willis, *When Nudges Fail: Slippery Defaults*, 80 U. CHI. L. REV. 1155, 1157 (2013).

9. THALER & SUNSTEIN, *supra* note 8, at 6. According to *Nudge*, “[c]hoice architecture, both good and bad, is pervasive and unavoidable.” *Id.* at 252; see also On Amir & Orly Lobel, *Stumble, Predict, Nudge: How Behavioral Economics Informs Law and Policy*, 108 COLUM. L.

acceptable because they preserve individual choice.¹⁰ Choice is preserved because individuals can still choose to act on their own preferences.¹¹ A common example is changing the rules for employee savings plans so that employees must opt out of saving rather than opt into saving.¹² The simple shift maintains the choice not to save, but by changing the default from not saving to saving, the shift is likely to greatly increase the number of people who use a savings plan.¹³ Given the resistance to individual regulation,¹⁴ it is no surprise that regulators have begun to consider these types of alternative regulatory tools.

One of the main forms of this new behavioral regulation is based in activating social norms. Expressive (or “normative”) regulation changes community norms, or informs the community of existing norms, and capitalizes on social or internal enforcement of the norm as the means for changing behavior.¹⁵ Of course, choice is maintained because one can choose not to follow the group norm. Consider, for example, how smoking laws changed the social meaning of smoking from something cool to something dirty and unhealthy.¹⁶ This change in social meaning led to social ostracism of smokers,

REV. 2098, 2128 (2008). For example, Thaler and Sunstein explain that even if the State gets out of the business of licensing marriages and civil unions, contract law would still be needed to define what partners owe each other during and after the relationship. THALER & SUNSTEIN, *supra* note 8, at 237. In this sense, their understanding recalls earlier legal realists and critical legal thinkers who understood law as constituting the background rules of all human relationships. See Orly Lobel, *The Paradox of Extralegal Activism: Critical Legal Consciousness and Transformative Politics*, 120 HARV. L. REV. 937, 941 (2007) (describing the critical insight that law exists in every sphere of life, even those spheres that are seemingly unregulated).

10. See THALER & SUNSTEIN, *supra* note 8, at 5-6.

11. See *id.*

12. See, e.g., *id.* at 11-13, 104-110.

13. See *id.*

14. See *supra* notes 1-5 and accompanying text.

15. For an introduction to the concepts of expressive and normative regulation, see *infra* Section II.A. See also RICHARD H. MCADAMS, *THE EXPRESSIVE POWERS OF LAW* 233-39 (Harvard Univ. Press 2015).

16. See Kenworthy Bilz & Janice Nadler, *Law, Moral Attitudes, and Behavioral Change*, in *THE OXFORD HANDBOOK OF BEHAVIORAL ECONOMICS AND THE LAW* 241, 248-53 (Eyal Zamir & Doron Teichman eds., 2014).

and also led some smokers to change their beliefs about smoking.¹⁷ This belief change, in turn, resulted in internal sanction, causing those smokers to feel guilt when they smoked in the future, for example.¹⁸ In addition to being less politically objectionable, expressive regulation is attractive for a variety of other reasons. Normative campaigns are cheap to create, and enforcement, which happens primarily through social observation and sanctioning, carries no administrative costs.¹⁹

A burgeoning legal and social science literature has developed around the notion of social norms and expressive law.²⁰ Virtually this entire literature suggests that social enforcement of norms is not effective to solve large-group cooperation problems.²¹ Indeed, foundational works, such as Nobel Laureate Eleanor Ostrom's *Governing the Commons*, suggest that normative influence works best when individuals regularly interact and rely on one another—a phenomenon most likely to exist in small, rather than large, groups.²² This notion is perhaps best captured by Robert Ellickson in *Order Without Law*, in which he describes norms as functioning efficiently in small, “close-knit groups.”²³ This distinction between small, close-knit groups and large, loose-knit groups is now ubiquitous in the literature, and is generally taken for granted.²⁴

Of course, a large number of issues from taxpaying to energy conservation require the cooperation of large groups of people.²⁵ Existing legal scholarship casts great doubt on the effectiveness of expressive regulation in such cases. A small number of scholars

17. *See id.*

18. *See id.*

19. *See infra* Section II.B.

20. *See infra* Part II.

21. *See infra* Part II.

22. *See generally* ELINOR OSTROM, *GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION* (1990).

23. ROBERT C. ELICKSON, *ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES* 167-83 (Harvard Univ. Press 1991).

24. *See infra* Part II.

25. Courtney Subramanian, ‘Nudge’ Back in Fashion at White House, *TIME* (Aug. 9, 2013), <http://swampland.time.com/2013/08/09/nudge-back-in-fashion-at-white-house/> [https://perma.cc/T8UF-EPRN].

have advocated for the use of expressive regulation to solve such problems. These authors often recognize that social and internal enforcement are complementary phenomena, but rely almost entirely on internal enforcement as the mechanism of action in their analyses.²⁶ Thus, large-group games are generally considered to be unamenable to effective expressive regulation when strong internal enforcement is not available.

This Article seeks to reconsider the current thinking regarding the limits of the social force in large-group games. The Article asserts that regulation can overcome traditional limits to social sanctioning by decreasing the transaction costs of norm enforcement and by using large-scale information reporting to trigger social enforcement in smaller, close-knit groups. Thus, properly designed, expressive regulation actually can be a more effective means for responding to large-group problems. Of course, like any regulatory tool, expressive regulation comes with pros and cons. In particular, the fact that norms may have different effects on different groups has potential implications for regulatory design. After developing its model of social enforcement in large-group games, the Article will consider ways in which the potentially negative consequences of uneven effects can be controlled.

The Article proceeds as follows: In Part I, the Article will provide a general overview of norm formation and describe the distinction between social and internal enforcement. In Part II, it will describe the social and internal enforcement mechanisms in detail and explain the general theory that paints social sanctioning as effective only in small, close-knit groups. In Part III, the Article describes the limitations of internal enforcement and provides a detailed explanation of how powerful social sanctioning forces can be recruited to

26. See, e.g., Stephen M. Johnson, *Is Religion the Environment's Last Best Hope? Targeting Change in Individual Behavior Through Personal Norm Activation*, 24 J. ENVTL. L. & LITIG. 119, 136-38 (2009); Lior Jacob Strahilevitz, *Social Norms from Close-Knit Groups to Loose-Knit Groups*, 70 U. CHI. L. REV. 359, 364-67 (2003); Michael P. Vandenbergh, *Order Without Social Norms: How Personal Norm Activation Can Protect the Environment*, 99 NW. U.L. REV. 1101, 1114 (2005) [hereinafter Vandenbergh, *Order Without Social Norms*]; Michael P. Vandenbergh & Anne C. Steinemann, *The Carbon-Neutral Individual*, 82 N.Y.U. L. REV. 1673, 1706-07 (2007) [hereinafter Vandenbergh & Steinemann, *Carbon-Neutral*].

solve large-group cooperation problems. Part IV will then consider the implications of using the social sanctioning model in large-group games before the Article concludes.

I. SEPARATING THE SOCIAL AND INTERNAL ENFORCEMENT MECHANISMS

To better understand the viability and limitations of norm-based regulation it is necessary to disentangle the effects of social enforcement from internalization. By identifying the ways in which both of these forces actually change behavior, one can glean insights into normative regulatory schemes. This Part will describe the internal and social enforcement mechanisms, starting with a brief introduction to the concept of norms and the ways in which norms have been studied in the legal literature to date. It then turns to a basic account of the game-theoretic model of norms that dominates legal scholarship. After establishing this groundwork, this Part will turn to a discussion of the differences between social and internal enforcement, and the role played by small and large groups in norm enforcement.

A. A Brief Introduction to Norms

A large number of law and economics scholars have become dissatisfied with the traditional behavioral model.²⁷ The vast majority

27. See generally Russell Korobkin, *What Comes After Victory for Behavioral Law and Economics?*, 2011 U. ILL. L. REV. 1653 (2011) (describing how behavioral law and economics has emerged as the dominant theory of the last decade). There is a long history of legal scholarship critical of the rational actor model. See, e.g., Mark Kelman, *Consumption Theory, Production Theory, and Ideology in the Coase Theorem*, 52 S. CAL. L. REV. 669, 673, 678-85 (1979); Duncan Kennedy, *Cost-Benefit Analysis of Entitlement Problems: A Critique*, 33 STAN. L. REV. 387, 387-89 (1981); Arthur Allen Leff, Commentary, *Economic Analysis of Law: Some Realism About Nominalism*, 60 VA. L. REV. 451, 451-53 (1974). However, for those scholars sympathetic to the law and economics tradition, such questioning is of more recent vintage. See, e.g., Robert C. Ellickson, *Law and Economics Discovers Social Norms*, 27 J. LEGAL STUD. 537, 537-38 (1998); Christine Jolls, Cass R. Sunstein & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471, 1473-76 (1998); Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 CALIF. L. REV. 1051, 1053-59 (2000).

of scholars have challenged the model's rationality assumption,²⁸ whereas other critics argue that the model is ignorant of the socialization process and the human desire for status, as well as the process by which law may affect preferences for certain behaviors over others.²⁹ This latter group is particularly interested in the ability of social norms to control or affect behavior, and the ability of law to affect social norms and preferences.³⁰

The concept of a “norm” is subject to a variety of definitions.³¹ For purposes of this Article, it is enough to define a norm as a behavioral rule supported by a pattern of informal sanctions.³² The sanctions

28. See, e.g., DANIEL KAHNEMAN, THINKING, FAST AND SLOW (2011); Ellickson, *supra* note 27, at 551-52; Jolls et al., *supra* note 27, at 1473-76 (describing and applying, among other things, a concept of bounded rationality); Korobkin & Ulen, *supra* note 27, at 1055-59 (describing and critiquing the different versions of rational choice theory).

29. See, e.g., GEOFFREY BRENNAN & PHILIP PETTIT, THE ECONOMY OF ESTEEM, at vii (2004); John Bronsteen, Christopher Buccafusco & Jonathan S. Masur, *Happiness and Punishment*, 76 U. CHI. L. REV. 1037, 1037-39 (2009); John Bronsteen, Christopher Buccafusco & Jonathan S. Masur, *Welfare as Happiness*, 98 GEO. L.J. 1583, 1585-88 (2010); John Bronsteen, Christopher Buccafusco & Jonathan S. Masur, *Well-Being Analysis vs. Cost-Benefit Analysis*, 62 DUKE L.J. 1603, 1605-10 (2013); Kenneth G. Dau-Schmidt, *An Economic Analysis of the Criminal Law as a Preference-Shaping Policy*, 1990 DUKE L.J. 1, 1-3 (arguing that criminal law can be better understood in terms of preference shaping than opportunity shaping); Ellickson, *supra* note 27, 538-46 (identifying a number of lacunae in classical law and economics and arguing that these lacunae are major); Daniel A. Farber, *Toward a New Legal Realism*, 68 U. CHI. L. REV. 279, 287-88 (2001) (reviewing BEHAVIORAL LAW AND ECONOMICS (Cass Sunstein ed., 2000)).

30. The literature is voluminous. A Westlaw search of the term “social norms” returns over 10,000 documents. Some examples of recent works that consider social norms in law include: Rachel Brewster, *Pricing Compliance: When Formal Remedies Displace Reputational Sanctions*, 54 HARV. INT'L L.J. 259 (2013) (international environmental law); Stefan Larsson, *Karl Renner and (Intellectual) Property—How Cognitive Theory Can Enrich a Sociolegal Analysis of Contemporary Copyright*, 48 LAW & SOC'Y REV. 3 (2014) (intellectual property); Sarah B. Lawsky, *How Tax Models Work*, 53 B.C. L. REV. 1657 (2012) (tax law); Michael L. Rich, *Should We Make Crime Impossible?*, 36 HARV. J.L. & PUB. POL'Y 795 (2013) (criminal law); Tom R. Tyler, *Reducing Corporate Criminality: The Role of Values*, 51 AM. CRIM. L. REV. 267 (2014) (corporate law). The seminal work on law and norms is undoubtedly ROBERT C. ELLICKSON, ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES (1991).

31. Robert Ellickson, for example, defines a norm as a rule supported by a pattern of informal sanctions. See Ellickson, *supra* note 27, at 549 n.58. Similarly, Eric Posner defines a norm as a rule of behavior enforced by private third parties. See Eric A. Posner, *Law, Economics, and Inefficient Norms*, 144 U. PA. L. REV. 1697, 1699 (1996). Robert Cooter, on the other hand, defines a norm in the traditional philosophical sense as an obligation. See Robert Cooter, *Normative Failure Theory of Law*, 82 CORNELL L. REV. 947, 954 (1997).

32. See Ellickson, *supra* note 27, at 549 n.58.

can be based on shame, some other type of social ostracism, or guilt. Thus, a rule against smoking in public places can affect behavior not just through the civil penalty that accompanies it—that is, its sanction—but also by increasing the willingness of individuals to shame or otherwise socially ostracize those who violate its prohibition.³³ Moreover, to the extent that such a rule results in the “internalization” of the prohibition, individuals will be deterred from such activity because of the prospect of guilt, regardless of the possibility of sanction.³⁴ The effect of norms on behavior has been considered in a wide variety of contexts.³⁵

Expressive regulation, in turn, focuses on utilizing the social and internal sanctioning process to change behavior. Such regulation can be either direct or indirect. Most scholarship to date has considered indirect normative effects of law, and has focused on the way in which passage of laws affects the “social meaning” of regulated behavior.³⁶ Scholars have, for example, discussed how antismoking laws have changed the social meaning of smoking from cool to dirty,

33. Bilz & Nadler, *supra* note 16, at 250-51.

34. Vandenberg & Steinemann, *Carbon-Neutral*, *supra* note 26, at 1706-07; *see also* Robert E. Scott, *The Limits of Behavioral Theories of Law and Social Norms*, 86 VA. L. REV. 1603, 1603-04 (2000).

35. Eric Posner identifies a number of these applications and adds to the list by considering how norms influence tax compliance. *See* Eric A. Posner, *Law and Social Norms: The Case of Tax Compliance*, 86 VA. L. REV. 1781, 1781 & n.2 (2000).

36. Lawrence Lessig, *The Regulation of Social Meaning*, 62 U. CHI. L. REV. 943, 949-62 (1995) [hereinafter Lessig, *Regulation*]; Richard H. McAdams, *A Focal Point Theory of Expressive Law*, 86 VA. L. REV. 1649, 1650-51 (2000) (“The thesis is that law influences behavior independent of the sanctions it threatens to impose, that law works by what it says in addition to what it does.”); *see, e.g.*, Lawrence Lessig, *The New Chicago School*, 27 J. LEGAL STUD. 661, 680 (1998) (noting that expressive law scholars recognize that the expressive function of law works not through something physical but through a function that is interpretive). For example, Lessig argues that a law prohibiting duelers from holding public office worked better than a law that simply outlawed dueling because it obfuscated the objective meaning of choosing not to duel. Lessig, *Regulation*, *supra*, at 971-72. Under the new law, dueling was no longer simply a breach of honor that could not be constrained by mere punishment; rather, it was a choice to maintain honor by undertaking one's duty to do civic work. *See id.* Similarly, Cass Sunstein suggests that laws against public smoking may have significantly decreased the amount of young black Americans who smoke by changing the social meaning of smoking from attractive rebelliousness to dirtiness and a “willingness to be duped.” Cass R. Sunstein, *On the Expressive Function of Law*, 144 U. PA. L. REV. 2021, 2034 (1996).

resulting in a change in the social feedback smokers receive.³⁷ Numerous scholars have catalogued a variety of laws and their influence on the social meaning of behavior.³⁸

Direct expressive regulation has been much less studied by legal scholars.³⁹ Direct regulation is specifically directed toward activating norms in order to change behaviors. In some cases, public information campaigns attempt to redefine the social meaning of behavior. Campaigns, such as “Don’t Mess with Texas”⁴⁰ and the iconic “Iron Eyes Cody”—also known by its tag line, “People Start Pollution, People Can Stop It”⁴¹—embody this idea. Other efforts are even more direct and even more clearly focused on social norms as the mechanism by which behavior is affected. These efforts work primarily by telling the population what others in the community

37. Sunstein, *supra* note 36, at 2034.

38. See, e.g., Danielle Keats Citron, *Law’s Expressive Value in Combating Cyber Gender Harassment*, 108 MICH. L. REV. 373, 407-14 (2009) (discussing the expressive role of law in gender harassment in the workplace and on the internet); Dan M. Kahn, *What Do Alternative Sanctions Mean?*, 63 U. CHI. L. REV. 591, 597-601 (1996) (discussing the expressive theory and its role in explaining the relative seriousness of various crimes); Lessig, *Regulation*, *supra* note 36, at 962-91 (discussing a myriad of instances in which social meaning has changed with social norms); Jason Mazzone, *When Courts Speak: Social Capital and Law’s Expressive Function*, 49 SYRACUSE L. REV. 1039, 1043, 1056-58 (1999) (arguing that courts perform expressive functions when social capital is high, and establishing two sources of social capital: “norms of generalized reciprocity” and “networks of civic engagement”); Richard H. Pildes, *Why Rights Are Not Trumps: Social Meanings, Expressive Harms, and Constitutionalism*, 27 J. LEGAL STUD. 725, 725-26 (1998) (arguing that social norms give content to constitutional rights); Paul H. Robinson & John M. Darley, *The Utility of Desert*, 91 NW. U. L. REV. 453, 471-77 (1997) (analyzing criminal law’s ability to create shared norms and its power as a moral authority); Sunstein, *supra* note 36, at 2033-36 (focusing on norms and dangerous behavior).

39. See Vandenberg & Steinemann, *Carbon-Neutral*, *supra* note 26, at 1676-79 (suggesting that policymakers utilize the often overlooked strategy of direct expressive regulation to alter individual carbon emissions).

40. *Ad Archive: Explore Thirty Years, DON’T MESS WITH TEXAS*, <http://www.dontmesswithtexas.org/the-campaign/ad-archive/> [<https://perma.cc/SM2V-RMPQ>] (archiving thirty years’ of Texas advertisements aimed at preventing pollution).

41. The Iron Eyes Cody spot begins with a shot of a stately, buckskin-clad Native American chief paddling his canoe up a river that carries various forms of industrial and individual pollution. Vladas Griskevicius et al., *Social Norms: An Underestimated and Underemployed Lever for Managing Climate Change*, 3 INT’L J. SUSTAINABILITY COMM. 5, 6 (2008), http://www.climateaccess.org/sites/default/files/Cialdini_Social%20Norms.pdf [<https://perma.cc/GEP6-E4DF>]. After coming ashore near the littered side of a highway, Iron Eyes Cody watches as a bag of garbage is thrown from the window of a passing car. *Id.* From the refuse to his feet, the camera pans up slowly to his face, where a tear is shown rolling down his cheek. *Id.*

do, directly carrying information on norms to the intended audience.⁴² For example, a company called “Opower” has successfully teamed with utilities in an effort to decrease energy consumption through the use of mailers that compare one homeowner’s energy use to that of her neighbors.⁴³ Although some mechanisms, such as the one used by Opower, have been used to successfully activate norms, the best means for doing so has yet to be developed.⁴⁴

B. Norm Formation

A particular vision of norms based in economics and, in particular, game theory dominates the legal scholarship on social norms. Foundational norms scholarship has been particularly intrigued by the effectiveness of normative enforcement in small, close-knit communities. Elinor Ostrom’s analysis of how small communities can efficiently manage common resources, Robert Ellickson’s study of how ranchers in Shasta County California opt out of formal law and choose to follow a set of self-imposed behavioral rules, the informal controls used by the lobster gangs of Maine, and Lisa Bernstein’s studies of behavior in the diamond industry, all suggest that norms function efficiently to control behavior in small groups of individuals who interact regularly toward the achievement of a common goal.⁴⁵ Social enforcement in large, loose-knit groups, on the other hand, is generally considered to be ineffective.

These conclusions are derived from a particular vision of norm formation. Many scholars⁴⁶ conceive of norms as arising from

42. See Vandenberg & Steinemann, *Carbon-Neutral*, *supra* note 26, at 1704-09.

43. Stephen Lacey, *Opower Expands Behavioral Demand Response to 1 Million Customers*, GREENTECH MEDIA (May 20, 2014), <http://www.greentechmedia.com/articles/read/opower-looks-to-bring-behavioral-demand-response-nationwide> [<https://perma.cc/HR8E-PDKS>].

44. See Vandenberg & Steinemann, *Carbon-Neutral*, *supra* note 26, at 1703-04 (referring to skepticism about efforts to directly affect behavior on the grounds that research suggests that information campaigns are ineffective).

45. See *infra* Section III.A.

46. See, e.g., Richard H. McAdams, *Signaling Discount Rates: Law, Norms, and Economic Methodology*, 110 YALE L.J. 625, 625-26 (2001) (reviewing ERIC A. POSNER, *LAW AND SOCIAL NORMS* (2000)) (identifying two groups, those who think of norms in terms of rational choice and those who do not, and recognizing that economists tend to fall into the former camp).

cooperation problems that confront rational individuals acting in their own self-interest.⁴⁷ The prisoner's dilemma is often the starting point for this analysis.⁴⁸ The prisoner's dilemma posits two rational, self-interested individuals who must choose between alternate strategies.⁴⁹ Under the circumstances of the game, rational decisions lead to inefficient outcomes.⁵⁰

Take, for example, the following scenario between players Row and Column, who are being questioned in separate cells at the police station.⁵¹ If one player tells on the other player, the other player will get a sentence of three years, whereas the tattler will be let off for cooperation.⁵² If neither tells they will both be found guilty of a lesser offense (one year in jail each).⁵³ If both tell, they will both be convicted of a more significant offense (two years each).⁵⁴

	Cooperate	Defect
Cooperate	2/2	0/3
Defect	3/0	1/1

Under these circumstances, Row will always tell. Assume first that Column will tell. If Row does not tell he will get three years in

47. See *infra* Part II (discussing foundational work on norms and its reliance on game theory); see also Thomas F. Cotter, *Legal Pragmatism and the Law and Economics Movement*, 84 GEO. L.J. 2071, 2126 n.235 (1996); Steven Hetcher, *Creating Safe Social Norms in a Dangerous World*, 73 S. CAL. L. REV. 1, 7-8 (1999); Steven A. Hetcher, *Norm Proselytizers Create a Privacy Entitlement in Cyberspace*, 16 BERKELEY TECH. L.J. 877, 902-03 (2001); Eric A. Posner, *Symbols, Signals, and Social Norms in Politics and the Law*, 27 J. LEGAL STUD. 765, 797 n.52 (1998); Elmer J. Schaefer, *Predicting Defection*, 36 U. RICH. L. REV. 443, 462 (2002).

48. See, e.g., ERIC A. POSNER, *LAW AND SOCIAL NORMS* 13-18 (2000).

49. *Id.* at 13-15.

50. *Id.* at 14.

51. *Id.* at 13-14 (illustrating this example).

52. *Id.*

53. *Id.*

54. *Id.*

jail, but if he does tell, he will only get a two-year sentence. If Column does not tell, Row will get no time in jail if he does tell and one year in jail if he does not tell. Under these circumstances, it is better for the self-interested Row to tell no matter what Column does. The dominant strategy for both players will thus be to tell. As a result, both will receive two years in prison, whereas if they had stayed silent, they would each only get one year in jail. Pursuit of individual self-interest leads to worse results than if they had cooperated and both withheld information.

Whereas defection is the dominant strategy in a one-time play of the prisoner's dilemma, cooperation is a natural result of such a problem in situations in which the parties will play the game a substantial number of times (an iterated game).⁵⁵ Assume, for example, that Column and Row are a wholesaler and retailer of goods. They desire to create a relationship in which Column will supply the goods at a certain cost. If Column delivers the quality of goods agreed upon, both parties will make two dollars. If Column cheats and sends goods of lesser quality, he will make three dollars and Row will make zero dollars, but Row will defect and Column will have to look for other cooperative partners. A similar result would occur if Row cheats by, for example, challenging the quality of the goods and withholding full payment. Assuming a desire to play for a number of times, it is better for the parties to cooperate than defect because making two dollars regularly is better than making three dollars a few times but developing a reputation for being untrustworthy, and thus losing cooperative opportunities in the future.⁵⁶ As Eric Posner says, "logic shows that the optimal move is always to cooperate."⁵⁷

Social norms within this framework are simply artifacts of the cooperation between rationally self-interested group members. Put simply, when the game is played many times between the same

55. *Id.* at 15-18.

56. *Id.* at 16.

57. *Id.* Posner also suggests that the logic of cooperation extends to games involving more than two players by assuming that everyone has sufficient information about other people's past activities. *Id.* Thus, defection from one pairwise transaction will not lead to a clean slate in the next pairwise transaction. *See id.*

group members, particular norms that reflect the preferences of the majority of group members will develop. Prisoners will likely develop a preference for not “snitching,”⁵⁸ whereas retailers will prefer “good faith and fair dealing.”⁵⁹ Norms are thus a reflection of the aggregate preferences of the individuals that comprise the group when the group members regularly cooperate.

Normative pressure, in turn, is based on the mutual attraction that arises between people who are interdependent. The attraction is rooted in “the operation of a need satisfaction or ‘reinforcement’ principle: mutual liking between group members reflects the extent to which positive, gratifying, or rewarding outcomes are associated directly or indirectly with being in a cooperative relationship with each other.”⁶⁰ Economists often model this as a preference for esteem from other group members.⁶¹ Normative pressure is thus an external force that affects individual behavior only to the extent one is concerned about others to whom he is attracted. Put simply, if an individual wants to do something he perceives is not condoned by other group members, and a sense of mutual liking or attraction exists between the individual and the other group members, then the individual risks disapproval from others whom he likes when they observe his behavior.

C. Distinguishing Between Internal and Social Enforcement

Although many energy-conserving behaviors, such as the type of car one drives, are open to social observation, others, such as how high one sets his thermostat, are less open to inspection. Norms are likely to influence behavior differently in each of these two scenarios. The social enforcement model of norms is well developed in legal

58. For a discussion of the anti-snitching norm, see Bret Asbury, *Anti-Snitching Norms and Community Loyalty*, 89 OR. L. REV. 1257 (2011).

59. Lisa Bernstein, *Merchant Law in a Merchant Court: Rethinking the Code's Search for Immanent Norms*, 144 U. PA. L. REV. 1765, 1776 & n.38 (1996).

60. Alex Geisinger & Michael Ashley Stein, *A Theory of Expressive International Law*, 60 VAND. L. REV. 77, 93 (2007).

61. See, e.g., Ellickson, *supra* note 27, at 540-41; Jed S. Ela, Comment, *Law and Norms in Collective Action: Maximizing Social Influence to Minimize Carbon Emissions*, 27 UCLA J. ENVTL. L. & POL'Y 93, 118-19 (2009).

scholarship. As just discussed, social enforcement is rooted in the “liking” that develops between individuals engaged in mutually beneficial activities, often described as a desire for esteem from other group members.⁶² When an individual desires esteem from others in the group, he attempts to determine the preferences of others and to act in accordance with them. Conversely, failure to act in accordance with group norms, when discovered by group members, will result in social sanctioning.

Internalized enforcement of norms occurs when, instead of concern for esteem, an individual feels guilt for failure to act in accordance with a norm she believes to be right. As will be discussed shortly, the mechanism of internal norm change has not been as well developed in the legal literature.⁶³ Scholars, however, have considered the use of internal enforcement mechanisms in a number of instances.⁶⁴ A simple example will demonstrate the differences between the two mechanisms. Consider the normative sanctions that would accompany a parent’s decision not to use a car seat for her child. If the parent does not use a car seat and neighbors observe her doing so, she may feel that her neighbors will sanction her socially by withholding esteem. On the other hand, even if neighbors are not around, she may feel guilty not using a car seat because she believes it is the wrong thing to do.

II. SOCIAL AND INTERNAL ENFORCEMENT MODELS

A. *The Social Enforcement Mechanism*

An important distinction in the social norm enforcement model exists between large and small groups. Small groups are generally considered capable of establishing and enforcing efficient normative behavioral controls, whereas large groups are generally conceived of as unable to use norms effectively. This is of particular concern

62. For a general discussion, see Alex Geisinger & Michael Ashley Stein, *Rational Choice, Reputation, and Human Rights Treaties*, 106 MICH. L. REV. 1129, 1138-39 (2008) (reviewing ANDREW T. GUZMAN, *HOW INTERNATIONAL LAW WORKS: A RATIONAL CHOICE THEORY* (2007)).

63. See *infra* Part II.

64. See *infra* Section II.B.

because a large number of regulatory targets from taxpaying to recycling require cooperation among large numbers of individuals. This Section will describe how small- and large-group distinctions arise in norms scholarship.

Any study of large versus small groups and formation of social norms must begin with the influential work of Elinor Ostrom. Ostrom dedicated a good portion of her Nobel Prize-winning career to analyzing how groups of individuals can solve commons problems without legal intervention.⁶⁵ Ostrom's work specifically engages Mancur Olson and others who assume that the collective action problem created by common ownership cannot be solved without outside intervention.⁶⁶ Ostrom found that norms do arise spontaneously to solve cooperation problems under certain conditions.⁶⁷ Among the conditions she identified for norms to spontaneously arise are small group size and similarities of interests among group members.⁶⁸ As these conditions suggest, normative solutions to cooperation problems can only arise in small groups whose members share a compelling mutual need to benefit from the proper management of a common resource. These findings, of course, raise significant concerns regarding the ability of norms to function efficiently in large, heterogeneous groups.⁶⁹

Another source of skepticism regarding the effectiveness of social

65. See, e.g., OSTROM, *supra* note 22, at 1-2, 25-28.

66. See *id.* at 1-5 (describing the tragedy of the commons, the prisoner's dilemma game, and the logic of collective action); see also Posner, *supra* note 35, at 1815 (discussing the need for traditional regulation to solve collective action problems).

67. See OSTROM, *supra* note 22, at 187-88.

68. See *id.* at 188.

69. See Vandenbergh, *Order Without Social Norms*, *supra* note 26, at 1112 (noting a profoundly pessimistic conclusion lies at the core of recent environmental scholarship regarding behavior change in these negative-payoff, loose-knit group situations). When the desired behavior requires sustained or substantial effort, studies of responses to recycling norm campaigns suggest that they have limited effects unless they are of the expensive, face-to-face variety, or the government invests in financial incentives or the infrastructure necessary to make the behavior convenient. *Id.* Studies of product labeling have reached similar conclusions. See *id.*; see also OSTROM, *supra* note 22, at 189 (questioning the policy implications that arise from knowing that the group size increases the difficulty of organizing collective action, and asking whether it should be assumed that small groups will take care of themselves while external authorities will manage larger groups).

enforcement of norms in large groups is Robert Ellickson's influential study on normative control of behavior among ranchers in Shasta County, California.⁷⁰ In *Order Without Law*, Ellickson describes how normative controls led ranchers to use their pastureland efficiently, avoiding the traditional problem of the commons.⁷¹ Ellickson's seminal study, similar to Ostrom's, suggests that self-governing norms may arise in what he describes as small, close-knit communities.⁷² The influence of Ellickson and Ostrom on legal norms scholarship cannot be overstated. In particular, the legal literature has almost universally adopted the thesis that efficient norms will develop in small, close-knit groups and has relied on that concept as a structural component of thinking about norms.⁷³

Of course, both Ostrom's and Ellickson's work provide only one part of the story of norm compliance. In particular, neither author's study specifically considers the way in which regulatory interventions into groups could influence normative pressure and change the behavior of group members.⁷⁴ Their work, instead, focuses on the "spontaneous" development of stable normative regimes among small groups of individuals who share a common resource absent government intervention.⁷⁵ Direct regulation of norms in large groups, however, has been studied in the legal literature. Perhaps the most influential early article in this regard is Ann Carlson's

70. ELLICKSON, *supra* note 23, at 1.

71. *Id.* at 141.

72. *Id.* at 167.

73. A Westlaw search of "Ellickson, Order Without Law" returns over 1400 secondary-source citations in total and over 600 citations in the last decade. A similar search of "Elinor Ostrom and close-knit" returns nearly 200 citations from the legal literature. For samples of articles reliant on the vision of small, close-knit groups, see Dotan Oliar & Christopher Sprigman, *There's No Free Lunch (Anymore): The Emergence of Intellectual Property Norms and the Transformation of Stand-Up Comedy*, 94 VA. L. REV. 1787, 1794 (2008); Pamela Quinn Saunders, *A Sea Change off the Coast of Maine: Common Pool Resources as Cultural Property*, 60 EMORY L.J. 1323, 1329-30 (2011); and Christopher S. Yoo, *Beyond Coase: Emerging Technologies and Property Theory*, 160 U. PA. L. REV. 2189, 2213-14 (2012).

74. Ostrom's work focused primarily on the development of normative communities, and not on the use of regulation to spur norm compliance; however, she did provide some insight into the way in which normative communities must be designed to succeed. See OSTROM, *supra* note 22, at 88-102 (discussing the topic in-depth).

75. See ELLICKSON, *supra* note 23, at 4; OSTROM, *supra* note 22, at 30-33.

watershed study of programs directed at increasing recycling.⁷⁶

Like Ostrom and Ellickson, Carlson starts with the basic collective action problem of recycling.⁷⁷ In the case of recycling, however, the problem is not one that extends to a small number of closely interconnected group members.⁷⁸ Rather, it is one of large groups that need to act collectively for mutual benefit.⁷⁹ Carlson places recycling into the now-familiar game theory construct by expressly recruiting Mancur Olson's discussion of the problem of collective action:

Olson argued that groups frequently fail to work in their collective interest to achieve group benefits because individual self-interests get in the way.... The size of the group is often related to the depth of the collective action problem; the greater the numbers, the more difficult it is likely to be to solve the problem, particularly given that "if one member does or does not help provide the collective good, no other one member will be significantly affected and therefore none has any reason to react." Recycling provides an excellent example. To achieve the widespread benefits of recycling, a significant portion of the population must participate. Yet each individual knows that her individual behavior, standing alone, makes little difference; if I throw my junk mail into the trash can rather than taking it out to the recycling bin, I can easily rationalize such behavior by questioning whether, in the scheme of things, my contribution to the overuse of landfills is really worth the effort to recycle.⁸⁰

Having described recycling as a large-number game, Carlson also explains how it is also a "small-payoff" problem by referring to the low, direct benefit received by any player.⁸¹ She describes the benefits of recycling—including decreased landfill use, fewer emissions from incinerators, and diminished use of virgin resources—as "generalized benefits to the collective not typically viewed as producing

76. Ann E. Carlson, *Recycling Norms*, 89 CALIF. L. REV. 1231, 1234 (2001).

77. *See id.* at 1232.

78. *See id.* at 1233-34.

79. *See id.*

80. *Id.* at 1243 (footnotes omitted).

81. *Id.* at 1249.

any substantial, immediate benefit at an individual level.”⁸² Although Carlson does specifically recognize that energy conservation, like recycling, is a large-number, small-payoff game, she asserts that conservation may be more susceptible to financial incentives because wasteful energy consumption costs money.⁸³

Because of the small-payoff structure of the problem, Carlson concludes that expressive regulation plays, at best, a minor role in increasing recycling. For example, she notes that programs designed to lower the costs of recycling by allowing recyclables to be mixed in one bin rather than separated into many bins are much more effective at increasing recycling rates than programs that use social influence.⁸⁴ The limitations on normative regulation in large groups, Carlson suggests, arise from “[t]he same characteristics that make a large-number, small-payoff problem difficult to resolve[:] ... large numbers of people, little economic incentive to act, and lack of homogeneity.”⁸⁵

This observation is starkly supported by Richard McAdam’s observation that enforcement of social norms in large groups creates its own second-order cooperation problem:

[I]f sanctioning is costly, as most analyses assume, the puzzle is to explain why individuals will ever begin to sanction violators or why threats of sanctions are ever credible.... Even when the norm benefits the group, a *second-order* collective action problem remains: if others enforce the norm, the individual can gain the norm’s benefits without bearing enforcement costs; if others do not enforce the norm, the individual’s solo enforcement efforts are wasted. The individual gains only in the rare case where her

82. *Id.* at 1242. Throughout the article, Carlson does note that there are some direct monetary benefits of recycling, such as receiving a deposit back in states that have bottle bills. *See id.* at 1266-67. Ultimately, she argues that such small payments affect behavior much less than other factors, such as making recycling more convenient. *Id.* at 1296.

83. *See id.* at 1297. She further theorizes that small differences may ultimately have significant effects on the power of normative remedies. *Id.* at 1298.

84. *See id.* at 1278-79.

85. *Id.* at 1235; *see also* Stephanie Stern, *Encouraging Conservation on Private Lands: A Behavioral Analysis of Financial Incentives*, 48 ARIZ. L. REV. 541, 556 (2006) (noting that homes and similarly exclusive private spaces limit both the social reinforcement of pro-environmental behavior and derision and shaming responses to anti-environmental actions).

contribution to enforcement by itself will “make or break” the norm. Otherwise, the individual is better off not bearing enforcement costs.⁸⁶

In agreement with McAdams, Carlson concludes that normative programs on their own are not powerful enough to shape behavior meaningfully. She notes that “as Mancur Olson, Elinor Ostrom, and others have theorized, large-number, small-payoff problems are unlikely to be resolved without external intervention ... even if governments can shape and strengthen social norms in favor of resolution of the problem absent additional regulatory mechanisms.”⁸⁷

Although recognizing the problems of cooperation in large groups, Carlson draws some conclusions on how normative interventions may be structured to be effective. Carlson suggests that the most effective normative regimes will use “strategies that intensify human contact and communication among potential cooperators ... [to] achieve the sustained behavioral change necessary to resolve collective action problems.”⁸⁸ Such an observation, of course, reflects the general rational, choice-based vision of groups and norms. In essence, Carlson suggests strategies that turn larger groups into smaller ones. Thus, under the rational-choice view, the existence of large groups, such as those engaged in energy conservation, and the need to cooperate create not just problems for the spontaneous creation of norms, but for direct normative regulation as well.

86. Richard H. McAdams, *The Origin, Development, and Regulation of Norms*, 96 MICH. L. REV. 338, 352-53 (1997) (footnotes omitted); see also Taisu Zhang, *Social Hierarchies and the Formation of Customary Property Law in Pre-Industrial China and England*, 62 AM. J. COMP. L. 171, 177 n.24 (2014). Zhang writes:

Rational choice theories struggle, in particular, to explain how rational individuals desist from free-riding on norm enforcement and adherence. Although certain evolutionary game theory models claim to explain social cooperation under fixed conditions ... those conditions often seem unrealistic: for example, that players interact one-on-one even in an n-person game and possess perfect information. Some have attempted to bypass these difficulties by suggesting that withholding or conferring esteem is “costless.”

Id. (citations omitted).

87. Carlson, *supra* note 76, at 1299.

88. *Id.* at 1251.

B. The Internal Enforcement Mechanism

One can understand why individuals such as Carlson, Ellickson, and Ostrom are skeptical of large-group norms as a means of promoting cooperation. Norm surveillance and enforcement in such situations is difficult. Moreover, the larger the group, the more diffuse the interests and the less the reliance of group members on one another for mutual benefit. In short, whereas members of small groups interact regularly and have relatively homogenous preferences regarding the specific goals of their cooperation, members of large groups rarely interact, have heterogeneous preferences, and do not rely on each other for cooperative benefits.

As a result of this general skepticism, scholars turn to the internal enforcement mechanism when considering norm activation in large, loose-knit groups.⁸⁹ The mechanism of internalization, however, is not nearly as well-studied by legal scholars as the social sanctioning mechanism.⁹⁰ Whereas the traditional game-theory model predicts that social enforcement of norms will not be a successful strategy in large-group games, it says little about internal enforcement.⁹¹ Game theorists have recognized the influence internalization of norms has on behavior, but have chosen in great part to ignore that mechanism because of its complexity and uncertain theoretical foundation.⁹²

As Michael Vandenbergh—perhaps the leading authority on internal enforcement—observes:

The norms literature provides only limited insights for the resolution of negative-payoff, loose-knit group situations. Recent studies of two types of efforts that rely on norms to influence environmental behaviors, recycling norm campaigns and labeling programs, demonstrate the difficulty of changing behavior in these situations. In addition, the more general legal literature on norms is extensive, but the bulk of the scholarship has

89. See, e.g., Vandenbergh, *Order Without Social Norms*, *supra* note 26, at 1113-16.

90. See *id.*

91. See *id.*

92. *Id.* at 1114 n.54, 1115 n.60.

focused on the role of externally-enforced social norms, which have limited influence in loose-knit group situations.... Several scholars have emphasized the importance of personal norms and have argued that personal norms do influence behavior in some types of loose-knit group situations. Yet the identification of the most influential norms for particular behaviors, the means by which personal norms become influential, and the ways in which legal interventions can affect this process have received only limited attention.⁹³

Although there has been little work on norm internalization generally in the legal literature, one theory of internalization advanced by Vandenberg has found its way to the forefront of legal scholarship. He adapts from the social sciences a model of internalization defined as Values-Beliefs-Norms (VBN) theory to develop a model of “personal norm activation.”⁹⁴ The VBN theory incorporates findings of empirical studies indicating that most individuals hold at least four value clusters, each of which includes more specific values.⁹⁵ “A new belief that a value is threatened and that the individual can act to reduce the threat tends to activate norms and induce action.”⁹⁶ In his article on internal norm activation, Vandenberg explains the relationship between generalized abstract norms and concrete norms of environmental protection.⁹⁷ He notes that information that the concrete behavior of conservation is good for the environment activates the general norm of environmental protection.⁹⁸ This induces behavior change by connecting the act of conservation to a broadly held belief of what is socially acceptable.⁹⁹

Other theories of norm internalization do exist. For example, a number of scholars have suggested that internalization is nothing more than determining that a new behavior is actually preferred

93. *Id.* at 1112-13 (footnotes omitted).

94. *Id.* at 1101, 1116 n.68.

95. *Id.* at 1116 n.68.

96. *Id.* at 1115.

97. *See id.* at 1115-17.

98. *See id.*

99. *Id.*

over another,¹⁰⁰ for example, determining that wearing a seatbelt is preferable to not wearing one.¹⁰¹ Others have suggested that external norms become internal ones through an iterative process in which continuous adherence to the norm in the presence of others leads an individual to begin to believe the norm is the “correct” behavior and suffer guilt when failing to act in accordance with it.¹⁰²

The social sciences literature does support personal norm activation. However, the literature suggests a different mechanism for successful personal norm activation in large groups: simply providing information on the behavior of others can have a significant impact on behavior.¹⁰³ In particular, social scientists have identified different ways in which information about others influences behavior other than through social normative effects or personal norm activation.¹⁰⁴ “True” social learning may occur as a result of observing the behavior of others.¹⁰⁵ This is considered “true” learning because it relates to changes in internal preferences and not just a willingness to act publicly in accordance with the norm.¹⁰⁶ Pursuant to this literature, one need not consider complex personal norm activation messages, such as those that VBN theory suggests.¹⁰⁷ Rather, simply communicating to individuals what others are doing can lead to significant behavioral change.¹⁰⁸ This is not to suggest that VBN theory has no place in the design of social norm campaigns. Rather, VBN and social learning should be considered complimentary mechanisms of norm activation and each tool should be

100. See, e.g., Scott, *supra* note 34, at 1611.

101. See Alex Geisinger, *A Belief Change Theory of Expressive Law*, 88 IOWA L. REV. 35, 62-64 (2002).

102. See Geisinger & Stein, *supra* note 60, at 116-18; Harold Hongju Koh, *Why Do Nations Obey International Law?*, 106 YALE L.J. 2599, 2646 (1997) (book review).

103. See Robert B. Cialdini et al., *Managing Social Norms for Persuasive Impact*, 1 SOC. INFLUENCE 3, 4-5 (2006); Noah J. Goldstein, Robert B. Cialdini & Vidas Griskevicius, *A Room with a Viewpoint: Using Social Norms to Motivate Environmental Conservation in Hotels*, 35 J. CONSUMER RES. 472, 472-74 (2008); Griskevicius et al., *supra* note 41, at 6; Matthew E. Kahn, *Do Greens Drive Hummers or Hybrids? Environmental Ideology as a Determinant of Consumer Choice*, 54 J. ENVTL. ECON. & MGMT. 129, 130 (2007).

104. See Goldstein et al., *supra* note 103, at 479-80.

105. *Id.*

106. See *id.*

107. See *supra* notes 85-87 and accompanying text.

108. See Goldstein et al., *supra* note 103, at 479-80.

used when it will be most effective.

III. APPLYING THE SOCIAL AND INTERNAL ENFORCEMENT MODELS TO REGULATION OF LARGE, LOOSE-KNIT GROUPS

Legal scholarship concludes that social sanctioning is effective in the small, close-knit group environment and ineffective in large-group games.¹⁰⁹ Pursuant to this view, internalized norm activation becomes the expressive tool of choice in the large-group context.¹¹⁰

This Article argues that, although internal activation is a cost-effective means of regulating, the power of internalization to change behavior in large groups may be limited. Instead of relying on the weak internal force, the Article asserts that regulators should consider ways to harness the strong social sanctioning force for such groups. The Article uses a simple information registry to explain how both the dilution and free-riding problems that plague norm enforcement in large groups can be overcome. Such registries could be used in any number of areas in which the cooperation problem involves a large group.¹¹¹ Everything from tax compliance, hiring disabled workers, and decreasing Greenhouse Gas Emissions (GHGs) could be effectively regulated through such a mechanism.¹¹²

Because the area of energy conservation has been the focus of the majority of the literature on norm activation in large-group games, this Article will focus on the same topic in explaining the basic registry model.¹¹³ Energy conservation is a large-group game of great

109. *See supra* Part II.

110. *See supra* Part II.

111. *See also* Michael P. Vandenbergh & Jonathan A. Gilligan, *Beyond Gridlock*, 40 COLUM. J. ENVTL. L. 217, 246 n.109 (2015) (describing how labeling and certification schemes may also carry the information necessary to trigger social enforcement).

112. *See generally id.* at 258-60 (discussing the use of a private climate legacy registry as a means of private governance to reduce carbon emissions).

113. *See, e.g.*, Hunt Allcott, *Consumers' Perceptions and Misperceptions of Energy Costs*, 101 AM. ECON. REV. 98, 99, 103 (2011); Hunt Allcott, *Social Norms and Energy Conservation*, 95 J. PUB. ECON. 1082, 1082-83 (2011) [hereinafter Allcott, *Social Norms*]; David Card & Laura Giuliano, *Peer Effects and Multiple Equilibria in the Risky Behavior of Friends*, 95 REV. ECON. & STAT. 1130, 1146 (2013); Robert B. Cialdini et al., *A Focus Theory of Normative Conduct: Recycling the Concept of Norms to Reduce Littering in Public Places*, 58 J. PERSONALITY & SOC. PSYCHOL. 1015, 1015, 1025 (1990); Cialdini et al., *supra* note 103, at 11-12;

importance. It has been estimated that individuals are responsible for between 32 and 40 percent of all GHG emissions.¹¹⁴ Given that any meaningful response to climate change will require substantial cuts in GHGs, these numbers simply do not allow for the individual to be ignored as a regulatory target. As Amy Sinden notes, “Even if tomorrow, we get all the electric utilities to cut their greenhouse gas (GHG) emissions in half, if we as individuals keep leaving our computers on all night and buying bigger and better plasma TV screens, we’re not going to solve the problem.”¹¹⁵ Put another way, “[i]f those emissions from individuals could be decreased by just one percent, that would represent a reduction of 1 billion pounds of carbon dioxide.”¹¹⁶

Timothy G. Conley & Christopher R. Udry, *Learning About a New Technology: Pineapple in Ghana*, 100 AM. ECON. REV. 35, 62 (2010); Dora L. Costa & Matthew E. Kahn, *Energy Conservation “Nudges” and Environmentalist Ideology: Evidence from a Randomized Residential Electricity Field Experiment*, 11 J. EUR. ECON. ASS’N 680, 681-82, 698 (2013); Esther Dufló & Emmanuel Saez, *The Role of Information and Social Interactions in Retirement Plan Decisions: Evidence from a Randomized Experiment*, 118 Q.J. ECONOMICS 815, 839 (2003); Andrew D. Foster & Mark R. Rosenzweig, *Learning by Doing and Learning from Others: Human Capital and Technical Change in Agriculture*, 103 J. POL. ECON. 1176, 1204-06 (1995); Goldstein et al., *supra* note 103, at 480; Griskevicius et al., *supra* note 41, at 12; David Hirshleifer, *The Blind Leading the Blind: Social Influence, Fads, and Informational Cascades*, in THE NEW ECONOMICS OF HUMAN BEHAVIOR 188 (Mariano Tommasi & Kathryn Ierulli eds., 1995); Kahn, *supra* note 103; Kaivan Munshi, *Social Learning in a Heterogeneous Population: Technology Diffusion in the Indian Green Revolution*, 73 J. DEV. ECON. 185, 186-87 (2004); Jessica M. Nolan et al., *Normative Social Influence Is Underdetected*, 34 PERSONALITY & SOC. PSYCHOL. BULL. 913, 913-15 (2008); Matthew J. Salganik et al., *Experimental Study of Inequality and Unpredictability in an Artificial Cultural Market*, 311 SCIENCE 854, 854 (2006); P. Wesley Schultz et al., *The Constructive, Destructive, and Reconstructive Power of Social Norms*, 18 PSYCHOL. SCI. 429, 429-30 (2007); Hunt Allcott & Todd Rogers, *The Short-Run and Long-Run Effects of Behavioral Interventions: Experimental Evidence from Energy Conservation 2-5* (Nat’l Bureau of Econ. Research, Working Paper No. 18492, 2012); Markus M. Mobius et al., *Social Learning and Consumer Demand 1-28* (Dec. 17, 2005) (unpublished manuscript) (on file with author).

114. See Vandenbergh & Steinemann, *Carbon-Neutral*, *supra* note 26, at 1694; see also Amy Sinden, *Revenue-Neutral Cap and Trade*, 39 ENVTL. L. REP. 10944, 10945 (2009).

115. Sinden, *supra* note 114, at 10945.

116. Albert C. Lin, *Evangelizing Climate Change*, 17 N.Y.U. ENVTL. L.J. 1135, 1146 (2009) (citing Vandenbergh & Steinemann, *Carbon-Neutral*, *supra* note 26, at 1695).

A. The Limits of Internalized Regimes: The Opower Example

Given the well-entrenched understanding that the social enforcement mechanism is not available in large-group games, virtually all discussions of expressive regulation in such games focus on internalization.¹¹⁷ Perhaps the best-known example of expressive regulation in large-group games is Opower's current work to decrease energy consumption.¹¹⁸ Opower works with utilities to increase energy conservation.¹¹⁹ Opower does so primarily through the mechanism of social learning.¹²⁰ It sends mailers to individuals with information on the energy use of their neighbors.¹²¹ Although the Opower mailers primarily focus on communicating to individuals what others are doing, the mailers also contain other information, such as cost-effective ways of decreasing energy use.¹²² Empirical literature, however, demonstrates that it is the social comparison mechanism that does the heavy lifting.¹²³ Individuals who receive this information and exceed the neighbor average have reason to think about lowering their energy consumption. Similar campaigns have

117. See, e.g., Hope M. Babcock, *Assuming Personal Responsibility for Improving the Environment: Moving Toward a New Environmental Norm*, 33 HARV. ENVTL. L. REV. 117, 118, 143-44 (2009); Ela, *supra* note 61, at 95-97; Andrew Green, *You Can't Pay Them Enough: Subsidies, Environmental Law, and Social Norms*, 30 HARV. ENVTL. L. REV. 407, 409-11 (2006); Katrina Fischer Kuh, *Capturing Individual Harms*, 35 HARV. ENVTL. L. REV. 155, 193-95 (2011) [hereinafter Kuh, *Individual Harms*]; Katrina Fischer Kuh, *Personal Environmental Information: The Promise and Perils of the Emerging Capacity to Identify Individual Environmental Harms*, 65 VAND. L. REV. 1565, 1567-69 (2012) [hereinafter Kuh, *Promise and Perils*]; Douglas A. Kysar & Michael P. Vandenbergh, *Introduction: Climate Change and Consumption*, 38 ENVTL. L. REP. 10825, 10832 (2008); Sinden, *supra* note 114, at 10944-45; Sunstein, *supra* note 6, at 415-17; Vandenbergh, *Order Without Social Norms*, *supra* note 26, at 1101-02; Vandenbergh & Steinemann, *Carbon-Neutral*, *supra* note 26, at 38-39.

118. *Energy Efficiency*, OPOWER, <https://opower.com/products/energy-efficiency/> [https://perma.cc/7MCL-KJ2W].

119. See Lacey, *supra* note 43.

120. See *id.*

121. See *id.*

122. See Steven Lacey, *Is Opower About to Reinvent Residential Demand Response?*, GREENTECH MEDIA (Sept. 11, 2013), <http://www.greentechmedia.com/articles/read/opower-launches-behavioral-demand-response-program> [https://perma.cc/UZB8-9PJP].

123. Cialdini et al., *supra* note 103, at 4 (noting the powerful effect of the social force on behavior); Goldstein et al., *supra* note 103, at 480.

been used in other areas, such as decreasing tax evasion.¹²⁴

However, a number of potential limitations lessen the effectiveness of internal enforcement campaigns like Opower's. This suggests such campaigns, alone, may not be enough to achieve the levels of behavioral change necessary to achieve regulatory goals. Both VBN and social learning require relatively strong generalized norms to be successful. Consider the way VBN works. VBN activates personal norms by connecting a specific behavior to a broader meta-norm or preference.¹²⁵ If such meta-norm (say caring for the environment) is weakly held, connecting a specific behavior—energy conservation, for example—to that norm is not likely to have much behavioral impact.¹²⁶ Similarly, social learning will be influential only if the information on how others behave relates to something the recipient values significantly.¹²⁷ It is thus more likely for internalization campaigns to have substantial impacts when the specific behavior can be connected to a compelling preference.

In addition, focusing on only one preference at a time is unrealistic and fails to consider competition from other meta-norms. When competition with other meta-norms is considered, personal norm activation as a means of behavior change becomes less compelling. For example, as Professor Vandenberg notes, norm change in loose-knit groups is not likely to occur if norms of convenience have also been activated.¹²⁸ Others too have consistently noted that normative effects in loose-knit groups are less likely to work when the behavior change requires individual effort.¹²⁹ All this points to the fact that unless the particular meta-norm being activated is a

124. See John Cullis et al., *Social Norms and Tax Compliance: Framing the Decision to Pay Tax*, 41 J. SOCIO-ECON. 159, 159 (2012).

125. See *supra* Section II.B. For a discussion of the distinction between norms and meta-norms, see Richard H. McAdams, *Group Norms, Gossip, and Blackmail*, 144 U. PA. L. REV. 2237, 2252 n.46 (1996).

126. See Vandenberg, *Order Without Social Norms*, *supra* note 26, at 1117-24.

127. See *id.*

128. See *id.* at 1132-33.

129. See, e.g., Carlson, *supra* note 76, at 1233-34; see also Stephanie M. Stern, *Smart-Grid: Technology and the Psychology of Environmental Behavior Change*, 86 CHI.-KENT L. REV. 139, 151 (2011) ("It may be the case that people feel particularly at liberty to satisfy their individual desires and convenience, rather than their environmental responsibilities, within the four walls of the home.").

powerful one, personal norm change alone cannot substantially alter behavior.

These observations are supported by empirical evidence. Consider the impacts of Opower's program on conservation. Although Opower mailers have had an effect on conservation, the effect has been limited. Studies show that the mailers have decreased energy use by about 2 percent.¹³⁰ This is a valuable decrease given the low cost of Opower mailers,¹³¹ and such positive behavioral effects suggest internal norm activation campaigns play an important role in any regulatory regime. But internal activation alone will not be enough to achieve the decrease in GHG emissions from residential energy use necessary to respond to climate change.¹³²

Moreover, internalized norm campaigns that provide information on the behavior of others, such as Opower's, may actually retard efforts to achieve a regulatory goal. This problem has two dimensions. First, normative influence can create incentives for individuals who are doing better than their neighbors to do less. For example, those who conserve energy at lower levels than the group average may actually increase their energy use in response to receiving information on the group norm.¹³³ Empirical research based on Opower's own data has suggested this to be the case, and Opower has successfully responded to the problem by adding a prescriptive command to the information already provided.¹³⁴ Second, and more importantly, normative influence serves to anchor behavior to the community norm. The same pressure that leads individuals who over-conserve to return to the norm will also keep people from wanting to either go above the norm or below it once they have conserved in accordance with the community norm. This group anchoring

130. Allcott, *Social Norms*, *supra* note 113, at 1083, 1093.

131. It is estimated that the price of energy would have to go up approximately 11 to 20 percent to have the same effect. *See id.* Thus, Opower mailers are certainly a cost-effective means for increasing conservation. *See Allcott & Rogers*, *supra* note 113, at 2.

132. *See supra* notes 39-42 and accompanying text.

133. *See, e.g., Vandenberg*, *Order Without Social Norms*, *supra* note 26, at 1118-19 (discussing abstract norms, such as the reciprocity norm).

134. *See Allcott*, *Social Norms*, *supra* note 113, at 1083. The potential power of prescriptive norms to cancel out decreases in conservation has not been considered in the context of increasing conservation from those who conserve the least.

effect suggests that internalized norm campaigns are only as good as other components of a regulatory regime. If the regulation does not create other incentives to change behavior and thus change the group average, information on the norm will likely entrench behavior so that it resists change. Thus, although clearly a cost-effective mechanism that should be considered in any comprehensive regulatory regime, the power of internal enforcement on its own to accomplish behavioral change is likely limited.

In sum, internal norm activation campaigns, such as Opower's, are cost-effective means for incentivizing individuals to decrease energy use. However, in situations in which the meta-norm is not highly valued and a variety of meta-norms influence behavioral decisions, internalized norm enforcement campaigns can only slightly change behavior. Moreover, in some cases, such campaigns may stagnate progress.

B. External Enforcement of Norms in Large Groups: The Carbon Registry Example

As the theory of social norm enforcement suggests, impediments to the use of powerful social normative forces in large-group games exist. The theory shows that the large and loose-knit aspects of groups make norm surveillance more difficult. Further, the power of social sanctioning is diluted when one is not bound to the group for cooperative benefit in other endeavors. This Section suggests that making information regarding an individual's behavior available to other members of her close-knit group can overcome both of these problems. An information registry could provide information on any number of behaviors for which a norm exists in society, from who pays their taxes to how many minorities are in a particular business's workforce.

In the case of energy conservation, the idea of a GHG registry is not entirely new. Professors Vandenberg and Steinemann first outlined the potential for such a regulatory mechanism in their article on the carbon-neutral individual.¹³⁵ In that article, they make

135. See Vandenberg & Steinemann, *Carbon-Neutral*, *supra* note 26.

a case for the use of an “Individual Carbon-Release Inventory,”¹³⁶ grounded primarily in the theory of norm internalization—particularly Vandenberg’s VBN theory.¹³⁷ The authors first consider the way in which information on individual carbon emissions could be used to inform individuals through news and other media of the importance of carbon-neutrality.¹³⁸ As they note, disclosure of information “could activate the carbon-neutrality norm by changing beliefs about the harms caused by individual carbon emissions.”¹³⁹ This, of course, resonates directly with norm internalization theory, which suggests changes in beliefs will result in changes to how a person values a particular result. If the change in value is significant enough, individuals will reorient their priorities from not conserving energy to conserving energy.¹⁴⁰

The authors then provide additional support for the use of an Individual Carbon-Release Inventory by turning to another aspect of VBN theory—the connection of specific behaviors to larger meta-norms. They start by reiterating their assertion that “the personal responsibility norm may be more widely held than the environmental protection norm,” and that “[i]ndividuals are more likely to be motivated by information that indicates that their behavior will cause economic or physical harm to other people than by information about harms caused to the environment.”¹⁴¹ As a result, the authors conclude that providing information on “potential human health and economic harms of climate change may activate carbon-

136. *Id.* at 1729. For a discussion of the relationship between the Individual Carbon-Release Inventory and the Toxics Release Inventory (TRI), see *id.* at 1729-31. The TRI has been enormously successful. See Madhu Khanna et al., *Toxics Release Information: A Policy Tool for Environmental Protection*, 36 J. ENVTL. ECON. & MGMT. 243, 245 (1998). Indeed, the TRI has been described by the EPA as “one of the most powerful tools in this country for environmental protection,” OFFICE OF POLLUTION PREVENTION & TOXICS, U.S. EPA, EPA 745-F-95-001, EXPANDING COMMUNITY RIGHT-TO-KNOW: RECENT CHANGES IN THE TOXICS RELEASE INVENTORY 3 (1995), and “one of the most successful policy instruments ever created for improving environmental performance,” OFFICE OF POLLUTION PREVENTION AND TOXICS, U.S. EPA, ISSUE PAPER ON EXPANSION OF TOXIC RELEASE INVENTORY, TRI PHASE 3 (1995).

137. See Vandenberg & Steinemann, *Carbon-Neutral*, *supra* note 26, at 1707-08.

138. See *id.* at 1730-31.

139. *Id.* at 1731.

140. See, e.g., *supra* Section II.B.

141. Vandenberg & Steinemann, *Carbon-Neutral*, *supra* note 26, at 1732.

neutrality norms among those who feel strongly about personal responsibility but do not ascribe to the environmental protection norm.”¹⁴²

Similar arguments can be found in the wealth of articles that have taken up the charge of regulating individual GHG emissions. Hope Babcock, for example, argues further for the importance of the personal responsibility meta-norm.¹⁴³ Separately, Katrina Fischer Kuh argues that norm activation is best achieved by delegating normative regulation to the local level.¹⁴⁴ The argument for local regulation can be understood through the lens of the internal/social dichotomy. According to Kuh, delegation to the smallest level of government will ensure that the proper motivational meta-norms of any small community can be triggered.¹⁴⁵ In other words, in the communities that value environmental protection, local normative campaigns can resonate with those values. In other communities that value personal responsibility, different normative campaigns can be formed that appeal to that particular meta-norm.¹⁴⁶ It bears noting that a scheme that delegates to local regulators also reflects the general understanding that social enforcement is more likely to work within smaller, more close-knit groups.¹⁴⁷

As this Article has already discussed, this reliance on internal enforcement is not likely to cause significant behavior change in most large-group games.¹⁴⁸ Although the existence of a registry may influence internal beliefs about the importance of decreasing GHG emissions, this Article suggests that individuals should not overlook how such registries could also trigger social enforcement. A carbon registry, like any registry, has the ability to overcome the key limitations to social enforcement in large-group games. Specifically, registries can overcome both the dilution and surveillance limitations on social enforcement.

142. *Id.* at 1732-33.

143. See Babcock, *supra* note 117, at 118.

144. See Kuh, *Individual Harms*, *supra* note 117, at 166-70.

145. See *id.*

146. *Id.* at 185-86.

147. See Carlson, *supra* note 76, at 1245-47.

148. See *supra* Section III.A.

To begin, consider the effects of a carbon registry on dilution. At the heart of the theoretical limitations of normative intervention into large group problems is the conception of the game itself. That conception starts and ends with the notion that the group to be analyzed is defined by the cooperative endeavor. Conservation is generally conceived of as a large group problem because a large number of individuals all need to conserve in order to meet carbon emissions targets.¹⁴⁹ Of course, there are significant impediments to the use of norms as a means of ensuring cooperation in these large groups.¹⁵⁰ But scholars who are skeptical of the use of social sanctioning in large groups miss the fact that individuals in large groups are also members of a number of small, close-knit communities, and by making information available to other community members, the possibility of social sanctions increases.

Norms simply reflect aggregate group preferences.¹⁵¹ One implication of this understanding is that normative forces can extend beyond the boundaries of any particular cooperation problem. In other words, if the members of a small, close-knit group have a known preference for conservation, the traditional forms of attraction among members of such a group will lead a group member to care about the publication of her energy use. Most people are members of small, close-knit groups upon which they rely for their own well-being. Consider, for example, the group of friends one has while a student, or work and social friends later in life. One is reliant on these friends for study or work help, entertainment, general counsel or support, and many other things. The fact that the group satisfies these basic needs reinforces an individual's liking of group members. If an individual group member thinks that others in the group prefer energy conservation, release of information through a carbon registry would pressure that person to meet the group's normative mandate. In this sense, the use of a registry may well take advantage of the social pressures exerted by small groups, thus skirting

149. See Carlson, *supra* note 76, at 1244; see also *supra* Section II.A (discussing the problems of large-group cooperation).

150. See *supra* Section II.A.

151. See *supra* notes 54-69 and accompanying text.

the dilution problem of large-group games.¹⁵²

Registries, if properly designed, can also overcome many of the surveillance problems created by large-group games. The types of activities considered by a registry will depend on such factors as the availability of public information on the activity, the cost of obtaining information, and how the data is reported.¹⁵³ By packaging the gathered information in a simple and understandable format,¹⁵⁴ a registry will make it easy to find out about the particular behavior, including, for example, per-capita minority employees or energy used.

Of course, the more private the information, the less likely a registry could be used. In particular, some concerns about personal privacy could hamper registries that report information on individuals rather than businesses.¹⁵⁵ Concerns over privacy, however, may not be as substantial as initially perceived. First, with the rise of social media, society has begun to narrow the scope of what is perceived to be private information.¹⁵⁶ Moreover, as social media demonstrates, social pressure may influence individuals to voluntarily share information.¹⁵⁷ Vandenbergh and Stienemann further note, “Although many past informational efforts have been ineffective, in prior times of crisis—such as the scrap drives of World War II—government has engaged in successful efforts to persuade individuals to act by providing information about the effects of behavior.”¹⁵⁸ Climate change, for example, could be a compelling cause for efforts to gather information on GHG production.

152. See, e.g., Vandenbergh & Gilligan, *supra* note 111, at 253-54 (noting that a small number of individuals from nongovernmental entities and multinational corporations interact, creating opportunities for social sanctioning).

153. For a general set of factors to be considered in design, see Vandenbergh & Steinemann, *Carbon-Neutral*, *supra* note 26, at 1734-39.

154. See *id.* at 1731.

155. Given the success of the TRI and the availability of data on industrial production of carbon, there is little reason to doubt the effectiveness of a mandatory carbon registry for the industry.

156. Cf. AMANDA LENHART ET AL., PEW RESEARCH CTR., TEENS, TECHNOLOGY & FRIENDSHIPS 54-55 (2015), <http://www.pewinternet.org/files/2015/08/Teens-and-Friendships-FINAL2.pdf> [<https://perma.cc/5PWJ-7V82>] (discussing this phenomenon as it relates to teenagers).

157. See *id.* at 58-61.

158. Vandenbergh & Steinemann, *Carbon-Neutral*, *supra* note 26, at 1728.

Katrina Fischer Kuh has recently considered the privacy issue (or the “intrusion objection”) as it relates to behavioral mandates in environmental law.¹⁵⁹ She notes that “[t]he intrusion objection hypothesizes fatal resistance to mandates imposed in the context of environmentally significant individual behaviors,” and then suggests that such a monolithic objection cannot stand.¹⁶⁰ Such a hypothesis does not comport with the reality that individuals regularly accept direct intrusions in order to protect the environment.¹⁶¹ Kuh does recognize, however, that direct information collection may be more objectionable than indirect collection.¹⁶² Whether a registry that gathers personal information that is usually deemed to be private would survive informational privacy objections remains to be seen.

Of course, business entities are not subject to the same privacy concerns as individuals. We regularly require businesses to provide information to society, whether it is the calories in their food or the harmfulness of their products.¹⁶³ The primary purpose of such requirements is to provide information relevant to individual decision-making, which may influence business behavior by directly impacting revenue.¹⁶⁴ A person with information on the calorie count

159. See Katrina Fischer Kuh, *When Government Intrudes: Regulating Individual Behaviors That Harm the Environment*, 61 DUKE L.J. 1111, 1148 (2012); see also Kuh, *Promise and Perils*, *supra* note 117, at 1549.

160. Kuh, *supra* note 159, at 1160-61.

161. See *id.* at 1148 (“[D]irect regulation of at least some environmentally significant individual behaviors is relatively common and is generally accepted, primarily at the local level. This acceptance is present even when enforcement, or at least the threat of enforcement, is arguably quite intrusive.”); see generally *id.* at 1132-47.

162. See *id.* at 1163.

163. See, e.g., *Menu and Vending Machines Labeling Requirements*, U.S. FOOD & DRUG ADMIN., <http://www.fda.gov/Food/IngredientsPackagingLabeling/LabelingNutrition/ucm217762.htm> [<https://perma.cc/48WS-5YPY>] (last updated Mar. 9, 2016) (food labeling); *Statutes*, U.S. CONSUMER PROD. SAFETY COMM’N, <http://www.cpsc.gov/en/Regulations-Laws--Standards/Statutes/> [<https://perma.cc/B873-WV5F>] (product safety labeling).

164. Michael Vandenberg has argued, for example, that labeling and certification systems can overcome collective action problems that arise due to the global nature of certain problems, such as tropical deforestation and climate change. See Michael P. Vandenberg, *Private Environmental Governance*, 99 CORNELL L. REV. 129, 165-70 (2013). Such systems allow individuals to act in accordance with their preferences for environmental protection in the market to achieve an allocation of resources that better reflects such preferences. See *id.*

of a burger can make a better informed choice about whether to eat it. Similarly, a person who understands the latent dangers in a product may choose not to buy it.

Norm registries provide different information. They inform the public about whether a business is acting in accordance with the majority's preferences regarding behaviors such as hiring employees, paying taxes, and conserving energy. In these cases, social pressure may be an additional force of behavioral change in addition to revenue impacts. One can easily imagine that individuals who work for a company whose behavior conflicts with community norms may be shamed by such an association. The social force, of course, becomes more pronounced as economic consequences become more attenuated. In the case of individual behavior, when direct economic consequences are generally not at issue, social pressure from registries is likely to be the primary mechanism of behavior change.

IV. IMPLICATIONS OF THE LARGE-GROUP SOCIAL ENFORCEMENT MODEL

The fact that a national information provision may resonate in small, close-knit groups is a sword that cuts two ways. Although a national carbon registry is likely to decrease individual GHG emissions, the registry model identifies a number of concerns that must be addressed in registry design. The goal for registry architects would be to maximize benefits while limiting costs.

The power of social enforcement depends on what an individual group member believes others in the group prefer, how many people indicate the preference, and the degree to which they value the particular behavior.¹⁶⁵ For example, if most of the group has a strong preference for drinking tequila shots while out at a bar, another group member will feel significant normative pressure to conform. On the other hand, if only a small number of group members are drinking tequila shots and the majority of the group seems indifferent to the behavior, a group member will feel less pressure to conform. Thus, different groups will likely enforce a

165. *Cf.* Geisinger, *supra* note 101, at 64-65.

conservation norm to different extents based on the depth of preferences held by group members.

These different groups are important to our understanding of the effects of social sanctioning through the use of a registry because individuals in some of these groups may compete inefficiently for esteem in certain circumstances. Competitions for esteem can result in inefficient personal allocations of resources in some circumstances.¹⁶⁶ Consider, for example, the members of a group that highly esteems conservation. With publication of an individual's carbon footprint, each individual group member is likely to increase his or her conservation. For example, he may lower his thermostat more in winter and install LED light bulbs. But as each individual group member invests in decreasing his carbon footprint, this raises the cost of getting esteem from other group members because the group average has been raised.¹⁶⁷ An individual who desires group esteem will thus have to spend even more on conservation in order to differentiate his behavior from that of others.¹⁶⁸ Thus, competition for esteem may lead some group members to buy a hybrid car or invest in solar panels. Of course, as group members continue to compete for the esteem of others, the bar defining what amount of conservation is normal for the group will rise, and meeting or exceeding the bar again becomes costlier.¹⁶⁹

The same phenomenon will occur for groups that prioritize consumptive behaviors rather than conservation. Although the preference for environmental protection is thought to be widespread,¹⁷⁰

166. *See supra* Section II.A.

167. *See supra* Section II.A.

168. McAdams, *supra* note 86, at 352.

169. Although the race leads to excessive individual investment in conservation among group members, it does not go on forever. As Richard McAdams notes, at some point a new equilibrium will be reached:

"The feedback effect is that one person's new norm compliance raises the average and lowers everyone else's relative position. One individual's contribution thus provides an incentive for others to contribute. Obviously, the contributions do not rise infinitely, but they stop only when no one can gain by additional contributions, when the opportunity costs of one's time or money exceed any esteem return."

Id. at 369.

170. Although of relatively low order, a majority of individuals do indicate that they have

groups of individuals with anti-environmental preferences likely exist. In the current political landscape, many groups spurn environmental protection as involving too much governmental intervention and limiting individual choice and freedom.¹⁷¹ Additional groups may be composed of individuals who deny the existence of climate change or at least that humans can affect temperature change on the planet.¹⁷² It may well be that libertarian beliefs and climate change denial co-exist in many groups.¹⁷³

Individuals in these groups are likely to esteem behavior that reflects the group's high-order preference for freedom from government interference and its belief that responding to climate change is unwarranted. Members of these groups are thus likely to receive esteem for behavior that increases GHG emissions—for example, buying a car or truck with low gas mileage—rather than behavior that decreases GHG emissions. There is, of course, a constraint on competition for esteem within libertarian groups. Energy consumption costs money, and thus failure to buy a fuel efficient vehicle or to insulate one's house will incur additional energy costs. These additional costs will curtail these groups members' willingness to race for esteem.

a preference for environmental protection. See, e.g., ANTHONY LEISEROWITZ ET AL., YALE PROJECT ON CLIMATE CHANGE COMM'N & GEORGE MASON UNIV. CTR. FOR CLIMATE CHANGE COMM'N, PUBLIC SUPPORT FOR CLIMATE AND ENERGY POLICIES IN APRIL 2013, at 6 (2013), <http://environment.yale.edu/climate-communication/files/Climate-Policy-Report-April-2013-Revised.pdf> [<https://perma.cc/Q4V7-328Z>].

171. See, e.g., *About Us*, TEA PARTY, <http://www.teaparty-platform.com/about-us> [<https://perma.cc/7HMU-VLH6>] (protecting free markets from government interference); see also *About Cato*, CATO INST., <http://www.cato.org/about> [<https://perma.cc/B9R3-LPTX>] (identifying the Cato Institute as “dedicated to the principles of individual liberty, limited government, free markets and peace,” and noting that the Institute is primarily supported by individual donors).

172. See generally Riley E. Dunlap & Aaron M. McCright, *Climate Change Denial: Sources, Actors and Strategies*, in ROUTLEDGE HANDBOOK OF CLIMATE CHANGE AND SOCIETY 240 (Constance Lever-Tracy ed., 2010).

173. See Noah M. Sachs, *Can We Regulate Our Way to Energy Efficiency? Product Standards as Climate Policy*, 65 VAND. L. REV. 1631, 1675 (2012) (“Given widespread denial of climate change on the right, it will be difficult for any Republican politician to justify efficiency standards on environmental grounds. Even if standards are justified purely as cost-saving measures, rather than as climate change strategy, the cost-saving arguments may be trumped in the future by concerns over intrusive government.”).

The potential small increase in GHG emissions from deniers and libertarians will likely offset some of the decrease in emissions from those who highly esteem conservation. The net result of such groups responding to normative nudges will thus be an overspending of resources relevant to the decrease in GHG emissions achieved. Consider an individual who, without competition for esteem, would invest a small amount in decreasing energy use, according to her preferences. Assuming that individuals rationally choose the most cost-effective strategies first, perhaps she would change to LED lightbulbs and install a smart thermostat. Perception of a strong pro-conservation norm within her group, however, may lead the individual to invest significantly more in conservation, perhaps by installing new attic insulation and a more efficient furnace and air conditioner. Put simply, the individual would overspend relative to her preferences for conservation.¹⁷⁴

It might be said that overspending relative to preferences is the precise goal of a carbon registry. That is, carbon registries create powerful social incentives for individuals to spend money on energy conservation regardless of their preferences for conservation absent normative influence. Although this may be the ultimate goal of a registry, registry design must consider the inefficient investments of groups on both ends of the conservation spectrum. A simple way to respond to this concern would be to cap reported emissions at the extremes. If one has already met the maximum decrease in GHG emissions counted by a registry, for example, extra efforts at conservation will have no effect on esteem because it will not change the way in which her emissions are reported.

In sum, a carbon registry for industry or for individuals is likely to create significant decreases in the amount of carbon produced by both groups as a result of social enforcement. Yet, concerns regarding privacy, efficiency, and the distribution of compliance costs exist and must be considered in registry design.

174. It might be argued that the decrease in utility from overspending on conservation is offset by the increase in utility that occurs from getting esteem. Such an argument misses the fact that the level of esteem does not necessarily rise while parties are racing for esteem. Rather, parties could continue to receive the same amount of esteem for a lesser investment that reflects their preferences absent esteem competitions.

CONCLUSION

The demand for smarter regulation with low enforcement costs has led governments to turn to new forms of behavioral regulation. One of these tools is expressive regulation. Expressive regulation holds significant promise for influencing many different types of behaviors, including energy conservation. However, traditional views of norms suggest that the force of social enforcement is lost in large group games. This Article suggests something different. Powerful social influences can be harnessed even when the need to cooperate is spread over a large, loose-knit group. Specifically, the social force can be harnessed in large-group games by regulatory structures that overcome transaction costs and the dilution of interdependence that exist within large groups. A carbon registry is an example of just such a response. Carbon registries can overcome both the problem of dilution and transaction costs while providing strong behavioral prompts to aid in conservation.

Of course, registries are not a panacea. Many issues, including concerns over privacy, the cost of gathering data, and how to deal with the distribution of compliance costs must be considered in registry design. Many regulatory targets such as climate change require the use of a variety of different regulatory tools. Given the potential low cost of both creation and enforcement, as well as the potential for social enforcement to significantly change behavior, expressive regulation should not be overlooked as one such tool.