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WHEN GOVERNMENT INTRUDES: REGULATING INDIVIDUAL BEHAVIORS THAT HARM THE ENVIRONMENT

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> The regime of a free society needs room for vast experimentation. Crises, emergencies, experience at the individual and community levels produce new insights; problems emerge in new dimensions; needs, once never imagined, appear. To stop experimentation and the testing of new decrees and controls is to deprive society of a needed versatility.[1]
>
> – Justice William Douglas

> Experience should teach us to be most on our guard to protect liberty when the Government's purposes are beneficent. Men born to freedom are naturally alert to repel invasion of their liberty by evil-minded rulers. The greatest dangers to liberty lurk in insidious encroachment by men of zeal, well-meaning but without understanding.[2]
>
> – Justice Louis Brandeis

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1. Poe v. Ullman, 367 U.S. 497, 518 (1961) (Douglas, J., dissenting).

2. Olmstead v. United States, 277 U.S. 438, 479 (1928) (Brandeis, J., dissenting), *overruled on other grounds by* Katz v. United States, 389 U.S. 347 (1967), *and* Berger v. New York, 388 U.S. 41 (1967).

ABSTRACT

Emerging environmental problems and technologies, coupled with the existence of mature regulatory regimes governing most industrial sources of pollution, reveal with new clarity the harms that individual behaviors can inflict on the environment. Changing how individuals impact the environment through their daily behaviors, however, requires a reorientation of environmental law and policy and a balancing of government prerogatives with individual liberty. A growing body of legal scholarship recognizes the environmental significance of individual behaviors, critiques the failure of law and policy to capture harms traceable to individuals, and suggests and evaluates strategies for capturing individual harms going forward. In this discussion, mandates on individuals have been largely dismissed as a policy tool for changing environmentally significant individual behaviors because of a widely shared view (1) that detection and enforcement of such mandates would pose insurmountable technical, administrative, and cost barriers and (2) that the application of mandates to individuals would trigger insurmountable objections to their intrusive effect, essentially so offending notions of liberty and privacy that they could not be adopted or enforced.

But there are reasons to believe that the cost and feasibility of imposing mandates on environmentally significant individual behaviors may be less daunting than widely imagined. Notably, intrusion objections have yet to be subjected to critical examination. A better understanding of whether, when, and why mandates on environmentally significant individual behaviors might trigger fatal intrusion objections would help to assess mandates as a policy tool for changing environmentally significant individual behaviors and would offer guidance about how mandates could be structured to avoid such objections.

This Article undertakes an initial effort to better define and understand the intrusion objection as it applies to the use of individual mandates to change environmentally significant behaviors. Part I surveys prior and existing laws aimed at individual behaviors and associated environmental harms to develop a rough sense of when such regulations have, and have not, triggered what could be characterized as intrusion objections. Part II then looks to substantive due process jurisprudence for further guidance about when and why government restrictions on individual freedom might give rise to intrusion objections. Part III builds on Parts I and II to offer a more nuanced understanding of the intrusion objection and suggests some principles to guide the consideration and development of mandates on environmentally significant individual behaviors going forward. Part

III proposes as an example an energy-waste ordinance designed to avoid intrusion objections.

The Article concludes that the obstacle to direct regulation of environmentally significant individual behaviors posed by the intrusion objection is both narrower and broader than presently recognized. The obstacle posed by the intrusion objection is narrower because although the enforcement of mandates against some primarily in-home behaviors may occasion insurmountable privacy objections, other environmentally significant individual behaviors can be and are regulated without triggering these objections. The obstacle posed by the intrusion objection is broader because perceived government intrusion is just one of the costs—along with monetary costs and inconvenience—that regulation can impose on individuals. The more salient variable for purposes of understanding the objections to regulating environmentally significant individual behaviors is transparency: direct regulation, as opposed to indirect regulation, tends to make all of the costs of regulation more transparent, an effect that may invite public resistance.

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INTRODUCTION

Emerging environmental problems and technologies, coupled with the maturation of regulatory regimes governing most industrial sources of pollution, reveal with new clarity the harms that individual behaviors and lifestyles inflict on the environment. Individual behaviors and lifestyles lie at the core of both the climate-change problem and its potential solutions.[3] Individuals directly pollute a range of environmental media in significant volumes; indeed, individual sources are responsible for approximately "a third of the chemicals that form low-level ozone or smog," and "[h]ouseholds discharge as much mercury to wastewater as do all large industrial facilities combined."[4] Increasingly sophisticated detection and mapping methods document resource depletion and the unsustainability of present Western lifestyles and consumption.[5] In the memorable words of one scholar, "Actions that may not have previously appeared to be worthy of regulation have been found to cause significant adverse impacts cumulatively, over time, and in context—heading us toward a certain death by a thousand cuts."[6] But

3. Including only "behaviors over which individuals have direct, substantial control"—and thereby excluding emissions associated with the production of consumer goods and food—the average American emitted over seven tons of carbon dioxide in 2000, for a total of 4.1 trillion pounds of individual emissions—compared to the 3.9 trillion pounds attributable to the entire industrial sector. Michael P. Vandenbergh & Anne C. Steinemann, *The Carbon-Neutral Individual*, 82 N.Y.U. L. REV. 1673, 1693–94 (2007). Individual emissions constitute 32 percent of annual emissions in the United States. *Id.* at 1694. For an excellent, in-depth explanation of the environmental impact of individual behaviors on climate change, see generally JASON J. CZARNEZKI, EVERYDAY ENVIRONMENTALISM: LAW, NATURE AND INDIVIDUAL BEHAVIOR (2011).

4. Hope M. Babcock, *Assuming Personal Responsibility for Improving the Environment: Moving Toward a New Environmental Norm*, 33 HARV. ENVTL. L. REV. 117, 120–21 (2009).

5. For example, satellite mapping and other technologies are used to more accurately assess deforestation and forest degradation. *See, e.g.*, Scott J Goetz, Alessandro Baccini, Nadine T Laporte, Tracy Johns, Wayne Walker, Josef Kellndorfer, Richard A Houghton & Mindy Sun, *Mapping and Monitoring Carbon Stocks with Satellite Observations: A Comparison of Methods*, CARBON BALANCE & MGMT., Mar. 25, 2009, http://www.cbmjournal.com/content/4/1/2 (reviewing various remote-sensing techniques for measuring aboveground biomass and concluding that those techniques provide advantages over traditional technologies). Some journals, such as *Remote Sensing of Environment*, focus solely on advanced methods of environmental monitoring. *See Remote Sensing of Environment*, ELSEVIER, http://www.journals.elsevier.com/remote-sensing-of-environment (last visited Feb. 14, 2012) ("The emphasis of the journal is on biophysical and quantitative approaches to remote sensing at local to global scales.").

6. Keith H. Hirokawa, *At Home with Nature: Early Reflections on Green Building Laws and the Transformation of the Built Environment*, 39 ENVTL. L. 507, 562 (2009) (footnote omitted).

existing federal environmental laws focus on controlling the impacts of resource extraction—pollution generated by industrial sources during, for example, the manufacturing or production of a good—and the disposal of waste. These laws rarely address individual behaviors or apply directly to private individuals.[7] And, in the few instances in which federal environmental laws do directly impose controls on individuals—for example, by introducing limits on the use of private property to protect wetlands or endangered species[8]—enforcement has often been both controversial and halting.[9] Using law to change how individuals impact the environment through their behaviors and lifestyles thus requires a reorientation of environmental law and policy and also perhaps a balancing of government prerogatives with individual liberty.

Four "types of constraint[s]" operate on individual behaviors and thus offer potential paths for reorienting environmental law and policy to better capture or control harms from individual behaviors: a law, or mandate, that directs behaviors by threatening sanctions; social norms; markets; and architecture, or features of the world.[10] Mandates impose direct constraints on behaviors, whereas social norms, markets, and architecture impose indirect constraints on behaviors. As Professor Lawrence Lessig explains, "In its direct

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7. Individuals are, for example, specifically exempted from regulation under subtitle C of the Resource Conservation and Recovery Act (RCRA) of 1976, 42 U.S.C. §§ 6901–6992k (2006), which allows individuals to dispose of hazardous wastes, without any controls, as part of the nonhazardous-solid-waste stream. *See* 40 C.F.R. § 261.4(b)(1) (2011) (setting forth the household-waste exemption to RCRA, an exemption that provides that "household waste," or "any material . . . derived from households" is not deemed hazardous waste under the law, regardless of whether it exhibits hazard characteristics or contains listed hazardous wastes); *see also* John C. Dernbach, *Harnessing Individual Behavior To Address Climate Change: Options for Congress*, 26 VA. ENVTL. L.J. 107, 121 (2008) ("[F]ederal environmental laws are directed primarily at large emitters and make relatively infrequent efforts to direct individual behavior."); Michael P. Vandenbergh, *From Smokestack to SUV: The Individual as Regulated Entity in the New Era of Environmental Law*, 57 VAND. L. REV. 515, 523–29 (2004) (reviewing traditional regulation of industrial sources and illustrating how that regulation frequently fails to capture environmental harms that arise from individual behaviors).

8. *See* Endangered Species Act (ESA) of 1973 § 9(a)(1)(B), 16 U.S.C. § 1538(a)(1)(B) (2006) (prohibiting the "taking" of endangered species); Clean Water Act § 404(a), 33 U.S.C. § 1344(a) (2006) (requiring permits for the dredging or filling of navigable waters); *see also infra* notes 109–16 and accompanying text.

9. For a discussion of the difficulties that accompany implementing controls on individuals through the Clean Air Act's (CAA's) inspection and maintenance (I/M) program, through section 404 of the Clean Water Act (CWA), and through section 9 of the Endangered Species Act of 1973 (ESA), see *infra* notes 79–97, 108–20, 129–41 and accompanying text.

10. *See* Lawrence Lessig, *The New Chicago School*, 27 J. LEGAL STUD. 661, 662–63 (1998) (listing these four "types of constraint[s]").

aspect, the law uses its traditional means to direct an object of regulation (whether the individual regulated, norms, the market, or architecture); in its indirect aspect, it regulates these other regulators so that they regulate the individual differently."[11] One can see these different constraints in operation in the field of air pollution. A public-information campaign designed to encourage people to cease backyard burning is a regulation of norms designed to influence, and thereby to regulate indirectly, individual behaviors. A subsidy for hybrid vehicles is a regulation of the market that indirectly regulates the harms imposed by individual driving behavior. Smart-growth zoning, designed to reduce car travel, is a direct regulation of architecture that indirectly regulates individual driving behavior. By contrast, an environmental speed limit designed to reduce air pollution by reducing driving speeds is a direct regulation of individual behaviors.

A growing body of legal scholarship recognizes the environmental significance of individual behaviors and lifestyles, critiques the failure of environmental law and policy to speak directly to individuals as sources of environmental harm, and suggests and evaluates strategies for capturing individual harms going forward.[12]

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11. *Id.* at 666.

12. *See, e.g.*, CZARNEZKI, *supra* note 3 (detailing the environmental impacts of everyday behaviors, reviewing existing attempts to change those behaviors, and suggesting policy approaches for the future); Babcock, *supra* note 4 (observing that individuals are an important source of environmental problems, examining "why changing [norms] is a critical part of any campaign to make individuals more environmentally responsible," and identifying "various norm- and behavior-changing tools"); Dernbach, *supra* note 7 (proposing ways for congressional climate legislation to better engage individuals); Andrew Green, *Creating Environmentalists: Environmental Law, Identity and Commitment*, 17 J. ENVTL. L. & PRAC. 1 (2006) (considering the policy ramifications of theories of individual identity, choice, and commitment development); Andrew Green, *Norms, Institutions, and the Environment*, 57 U. TORONTO L.J. 105 (2007) (assessing the potential for government to influence environmental values and norms); Andrew Green, *Self Control, Individual Choice, and Climate Change*, 26 VA. ENVTL. L.J. 77, 81 (2008) (assuming that individuals "have values or norms that favor environmental action" but questioning their capacity to make choices consistent with such values and norms); Andrew Green, *You Can't Pay Them Enough: Subsidies, Environmental Law, and Social Norms*, 30 HARV. ENVTL. L. REV. 407 (2006) (arguing that subsidies may undermine environmental values); Katrina Fischer Kuh, *Capturing Individual Harms*, 35 HARV. ENVTL. L. REV. 155 (2011) (analyzing "the problem of individual harms through the lens of environmental federalism" and "evaluat[ing] the potential role of local information, local governments, and local implementation in designing policy to capture individual environmental harms"); Douglas A. Kysar & Michael P. Vandenbergh, *Introduction: Climate Change and Consumption*, 38 ENVTL. L. REP. 10,825 (2008) (noting the connection between consumption and climate change, describing the historical lack of attention to consumption in environmental policy, discussing the relationship between law and consumer preferences, and explaining why

This scholarship cautions against relying solely on price signals,[13] product mandates,[14] or other common methods of indirectly changing environmentally significant individual behaviors[15] or reducing the

consumption must now be addressed head-on by environmental policy); Albert C. Lin, *Evangelizing Climate Change*, 17 N.Y.U. ENVTL. L.J. 1135 (2009) (emphasizing the role of values in behavioral choices and evaluating strategies for changing behaviors within the American evangelical community); James Salzman, *Sustainable Consumption and the Law*, 27 ENVTL. L. 1243 (1997) (examining "the historic, economic, and policy issues linking sustainable consumption and environmental law" and "build[ing] an analytical framework to assess and identify meaningful future roles for the law to play in moving toward the goal of sustainable consumption"); Vandenbergh, *supra* note 7 (quantifying individuals' contributions to environmental degradation, identifying limitations of traditional command-and-control and economic-incentive-based regulation of individual behavior, and suggesting how "individual environmentally significant behavior can be changed through a mix of traditional and new approaches"); Michael P. Vandenbergh, *Order Without Social Norms: How Personal Norm Activation Can Protect the Environment*, 99 NW. U. L. REV. 1101 (2005) (advocating personal norm management to address "individual behavior in negative-payoff, loose-knit group situations"); Michael P. Vandenbergh, Jack Barkenbus & Jonathan Gilligan, *Individual Carbon Emissions: The Low-Hanging Fruit*, 55 UCLA L. REV. 1701 (2008) [hereinafter Vandenbergh et al., *Individual Carbon Emissions*] (identifying individual greenhouse-gas-emitting behaviors that are the most susceptible to change and suggesting strategies for changing them); Vandenbergh & Steinemann, *supra* note 3 (demonstrating "that reducing individuals' greenhouse gas emissions in the United States can make a meaningful contribution to the global effort to reduce the risk of catastrophic climate change" and "argu[ing] that the law has a central role to play in reducing emissions attributable to individuals by activating the emerging norm of carbon neutrality" and integrating it with "traditional regulatory measures"); Michael P. Vandenbergh, Paul C. Stern, Gerald T. Gardner, Thomas Dietz & Jonathan M. Gilligan, *Implementing the Behavioral Wedge: Designing and Adopting Effective Carbon Emissions Reduction Programs*, 40 ENVTL. L. REP. 10,547, 10,551–52 (2010) (making recommendations to policymakers about how best to achieve reductions in harms from environmentally significant individual behaviors); 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 (2009) (arguing for a national norm campaign to reduce individual greenhouse-gas (GHG) emissions that would target highly visible behaviors).

13. *See* Vandenbergh et al., *Individual Carbon Emissions*, *supra* note 12, at 1704 (describing studies suggesting that price signals may have only a limited effect on behavior); Michael P. Vandenbergh, Amanda R. Carrico & Lisa Schultz Bressman, *Regulation in the Behavioral Era*, 95 MINN. L. REV. 715, 765 (2011) (criticizing current GHG-control strategies aimed at the household sector for "reflect[ing] strong assumptions about the influence of price and thus often overlook[ing] other influences on behavior").

14. *See* ROBERT R. NORDHAUS & KYLE W. DANISH, PEW CTR. ON CLIMATE CHANGE, DESIGNING A MANDATORY GREENHOUSE GAS REDUCTION PROGRAM FOR THE U.S. 45 (2003) (describing limitations on the effectiveness of product-efficiency mandates, including the rebound and junker effects).

15. This term encompasses behaviors of individuals that, taken alone, have a negligible impact on the environment but that, in the aggregate, may significantly harm the environment. *See* Vandenbergh, *supra* note 7, at 518 ("We are polluters. Each of us. We pollute when we drive our cars, fertilize and mow our yards, pour household chemicals on the ground or down the drain, and engage in myriad other common activities. Although each activity contributes

harms occasioned by such behaviors.[16] The scholarship instead advocates use of a variety of policy tools, most importantly informational and norm campaigns.[17] Notably, although mandates are the most commonly used policy tool for controlling environmental harms,[18] and although they are recognized as having the potential to enhance norm campaigns aimed at environmentally significant individual behaviors,[19] mandates on individual behaviors have received comparatively little attention as a policy tool for changing

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minute amounts of pollutants, when aggregated across millions of individuals, the total amounts are stunning.").

16. *See* Thomas Dietz, Gerald T. Gardner, Jonathan Gilligan, Paul C. Stern & Michael P. Vandenbergh, *Household Actions Can Provide a Behavioral Wedge To Rapidly Reduce US Carbon Emissions*, 106 PROC. NAT'L ACAD. SCI. 18,452, 18,453 (2009) (concluding that research suggests that a single policy tool will be insufficient to change individual and household behavior and that "interventions that combine appeals, information, financial incentives, informal social influences, and efforts to reduce the transaction costs of taking the desired actions" will be most effective).

17. *See, e.g.*, CZARNEZKI, *supra* note 3, at 3–4 (identifying six decisionmaking tools that are useful for influencing the environmental effects of individual behavior, three of which involve informational or norm approaches, and predicting that "[i]n the future, the cutting edge of environmental law will focus on public awareness, informational mechanisms, economic and market incentives, and empirical inquiry into the appropriate target audience and product, the correct government level for action, and how to best influence social norms and support community initiatives"); Dernbach, *supra* note 7, at 123–24, 132, 144 (emphasizing that the "literature indicates that a variety of interventions directed at the same result are more likely to be effective than fewer interventions" and highlighting the role of information); Vandenbergh & Steinemann, *supra* note 3, at 1724 (explaining the need to use both norm activation and traditional regulatory measures, "includ[ing] taxes or subsidies, cap-and-trade schemes, standards that regulate the efficiency of consumer products made by industrial firms, and support for new technologies and infrastructure"); Ela, *supra* note 12, at 116–17 ("[W]hile there is no doubt that convenience, economic incentives, and personal norms can outweigh social influences in many cases, this does not mean that social influences have no effects in large-scale environmental collective action problems. Such a conclusion is not only a mistake, but a mistake with consequences, if it leads policymakers to pass up easily available opportunities to improve behavior change through attention to social influences."); *see also* Vandenbergh et al., *supra* note 13, at 735–39 (criticizing rational-choice theory for causing energy-efficiency policies and programs to focus on price mechanisms and technological solutions, while neglecting "policies designed to encourage curtailment behavior, such as reducing motor vehicle idling, lowering highway driving speeds, or setting back thermostats").

18. Command-and-control mandates on industrial point sources of pollution—for example, setting a maximum volume of pollutant that may be emitted or requiring the installation of pollution-control technology—compose the traditional core of environmental law and policy. Vandenbergh, *supra* note 7, at 526–33.

19. *See* Kuh, *supra* note 12, at 193–95 (explaining how mandates might enhance norm campaigns); Vandenbergh, *supra* note 7, at 600 (concluding that the expressive effects of command-and-control measures can enhance efforts to change individual behavior).

environmentally significant individual behaviors.[20] This Article examines one of the chief rationales offered in the literature for why mandates have limited utility as a method of regulating individual behaviors: the intrusion objection. The intrusion objection posits generally that mandates on individual behaviors are politically

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20. In his seminal article explaining the imperative to regulate, as well as the challenges to regulating individual behavior, *From Smokestack to SUV: The Individual as Regulated Entity in the New Era of Environmental Law*, *supra* note 7, Professor Michael Vandenbergh details the difficulties of trying to apply traditional command-and-control regulation to individuals, *see id.* at 554–56, 597–600. As damning as its critique of the use of mandates is, Professor Vanderbergh's article nonetheless recognizes the possibility of a limited role for mandates:

> To date, the experience with pure command and control approaches suggests that, at least as a first order measure, such approaches are not a viable option on their own for changing individual environmentally significant behavior. They may be more effective when combined with other regulatory instruments, or when used as a second order measure after information and other regulatory instruments have had an influence on heliefs [*sic*] and norms. In addition, the expressive effects of command and control measures may play an important role in the regulation of individual behavior.

Id. at 599–600; *see also* Vandenbergh et al., *Individual Carbon Emissions*, *supra* note 12, at 1705, 1727, 1730 (outlining strategies for changing particular environmentally significant individual behaviors not only by stressing informational regulation and economic incentives but also by incorporating "modest legal requirements" for individuals, such as the enforcement of fines for excessive idling). But the identified difficulties regarding the application of mandates to individuals resonate in the academic literature, which has largely focused on other strategies—primarily informational and norm management—for influencing individual behavior. *See, e.g.*, Babcock, *supra* note 4, at 123–24 (pointing out problems with command-and-control regulation of individual behavior and focusing on "the role norms play in influencing personal behavior and why changing them is a critical part of any campaign to make individuals more environmentally responsible"); Hope M. Babcock, *Civic Republicanism Provides Theoretical Support for Making Individuals More Environmentally Responsible*, 23 NOTRE DAME J.L. ETHICS & PUB. POL'Y 515, 515–17 (2009) [hereinafter Babcock, *Civic Republicanism*] (noting that regulation of individual "behavior [has] either failed or not been tried" and describing "how the overlapping strands of republican thought and norm development support the creation of a new norm of personal environmental responsibility"); Hope M. Babcock, *Global Climate Change: A Civic Republican Moment for Achieving Broader Changes in Environmental Behavior*, 26 PACE ENVTL. L. REV. 1, 5–6 (2009) [hereinafter Babcock, *Global Climate Change*] (identifying difficulties with "legislat[ing] personal behavior" and concentrating instead on the development of environmental norms); Lin, *supra* note 12, at 1151–52 (observing that "direct regulation of individual behavior is not a panacea" and that "[t]argeting behavioral norms offers a less coercive and potentially less costly alternative for achieving individual behavioral change"); Vandenbergh, *supra* note 12, at 1103–04 ("Regulations that seek to direct personal behavior by fiat are exceedingly unpopular, and they are often inefficient and costly to enforce. . . . Norms appear to provide a ready answer, at least on the surface."); Ela, *supra* note 12, at 95 ("Law-and-norms theorists have long acknowledged the power of social influences to determine individual behavior, and some have championed efforts to manage social norms in situations where enforcement difficulties, transaction costs or political realities render other regulatory techniques—such as laws or economic incentives—inefficient or politically unpalatable. Such situations include many important environmental harms caused by individuals . . . ." (footnote omitted)).

untenable, primarily because their enforcement invades privacy or other civil liberties in a manner unpalatable to the public.[21] This Article contributes to the existing literature by offering a more nuanced understanding of the obstacle posed by the intrusion objection and by suggesting that mandates might prove to be a more useful tool for changing individual behaviors than has previously been recognized.

The existing literature's relative inattention to direct mandates on environmentally significant individual behaviors stems from the perception that applying mandates to most environmentally significant individual behaviors would simply be infeasible. Two justifications are usually offered for this position:[22] First, enforcing mandates against individuals would be difficult because individuals are numerous and spread out and because they frequently engage in environmentally significant behaviors in private. Detection and enforcement against individuals would be of questionable technical

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21. This Article employs the term "intrusion objection" to refer to the argument, raised in the literature addressing environmentally significant individual behavior, that mandates on individual behavior have limited utility as a policy tool because politicians will encounter too much public opposition in trying to adopt them and that, even if such mandates were adopted, they would engender public outcry and be repealed or disobeyed. As discussed in Part I.C, the most frequent explanation offered in the literature for this public opposition is the perception that government regulation of these behaviors constitutes an invasion of privacy or an instance of government overreaching more generally. This Article does not attempt to define "intrusion" per se, although some interesting empirical work has been done attempting to gauge perceptions of intrusiveness in the context of the Fourth Amendment. *See generally* Christopher Slobogin & Joseph E. Schumacher, *Reasonable Expectations of Privacy and Autonomy in Fourth Amendment Cases: An Empirical Look at "Understandings Recognized and Permitted by Society*,*"* 42 DUKE L.J. 727 (1993) (examining "how society perceives the 'intrusiveness' of government investigative methods").

22. Of note, the use of mandates to change behavior generally has attracted significant criticism. *See, e.g.*, RICHARD H. THALER & CASS R. SUNSTEIN, NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS 14 (rev. and expanded ed. 2009) (defending libertarian paternalism as an alternative to mandates and arguing that "[i]n many domains, including environmental protection, family law, and school choice, . . . better governance requires less in the way of government coercion and constraint, and more in the way of freedom to choose"); Edward K. Cheng, *Structural Laws and the Puzzle of Regulating Behavior*, 100 NW. U. L. REV. 655, 659–62 (2006) (criticizing regulation by "fiat," or through mandates, on a variety of grounds, including that limited enforcement undercuts deterrence, that widespread disobedience vests police officers with undue discretion, and that "[l]ow compliance rates can . . . harm the moral authority of the law"). Importantly, however, this Article does not advocate mandates as the only or even the primary policy tool for changing individual behavior. It posits more modestly that mandates might, in some circumstances, prove a useful tool for changing behavior, particularly in conjunction with other approaches, and it seeks to understand whether—and, if so, how—mandates can be deployed in this limited manner with respect to environmentally significant individual behaviors.

and administrative feasibility and would perhaps be prohibitively expensive.[23] Second, even if mandates could be enforced in a cost-effective manner, they would trigger insurmountable intrusion objections, as individuals would not accept government constraints, or the measures required to enforce them, in the context of environmentally significant individual behaviors.[24]

The cost and administrative feasibility of imposing mandates on some environmentally significant individual behaviors might, however, be less daunting, or at least might pose less of an obstacle, than has been widely anticipated. A host of new technologies make it increasingly easier to identify and track environmental harms, including harms generated by individuals, through household energy consumption and waste production.[25] Many environmentally

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23. *See* Vandenbergh, *supra* note 7, at 598 ("The thousands or millions of potential regulatory targets . . . , the widespread belief that individuals are not significant pollution sources, and the cognitive barriers to changing that belief all make individual behavior extremely difficult to regulate through command and control instruments . . . . To the extent environmental harms caused by individuals are difficult to detect, enforcement is expensive and intrusive.").

24. *See* Babcock, *Global Climate Change*, *supra* note 20, at 5–6 ("Efforts to detect and ultimately enforce against environmentally harmful individual activities . . . would be costly for the government to carry out and would trigger enormous political resistance because of the interference with individual liberty and invasion of privacy."); Lin, *supra* note 12, at 1152 ("Often, command-and-control regulation of individuals is politically infeasible because of its perceived intrusiveness. . . . Command-and-control regulation of individuals can also be inefficient and costly to enforce because of the large number of regulatory targets, their dispersed nature, and the difficulty of detecting environmental harms."); Vandenbergh, *supra* note 7, at 598–99 ("Even if sufficient resources were devoted to the [enforcement] effort, tbe [*sic*] intrusiveness of enforcing these regulations may undermine compliance or produce a political backlash. Empirical studies suggest that the difficulties of fully enforcing command and control approaches against individual behavior present tbe [*sic*] risk of increasing, rather than decreasing, environmental harms.").

25. *See, e.g.*, THALER & SUNSTEIN, *supra* note 22, at 194 (summarizing Clive Thompson's review of Southern California Edison's creative efforts to encourage energy conservation, including the "Ambient Orb, a little ball that glows red when a customer is using lots of energy but green when energy use is modest"); JOSH WYATT, TEX. INSTRUMENTS, MAXIMIZING WASTE MANAGEMENT EFFICIENCY THROUGH THE USE OF RFID 2–5 (2008), *available at* http://www.ti.com/rfid/docs/manuals/whtPapers/wp_lf_hdx.pdf (describing chips that can be installed in trash receptacles and then used to monitor household waste activities, including recycling); Frederick R. Fucci with Clara Vondrich & Annette Nichols, *Alternative Energy Options for Buildings: Distributed Generation*, *in* GREEN REAL ESTATE SUMMIT 2010, at 337, 346–47 (PLI Real Estate Law & Practice, Course Handbook Ser. No. 577, 2010) (describing how smart-metering devices allow utilities and consumers to track power use by individual appliances); Saqib Rahim, *They Don't Talk Trash, They Track It*, N.Y. TIMES (Mar. 26, 2010), http://www.nytimes.com/cwire/2010/03/26/26climatewire-they-dont-talk-trash-they-track-it-76922.html (describing a Massachusetts Institute of Technology program that tracks individual items of household trash and a device that monitors data about individual bicycle use);

significant individual behaviors—from solo commuting to the disposal of household waste—occur in contexts that have external aspects that can be detected from outside the home, thus facilitating enforcement. Piggybacking enforcement efforts on existing local regulation may also reduce administrative costs.[26] And, most importantly, for purposes of enhancing norm campaigns, consistent enforcement may not be necessary: the enactment of mandates may exert an expressive effect even in the absence of rigorous enforcement.[27] It is thus premature to dismiss individual mandates as technically or administratively infeasible in the field of environmental regulation.

Yet even if the imposition of mandates on environmentally significant individual behaviors may in some circumstances be both technically and administratively feasible, policymakers must still contend with a core objection to the use of mandates: the intrusion objection. As Professor Hope Babcock suggests, mandates on environmentally significant individual behaviors may prove too intrusive to adopt and enforce:

> Even if there were laws that reached these [environmentally significant individual] activities, there would be serious problems enforcing them. Efforts to detect and ultimately enforce against individual activities that usually occur at home or in the immediately

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Mandeep Singh, *Pollution Watch Goes Online . . . ,* GULF DAILY NEWS (Jan. 31, 2011), http://www.gulf-daily-news.com/NewsDetails.aspx?storyid=297360 (describing "the world's first country-wide online monitoring system to analyse pollution from factories and power stations"—a system that was launched in Bahrain and that "entails installing microprocessor-based devices at selected companies" to "convey real time emission readings"); *see also* Lyndsey Layton, *The Rush Is On To Make Food Traceable*, WASH. POST, Jan. 24, 2011, at A1 (describing how "in some stores [consumers] can wave a smartphone above an apple or orange and learn instantly where it was grown, who grew it and whether it has been recalled"); Barry Paddock, *Shirts Act as Toxin Police: Grad Students Create Color-Changing Clothes That Detect Foul Air*, N.Y. DAILY NEWS, Jan. 19, 2011, at 11 (describing shirts that change color when exposed to pollution); Jyoti Madhusoodanan, *Cell Phone Cameras Help Monitor Atmospheric Black Carbon*, MONGABAY.COM (Feb. 1, 2011), http://news.mongabay.com/2011/0201-black_carbon_madhusoodanan.html (describing efforts to equip cell phones with an application that would visually reveal levels of black carbon and then to provide these cell phones to households in an attempt to encourage the adoption of clean-cook stoves).

26. Kuh, *supra* note 12, at 201–02.

27. *See* Babcock, *supra* note 3, at 148–49 ("A law by itself can influence the social meaning of actions and can influence what people think others might do."); Cass R. Sunstein, *On the Expressive Function of Law*, 144 U. PA. L. REV. 2021, 2032–33 (1996) ("With or without enforcement activity, such laws can help reconstruct norms and the social meaning of action."); Cass R. Sunstein, *Social Norms and Social Roles*, 96 COLUM. L. REV. 903, 958–59 (1996) [hereinafter Sunstein, *Social Norms*] (observing that even rarely enforced laws shape social norms and meanings "because there is a general norm in favor of obeying the law" and because the laws "inculcate both shame and pride").

> surrounding area would trigger enormous political resistance, as they would be seen as an interference with individual liberty and an invasion of privacy.[28]

This objection is often raised to explain why mandates on environmentally significant individual behaviors are not a promising policy tool for capturing individual harms.[29] Although nowhere precisely defined, the intrusion objection is most commonly presented as being grounded in concerns about how government enforcement might infringe civil liberties—most notably privacy[30]—although at times it is characterized more broadly as a form of public or political

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28. Babcock, *supra* note 4, at 123; *see also* Vandenbergh, *supra* note 7, at 598 ("To the extent environmental harms caused by individuals are difficult to detect, enforcement is expensive and intrusive. Even if sufficient resources were devoted to the effort, tbe [*sic*] intrusiveness of enforcing these regulations may undermine compliance or produce a political backlash.").

29. *E.g.*, Babcock, *supra* note 4, at 124 (asserting that Congress is especially unlikely to "amend our environmental laws to reach individual actions . . . when regulation is sought in an area where unrestricted individual choice has been (or is perceived to have been) the norm" (quoting Holly Doremus, *Biodiversity and the Challenge of Saving the Ordinary*, 38 IDAHO L. REV. 325, 346 (2002)) (internal quotation marks omitted)); Babcock, *Civic Republicanism*, *supra* note 20, at 515 ("For a variety of reasons, ranging from the difficulty of trying to identify and then regulate all of these individual sources to the political backlash that might result if such regulation was tried, efforts to control that behavior have either failed or not been tried."); Babcock, *Global Climate Change*, *supra* note 20, at 5–6 ("Efforts to detect and ultimately enforce against environmentally harmful individual activities, many of which occur in and around the home, would be costly for the government to carry out and would trigger enormous political resistance because of the interference with individual liberty and invasion of privacy."); Ann E. Carlson, *Recycling Norms*, 89 CALIF. L. REV. 1231, 1235 (2001) ("When numerous people must act to solve a collective problem and lack the economic incentive to do so, traditional government regulation, such as formal law, may be infeasible, ineffectual, or politically difficult."); Lin, *supra* note 12, at 1152 ("Often, command-and-control regulation of individuals is politically infeasible because of its perceived intrusiveness."); Vandenbergh, *supra* note 7, at 598 ("[The] intrusiveness of enforcing [command-and-control] regulations may undermine compliance or produce a political backlash.").

30. Babcock, *supra* note 4, at 123 ("Efforts to detect and ultimately enforce against individual activities that usually occur at home or in the immediately surrounding area would trigger enormous political resistance, as they would be seen as an interference with individual liberty and an invasion of privacy."); Babcock, *Global Climate Change*, *supra* note 12, at 5–6 (observing that efforts to detect and enforce laws designed to reach environmentally significant behaviors would be perceived as interfering with individual liberty and invading privacy and that "trying to legislate personal behavior would generate enormous ill will and be politically suicidal"); Carlson, *supra* note 29, at 1235 (referencing privacy concerns); Lin, *supra* note 12, at 1152 (observing that the "perceived intrusiveness" of the command-and-control regulation of individuals renders that regulation "politically infeasible"). *See generally* Daniel J. Solove, *A Taxonomy of Privacy*, 154 U. PA. L. REV. 477, 552–56 (2006) (offering a taxonomy of privacy that identifies "intrusion" as a type of privacy harm "involv[ing] invasions or incursions into one's life" that "can be caused not only by physical incursion and proximity but also by gazes (surveillance) or questioning (interrogation)").

resistance to government overreaching.[31] Both the narrower, privacy-based intrusion objection and the broader objection of government overreaching appear to be motivated by several factors: observations of earlier, unsuccessful attempts to mandate changes in environmentally significant individual behaviors; cognitive limitations that may prevent individuals from recognizing the individually de minimis, but collectively significant, harms that their actions impose on the environment; empirical studies suggesting that constraints on individual behaviors can engender backlash; and commonsense intuition about the limits of public tolerance for government intervention.[32] Although it is not explicitly characterized as such, the intrusion objection constitutes a prediction by scholars about how the public and their elected representatives will respond to actual or proposed mandates on environmentally significant individual behaviors.

In large measure, then, the intrusion objection rests on an unproven prediction about popular responses to mandates on environmentally significant individual behaviors. Importantly, however, the intrusion objection has yet to be subjected to critical examination that tests this prediction, and commentators have not yet completely assessed the source, scope, or intransigence of the intrusion objection or the obstacle that it may pose to the use of mandates to change environmentally significant individual behaviors. A better understanding of if, when, how, and why mandates on environmentally significant behaviors may trigger fatal intrusion objections could help to evaluate mandates as a policy tool for changing individual behaviors and could also provide guidance about how mandates might be structured to avoid such objections.

This Article undertakes an initial effort to better define and understand the intrusion objection to the use of mandates to change environmentally significant individual behaviors. Part I surveys prior and existing laws aimed at impacting individual behaviors and associated environmental harms to develop a rough sense of when such regulations have and have not triggered intrusion objections. Part II then looks to some early privacy cases among the Court's substantive due process jurisprudence for further guidance as to when

31. *See* Vandenbergh, *supra* note 7, at 520, 598–600 (referencing both the potential intrusiveness required for enforcement and, more generally, the "public resistance to formal legal regulation of individual behavior").

32. Babcock, *supra* note 4, at 123; Vandenbergh, *supra* note 7, at 598.

and why government restrictions on individual freedom might give rise to intrusion objections. Although the intrusion objection arises from the hypothesized public rejection of mandates, as opposed to the constitutional infirmity of such measures, as explained in greater detail in Part II, adducing the constitutional boundaries imposed by substantive due process review can offer insight into when and why government constraints on individuals are most likely to be viewed as unacceptable overreaching. This is so because under substantive due process review, courts identify a fundamental right and forbid government action when they determine that the action crosses deeply rooted, traditional boundaries between government prerogatives and individual liberties.[33] Part III builds on Parts I and II to offer a clearer understanding of the intrusion objection and suggests principles to guide the future development of mandates on environmentally significant individual behaviors, proposing as an example an energy-waste ordinance designed to avoid intrusion objections.

The Article concludes that the obstacle to direct regulation of environmentally significant individual behaviors posed by the intrusion objection is both narrower and broader than presently recognized. The obstacle posed by the intrusion objection is narrower because although the enforcement of mandates against some primarily in-home behaviors may occasion insurmountable privacy or related objections, other environmentally significant individual behaviors can be and are regulated without triggering these objections. The obstacle posed by the intrusion objection is broader because perceived government intrusion is just one of the costs, along with monetary costs and inconvenience, that regulation may impose on individuals. The more salient dynamic is transparency; direct regulation, as opposed to indirect regulation, tends to make all of the costs of regulation to individuals more transparent, a phenomenon that may invite public or political resistance.[34] This resistance, however, is not limited to direct regulation nor should it be presumed to invariably present an insurmountable obstacle to the use of direct

33. *See* Washington v. Glucksberg, 521 U.S. 702, 720 (1997) (explaining the Court's "established method of substantive-due-process analysis").

34. *See generally* Lessig, *supra* note 10, at 690 (describing how indirect regulation may result in indirection by "achiev[ing] a political end that citizens need not directly attribute to the government's choice").

mandates to regulate environmentally significant individual behaviors.

I. SURVEYING REGULATIONS DESIGNED TO REDUCE INDIVIDUAL ENVIRONMENTAL HARMS

Surveying existing regulation of, or past attempts to regulate, environmentally significant individual behaviors offers one way to better understand the intrusion objection. This Part provides a very broad overview[35] of the regulation of environmentally significant individual behaviors. The overview charts the difference between indirect and direct regulation of environmentally significant individual behaviors and attempts to discern when, and to some extent why, intrusion objections arise, particularly with respect to direct regulation. Section A identifies indirect methods as the predominant method of seeking to change environmentally significant individual behaviors. Section B then identifies some instances in which environmental law imposes—or has attempted to impose—direct mandates on environmentally significant individual behaviors. This Part concludes by summarizing when and how intrusion objections have arisen with respect to both indirect and direct regulation of environmentally significant individual behaviors and analyzing what this information reveals about the intrusion objection as an obstacle to the use of mandates in this area.

A. Indirect Regulation of Environmentally Significant Individual Behaviors Is Common and Widely Accepted

The government regularly nudges and prods Americans to behave in ways that are better for the environment.[36] It designates

35. As explained in Part I.C, this overview is necessarily incomplete. In particular, a more thorough accounting of historical efforts to control individual environmental behaviors might provide additional insight.

36. Interestingly, in their book NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS, *supra* note 22, Professors Richard Thaler and Cass Sunstein criticize the United States' traditional reliance on command-and-control measures to reduce environmental harms and recommend greater reliance on indirect regulation or "choice architecture," *id.* at 1–14. Specifically, they advocate economic-incentive systems—which directly regulate the market—and feedback and information—which, although aimed in some instances at individual behavior, do not mandate behavioral changes and perhaps more directly regulate norms. *Id.* at 183–96. In the narrow context of regulating individual behavior, however, indirect regulations—in other words, nudges—are perhaps better characterized as the traditional and predominant method of regulating individual behavior, whereas direct mandates are less common and are used less frequently, in particular with respect to federal

carpool lanes to reward those who share rides with a faster commute.[37] It subsidizes public transportation and the purchase of hybrid vehicles to make cleaner travel less expensive.[38] It permits manufacturers of energy-efficient products to market those products with special government seals of approval[39] and polices green marketing claims to make sure that consumers are not misled about the environmental attributes of the products they purchase.[40] It sponsors public-service campaigns exhorting people to "Give a Hoot" and, more recently, to "Change a Light, Change the World" by buying energy-efficient lighting; to "Turn Over a New Leaf" by buying SmartWay cars, certified by the Environmental Protection Agency (EPA); and to "Plug-In To eCycling" by recycling cell phones.[41] It charges bottle deposits to encourage recycling and discourage littering[42] and bars large grocery stores from distributing

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environmental policy. For example, in his book, EVERYDAY ENVIRONMENTALISM: LAW, NATURE AND INDIVIDUAL BEHAVIOR, *supra* note 3, Professor Jason Czarnezki reviews existing efforts to influence the environmental impacts of a variety of everyday, individual behaviors. Notably, these efforts are overwhelmingly indirect. *See, e.g.*, *id.* at 41–47 (examining efforts to increase household energy efficiency and identifying only one effort that could be best characterized as a direct mandate on individual behavior: local limits on the use of leaf blowers during ozone action days).

37. *See, e.g.*, 23 U.S.C. § 146 (2006) (authorizing funds for carpool and vanpool projects); 23 U.S.C. § 149(b)(5) (2006) (setting out requirements for a congestion-mitigation and air-quality-improvement program); 23 U.S.C. § 166 (2006) (expanding eligibility to use high-occupancy vehicle (HOV) lanes to hybrid and low-emission vehicles); *see also* CAL. VEH. CODE § 5205.5 (West Supp. 2011) (enacting a decal program for energy-efficient vehicles to allow them to use HOV lanes).

38. *See, e.g.*, 26 U.S.C. § 30 (2006) (granting a tax credit for a percentage of the cost of buying an electric car); S.C. CODE ANN. § 12-6-3377 (Supp. 2010) (granting a tax credit for qualified owners of fuel-efficient vehicles); W. VA. CODE ANN. 11-6D-1 (LexisNexis 2008 & Supp. 2011) (creating an alternative-fuel-motor-vehicles tax credit and an alternative-fuel-infrastructure tax credit); *see also* CZARNEZKI, *supra* note 3, at 47–49 (describing subsidy programs for the purchase of hybrid cars).

39. *See* Energy Policy and Conservation Act, 42 U.S.C. § 6294a (2006) (establishing Energy Star, "a voluntary program to identify and promote energy-efficient products and buildings"); *About Energy Star*, ENERGY STAR, http://www.energystar.gov/index.cfm?c=about.ab_index (last visited Feb. 14, 2012) (describing federal Energy Star programs).

40. *See* 16 C.F.R. §§ 260.1–.8 (2011) (setting forth the Federal Trade Commission's (FTC's) Guides for the Use of Environmental Marketing Claims). The FTC proposed revisions to the Green Guides in 2010. Guides for the Use of Environmental Marketing Claims, 75 Fed. Reg. 63,552 (proposed Oct. 15, 2010) (to be codified at 16 C.F.R. pt. 260).

41. *See, e.g.*, *Public Service Announcements*, U.S. ENVTL. PROT. AGENCY, http://www.epa.gov/newsroom/psa.htm (last updated Apr. 19, 2011) (describing a number of EPA public service announcements).

42. *See* Beverage Container Recycling and Litter Reduction Act, CAL. PUB. RES. CODE §§ 14500–14599 (West 2007 & Supp. 2011); Beverage Container Deposit, IOWA CODE

plastic bags to customers.[43] It encourages household energy efficiency through a growing array of measures including tax rebates and pricing mechanisms. Examples of these latter strategies include charging more for energy use above a set baseline; implementing weatherization programs that make homes more energy efficient; installing smart meters; and orchestrating public-information and marketing campaigns, including neighbor-to-neighbor education programs.[44]

The government also imposes upstream mandates that limit the environmental harms occasioned by a variety of individual behaviors. A host of product mandates dictate the permissible amount of energy that may be used by a variety of appliances and products, including specifying a miles-per-gallon requirement for vehicles.[45] These mandates are directed to the product manufacturers, but they effectively limit individual choice by restricting the types of products that are available to buy, thereby also limiting the environmental harms occasioned by, for example, taking a drive or using a refrigerator. Green building and zoning codes similarly dictate requirements for the built environment.[46] These codes can be

§§ 455C.1–.17 (West 2004 & Supp. 2011); Returnable Container Act, N.Y. ENVTL. CONSERV. LAW §§ 27-1001 to -1019 (McKinney 2007 & Supp. 2011).

43. *See* Plastic Bag Reduction Ordinance, S.F., CAL., ENVIR. CODE §§ 1701–1709 (2011).

44. The American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115, for example, included substantial funding for energy-efficiency programs, *see id.* div. A, tit. IV, 123 Stat. 138–40 (providing funding for "Weatherization Assistance Program[s]," the "manufacturing of advanced batteries and components," and "energy storage research," among other informal programs); *see also* Elias L. Quinn & Adam L. Reed, *Envisioning the Smart Grid: Network Architecture, Information Control, and the Public Policy Balancing Act*, 81 U. COLO. L. REV. 833, 857–59 (2010) (listing a variety of energy-efficiency-promoting policy tools, including smart meters). For an overview of state and federal efficiency measures, see SARAH SCHINDLER, ENCOURAGING PRIVATE INVESTMENT IN ENERGY EFFICIENCY 1, 3–7 (2011). *See also* CAL. PUB. UTIL. CODE § 739 (West 2004 & Supp. 2011) (setting baseline quantities, rates, and disclosure requirements for energy usage); CAL. PUB. UTIL. CODE § 8366(a) (West Supp. 2011) (mandating an evaluation of the impact of "[i]mplementation of new advanced metering initiatives").

45. For example, federal law sets minimum energy-efficiency requirements for a variety of appliances, Energy Policy and Conservation Act, 42 U.S.C. §§ 6291–6309 (2006), in addition to average fuel-economy standards for new vehicles, 49 U.S.C. §§ 32901–32919 (2006).

46. Although in some sense, these requirements are mandates directed to individuals at the juncture of construction or renovation, they do not directly operate on specific day-to-day behaviors. Nevertheless, such regulations indirectly constrain behavior and are best viewed as a regulation of architecture, as opposed to individuals. Thus, for present purposes I characterize zoning and building codes primarily as a direct regulation of architecture that indirectly regulates individuals. This characterization is, however, not entirely satisfying. In some circumstances, zoning and building codes do apply directly to individuals and constrain use of

designed to limit environmental harms by encouraging individuals to reduce their energy consumption. For example, mixed-use zoning can discourage car use by locating residences within walking distance of necessary services, and the mandated use of energy-efficient building materials can reduce heat or air-conditioning demand.[47]

These are just a few examples that are part of a web of regulation designed to indirectly change individual behaviors and limit associated environmental harms.[48] These indirect methods of influencing individual behaviors are common, and though they may

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their property for environmental ends. Christopher Serkin's interesting article, *Existing Uses and the Limits of Land Use Regulation*, 84 N.Y.U. L. REV. 1222 (2009), which identifies and critically examines the robust protections afforded to existing uses in property law, suggests an alternative way to more precisely identify when zoning and building codes function to regulate individuals directly rather than indirectly, *id.* at 1230 (refuting the "assum[ption] that there is something different . . . about the unfairness associated with regulating existing as opposed to future uses"). Namely, such regulations might be viewed as indirect with respect to individuals who are *prospective* homeowners, renters, or residents—and who thus are likely to experience the codes primarily in terms of how they have already defined existing architecture—but direct when they affect an *existing* property owner's use or renovation.

47. For a good account of the principles of green building and its evolution from reliance on informational/voluntary approaches to mandatory requirements, see Hirokawa, *supra* note 6, at 511–19, 545–46. *See also* BOS., MASS., ZONING CODE § 37-4 (2010) (requiring adherence to the U.S. Green Building Council's LEED Certified standard as part of the private-development review process); CZARNEZKI, *supra* note 3, at 43–45 (describing green building and zoning codes); Patricia E. Salkin, *Smart Growth and the Greening of Comprehensive Plans and Land Use Regulations*, *in* LAND USE INSTITUTE: PLANNING, REGULATION, LITIGATION, EMINENT DOMAIN, AND COMPENSATION 437, 440–41 (ALI-ABA Course of Study, 2008) (promoting successful local-government initiatives to curb global warming and encourage sustainable development).

48. Of course, in addition to these indirect regulations that have as an express purpose either changing environmentally significant individual behaviors or limiting the environmental harms arising from those behaviors, there is an enormous volume of regulation that, though not aimed at influencing individual behaviors or their associated harms, nonetheless significantly shapes—and frequently increases—the environmental harms imposed by individuals. *See* CZARNEZKI, *supra* note 3, at 48–49, 66–68 (identifying policies that encourage individual lifestyles and decisions that are harmful for the environment, such as highway funding and agricultural subsidies); John Dernbach, *Creating the Law of Environmentally Sustainable Economic Development*, 28 PACE ENVTL. L. REV. 614, 635 (2011) (discussing the negative environmental impacts of policies that encourage unsustainable development, including public funding for highways, single-use zoning, and the federal mortgage-interest tax deduction). Examples include everything from oil-energy-industry subsidies, *see* NAT'L COMM'N ON ENERGY POLICY, ENDING THE ENERGY STALEMATE: A BIPARTISAN STRATEGY TO MEET AMERICA'S ENERGY CHALLENGES 6 (2004), to agriculture policy, *see* Carrie Lowry La Seur & Adam D.K. Abelkop, *Forty Years After NEPA's Enactment It Is Time for a Comprehensive Farm Bill Environmental Impact Statement*, 4 HARV. L. & POL'Y REV. 201, 204–10 (2010), and transportation and housing policies, *see* John Turner & Jason Rylander, *Land Use: The Forgotten Agenda*, *in* THINKING ECOLOGICALLY 60, 64 (Marian R. Chertow & Daniel C. Esty eds., 1997).

trigger public opposition, such opposition is not held up as a major impediment to the use of indirect regulation generally.[49] The tendency to identify the intrusion objection as a significant obstacle primarily or exclusively with respect to direct mandates persists even though indirect measures may require the collection of personal information[50] and may spur objections that sound quite like intrusion objections.[51] The installation in California of smart meters, for example, which collect detailed information about an individual's electricity usage in an effort to change societal norms and encourage voluntary changes in energy use by individuals, has occasioned opposition on the ground that the meters constitute a "breach of privacy."[52]

Similarly, the federal statutory scheme of environmental protection in large measure reaches individual behaviors and associated environmental harms only indirectly.[53] The core provisions of major American environmental statutes impose restraints primarily on larger entities engaged in resource extraction—waste creation as a result of manufacturing or production, for example—or

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49. One specific form of indirect regulation aimed at individual behaviors—taxes or other significant price increases—is generally recognized as giving rise to often-insurmountable public opposition. *See* NORDHAUS, *supra* note 14, at 16 (describing the difficulties in gaining public support for direct increases in the price of energy); Vandenbergh, *supra* note 7, at 604 (observing that taxes "are politically radioactive in the United States to such an extent that they are not of more than theoretical interest, at least in the near term"); Vandenbergh & Steinemann, *supra* note 3, at 1703–04 (observing that, like direct regulation, taxes "have generated a fierce backlash in the past").

50. One scholar suggests, as an innovative approach to spur the development of energy-saving norms, that "Congress could require the collection and publication of information on individuals' energy footprint." John Dernbach, *Overcoming the Behavioral Impetus for Greater U.S. Energy Consumption*, 20 PAC. MCGEORGE GLOBAL BUS. & DEV. L.J. 15, 36 (2007).

51. Felicity Barringer, *New Meters Stir Fears for Health and Home*, N.Y. TIMES, Jan. 31, 2011, at A12 (citing privacy concerns about the collection of home-energy-use data by a utility company using real-time smart meters).

52. *Id.* Notably, in Maryland, where the installation of smart meters was at first linked to peak-demand pricing, the proposal attracted significant opposition from consumer groups concerned about rising electricity bills and was initially rejected by the Maryland Public Service Commission, although it was ultimately approved in revised form. Vandenbergh et al., *supra* note 13, at 739 & n.97.

53. *See* Vandenbergh, *supra* note 7, at 597–98 ("[T]he vast majority of the command and control regulations that seek to reduce environmental harms from individuals take the form of emissions controls directed at the industrial facilities that produce consumer products or restrictions on the environmentally harmful characteristics of consumer products, whether automobiles, thermostats, or home cleansers."); *see also* Scott D. Anderson, Comment, *Watershed Management and Nonpoint Source Pollution: The Massachusetts Approach*, 26 B.C. ENVTL. AFF. L. REV. 339, 367, 385 (1999) ("By relying primarily on regulation of industrial and municipal discharges, the general public has only indirectly contributed to cleaning up our waterways through higher consumer prices and sewer bills.").

waste disposal.[54] Ultimately, these entities only engage in these resource-extracting and waste-creating processes to satisfy the demands of individual consumption.[55] By limiting the environmental harms associated with manufacturing and producing these products, the regulatory regime indirectly limits the environmental harms that individuals contribute to by consuming those products.[56] For example, a host of environmental statutes impose restrictions on the harvesting of trees and the process of manufacturing paper, including the ultimate disposal of generated waste.[57] By limiting the environmental harm generated by these processes, the statutes also limit the environmental harm chargeable to individuals when they use paper. It is fair to characterize environmental law and policy as imposing direct regulation primarily on larger, institutional entities while addressing individual behaviors primarily through indirect regulation.[58]

But some laws—in particular local laws—do directly regulate environmentally significant individual behaviors. Examples of these laws, and explanations of whether and why they have triggered intrusion or other public objections, are considered in the next Section.

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54. *See* Vandenbergh, *supra* note 7, at 523–36, 565–67, 577–79 (noting that the government "rarely, if ever," enforces environmental statutes against individuals and instead uses "voluntary collection stations" and "public information campaigns" to alter individual behavior).

55. *See* Salzman, *supra* note 12, at 1244–45, 1255–56 (lamenting the law's focus on pollution control and explaining the need to address consumption, but noting that regulating consumption is difficult).

56. *Id.* at 1267–68 (discussing environmental law's narrow focus on the patterns of consumption and its failure to address levels of consumption).

57. The Forest Service regulates the harvest of timber on federal lands under the National Forest Management Act of 1976, 16 U.S.C. § 1604(g)(3) (2006), and paper mills must usually obtain permits under the CWA, 40 C.F.R. pt. 122 (2011), and the CAA, 40 C.F.R. §§ 60.280–.285, pt. 63 (2011).

58. Notably, this reliance on indirect regulation and the paucity of direct regulation in the context of environmental controls directed at individuals may be unusual. In his article *Structural Laws and the Puzzle of Regulating Behavior*, *supra* note 22, Professor Edward K. Cheng posits that direct regulation of behavior—what he terms "fiat"—is the dominant method employed to control behavior in other contexts, including criminal law, *see id.* at 715 ("Historically, attempts to change behavior have been addressed primarily through fiat—legal prohibitions with accompanying penalties for non-compliance.").

B. Direct Regulation of Environmentally Significant Individual Behaviors

A variety of local ordinances and state laws directly regulate environmentally significant individual behaviors.[59] Many municipalities require that individuals sort their trash to separate out recyclable, and sometimes even compostable, waste, and some jurisdictions impose bans on the disposal of certain types of waste.[60] Local and state burn laws[61] restrict or bar individuals from burning solid fuels—for example, by limiting or prohibiting the use of fireplaces or wood stoves.[62] Numerous jurisdictions limit the amount of time that individuals may idle vehicles or other emission-generating equipment.[63] Prohibitions on littering are ubiquitous.[64]

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59. For an overview of some such measures, see Vandenbergh, *supra* note 7, at 599 & n.321.

60. *E.g.*, S.F., CAL., ENVIR. CODE §§ 1901–1912 (2011) (requiring the separation of trash, compostable materials, and recyclables); NANTUCKET, MASS., CODE OF ORDINANCES §§ 125-2, -5 (2009) (same); N.Y.C., N.Y., RULES tit. 16, § 1-08(g) (2009) ("[R]esidents . . . of residential buildings . . . shall . . . separate from other materials designated recyclable materials that are required to be recycled and shall place such separated materials in the appropriate containers . . . ."); PITTSBURGH, PA., CODE OF ORDINANCES § 619.06(c) (2011) (requiring the separation of trash and recyclables); SEATTLE, WASH., MUN. CODE § 21.36.083 (2011) (same); *see also* CZARNEZKI, *supra* note 3, at 50 n.55 (citing waste-disposal bans in Arizona, Connecticut, Idaho, and Maine); Vandenbergh, *supra* note 7, at 567 n.190 (identifying state disposal bans and observing that disposal bans became more common during the 1990s).

61. State and local burn laws have long existed to address both local air pollution and fire concerns. *See, e.g.*, CAL. PUB. RES. CODE. § 4423 (1972). They are now widespread, adopted in some instances as part of state implementation of federal CAA requirements. *See, e.g.*, Approval and Promulgation of State Implementation Plans: Idaho, 61 Fed. Reg. 27,019, 27,019–23 (May 30, 1996) (codified at 40 C.F.R. pt. 52) (describing modifications to Idaho's burn laws to satisfy CAA requirements).

62. *E.g.*, IDAHO ADMIN. CODE r. 58.01.01.317 (2011); WASH. ADMIN. CODE §§ 173-433-010 to -200 (2010); Sacramento Cnty., Cal., Mandatory Episodic Curtailment of Wood and Other Solid Fuel Burning §§ 100–400 (2011).

63. *E.g.*, SACRAMENTO, CAL., CITY CODE §§ 8.116.010−.110 (2011) (requiring private-property owners to ensure that they do not allow commercial vehicles to idle on their property for more than five minutes and prohibiting individuals from idling certain gasoline-powered equipment, marine vessels, and off-road equipment); DENVER, COLO., CODE OF ORDINANCES § 4-43 (2011) (prohibiting idling for more than five minutes, with a few exceptions); N.Y.C., N.Y., ADMIN. CODE § 24-163 (2009) ("No person shall cause or permit the engine of a motor vehicle, other than a legally authorized emergency motor vehicle, to idle for longer than three minutes . . . ."); BURLINGTON, VT., CODE § 20-55(e) (2011) ("No person shall leave idling for more than three (3) minutes any motor vehicle in any area of the city [with certain limited exceptions]."). As with burn laws, restrictions on idling are sometimes enacted to comply with federal CAA requirements. *See, e.g.*, TEX. NATURAL RES. CONSERVATION COMM'N, RULE LOG NO. 2000-011-SIP-AI, REVISIONS TO THE STATE IMPLEMENTATION PLAN (SIP) FOR THE CONTROL OF OZONE AIR POLLUTION app. J (2000), *available at* http://www.tceq.texas.gov/

Municipalities also commonly adopt water-conservation ordinances that prohibit or limit the time or duration of outdoor water use, require the use of hoses that have an automatic shut-off nozzle, bar the washing of impervious surfaces, or require the installation of low-flow fixtures before the sale or major modification of a residential home.[65] Many jurisdictions have tree-protection ordinances that limit the circumstances under which an individual may cut down a tree, even on private property.[66] A number of states have recently enacted e-waste recycling laws that prohibit individuals from disposing of certain types of electronics as household waste destined for municipal landfills.[67] New Jersey recently adopted strict rules governing the

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airquality/sip/dec2000hgb.html (describing State Implementation Plan (SIP) modifications, including enhanced idling restrictions).

64. *E.g.*, Florida Litter Law, FLA. STAT. § 403.413 (2010); LINCOLN CNTY., OR., ENVIR. & HEALTH CODE § 2.1505 (2011) (setting forth littering prohibitions).

65. S.F., CAL., HOUS. CODE §§ 12A05–12A10 (2011) (requiring a qualified inspector to determine whether fixtures must be replaced and whether showers, faucets, and toilets are low-flow versions before sale); TAMPA BAY, FLA., CODE § 26–97(c) (2011) (providing that year-round, residential users are limited to using hoses that have an automatic shut-off nozzle; to watering outdoors two days per week, depending on what number their address ends in; and to watering during particular hours of the day); RIO RANCHO, N.M., CODE §§ 52.01–.09 (2011) (prohibiting water waste—the "non-beneficial use" of water—and fugitive water—water that runs from one property to another or to a public right of way—but excluding storm-water runoff); EL PASO, TEX., CODE § 15.13.020 (2011) (setting forth a year-round restriction that residents with even-numbered addresses may only water their lawns and outdoor plants with public water on Tuesdays, Thursdays, and Saturdays, whereas odd-numbered addresses may only do so on Wednesdays, Fridays, and Sundays; and prohibiting all outdoor watering between the hours of 10 a.m. and 6 p.m. from April 1 to September 30); EL PASO, TEX., CODE § 15.13.030(B) (prohibiting the waste of water, a violation that includes allowing the runoff of water from a residential property to form a pool in a street, alley, or ditch, or to run into a storm drain; failing to repair a leak within five days of discovering it; or washing impervious surfaces such as sidewalks, paved driveways, or patios except in an emergency); *Outside Water Usage*, WATER AUTH. OF W. NASSAU CNTY., http://www.wawnc.org/cm/index.php?option=com_content&task=view&id=57&Itemid=26 (last visited Feb. 14, 2012) (prohibiting outdoor water use from 10 a.m. to 4 p.m. year-round and providing that odd-numbered addresses may water only on odd-numbered days and even-numbered addresses may only water on even-numbered days).

66. For a detailed discussion of tree-protection ordinances, see Keith H. Hirokawa, *Sustaining Ecosystem Services Through Local Environmental Law*, 28 PACE ENVTL. L. REV. 760, 805–07 (2011). *See also* ATLANTA, GA., MUN. CODE §§ 158-28, -101 to -102 (2011) (placing strict limits on the removal of trees from public property and setting out the justification for that policy).

67. CONN. GEN. STAT. § 22a-636 (2011) (providing that, as of January 2, 2011, no person may dispose of covered electronic devices in the garbage); N.J. STAT. ANN. § 13:1E-99.109 (West 2011) (providing that, beginning January 1, 2011, disposal of classified electronic waste as household trash is prohibited); N.Y. ENVTL. CONSERV. LAW § 27-2611(3) (McKinney 2011) (prohibiting individuals from disposing of electronic waste in solid-waste-management facilities beginning in 2015).

content and application of fertilizers.[68] And some jurisdictions are either considering or have recently adopted bans on felt-soled boots and waders; those bans are aimed at reducing the spread of invasive species, which can attach to that common fishing gear.[69]

These laws are generally enforced through fines; some authorize enforcement-related inspections—for example, of trash containers—and some water-conservation ordinances even authorize cutting off water service for repeat violators.[70] One unusual enforcement mechanism is the use of radiofrequency identification (RFID) tags to monitor and track residential garbage volume and/or recycling rates.[71] Notably, this method of enforcement has occasioned accusations of government snooping.[72] Although anti-littering ordinances, recycling requirements, and other mandates on individuals are not always welcomed, their ubiquity and longevity suggest that direct regulation

68. Act of Jan. 5, 2011, ch. 112, § 2(a), 2010 N.J. ALS 112 (N.J.) (LEXIS) (codified at N.J. STAT. ANN. § 58:10A-62(a) (West Supp. 2011)) ("No person shall: (1) apply fertilizer to turf when a heavy rainfall, as shall be defined by the Office of the New Jersey State Climatologist at Rutgers, the State University, is occurring or predicted or when soils are saturated and a potential for fertilizer movement off-site exists; (2) apply any fertilizer intended for use on turf to an impervious surface, and any fertilizer inadvertently applied to an impervious surface shall be swept or blown back onto the target surface or returned to either its original or another appropriate container for reuse; or (3) apply fertilizer containing phosphorus or nitrogen to turf before March 1st or after November 15th in any calendar year, or at any time when the ground is frozen, except as provided otherwise in subsection b. of this section.").

69. *See* VT. STAT. ANN. tit. 10, § 4616 (2011) ("It is unlawful to use external felt-soled boots or external felt-soled waders in the waters of Vermont, except that a state or federal employee or emergency personnel, including fire, law enforcement, and EMT personnel, may use external felt-soled boots or external felt-soled waders in the discharge of official duties."); *Preliminary Summary*, ALASKA BD. OF FISHERIES, http://www.adfg.alaska.gov/index.cfm?adfg=lib.forcedownload&filepath=/static/regulations/regprocess/fisheriesboard/pdfs/2009-2010/statewide2010/&filename=statewide-finfish-2010-summ.pdf&contenttype=application/pdf (last visited Feb. 14, 2012) (recording the adoption of a felt-soled wading-boot ban beginning January 1, 2012); *see also* Felicity Barringer, *Anglers Bring Unwanted Guests to Rivers*, INT'L HERALD TRIB. (Paris), Aug. 17, 2010, at 4 (describing the conservation rationales for the bans and mentioning the Alaska and Vermont bans as well as a proposed ban in Maryland).

70. S.F., CAL., ENVIR. CODE § 1908 (2011) (authorizing inspection of trash receptacles and fines of up to $100 for households that fail to properly sort their recyclables or compostables); RIO RANCHO, N.M., CODE § 52.07 (2011) (establishing a scheme of increasing fines for repeat offenders and authorizing water service to be discontinued if the fines are not paid).

71. *See* Benjamin Lanka, *Radio Tags To Track Recycling Carts' Use*, J. GAZETTE (Fort Wayne, Ind.), Oct. 17, 2010, at 4 (describing the use of RFID chips by different communities).

72. *See* Wendy McElroy, *Big Brother Is Watching You Recycle*, 60 FREEMAN 17, 17–18 (2010) (recognizing that the strongest objections against the monitoring are based upon privacy concerns); Editorial, *Tattletale Trash Cans*, WASH. TIMES, Aug. 24, 2010, at B2 (stating that the government is spying on trash).

of some environmentally significant individual behaviors enjoys general acceptance in many areas.[73]

Although not aimed primarily at individual behaviors, a number of federal statutes, sometimes implemented by state and local authorities through cooperative-federalism arrangements, also directly regulate environmentally significant individual behaviors. As illustrated in later Sections, some of these efforts have encountered significant difficulties.[74]

1. *Clean Air Act.* Under the Clean Air Act's (CAA's)[75] cooperative-federalism arrangement,[76] most states are afforded the authority to decide how to achieve federal national air-quality standards within their boundaries by obtaining federal approval of State Implementation Plans (SIPs).[77] In determining which sources to target for emission reductions sufficient to achieve national air-quality standards, states have sometimes chosen—or have been compelled by the magnitude of needed emission reductions[78]—to

73. *See generally El Paso Launches Its Own Water Rationing Program*, TULSA WORLD, Apr. 4, 1991, at A16 (describing the reaction of El Paso residents to water-use restrictions); Suzanne Gamboa, *El Paso Begins Drive To Save Water*, DALL. MORNING NEWS, Apr. 2, 1991, at 13A (reporting the local response to conservation measures); Edmund Archuleta, *El Paso Helps Itself Through Water Conservation*, TEXAS WATER MATTERS (Oct. 2, 2005), http://www.texaswatermatters.org/pdfs/news_270.pdf (reciting the benefits of water conservation to El Paso residents); Eric Schmitt, *Nassau County Learns To Live with Less Water*, N.Y. TIMES, Aug. 8, 1988, at B23 (describing the reaction of Nassau County residents to water restrictions); Aubin Tyler, *The Case for Mandatory Composting*, BOS. GLOBE MAG., Mar. 21, 2010, http://www.boston.com/bostonglobe/magazine/articles/2010/03/21/the_case_for_mandatory_composting (commenting on the success of the Nantucket composting ordinance and observing that "[f]or island residents, it's now second nature to divide trash into two streams: recycling and organic waste").

74. *See* Vandenbergh, *supra* note 7, at 520 (reviewing efforts to regulate individual behaviors, primarily under federal environmental statutes; noting that "[t]he same pattern has occurred in area after area: regulators have sought to impose restrictions on individual behavior only rarely, and when they have done so, the restrictions have been unpopular and have provoked a public backlash;" and concluding that "[p]erhaps as a result, few regulations focus directly on individual behavior, and those that do are rarely enforced").

75. Clean Air Act (CAA), 42 U.S.C. §§ 7401–7671q (2006).

76. *Id.* § 110, 42 U.S.C. § 7410 (establishing the guidelines for SIPs).

77. *See generally* Train v. Natural Res. Def. Council, 421 U.S. 60, 99 (1975) (confirming that states retain the authority to choose how to reduce emissions to meet national ambient-air-quality standards (NAAQS) when developing SIPs under the CAA).

78. Notably, states retain the authority to require emission reductions even when those reductions are claimed to be economically or technologically impossible for regulated entities. *See, e.g.*, Union Elec. Co. v. EPA, 427 U.S. 246, 269 (1976) (holding that the EPA administrator need not consider economic or technological feasibility in reviewing SIPs).

regulate individual behaviors that contribute to air pollution.[79] Burn laws and idling restrictions are thus sometimes enacted to satisfy CAA requirements.[80] Another notable example is the "'environmental' speed limit"[81] imposed by the Texas Commission on Environmental Quality in an effort to reduce emissions and satisfy CAA requirements.[82] As characterized in the local press, "The measure was vilified from the start and drew heated negative response from drivers."[83] The initial speed-limit reductions were repealed after less than seven months when modeling showed that the reduced speed limits yielded a relatively insignificant reduction in emissions,[84] and the Texas legislature passed legislation prospectively barring the Texas Transportation Commission from approving new environmental speed limits going forward. Nevertheless, some five-miles-per-hour speed-limit reductions remain in effect in some Texas counties.[85]

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79. Nonattainment areas, for example, may be required in some circumstances to include transportation-control measures in their SIPs. CAA § 182, 42 U.S.C. § 7511a. Transportation-control measures can include direct regulation of individuals: for example, trip-reduction ordinances or vehicle-idling restrictions. *Id.* § 108(f), 42 U.S.C. § 7408(f); *see also* 40 C.F.R. § 93.101 (2011) (defining a transportation-control measure as one "of the type[] listed in section 108 of the CAA, or any other measure for the purpose of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions").

80. *See supra* notes 61–63.

81. Tony Freemantle, *55 MPH Begins Signing Off Freeways This Week*, HOUS. CHRON., Nov. 5, 2002, at A1.

82. The SIP revision authorizing environmental speed limits is available from the Texas Commission on Environmental Quality. *SIP Revision: Dallas-Fort Worth, April 19, 2000*, TEX. COMM'N ON ENVTL. QUALITY, http://www.tceq.texas.gov/airquality/sip/apr2000dfw.html (last visited Feb. 14, 2012); *see also* Approval and Promulgation of Implementation Plans; Texas; the Dallas/Fort Worth Nonattainment Area; Ozone, 66 Fed. Reg. 4756, 4759–60 (proposed Jan. 18, 2001) (to be codified at 40 C.F.R. pt. 52) (outlining Texas's "Emission Control Strategies," including new fuel regulations, vehicle-inspection requirements, and speed-limit reductions).

83. Freemantle, *supra* note 81.

84. *Id.*

85. *See* TEX. TRANSP. CODE ANN. § 545.353(j) (West 2011) ("The commission may not determine or declare, or agree to determine or declare, a prima facie speed limit for environmental purposes on a part of the highway system."); *see also* Vandenbergh, *supra* note 7, at 556 ("[S]tate and local efforts to reduce emissions by reducing speed limits have been hugely unpopular."). More information about these environmental speed limits is available from the North Central Texas Council of Governments, *1-Hour Attainment Demonstration SIP: Speed Limit Reduction Measure*, N. CENT. TEX. COUNCIL OF GOV'TS, http://www.nctcog.org/trans/air/sip/previous/esl/index.asp (last updated Dec. 12, 2011), and from the Texas Commission on Environmental Quality, *Vehicular Speed-Limit Reduction*, TEX. COMM'N ON ENVTL. QUALITY, http://www.tceq.texas.gov/airquality/mobilesource/speedlimit.html (last visited Feb. 14, 2012).

The EPA also possesses statutory authority to mandate the inclusion of some specific types of controls on individual behaviors in state SIPs.[86] In some circumstances, the EPA requires states to include vehicle-inspection and maintenance (I/M) programs in their SIPs when, for example, regions have failed to meet air-quality standards.[87] Although state I/M programs vary with respect to both the individuals covered and the other implementation details—for example, whether the checks are annual or biennial, or where the checks can be conducted—the core element of an I/M program is the requirement that covered individuals test the tailpipe emissions from their vehicles.[88] Owners usually cannot obtain required registrations for their vehicles unless they pass the emissions test, and thus, vehicles that fail required emissions tests must generally be repaired or even scrapped.[89] In short, I/M programs impose significant restraints directly upon individuals: first, individuals must test their cars to obtain permission to drive them, and second, individuals may not drive their cars if they emit pollutants above the prescribed level.

Adducing the significance of these I/M programs for purposes of better understanding the intrusion objection is complicated. The EPA's efforts to require I/M programs, initiated in 1977,[90] have occasioned over thirty years of controversy and disputes about everything from the EPA's authority to require states to implement these programs,[91] to the appropriate design and stringency of I/M programs,[92] to the efficacy of those programs that have been implemented.[93] States, envisioned in the CAA's cooperative-

86. Absent specific statutory authority, however, EPA may not generally prescribe the exact measures to be incorporated into a SIP to meet the NAAQS. *See, e.g.*, Virginia v. EPA, 108 F.3d 1397, 1415 (D.C. Cir. 1997) (invalidating an EPA SIP call).

87. *E.g.*, Clean Air Act (CAA) §§ 182, 187, 42 U.S.C. §§ 7511a, 7512a (2006); 40 C.F.R. § 51.350 (2011) (outlining the applicability of I/M plans).

88. *See* 40 C.F.R. §§ 51.351–.353 (demonstrating the variability of SIP plans).

89. *Id.* § 51.361 (describing the required I/M enforcement mechanisms).

90. Thomas O. McGarity, *Regulating Commuters To Clear the Air: Some Difficulties in Implementing a National Program at the Local Level*, 27 PAC. L.J. 1521, 1554 & n.211 (1996).

91. For example, the EPA initially sought to require states to issue I/M regulations, but it subsequently changed its approach after numerous legal challenges. *See* EPA v. Brown, 431 U.S. 99, 104 (1977) (per curiam) (vacating and remanding cases due to an EPA policy change).

92. *E.g.*, Natural Res. Def. Council v. EPA, 22 F.3d 1125, 1129 (D.C. Cir. 1994) (upholding EPA regulations promulgating guidelines for enhanced state vehicle I/M programs).

93. *See* McGarity, *supra* note 90, at 1535–1618 (detailing the fraught implementation of vehicle I/M requirements); Arnold W. Reitze, Jr. & Barry Needleman, *Control of Air Pollution from Mobile Sources Through Inspection and Maintenance Programs*, 30 HARV. J. ON LEGIS. 409, 414–19 (1993) (commenting on states' recalcitrance, court challenges to the EPA's

federalism scheme as the chief implementers of the CAA's requirements,[94] proved recalcitrant with respect to the establishment and operation of I/M programs.[95] One source of this recalcitrance was public resistance to the expense, inconvenience, and perceived heavyhandedness of I/M requirements.[96] The years saw repeated implementation delays,[97] judicial[98] and legislative limits placed on the EPA's authority,[99] and the gradual weakening of the EPA's requirements for I/M programs.[100]

It is tempting to explain the difficulties attending the establishment and operation of I/M programs as straightforward evidence of the intrusion objection at work. An observer adopting that account would say that a significant restraint on environmentally significant individual behaviors was perceived as unacceptably intrusive, occasioned public outcry, and was politically stymied at every turn. A fuller explanation, however, suggests that such an account would be incomplete, if not incorrect. First, although it is true that I/M program requirements sparked public outcry, individuals appear to have objected primarily to the inconvenience of the requirements, as opposed to the government invasion of privacy or

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authority to require I/M programs, and the EPA's relaxation of I/M requirements in light of state resistance). *See generally* Jerome Ostrov, *Inspection and Maintenance of Automotive Pollution Controls: A Decade-Long Struggle Among Congress, EPA and the States*, 8 HARV. ENVTL. L. REV. 139 (1984).

94. *See* McGarity, *supra* note 90, at 1619 (explaining the need for state cooperation in implementing I/M programs).

95. *Id.* at 1619–25.

96. *See* Ora Fred Harris, Jr., *The Automobile Emissions Control Inspection and Maintenance Program: Making It More Palatable to "Coerced" Participants*, 49 LA. L. REV. 1315, 1347 (1989) (discussing various rationales for public objections to the I/M program and recommending the "use of economic incentives to stimulate popular support for the I/M program").

97. *E.g.*, Act of Nov. 15, 1990, Pub. L. No. 101-549, § 101(c), 104 Stat. 2399, 2406–08 (codified at 42 U.S.C. § 7410 (2006)) (extending the deadlines for SIP submittals). For an extensive discussion of the troubled implementation of the I/M program, see McGarity, *supra* note 90, at 1535–1618.

98. *E.g.*, Brown v. EPA, 566 F.2d 665 (9th Cir. 1977) (finding that the EPA did not have the authority to impose sanctions on California for failing to adopt an EPA-developed I/M program). For an extensive discussion of this and other court challenges to the EPA's administration of the I/M program, see McGarity, *supra* note 90, at 1535–1618.

99. For example, Congress barred the EPA from imposing construction moratoria on states that had failed to meet a December 31, 1982, deadline to show how they would attain the NAAQS. Department of Housing and Urban Development-Independent Agencies Appropriation Act, 1984, Pub. L. No. 98-45, tit. II, 97 Stat. 219, 226 (1983).

100. McGarity, *supra* note 90, at 1535–1600.

liberty that they effected.[101] Moreover, individuals surveyed about the car inspections indicated that they did not find the process unduly troublesome and that they tended to support I/M programs generally.[102] Second, although public objection contributed to state opposition to I/M programs, it was only one of a number of factors informing that opposition. States also chafed at the Act's cooperative-federalism arrangement;[103] took issue with the EPA's initial attempts to force them to implement CAA programs;[104] disagreed with basic CAA goals;[105] and quickly piggybacked on the concessions that other states had been able to win from the EPA regarding deadlines, I/M requirements, and other measures of compliance.[106] Finally, despite all

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101. *See id.* at 1601–03 (noting complaints about wait times, dirtied seat covers, and the ways in which the test caused cars not to function properly); Bill Dawson, *Waits Choke Some Drivers as State's Smog-Checks Get in Gear*, HOUS. CHRON., Dec. 13, 1994, at A17 (reporting complaints about wait times and general annoyance with new I/M requirements in the early days of their implementation); Steve Strunsky, *It Could Be Worse. It Could Be Texas.*, N.Y. TIMES, July 16, 2000, http://www.nytimes.com/2000/07/16/nyregion/driving-it-could-be-worse-it-could-be-texas.html (reporting discontent with the wait times and inconvenience associated with New Jersey's I/M program but also reporting overall support for emissions testing).

102. *See* McGarity, *supra* note 90, at 1604 (observing that comment cards submitted by individuals in the early days of the Texas I/M program were generally positive); Strunsky, *supra* note 101 (reporting on a New Jersey poll finding that "8 in 10 respondents supported the enhanced inspection program" and that "[a]mong the 206 respondents who actually had their cars inspected under the new program, 52 percent said they were 'very satisfied' with the experience"); *see also* Ostrov, *supra* note 93, at 142, 190 (observing that "[a]lthough some motorists resent the perceived intrusion of the federal bureaucracy into their lives, once implemented, I/M need be no more intrusive or costly than the state safety inspections familiar to most," and summarizing polling data showing high public support for the continuation of I/M programs in states that had implemented them (footnote omitted)).

103. *See* McGarity, *supra* note 90, at 1622 ("State officials often express frustration with the intrusiveness of federal programs. They resent being treated like junior partners in the relationship, and they react negatively to the threat of federal sanctions, even when those sanctions are merely refusals to provide federal dollars to fund state programs.").

104. *See* John Quarles, *The Transportation Control Plans—Federal Regulation's Collision with Reality*, 2 HARV. ENVTL. L. REV. 241, 252–53 (1977) (reviewing cases that constrained EPA's authority to require specific regulatory actions by states under the CAA).

105. *See* McGarity, *supra* note 90, at 1621 (observing that some states doubt that the health threats posed by air pollutants that I/M programs aim to reduce actually pose health threats serious enough "to require members of the general public to go out of their way to clean up pollution").

106. *Id.* at 1623–24; *see also* Harris, *supra* note 96, at 1317 ("There are several underlying reasons for the seemingly widespread aversion to the I/M program. They are: 1) an antipathy to federal intrusion in matters considered to be of 'state or local' concern; 2) a concern about the costs attending such programs; and 3) a belief in the existing technological effectiveness and efficiency of most American and foreign made automobiles."). A similar account helps to explain the EPA's inability to impose transportation controls under the Clean Air Amendments of 1970, Pub. L. No. 91-604, 84 Stat. 1676 (codified as amended at 42 U.S.C. §§ 7401–7642 (2006)). *See* Quarles, *supra* note 104, at 249–55. The EPA attempted, and failed, to require

of this troubled history, I/M programs have now been implemented in over thirty states, and their requirements are accepted as business as usual for millions of individuals.[107] In Professor Eric Biber's words, "[A]s drivers adapted to the existence of I/M programs, they became much less controversial and much more popular."[108]

2. *Clean Water Act*. The Clean Water Act (CWA), although initially and primarily oriented toward larger point sources of pollution,[109] also directly regulates individual behaviors in a few ways. Most notably, individual property owners may be subject to controls on the use of their property that are designed to protect wetlands.[110]

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transportation controls designed to reduce automobile use. Proposed measures included programs designed to disincentivize individuals from using their cars, including higher fees for parking, reduced parking availability, and gas rationing. *Id.* at 245–46. The transportation-control plans occasioned significant public outcry, which ultimately helped to defeat the plans, *id*. at 249–50, but a variety of other factors—including many of the federalism tensions that plagued the implementation of I/M programs—also contributed to their failure, *id.* at 250–58.

107. For a description of current I/M programs, see U.S. ENVTL. PROT. AGENCY, MAJOR ELEMENTS OF OPERATING I/M PROGRAMS (2003), *available at* http://www.epa.gov/oms/epg/420b03012.pdf. *See generally* Benjamin Soskis, *Lone Star Joining*, NEW REPUBLIC, Sept. 18, 2000, at 23, 26 (reporting on the results of polling showing that "[i]n 1999, 70 percent of those . . . polled supported emissions testing for all vehicles in Houston, up from 38 percent just four years earlier").

108. Eric Biber, *Climate Change and Backlash*, 17 N.Y.U. ENVTL. L.J. 1295, 1325 n.84 (2009).

109. The core provisions of the CWA regulate the addition of pollutants to navigable waters from point sources. Point sources are defined in the Act as "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged." Clean Water Act (CWA) § 502, 33 U.S.C. § 1362(14) (2006). Individuals have been deemed not to be point sources. United States v. Plaza Health Labs., Inc., 3 F.3d 643 (2d Cir. 1993).

110. Individual property owners may also be required to control runoff from their property when a water body does not meet state water-quality standards and total maximum daily loads have been developed. CWA § 303(d), 33 U.S.C. § 1313(d). Individual behaviors, such as washing a car, may also be regulated under provisions of the Act governing stormwater discharges. *See generally id.* § 402, 33 U.S.C. § 1342 ("Permits for discharges from municipal storm sewers . . . shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers . . . ."). Efforts to restrict non-storm-water discharges to storm sewers include restrictions on car washing and other individual activities. For example, the website of the City of South Portland, Maine, provides guidance about permissible types of outdoor car washing. *Outdoor Car Washing*, CITY OF S. PORTLAND, http://www.southportland.org/index.asp?Type=B_BASIC&SEC=%7B845FE76B-380A-4630-97BC-F7F9D81A9040%7D&DE=%7BA673B004-F980-4A83-80E5-616BE61D56E9%7D (last visited Feb. 14, 2012) ("Regardless of the type of outside washing activity occurring, wash water is prohibited from directly entering surface waters (ponds, streams or wetlands), drainage ditches, storm drains or dry wells. . . . The use of acids, bases, metal brighteners, degreasing agents is prohibited for outside washing activities that do not discharge to a [publicly owned treatment works].").

Section 404 of the CWA prohibits the dredging or filling of wetlands that fall within the scope of the CWA's jurisdiction if a given individual lacks a permit.[111] Obtaining an individual section 404 permit can be a lengthy, complex, costly, and uncertain process.[112] Permits may not be available, for example, if there is a "practicable alternative" to the proposed discharge that would not have the same adverse impact on wetlands[113] or if issuing the permit would cause any of a number of specified effects, including contributing to "significant degradation of the waters of the United States."[114] Thus, property owners who have long imagined building a swimming pool and gazebo in their backyard, or perhaps a cabin on the family's lakefront property, may discover that doing so will require them to submit to a potentially complex federal permitting process,[115] to alter their plans to minimize impacts on wetlands, or perhaps even to abandon their plans altogether if a permit is not authorized. If they fail to recognize or heed the statute's requirement and instead proceed without a permit, they may be subject to civil and criminal penalties.[116]

Section 404's potential and actual interference with property rights has occasioned vociferous opposition to the program.[117] Property owners have challenged section 404 restrictions as

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111. CWA § 404, 33 U.S.C. § 1344(a).

112. *See* Rapanos v. United States, 547 U.S. 715, 721 (2006) ("The average applicant for an individual permit spends 788 days and $271,596 in completing the process, and the average applicant for a nationwide permit spends 313 days and $28,915—not counting costs of mitigation or design changes."). Notably, however, many common dredge and fill activities with minor impacts—for example, projects that fill half an acre or less of nontidal wetlands—may be authorized under nationwide general permits, which are much more readily obtained than individual permits. *See* ROBIN KUNDIS CRAIG, ENVIRONMENTAL LAW IN CONTEXT 834–35 (2d ed. 2008). And some evidence suggests that the permit process is becoming more customer friendly and easier to navigate. *See* Kim Diana Connolly, *Survey Says: Army Corps No Scalian Despot*, 37 ENVTL. L. REP. 10,317, 10,325–33 (2007) (reviewing customer-service surveys completed by section 404 applicants).

113. 40 C.F.R. § 230.10(a) (2011).

114. *See id.* § 230.10(b)–(c) (specifying circumstances in which a permit will not be granted).

115. Although states can be delegated the authority to implement the section 404 permitting program, only two states have accepted this authority. THE CLEAN WATER ACT HANDBOOK 98 (Mark A. Ryan ed., 2d ed. 2003). States have offered a variety of rationales for the decision not to accept permitting authority, including "the controversial nature of section 404 permitting." CRAIG, *supra* note 112, at 818.

116. CWA § 309, 33 U.S.C. § 1319.

117. *See* ROBERT MELTZ, CONG. RESEARCH SERV., RL30423, WETLANDS REGULATION AND THE LAW OF PROPERTY RIGHTS "TAKINGS" (2000) ("Talk about wetlands preservation today and you may soon be talking about private property and takings. . . . Accounts of land owners aggrieved by wetlands regulation have been widely circulated by the property rights movement, and challenged by environmentalists.").

unconstitutional takings—though usually unsuccessfully.[118] Since 1985, the Supreme Court has thrice heard challenges brought by landowners contending that they should not be required to obtain a section 404 permit to develop their property, on the ground that their property did not fall within the scope of the CWA's jurisdiction over navigable waters.[119] A variety of legislative proposals have been offered to limit the reach of the section 404 permitting program.[120] Policy and advocacy groups continue to object to the constraints that the section 404 permitting program places on landowners.[121] And scholars lament the perverse incentives created by uncompensated environmental-land-use regulations.[122] Professor Jonathan Adler observes, for example, that "[f]ederal wetlands regulations under section 404 of the CWA . . . likely discourage wetland conservation and restoration on private land, and may even encourage land modifications that can destroy wetland characteristics."[123]

Nevertheless, the section 404 permitting program chugs along. The U.S. Army Corps of Engineers receives roughly 85,000 permit requests annually,[124] and congressional proposals to limit the reach of the section 404 program compete with congressional proposals to expand its jurisdiction.[125] Moreover, corps customer-service surveys reveal little animosity or opposition from individuals who have actually applied for a section 404 permit.[126] Notably, opposition to the

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118. *Id.* (reviewing wetlands takings cases).

119. Rapanos v. United States, 547 U.S. 715 (2006); Solid Waste Agency v. U.S. Army Corps of Eng'rs, 531 U.S. 159 (2001); United States v. Riverside Bayview Homes, 474 U.S. 121 (1985).

120. MELTZ, *supra* note 117 ("In Congress, the 'property rights issue' has played out with particular force in the area of wetlands regulation. Many property rights bills have targeted wetlands regulation.").

121. *See, e.g.*, DANIEL R. SIMMONS & H. STERLING BURNETT, NAT'L CTR. FOR POLICY ANALYSIS, POLICY REPORT NO. 291, PROTECTING PROPERTY RIGHTS, PRESERVING FEDERALISM AND SAVING WETLANDS (2006) (critiquing the section 404 permit program, in large measure because of its interference with property rights, and detailing examples of abusive application of the program to individual property owners).

122. Jonathan H. Adler, *Money or Nothing: The Adverse Environmental Consequences of Uncompensated Land Use Controls*, 49 B.C. L. REV. 301, 313–19 (2008).

123. *Id.* at 313–14.

124. JEFFREY A. ZINN & CLAUDIA COPELAND, CONG. RESEARCH SERV., IB97014, WETLANDS ISSUES 5 (2003).

125. CLAUDIA COPELAND, CONG. RESEARCH SERV., R41594, WATER QUALITY ISSUES IN THE 112TH CONGRESS: OVERSIGHT AND IMPLEMENTATION 12 (2011).

126. *See* Connolly, *supra* note 112, at 10,325–33 (reviewing customer-service surveys completed by section 404 applicants and finding that "[i]n those districts that reported with a statistically significant number of surveys, more than half of respondents evaluating their overall

section 404 program appears centered on the program's uncompensated and, in the eyes of some, unfair restrictions on property use. Under this account, the section 404 program is unfair because "[t]he benefits of wetlands preservation . . .—water filtration, wildlife habitat, protection against flooding and erosion—inure to the public. By contrast, the burdens of wetlands preservation, in terms of development denied, fall on the wetland owner."[127] These property-rights objections, premised largely on questions of fairness, arise out of controls on uses of property, as opposed to direct controls on individual behaviors. As such, they generate an objection distinct from the intrusion objection, which is frequently characterized as arising from a rejection of government invasion of privacy.[128] Finally, at least some resistance to the section 404 program can likely be ascribed to the fact that the program is frequently enforced by the U.S. Army Corps of Engineers—a federal agency regulating in an area traditionally left to local governments.[129]

3. *Endangered Species Act.* A core protection of the Endangered Species Act of 1973 (ESA)[130] is its prohibition on the "taking" of listed endangered species.[131] The term "take" is defined by statute to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect."[132] The statutory term "harm" has been further defined by regulation to mean an act that actually kills or injures wildlife, a definition that may "include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or

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experience with the Corps' Regulatory Program gave 'high satisfaction' ratings" (footnote omitted)).

127. MELTZ, *supra* note 117.

128. *See* Babcock, *supra* note 4, at 123 ("Efforts to detect and ultimately enforce against individual activities that usually occur at home or in the immediately surrounding area would trigger enormous political resistance, as they would be seen as an interference with individual liberty and an invasion of privacy.").

129. *See generally* Rapanos v. United States, 547 U.S. 715, 737–38 (2006) (discussing the states' traditional authority over land-use decisions).

130. *See* Endangered Species Act (ESA) of 1973, 16 U.S.C. §§ 1531–1544 (2006 & Supp. IV 2010).

131. *Id.* § 9(a)(1)(B), 16 U.S.C. § 1538(a)(1)(B). The Act also prohibits the removal or damage of endangered plants in known violation of state law, *id.* § 9(a)(2)(B), 16 U.S.C. § 1538(a)(2)(B), and the take prohibition sometimes extends to threatened species as well, 50 C.F.R. § 17.31(a) (2010).

132. ESA § 3(19), 16 U.S.C. § 1532(19).

sheltering."[133] The ESA also prohibits the sale, import, export, or transport of listed endangered species.[134] Violation of these provisions may lead to civil and criminal penalties, and the ESA provides a mechanism for prospectively enjoining activities that might have these forbidden effects.[135]

The ESA thus regulates individuals in two related but distinct ways. First, it prohibits individuals from directly killing, injuring, et cetera—or selling, transporting, et cetera—listed endangered species. Second, because significant habitat modification can also constitute a "take,"[136] the ESA regulates individuals as property owners, effectively restricting their use of their property. Even when a landowner does not know whether modifying the habitat on his property will harm a protected species, he nonetheless faces a potentially difficult decision, as explained by Steven Quarles and Thomas Lundquist:

> [W]here there is . . . a risk of future take, it appears that the landowner is free to make a difficult choice among the options of: (1) not conducting the land use activity and bearing the economic consequences; (2) applying for an incidental take permit and bearing the economic, delay, and permit uncertainty consequences; or (3) conducting the land use activity and bearing the consequences of potential civil and criminal liability if a take does occur.[137]

The first set of restrictions—on an individual's freedom to directly kill or injure; or to sell, import, export, or transport endangered species—has not engendered widespread or sustained public objection and appears to be relatively well accepted.[138] The

133. 50 C.F.R. § 17.3. Of note, however, the showing required to establish a take remains unclear and differs among jurisdictions. Steven P. Quarles & Thomas R. Lundquist, *When Do Land Use Activities "Take" Listed Wildlife Under ESA Section 9 and the "Harm" Regulation?*, *in* ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES 207, 207–09 (Donald C. Baur & Wm. Robert Irvin eds., 2002).

134. ESA § 9(a)(1)(A), (E)–(F), 16 U.S.C. § 1538(a)(1)(A), (E)–(F).

135. *Id.* § 11(a)–(b), (e)(6), 16 U.S.C. § 1540(a)–(b), (e)(6).

136. *See* Babbitt v. Sweet Home Chapter of Cmtys. for a Great Or., 515 U.S. 687, 708 (1995) (holding that habitat modification can constitute an illegal "take" of a species).

137. Quarles & Lundquist, *supra* note 133, at 233–34; *see also id.* at 242–43 ("[L]andowners in areas inhabited by listed wildlife species face uncertainty as to whether their land use actions will be viewed as take. This springs from both factual uncertainty about whether the land use activity will actually injure a member of a listed wildlife species and legal uncertainty over the applicable tests for harm and harass.").

138. This statement should not be taken to suggest that no opposition to these ESA restrictions exists. Landowners, for example, have protested that the Act's take prohibition

second set of restrictions—on land use—however, has inspired strident and sustained public objections.[139] These restrictions are criticized as unfairly imposing the costs of species protection on a subset of individual landowners;[140] subjecting individuals to a confusing array of regulatory requirements and red tape; usurping local land-use authority; creating perverse incentives that cause landowners to harm species and destroy habitats to avoid regulation;[141] and, most importantly, interfering with landowners' property rights.[142] Thus, as with the section 404 program, opposition to the ESA's land-use restrictions centers on their interference with property rights.[143] The regulatory interpretation of the term "take" to

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unfairly prevents them from protecting their property, including livestock, from nuisance predator species, such as grizzly bears and wolves. *See* Robert Meltz, *Where the Wild Things Are: The Endangered Species Act and Private Property*, 24 ENVTL. L. 369, 391–98 (1994) (describing property claims that arise from "instances when a person is barred from using certain measures to protect his property from the depredations of protected wild animals"). This source of opposition is, however, more akin to objections grounded in concerns over property rights.

139. *See, e.g.*, Erin Morrow, *The Environmental Front: Cultural Warfare in the West*, 25 J. LAND RESOURCES & ENVTL. L. 183, 184 (2005) (commenting that "[t]he broad regulatory powers and land use restrictions wielded by federal agents under the Endangered Species Act . . . have collided with western perceptions of private property and distrust of regulation," and describing the "legal and cultural battles" that were occasioned by implementation of the ESA in the American West).

140. *Id.* at 188 ("The ESA has been criticized by landowners, environmentalists, and economists alike because it unfairly allocates costs and creates perverse incentives. The ESA is justified because it provides collective benefits like potential medical discoveries, aesthetic pleasure, and ecosystem functions. The cost of species protection, however, falls on a much narrower subgroup."); *see also Sweet Home*, 515 U.S. at 714 (Scalia, J., dissenting) (decrying the majority's opinion as "impos[ing] unfairness to the point of financial ruin—not just upon the rich, but upon the simplest farmer who finds his land conscripted to national zoological use").

141. Mark Sagoff, *Muddle or Muddle Through? Takings Jurisprudence Meets the Endangered Species Act*, 38 WM. & MARY L. REV. 825, 826–28 (1997) (describing the public reaction to the Supreme Court's decision that significant habitat modification can constitute a prohibited take of a species, including the recommendation of the executive director of the American Lands Rights Association that property owners should shoot and bury endangered species spotted on their land to avoid the Act's strictures).

142. *See id.* at 831–51 (describing property-rights objections to the ESA); Barton H. Thompson, Jr., *The Endangered Species Act: A Case Study in Takings and Incentives*, 49 STAN. L. REV. 305, 324–335 (1997) (explaining the property-rights movement's objections to, and focus on, the ESA).

143. Doremus, *supra* note 29, at 346 ("Despite an under-appreciated history of substantial regulation, real property has somehow become an iconic symbol of individual liberty in America. Landowners assume that they are or should be free to use their land in virtually any way they please, so long as other people are not directly injured by that use. Because that assumption is widespread and politically powerful, the effort to impose the kinds of regulatory controls on land use that are essential to biodiversity protection faces particularly formidable institutional barriers." (footnote omitted)).

include significant habitat modification has been legally challenged, although ultimately upheld by the Supreme Court.[144] Opponents of the ESA have also brought suit alleging that the statute is unconstitutional, most notably arguing that application of the ESA to intrastate species and property exceeds Congress's authority under the Commerce Clause.[145] Aggrieved property owners have continued to argue—overwhelmingly unsuccessfully—that ESA-imposed restrictions on land use constitute a compensable taking.[146] Scholars have critiqued the perverse incentives that the ESA creates for landowners to kill endangered species, remove evidence of the animals' presence, and destroy potential habitats; stories of this kind of landowner behavior, colloquially termed "shoot, shovel and shut up," abound.[147] In response to this widespread derision, Congress amended the ESA to allow individuals to apply for permits to "take" species in certain circumstances, thereby blunting the statute's restrictions on property use.[148] Congress has also entertained many proposals aimed at amending the ESA to limit or remove restrictions on private landowners or to provide them with compensation.[149]

For present purposes, what is perhaps most notable about these ESA controversies is that they are not grounded in the narrower, privacy-based intrusion objection. And even if the public opposition

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144. *Sweet Home*, 515 U.S. at 708.

145. *See, e.g.*, GDF Realty Invs., Ltd. v. Norton, 326 F.3d 622, 640–41 (5th Cir. 2003) (upholding the take prohibition as applied to intrastate species on intrastate property in Texas); Gibbs v. Babbitt, 214 F.3d 483, 486–87 (4th Cir. 2000) (upholding application of the section 9 take prohibition to an experimental population of red wolves in North Carolina and Tennessee); Nat'l Ass'n of Homebuilders v. Babbitt, 130 F.3d 1041, 1059–60 (D.C. Cir. 1997) (upholding application of section 9 of the ESA to a wholly intrastate species on a wholly intrastate property).

146. Glenn P. Sugameli, *The ESA and Takings of Private Property*, *in* ENDANGERED SPECIES ACT, *supra* note 133, at 441, 441–58.

147. *See* Adler, *supra* note 122, at 319–32 (advocating the compensation of landowners, in part because it would remove harmful perverse incentives and thus would benefit species, and detailing how the ESA causes landowners to undermine species-preservation efforts); *see also* Robert A. Hillman, *The Rhetoric of Legal Backfire*, 43 B.C. L. REV. 819, 824–28 (2002) (documenting the ubiquity of claims that landowners destroy habitats to avoid the ESA's strictures but finding no empirical evidence to support the view that the attitudes motivating such behavior actually render the Act ineffective).

148. Endangered Species Act (ESA) of 1973 § 10(a), 16 U.S.C. § 1539(a) (2006); *see also* Quarles & Lundquist, *supra* note 133, at 243–44 (describing efforts to provide landowners with greater certainty regarding compliance with the ESA).

149. *E.g.*, Threatened and Endangered Species Recovery Act of 2005, H.R. 3824, 109th Cong. (2005) (creating a system of grants for private landowners who protect endangered species and authorizing reimbursements for private livestock killed by endangered predatory species).

to the ESA could be understood to fall within the very broad conception of the intrusion objection as political resistance to government overreaching, the very specific context for that opposition, as with opposition to the section 404 program, would be the somewhat unique setting of property rights.[150]

C. *Lessons from Regulation of Environmentally Significant Individual Behaviors*

The difficulties encountered in applying federal environmental statutes directly to individuals are often cited—even by this author—as evidence of the perils of using mandates to control environmentally significant individual behaviors and, thus, of the limited utility of those mandates.[151] To some extent, the examples in the previous Sections map onto the standard critique of individual mandates, which focuses on cost and administrative constraints, as well as public opposition to "intrusive" enforcement.[152] Implementation burdens—the cost and administrative burden of testing emissions from hundreds of thousands of vehicles[153]—appear to explain, at least in part, the difficulties encountered with respect to the CAA I/M programs, specifically, states' resistance to implementing those programs.[154] It is also clear, however, that other factors, beyond implementation challenges and public opposition, have contributed to the difficulties encountered in implementing the regulatory measures. Federalism friction, in terms of states' willingness to implement federal statutes through cooperative-federalism arrangements, has

150. Perceptions of interference with property rights may present special considerations. *See generally* Jonathan Remy Nash & Stephanie M. Stern, *Property Frames*, 87 WASH. U. L. REV. 449, 451–52 (2010) (using the ESA as an example of a circumstance in which property owners' mistaken perceptions of strong or unfettered private property rights can frustrate regulation and proposing new methods for framing property rights to avoid this problem).

151. *See* Katrina Fischer Kuh, *Using Local Knowledge To Shrink the Individual Carbon Footprint*, 37 HOFSTRA L. REV. 923, 936 (2009) ("[M]andates and their enforcement—even if feasible—may founder on objections that they are uncomfortably intrusive. . . . And mandates on individual action that raise such objections create the risk of giving rise to perverse responses."); Vandenbergh, *supra* note 7, at 554–56 ("Efforts to control individual behavior [for environmental reasons] through command and control regulation have been far more limited and far less successful.").

152. Vandenbergh, *supra* note 7, at 597–600 (describing the difficulties of applying mandates to individual behaviors, including the cost and intrusiveness of enforcement).

153. McGarity, *supra* note 90, at 1571 (referencing an EPA estimate that the cost of testing to implement one proposed I/M rule would have been approximately $451 million).

154. Reitze & Needleman, *supra* note 93, at 416 (explaining that the I/M program was "unpopular in many states" partly because it "drained scarce state financial resources").

bedeviled the CAA's vehicle I/M program.[155] And, as discussed in Part I.B.1, the public has opposed these measures for a variety of reasons separate from any objections to the intrusiveness of government enforcement.

Perhaps most interesting are the ways in which prior experience regulating environmentally significant individual behaviors departs from, or at least complicates, the intrusion objection. Although nowhere fully developed or explained, the intrusion objection is frequently articulated as the idea that direct regulation of environmentally significant individual behaviors would require unacceptably intrusive enforcement—measures that would be too invasive of privacy and civil liberties[156] or, as the intrusion objection is occasionally characterized, that would constitute government overreaching.[157] This objection suggests that a government "no fly" zone exists, in which regulation of individuals is per se unacceptable. It also suggests that direct regulation of environmentally significant individual behaviors would be of limited utility because it would so frequently transgress that no-fly zone. The American experience with direct regulation of environmentally significant individual behaviors complicates this view.

First, direct 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—for example, when recycling ordinances permit searches of individuals' trash.[158] Notably, the restrictions on the export or sale of endangered species have similarly not occasioned significant backlash.

Second, public opposition to measures that directly regulate environmentally significant individual behaviors does not appear to have been monolithic over time in terms of content, breadth, or even strength, nor does it appear to have been expressed exclusively or even primarily through concerns about government invasion of privacy or overreaching. Public opposition has proved to be dynamic

155. McGarity, *supra* note 90, at 1622–24 (describing state-federal disputes over the implementation of I/M requirements and further observing that politicians have frequently used the I/M program to make appeals to the public that "attack[ed] the federal government").

156. *See supra* note 30.

157. *See supra* note 31.

158. *See supra* notes 70–73 and accompanying text.

over time or geography, a fact that is illustrated by the reality that vehicle I/M programs are now commonplace in many parts of the country. This example suggests the possibility that even strident initial opposition to a measure might reflect a mere bias for the status quo, but one that can ultimately be overcome.[159] Public opposition sometimes appears to have arisen from the straightforward rejection of a measure on typical balancing grounds—that is, based on the contention that the benefits of the measure are not worth the cost or inconvenience.[160] And opposition has frequently been grounded in property-rights objections that are distinct from the enforcement/privacy concerns that are most commonly understood to animate the intrusion objection. Property-rights objections are frequently rooted in claims about fairness or the undue burden imposed on a select number of unlucky landowners, and they arguably present a type of objection to regulation that is distinct from even the broadest conception of the intrusion objection as being premised on public opposition to government overreach.[161] Indeed,

159. *See generally* Biber, *supra* note 108, at 1317–28 (noting and offering explanations for the "resistance to the regulation of long-standing activities," including the status quo bias, and observing that this resistance may be particularly pronounced when regulation seeks to prevent long-term environmental harms); Doremus, *supra* note 29, at 346 ("The law's resistance to change is even more pronounced when regulation is sought in an area where unrestricted individual choice has been (or is perceived to have been) the norm."); Lisa Heinzerling, *Environmental Law and the Present Future*, 87 GEO. L.J. 2025, 2068 (1999) (discussing the status quo bias and how habits and their development can dictate the environmental harms occasioned by individual behaviors); Serkin, *supra* note 46 (exploring and critiquing property law's robust protections for existing uses).

160. Consider, for example, public complaints about vehicle I/M programs. *See supra* notes 91–93 and accompanying text.

161. For a discussion of why and how property-rights objections may present a special case, see Doremus, *supra* note 29, at 346; and Nash & Stern, *supra* note 150, at 449. In addition to the fairness objections noted with respect to land-use restrictions imposed under the section 404 program and section 9 of the ESA, similar fairness objections sometimes arise in the context of objections to water-use restrictions. Although common and generally accepted in many communities, water-conservation ordinances often raise fairness issues. Residents of Nassau County objected to their ordinance because they believed that restrictions were being instituted to allow for overdevelopment and that wealthier neighborhoods were being permitted to use more water. Schmitt, *supra* note 73. In the Tampa Bay area, the South Florida Water Management District found in a public-opinion survey that public opposition only seems to come into play when residents do not feel that others are doing their part, particularly when the agricultural industry does not seem to be helping with conservation. David K. Rogers, *'Do Your Part' To Save Water*, ST. PETERSBURG TIMES, Jan. 25, 1994, at 1B; *see also* Shirley David, Letter to the Editor, *Strawberry Growers*, ST. PETERSBURG TIMES, Dec. 22, 2010, at 10A (blaming agricultural water use for damage to private homes); D.W. Deck, Letter to the Editor, *Real Cause of Sinkholes Ignored*, ST. PETERSBURG TIMES, Jan. 19, 2011, at 2 (arguing that overuse of water in other counties was having detrimental effects on homeowners who were

with the possible exception of commentary suggesting that the use of RFID chips to enforce recycling ordinances constitutes government spying, not one of the examples in this Part seems to provide a clear example of the privacy-based intrusion objection in action. But fatal public opposition—for example, to environmental taxes or to the installation of smart meters—has arisen with respect to the *indirect* regulation of environmentally significant individual behaviors as well.

A review of the regulation of environmentally significant individual behaviors suggests that, broadly speaking, indirect regulation of environmentally significant individual behaviors is the predominant method. Additionally, although intrusion objections and public resistance frustrate some efforts at indirect regulation, the intrusion objection has not been held up as a significant impediment to the use of indirect regulation generally, as it has been with respect to direct regulation.[162] Public, political resistance is frequently identified as a significant impediment to environmental taxes aimed at individuals; notably, however, the origin of that resistance is not characterized as a rejection of intrusive government action, nor is the political infeasibility of such taxes taken as a wholesale rejection of other indirect market measures to influence environmentally significant individual behaviors.

This heavy reliance on the indirect regulation of individuals suggests an interesting observation with respect to the intrusion objection. Although the intrusion objection posits that direct regulation of individuals poses particular concerns regarding the infringement of civil liberties, in some ways, indirect regulation is arguably more intrusive, or at least more troubling, from the

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conserving). In Rio Rancho, New Mexico, residents expressed concern about the water demands of new development and industry's high use of water, particularly the failure of industry to do its part to conserve. *See* Jon Fleischer, Letter to the Editor, *Building Isn't Drying Up*, ALBUQUERQUE J., May 9, 2006, at A6 (describing the water plan as beneficial only for developers); Gary W. Priester, Letter to the Editor, *Drought Does Not Compute*, ALBUQUERQUE J., May 9, 2006, at A6 (objecting specifically to Intel's water usage).

162. This observation should not be read to imply that environmental laws that indirectly regulate individuals occasion no public opposition. To the contrary, indirect regulation can and does inspire negative public responses, particularly when the indirect regulation is recognized as—or simply viewed as—imposing higher costs on individuals. *See* Anderson, *supra* note 53, at 367 n.242 (citing, as an example of public backlash against indirect regulation, water customers' burning their water bills to protest higher costs attributable to the cleanup of Boston Harbor); Vandenbergh et al., *supra* note 13, at 739–40 (describing the defeat of a Maryland proposal to install residential smart meters with peak-demand pricing capabilities and explaining how "[p]olicies that link new technology uptake to price signals in some cases can generate opposition to both").

perspective of protecting civil liberties, than direct regulation.[163] This hypothesis may hold true for two reasons. First, in some of its most common iterations, such as product mandates, indirect regulation extinguishes individual choice: the individual does not have the option of choosing not to comply.[164] Second, because indirect regulations are enforced against other entities, such as product manufacturers, those regulations are less visible to the ultimately regulated individual and, hence, are less subject to democratic controls.[165] In short, in some circumstances, indirect regulation may attract less public opposition in part because it obscures the controls it places on individuals.

Ultimately, however, information gleaned from a review of prior and existing direct regulation of environmentally significant individual behaviors does not provide a satisfying basis for drawing general conclusions about the potential for applying mandates to those behaviors, nor does the information enable an estimation of the specific obstacles that the intrusion objection may pose to any given project. The characterizations of public opposition that I have offered were gleaned from a review of newspaper articles, ad hoc surveys, and other similar sources, as opposed to contemporary and reliable social-science data. Thus, my characterizations are supported by some

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163. Of course, direct regulation through mandates also constrains liberty. *See* THALER & SUNSTEIN, *supra* note 22, at 186 ("Especially when compared with command-and-control systems, economic incentives have a strong libertarian element. Liberty is much greater when people are told, 'You can continue your behavior, so long as you pay for the social harm that it does' than when they are told, 'You must act exactly as the government says.'").

164. *See* Cheng, *supra* note 22, at 669 ("Fiat makes compliance a choice, whereas structure makes compliance largely automatic. The involuntary nature of structural regulation raises objections of excessive government control, reduced liberty, and invasions of privacy." (footnote omitted)); Richard A. Posner, *Social Norms and the Law: An Economic Approach*, 87 AM. ECON. REV. 365, 367 (1997) (arguing that internalized norms, unlike external laws, deprive individuals of the opportunity to weigh obedience to the law and thereby limit freedom).

165. *See* THALER & SUNSTEIN, *supra* note 22, at 243–46 (describing a "publicity principle [that] bans government from selecting a policy that it would not be able or willing to defend publicly to its own citizens" to mitigate this potential concern); Lessig, *supra* note 10, at 690 (observing that "indirect modes of regulation" face a "problem of regulatory indirection" because they "may allow the government to achieve a regulatory end without suffering political cost"). Of course, some indirect regulation—regulation of the market through taxes on consumer goods, for example—is highly visible. This visibility means that such measures are often rejected by the public, occasioning recourse to less visible means of indirect regulation or other regulatory strategies. *See* THALER & SUNSTEIN, *supra* note 22, at 187 ("[I]ncentive-based systems [such as GHG taxes] have not always gained political traction—in part, we think, because they make the costs of cleaning up the environment transparent. Announcing a new fuel efficiency standard sounds misleadingly 'free,' whereas imposing a carbon tax sounds expensive, even if it is actually a cheaper way of achieving the same goal.").

data, but they are not definitive or empirically defensible. Moreover, the dataset is necessarily incomplete. Missing are a potentially great number of measures that—perhaps because they were too intrusive—never crossed the lips of policymakers or flickered out so quickly that they left little record. And my examples are hardly exhaustive. My analysis focuses primarily on the usual suspects—those instances of direct regulation most often cited as evidence that cuts against the feasibility of mandates on individuals—and almost certainly misses examples of other types of direct regulation, particularly at the local level. Recognizing the limited utility of these factual examples for analyzing the intrusion objection, Part II seeks to gain insight from a more theoretical perspective, stepping outside of the context of environmentally significant individual behaviors and employing substantive due process doctrine to think more broadly about what might render government regulation of individuals unacceptably intrusive.

II. RECOGNIZING INTRUSION: LESSONS FROM SUBSTANTIVE DUE PROCESS

Governments regularly adopt and enforce laws that directly and indirectly restrict individual liberty[166] without encountering insurmountable public opposition, whether as a result of perceived intrusion or otherwise. Speed limits, noise ordinances, compulsory education, building codes, product mandates, and criminal codes all limit individual freedom. Thus, when the literature raises intrusion concerns as a particular impediment to mandates addressed to regulating environmentally significant individual behaviors,[167] it by extension suggests that mandates aimed at these behaviors restrict individual freedom in a manner that is more likely to be deemed unacceptably intrusive. To better understand what renders such mandates particularly offensive—or to better evaluate the claim that they are particularly offensive—it is useful to consider a question that is both more general and more limited. Namely, when and why are

166. Or, if one prefers to avoid constitutional connotations, the term "freedom" might be preferable. For an interesting dispute over the terminology of liberty versus that of freedom, compare *City of Chicago v. Morales*, 527 U.S. 41, 53 n.19 (1999), with *id.* at 73, 84 (Scalia, J., dissenting). I generally use the term "liberty" in its broad sense to refer to the "ability of individuals to engage in freedom of action within society and free choice regarding most aspects of . . . private life." JOHN E. NOWAK & RONALD D. ROTUNDA, CONSTITUTIONAL LAW § 13.4(d)(vii), at 669 (8th ed. 2010).

167. *E.g.*, Babcock, *Global Climate Change*, *supra* note 12, at 5–6.

government restrictions on individual freedom deemed unconstitutional because they are unacceptably intrusive?

This Part begins by explaining why substantive due process doctrine and, in particular, some early privacy cases provide useful guidance about when laws are likely to trigger intrusion objections.[168] It then describes how and why those cases distinguish direct and indirect regulation and afford special solicitude to conduct occurring within the home. This Part further explains why the direct-indirect distinction and the special status of the home may offer some insights into the intrusion objection.

A. The Relevance of Substantive Due Process and the Early Privacy Cases

The Fifth and Fourteenth Amendments prohibit the government from depriving persons "of life, liberty, or property, without due process of law."[169] Under the theory of substantive due process, a law contravenes this constitutional guarantee if it does not bear a rational relationship to a legitimate interest of government[170]—in other words, if it effects a "totally arbitrary deprivation of liberty"[171]—or if it infringes a fundamental right and is not narrowly tailored to promote a compelling government interest.[172] The judiciary retains a limited power to strike down laws that survive the political process, and that do not contravene a right specifically protected in the Bill of Rights, but that nonetheless are wholly arbitrary or infringe "fundamental

168. That this analysis looks to substantive due process review for insight into the intrusion objection should not be taken to suggest that that branch of the Supreme Court's jurisprudence is the only—or even the best—source of such insight. Other fields, such as psychology, sociology, or political theory; methods, such as polling; or even strands of legal doctrine, such as the Fourth or Fifth Amendment, might well provide additional insight. The claim offered here is that substantive due process review is one noteworthy source of insight into the intrusion objection because the inquiry conducted by judges engaged in this kind of review mirrors the core sentiment underlying the intrusion objection: Looking to tradition, history, and gestalt notions of freedom and autonomy, has the government overstepped its bounds? Substantive due process review may even offer some advantages to, for example, polling because judges (unlike polled subjects) are required to explain their decisions. And although substantive due process review pulls from both Fourth and Fifth Amendment concepts, it is not tied to the interpretation of specific constitutional text.

169. U.S. CONST. amend. V; *id.* amend. XIV, § 1.

170. Washington v. Glucksberg, 521 U.S. 702, 728 (1997); Amunrud v. Bd. of Appeals, 143 P.3d 571, 576–78 (Wash. 2006) (en banc) (explaining when substantive due process claims are afforded rational basis review, as opposed to strict scrutiny review).

171. NOWAK & ROTUNDA, *supra* note 166, § 11.4(e), at 486.

172. *Glucksberg*, 521 U.S. at 721.

rights and liberty interests."[173] Political-process checks and judicial review under specific provisions of the Constitution are otherwise deemed sufficient to weed out legislation that inflicts unacceptable deprivations of liberty.

This judicial role is both disputed[174] and narrowly defined, particularly with respect to the application of heightened scrutiny. Limitations on the judicial role arise out of the concern that the judiciary either lacks institutional competence or acts at the bounds of—or even beyond—its constitutional authority when it undertakes the necessarily subjective[175] task of identifying fundamental rights. As the Court itself has explained,

> [W]e "ha[ve] always been reluctant to expand the concept of substantive due process because guideposts for responsible decisionmaking in this unchartered area are scarce and open-ended." By extending constitutional protection to an asserted right or liberty interest, we, to a great extent, place the matter outside the arena of public debate and legislative action. We must therefore "exercise the utmost care whenever we are asked to break new ground in this field," lest the liberty protected by the Due Process Clause be subtly transformed into the policy preferences of the Members of this Court.[176]

A chief doctrinal constraint on substantive due process review is that heightened scrutiny is meant to be reserved for the most important and historically demonstrable[177] rights and liberties—those that are

173. *Id.* at 720. At best, substantive due process review provides a judicial backstop to prevent liberty deprivations that are out of step with the shared American understanding of the appropriate role of government but that have slipped through the political process; at worst, in the name of erecting such a backstop, courts impose artificial and unnecessary constraints on government power that are out of sync with public and constitutional values.

174. For a recent demonstration of disagreements over the meaning and scope of the Due Process Clause, compare the concurrence of Justice Scalia in *McDonald v. City of Chicago*, 130 S. Ct. 3020, 3050–58 (2010), with the dissent of Justice Stevens, *id.* at 3088–3120 (Stevens, J. dissenting). *See also* ROBERT H. BORK, THE TEMPTING OF AMERICA: THE POLITICAL SEDUCTION OF THE LAW (1990) (examining theories about the proper judicial role); JOHN HART ELY, DEMOCRACY AND DISTRUST: A THEORY OF JUDICIAL REVIEW 18 (1980) (referring to substantive due process as a "contradiction in terms—sort of like 'green pastel redness'").

175. *Glucksberg*, 521 U.S. at 722 (referring to the "subjective elements that are necessarily present in due process judicial review").

176. *Id.* at 720 (quoting Collins v. City of Harker Heights, 503 U.S. 115, 125 (1992)).

177. *Id.* at 721.

"rooted in the . . . conscience of our people"[178] and that constitute "vital principles in our free Republican governments" that "determine the nature and terms of the social compact."[179]

The narrow role reserved to the judiciary in substantive due process review reflects in part the belief that judicial intervention is often unnecessary, as the political process will frequently defeat offensive measures; the intrusion objection can be understood to function as part of that political-process check: laws restricting environmentally significant individual behaviors that trigger intrusion objections will not be enacted, will be repealed, or will be willfully disregarded and unenforced. Of course, the public may reject perfectly constitutional restrictions for a variety of reasons unrelated to concerns about intrusion. For instance, the public might not accept that the environmental problem is real or important, or at least not important enough to warrant a particular government action, or individuals might not wish to be personally subject to the restriction.[180] Thus, public and political tolerance of liberty deprivations to protect the environment does not necessarily have a constitutional dimension and may, in many cases, be indexed to considerations unrelated to intrusion objections.[181] Moreover, although one can imagine, say, a

178. Griswold v. Connecticut, 381 U.S. 479, 487 (1965) (quoting Snyder v. Massachusetts, 291 U.S. 97, 105 (1934)).

179. Calder v. Bull, 3 U.S. (Dall.) 386, 388 (1798) (emphasis omitted).

180. As I have explained, the intrusion objection is nowhere precisely defined. It is most commonly described as an objection grounded in concerns about how government enforcement might infringe civil liberties, most notably privacy. Substantive due process review may be most relevant in terms of illuminating this narrower, privacy-based type of intrusion objection. At times, the intrusion objection is described more broadly as public—or political—resistance to measures designed to restrict environmentally significant individual behaviors. To the extent that this resistance resides in straightforward balancing (in other words, a measure generates opposition because the public is not convinced that its purpose or effect warrants its costs, or simply because members of the public—recognizing the government has the authority to impose the proposed constraints—nonetheless do not wish to be subject to those constraints), substantive due process review will shed little light. To the extent, however, that this resistance is grounded in a sense that government has overreached—exceeded its appropriate bounds with respect to its dictate of individual decisions—or that the perceived intrusiveness of a measure is one of the costs weighed by the public in deciding whether to support that measure, substantive due process review may well provide some insight.

181. It is unclear whether the intrusion objection anticipates that most mandates governing environmentally significant individual behaviors will be rejected on intrusiveness grounds *regardless* of the value placed on the environmental benefit sought to be achieved, or whether the intrusion objection functions simply to *outweigh* environmental benefits, as when individuals conclude that the environmental benefits of a measure do not justify the discomfort of the intrusion required to achieve its benefits. This latter analysis is akin to the balancing undertaken by the Court during the *Lochner* era, which has since been disavowed, whereby the Justices

population-control measure that might offend fundamental rights,[182] the vast majority of measures that might be contemplated as a means of altering environmentally significant behaviors—requiring individuals to reduce the settings of their water heaters or keep their tires properly inflated[183]—do not implicate fundamental rights subject to heightened due process review.[184]

Substantive due process review does, however, perform the same basic function as the intrusion objection: it imposes boundaries on government restrictions of individual liberty.[185] Importantly, both substantive due process review[186] and public or political rejection of a measure on intrusion grounds can forestall government action, even when the action has a legitimate, rational purpose, if the action is deemed to intrude too greatly on individual liberty. Both processes demarcate the proper relationship between government and the individual—in effect, what the government either cannot do or should

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would "only approve laws where they believe[d] that the end of the law, based on their personal values, justifie[d] an intrusion on individual liberty." NOWAK & ROTUNDA, *supra* note 166, § 11.4(e), at 489. In either case, the obstacle that the intrusion objection poses to the use of mandates on environmentally significant individual behaviors depends on when, how, and to what extent mandates trigger the intrusion objection.

182. *See* Planned Parenthood of Se. Pa. v. Casey, 505 U.S. 833, 915 n.3 (1992) (Stevens, J., concurring in part and dissenting in part) ("[A] state interest in population control could not justify a state-imposed limit on family size or, for that matter, state-mandated abortions.").

183. By one estimate, a "one-third increase in proper tire inflation would translate into CO_2 savings of 12 million tons," and a reduction in the temperature of a water heater from 140 or 150 degrees Fahrenheit to 120 degrees Fahrenheit "could produce as much as 1,466 pounds of CO_2 emissions reductions per year." Vandenbergh et al., *Individual Carbon Emissions*, *supra* note 12, at 1746, 1748.

184. Recognized fundamental rights include "the specific freedoms protected by the Bill of Rights" as well as "the rights to marry; to have children; to direct the education and upbringing of one's children; to marital privacy; to use contraception; to bodily integrity; and to abortion." Washington v. Glucksberg, 521 U.S. 702, 720 (1997) (citations omitted).

185. Notably, substantive due process review also employs the terminology of intrusion to characterize government action that oversteps. *See* Lawrence v. Texas, 539 U.S. 558, 578 (2003) (holding that a state statute prohibiting same-sex sodomy violated the Due Process Clause of the Fourteenth Amendment because it "further[ed] no legitimate state interest which c[ould] justify its intrusion into the personal and private life of the individual"); Eisenstadt v. Baird, 405 U.S. 438, 453 (1972) ("If the right of privacy means anything, it is the right of the individual, married or single, to be free from unwarranted governmental intrusion into matters so fundamentally affecting a person as the decision whether to bear or beget a child." (emphasis omitted)).

186. Strict scrutiny is applied to government actions that infringe on fundamental rights. *See* Reno v. Flores, 507 U.S. 292, 302 (1993) (observing that substantive due process "forbids the government to infringe certain 'fundamental' liberty interests at all, no matter what process is provided, unless the infringement is narrowly tailored to serve a compelling state interest" (emphasis omitted)).

not do based on the "nature and terms of the social compact."[187] And in imposing boundaries on government action, both processes locate the boundaries—self-consciously, in the case of substantive due process review; intuitively, in the case of the intrusion objection—in accordance with gestalt notions of "the [appropriate] balance [between the] . . . liberty of the individual . . . and the demands of organized society."[188] So, under substantive due process review, boundaries on government action are adduced by looking to "our Nation's history, legal traditions, and practices"[189] for "enduring themes of our philosophical, legal, and cultural heritages."[190] In the context of the intrusion objection, boundaries are imposed when an environmental mandate gives rise to what the public—whose attitudes are presumably shaped by this same history and tradition—views as "an interference with individual liberty and an invasion of privacy"[191] that is unacceptably intrusive.

Substantive due process analysis is, then, self-consciously grounded in values and tradition, both of which arise from and reflect ingrained societal understandings about when the government has overstepped its bounds.[192] Justice Black's dissent in *Griswold v. Connecticut*[193] went so far as to suggest that polling the public would

187. Calder v. Bull, 3 U.S. (Dall.) 386, 388 (1798) (emphasis omitted).

188. Poe v. Ullman, 367 U.S. 497, 542 (1961) (Harlan, J., dissenting).

189. *Glucksberg*, 521 U.S. at 710.

190. *Id.* at 711.

191. Babcock, *supra* note 4, at 123.

192. This statement is not to suggest that judicial and lay understandings of when government has overstepped are, in fact or in theory, precisely the same. That judicial review is needed at all indicates that the political process will not always weed out unconstitutional deprivations of liberty. But such deprivations might occur even when judicial and lay understandings of government intrusion concur. Liberty-depriving laws may be enacted because of flaws in the political process—such that the political process fails to reflect public liberty values—or may be recognized as liberty-depriving but aimed at minority groups. Indeed, these rationales are frequently referenced to justify judicial review. *See* United States v. Carolene Prods. Co., 304 U.S. 144, 152 n.4 (1938) (recognizing that judicial review has been used to correct flawed political processes). For example, one explanation offered of the privacy cases is that the Court was concerned with desuetude and that the privacy cases signify "a judicial insistence that, if laws cannot be enforced directly—through the criminal law prohibiting certain activities—they cannot be enforced through indirect, sporadic, discriminatory routes that escape the same degree of public accountability." GEOFFREY R. STONE, LOUIS MICHAEL SEIDMAN, CASS R. SUNSTEIN, MARK V. TUSHNET & PAMELA S. KARLAN, CONSTITUTIONAL LAW 842 (6th ed. 2009). So, in other words, a law may be unacceptably intrusive to the public, but because opportunities for public resistance have been limited, court policing of that boundary is necessary.

193. Griswold v. Connecticut, 381 U.S. 479 (1965).

prove a more reliable method of identifying fundamental rights than judicial review, which inevitably hews instead to the "personal and private notions"[194] of judges: "Our Court certainly has no machinery with which to take a Gallup Poll. And the scientific miracles of this age have not yet produced a gadget which the Court can use to determine what traditions are rooted in the '[collective] conscience of our people.'"[195] In a 2010 dissent, Justice Stevens insisted that "[a]ll Americans can [and that] all Americans should" interpret the Fourteenth Amendment and that "courts should be 'guided by what the American people throughout our history have thought'" in identifying fundamental rights.[196] The Court's explanation of the need for substantive due process review in *Meyer v. Nebraska*[197] similarly underscored the connection between judicial and lay attitudes about the appropriate sphere of government conduct. The Court recounted that Plato had endorsed, and Sparta in fact had practiced, the removal of children from the care of their parents to be raised by "official guardians."[198] The Court then capitalized on the presumed repugnance of this practice to explain that

> [a]lthough such measures have been deliberately approved by men of great genius, their ideas touching the relation between individual and State were wholly different from those upon which our institutions rest; and it hardly will be affirmed that any legislature could impose such restrictions upon the people of a State without doing violence to both letter and spirit of the Constitution.[199]

The Court's rhetorical mechanism—providing an example designed to inspire a gut reaction against government overstepping—nicely captures the connection between the public response to laws that constrain liberty and substantive due process review, which purports

194. *Id.* at 519 (Black, J., dissenting) (quoting *id.* at 493 (Goldberg, J., concurring)) (internal quotation mark omitted).

195. *Id.* (alteration in original) (footnote omitted) (quoting *id*. at 493 (Goldberg, J., concurring)). That substantive due process review has long permitted the Court to "actively enforce values which a majority of the Justices felt were essential in our society even though they had no specific textual basis in the Constitution," and thereby effectively to substitute the Justices' judgment for that of the legislature and the public, persists as a chief criticism of substantive due process review. NOWAK & ROTUNDA, *supra* note 166, § 11.7, at 498.

196. McDonald v. City of Chicago, 130 S. Ct. 3020, 3099 n.22 (Stevens, J., dissenting) (quoting *id.* at 3052 (Scalia, J., concurring)).

197. Meyer v. Nebraska, 262 U.S. 390, 402–03 (1923) (striking down a law prohibiting the teaching of languages other than English).

198. *Id.* at 402.

199. *Id.*

to draw heavily upon widely held and accepted understandings of the limits on government restrictions of individual liberty.

Finally, substantive due process review does not identify fundamental rights in a vacuum.[200] It requires that they be carefully described and defined in relation to a challenged government action.[201] That an area is identified as one involving a fundamental right does not preclude, or even subject to heightened scrutiny, any government action touching on that subject; government action must satisfy heightened scrutiny only when a fundamental right has been infringed.[202] Both the contours of the right itself and the judicial review afforded in a particular case are indexed to the nature of the government action.[203] In other words, the Court evaluates not only the subject matter—procreation, children, marriage—but also the specific means of government action—direct and total prohibition or incidental effect—to ascertain the existence of a fundamental right and to determine whether that right has been infringed.[204] Thus, substantive due process review provides guidance about how the manner and method of government action can affect the level of perceived or actual constraint on individual freedom even when, as with respect to environmentally significant individual behaviors, fundamental rights or freedoms are not necessarily implicated.

Public reactions to a proposed law's constraints on liberty, as well as the judicial analysis underlying substantive due process, are thus grounded in murky instincts about the proper "relation between individual and State."[205] Additionally, substantive due process review provides lessons not only about the subject matter and types of liberties worthy of special protection but also about the means of government action that are generally most suspect in terms of infringing on liberties. For these reasons, explanations offered as part

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200. *McDonald*, 130 S. Ct. at 3102 (Stevens, J., dissenting) (explaining that liberty claims are not evaluated "on an abstract plane").

201. Washington v. Glucksberg, 521 U.S. 702, 721 (1997).

202. *See* Planned Parenthood of Se. Pa. v. Casey, 505 U.S. 833, 873–75 (1992) (applying an "undue burden" test and observing that the Court's "jurisprudence relating to all liberties . . . has recognized [that] not every law which makes a right more difficult to exercise is, ipso facto, an infringement of that right").

203. *Id.*

204. NOWAK & ROTUNDA, *supra* note 161, § 11.5, at 490–91 ("[A] determination that a regulated activity comes within the constitutional definition of liberty does not determine the manner in which the Court will review restrictions on that activity. Only significant impairments of fundamental constitutional rights will be subject to strict judicial scrutiny . . . .").

205. Meyer v. Nebraska, 262 U.S. 390, 402 (1923).

of a substantive due process review as to when, how, and why government action has infringed upon "deeply rooted"[206] fundamental rights and liberties—in particular those grounded in privacy interests—can shed light on when, how, and why a law might meet public and political resistance because of a perception that it is unduly intrusive.

A review of a subset of substantive due process cases—those leading to the recognition of a fundamental right to privacy—reveals that the individual behaviors targeted, the policy tool chosen to change those behaviors, and the requirements of enforcement all help define the perceived intrusiveness of government action. Two principles can be gleaned from these cases, both of which help to illuminate the intrusion objection in the context of individual environmental mandates. First, direct mandates on individuals may be understood to impose greater and more troublesome liberty deprivations than laws that constrain the same individual behaviors indirectly through, for example, product mandates. Additionally, government restrictions on individual behaviors may arouse greater resistance when they apply to behaviors that occur in or near the home or that must be enforced in or near the home. These principles, as well as their relevance for purposes of assessing the intrusion objection, are described in the next Sections.

B. Direct Versus Indirect Regulation

The intrusion objection hypothesizes fatal resistance to mandates imposed in the context of environmentally significant individual behaviors. As discussed in Part I, the government already channels, influences, and regulates many of these behaviors through a variety of indirect means.[207] The government regularly alters individual environmental behaviors and reduces or increases the environmental impacts of individual behaviors without imposing mandates directly on individuals. Most notably, product mandates constrain and, in some cases, extinguish individual choice.[208] A variety of subsidies, taxes, and public-information campaigns encourage environmentally friendly behaviors, such as the use of public transportation, or

206. *Glucksberg*, 521 U.S. at 721 (quoting Moore v. City of East Cleveland, 431 U.S. 494, 503 (1977) (plurality opinion)) (internal quotation mark omitted).

207. As discussed in Part I.A, some laws do directly regulate environmentally significant individual behavior, but the primary mode of federal regulation of such behaviors is indirect.

208. For a discussion of product mandates, see *supra* note 45.

discourage environmentally harmful behaviors. Building-code and zoning requirements define the built environment and thereby constrain choices about where and how individuals may live, significantly impacting individual energy consumption.[209] Moreover, as described in Part I, at least some direct regulation of environmentally significant individual behaviors already occurs without inspiring insurmountable intrusion objections, primarily at the local level.[210] Thus, it appears that individual environmental behaviors are not sacrosanct subject matter per se; insurmountable intrusion objections do not arise merely because the government adopts measures designed to change these behaviors. Indeed, the idea that government may appropriately act to control or influence these behaviors indirectly seems to be widely accepted. The intrusion objection appears, then, to be rooted at least in part in the means used by government—the imposition of mandates directly on environmentally significant individual behaviors.

Mandates directly proscribe individual behaviors. To illustrate the difference between direct mandates and policies that indirectly regulate individual behaviors, consider energy-conservation measures. As discussed in Part I, the government employs a variety of strategies to reduce home energy use. It requires that home appliances meet minimum efficiency standards,[211] funds public-information campaigns,[212] maintains energy-efficiency labeling schemes,[213] and subsidizes home weatherization.[214] It does not, however, directly bar individuals from using appliances that do not meet efficiency standards, let alone proscribe even readily detected behavior that wastes energy, such as leaving the porch lights burning all night or opening windows during the winter. One could easily

209. For a description of green building and zoning codes, see *supra* note 46 and accompanying text.

210. For a description of laws that directly regulate environmentally significant individual behaviors, see *supra* Part I.B and accompanying text.

211. 42 U.S.C. §§ 6291–6309 (2006).

212. *See, e.g.*, LOSE YOUR EXCUSE, http://www.loseyourexcuse.gov/index.html (last visited Feb. 14, 2012) (featuring an energy-efficiency educational campaign organized by the U.S. Department of Energy).

213. The Energy Star labeling program was commenced by the EPA pursuant to its authority under section 103(g) of the CAA, 42 U.S.C. § 7403 (2006), and is now administered jointly with the Department of Energy pursuant to section 324A of the Energy Policy and Conservation Act, 42 U.S.C. § 6294a (2006). *See supra* note 39 and accompanying text.

214. 10 C.F.R. §§ 440.1–.30 (2011); *see also* 42 U.S.C. § 6861 (2006) (outlining the congressional findings and purpose of the weatherization-assistance program).

imagine the resistance that would likely greet proposals to ticket individuals for using banned appliances. What then, if anything, is the salient difference between effectively preventing individuals from using inefficient appliances through product mandates and directly barring them from doing so?

The reasoning employed in the early contraception cases that laid the groundwork for recognizing a fundamental right to privacy—the dissents of Justices Douglas and Harlan in *Poe v. Ullman*[215] and the decision in *Griswold*—proves particularly useful for thinking about this issue.[216] These cases formally announced the use of substantive due process to protect privacy interests[217] but, at that early juncture, did not advance a fully formed concept of "substantive" privacy, or privacy that "attaches to the rightholder's own actions" by "immunizing certain conduct—such as using contraceptives, marrying someone of a different color, or aborting a pregnancy—from state proscription or penalty."[218] Instead, while hinting at the substantive concept of privacy to come, these decisions anchored their holdings in "informational" privacy,[219] a view of privacy found in the context of

215. Poe v. Ullman, 367 U.S. 497 (1961).

216. The privacy interests considered in the context of the Fourth Amendment, with respect to the significance of the home, may prove another useful analogue, particularly as the Court confronts challenges to the government's collection of personal data. *See infra* note 244; *see also* United States v. Karo, 468 U.S. 705, 716 (1984) (limiting, on Fourth Amendment grounds, the monitoring of a beeper brought into a home and observing that "[i]ndiscriminate monitoring of property that has been withdrawn from public view would present far too serious a threat to privacy interests in the home to escape entirely some sort of Fourth Amendment oversight"); Whalen v. Roe, 429 U.S. 589, 591 (1977) (considering "whether the State of New York may record, in a centralized computer file, the names and addresses of all persons who have obtained, pursuant to a doctor's prescription, certain drugs for which there is both a lawful and an unlawful market" consistent with the privacy interests protected under the Fourteenth Amendment).

217. Two *Lochner*-era cases, *Meyer v. Nebraska*, 262 U.S. 390 (1923), and *Pierce v. Society of Sisters*, 268 U.S. 510 (1925), can be viewed as the first privacy cases, though they do not use that terminology. *See* Jed Rubenfeld, *The Right of Privacy*, 102 HARV. L. REV. 737, 743 (1989) (identifying these cases as the "true parents of the privacy doctrine").

218. Rubenfeld, *supra* note 217, at 740.

219. *See* John Hart Ely, *The Wages of Crying Wolf: A Comment on* Roe v. Wade, 82 YALE L.J. 920, 929–30 (1973). Professor Ely explains how *Roe* announced a new and more substantive right to privacy. He observes that although *Roe* cited to "aspects of the First, Fourth and Fifth Amendments . . . [that] limit the ways in which, and the circumstances under which, the government can go about gathering information about a person he would rather it did not have," *Roe* "is not a case about government snooping." *Id.*; *see also* Rubenfeld, *supra* note 217, at 749 (explaining the distinction between informational privacy—which has its origins in the Fourth Amendment—and substantive privacy and observing that in informational privacy cases, "the claimant's substantive conduct [is] irrelevant; at issue is the government's manner of discovering the conduct").

the Fourth Amendment, under which privacy is "employed to govern the conduct of other individuals who intrude in various ways upon one's life" by "limit[ing] the ability of others to gain, disseminate, or use information about oneself."[220] Accordingly, these cases, instead of focusing primarily on whether or why the use of contraceptives is conduct that is substantively outside the scope of state regulation, devoted much more attention to analyzing whether and how the means adopted by the government independently infringed upon privacy and liberty.[221] This approach is thus more relevant to considering mandates governing environmentally significant individual behaviors that will rarely touch on the right to privacy or other fundamental rights.

The analysis in these cases supports the view that a significant distinction exists between the perceived liberty deprivations imposed by measures that indirectly influence individual behaviors and those imposed by measures that directly mandate changes in individual behaviors. Even when the results in terms of governmentally induced changes in behaviors are the same, direct mandates on individual behaviors often impose greater, or at least more salient, restrictions on freedom. In his dissent in *Poe*, Justice Douglas explained that if the prohibition on the use of contraceptives challenged in that case had been directed at the sale or manufacture of contraceptives, as

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220. Rubenfeld, *supra* note 217, at 740.

221. *See* Ely, *supra* note 219, at 930 ("[T]he Court in *Griswold* stressed that it was invalidating only that portion of the Connecticut law that proscribed the use, as opposed to the manufacture, sale, or other distribution of contraceptives. That distinction (which would be silly were the right to contraception being constitutionally enshrined) makes sense if the case is rationalized on the ground that the section of the law whose constitutionality was in issue was such that its enforcement would have been virtually impossible without the most outrageous sort of governmental prying into the privacy of the home. And this, indeed, is the theory on which the Court appeared rather explicitly to settle . . . ." (emphasis omitted) (footnote omitted)); *see also* Carey v. Population Servs. Int'l, 431 U.S. 678, 687 (1977) ("*Griswold* did state that by 'forbidding the use of contraceptives rather than regulating their manufacture or sale,' the Connecticut statute there had 'a maximum destructive impact' on privacy rights. This intrusion into 'the sacred precincts of marital bedrooms' made that statute particularly 'repulsive.' But subsequent decisions have made clear that the constitutional protection of individual autonomy in matters of childbearing is not dependent on that element." (emphasis omitted) (citations omitted) (quoting Griswold v. Connecticut, 381 U.S. 479, 485 (1965))). *See generally* Solove, *supra* note 30, at 557, 559 (characterizing the early contraception cases as protecting against "decisional interference," or "governmental interference with people's decisions regarding certain matters of their lives," but adding that "[d]ecisional interference bears a similarity to the harm of intrusion as both involve invasions into realms where we believe people should be free from the incursions of others").

opposed to their use by individuals, it would not have risen to the same level of concern:

> If a State banned completely the sale of contraceptives in drug stores, the case would be quite different. It might seem to some or to all judges an unreasonable restriction. Yet it might not be irrational to conclude that a better way of dispensing those articles is through physicians. The same might be said of a state law banning the manufacture of contraceptives. Health, religious, and moral arguments might be marshalled pro and con. Yet it is not for judges to weigh the evidence. Where either the sale or the manufacture is put under regulation, the strictures are on business and commercial dealings that have had a long history with the police power of the States.
>
> The present law, however, deals not with sale, not with manufacture, but with use. It provides:
>
> "Any person who uses any drug, medicinal article or instrument for the purpose of preventing conception shall be fined not less than fifty dollars or imprisoned not less than sixty days nor more than one year or be both fined and imprisoned."[222]

Justice Douglas also quoted a "noted theologian" who had observed that "[t]he real area where the coercions of law might, and ought to, be applied, at least to control an evil—namely, the contraceptive industry—is quite overlooked."[223]

Similarly, in his dissent Justice Harlan emphasized "the obnoxiously intrusive means [Connecticut] ha[d] chosen to effectuate [its] policy."[224] He suggested that the same result might have been achieved by limiting distribution, but he deemed dispositive the fact that the statute defined use by individuals as a crime:

> [C]onclusive, in my view, is the utter novelty of this enactment. Although the Federal Government and many States have at one time or other had on their books statutes forbidding or regulating the distribution of contraceptives, none, so far as I can find, has made the use of contraceptives a crime.[225]

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222. Poe v. Ullman, 367 U.S. 497, 519 (1961) (Douglas, J., dissenting) (emphasis omitted) (quoting CONN. GEN. STAT. § 53-32 (1958) (repealed 1969)).

223. *Id.* at 521 (quoting JOHN COURTNEY MURRAY, WE HOLD THESE TRUTHS: CATHOLIC REFLECTIONS ON THE AMERICAN PROPOSITION 157 (1960)).

224. *Id.* at 554 (Harlan, J., dissenting).

225. *Id.* (emphasis omitted).

Justice Harlan then explained that the government may adopt a variety of approaches to target the same behavior, identified other ways that the government might have gone about reducing the use of contraceptives, and argued that a direct prohibition on individual use presents a particularly troublesome means of influencing behavior:

> The secular state is not an examiner of consciences: it must operate in the realm of behavior, of overt actions, and where it does so operate, not only the underlying, moral purpose of its operations, but also the choice of means becomes relevant to any Constitutional judgment on what is done. The moral presupposition on which appellants ask us to pass judgment could form the basis of a variety of legal rules and administrative choices, each presenting a different issue for adjudication. For example, one practical expression of the moral view propounded here might be the rule that a marriage in which only contraceptive relations had taken place had never been consummated and could be annulled. Again, the use of contraceptives might be made a ground for divorce, or perhaps tax benefits and subsidies could be provided for large families. Other examples also readily suggest themselves.[226]

In short, Justice Harlan found the Connecticut statute particularly problematic in part because it applied directly to individual behavior. When the Court ultimately struck down Connecticut's birth-control law in *Griswold*, it continued to find the indirect-direct distinction significant, explaining,

> [The] law . . . , in forbidding the use of contraceptives rather than regulating their manufacture or sale, seeks to achieve its goals by means having a maximum destructive impact upon that [marital] relationship. Such a law cannot stand in light of the familiar principle, so often applied by this Court, that "a governmental purpose to control or prevent activities constitutionally subject to state regulation may not be achieved by means which sweep unnecessarily broadly and thereby invade the area of protected freedoms."[227]

This analysis is not meant to suggest that the sole fact that the birth-control laws applied to individual behavior drove the determination that they presented a substantive due process violation. The dissents in *Poe* and the decision in *Griswold* focused as

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226. *Id.* at 547–48 (emphasis omitted) (citation omitted).

227. Griswold v. Connecticut, 381 U.S. 479, 485 (emphasis omitted) (quoting NAACP v. Alabama, 377 U.S. 288, 307 (1964)).

well on the private nature of the decision involved—thus offering an early articulation of a substantive privacy interest—and on method of enforcement: exacerbating the infringement on informational privacy, the prohibition "reache[d] into the intimacies of the marriage relationship" and required entry into the home for its enforcement.[228] But by articulating the direct-indirect distinction and by finding it significant, these cases provide support for an assumption underlying the intrusion objection: namely, that direct regulation of individual behaviors may be expected to give rise to or to create perceptions of government overstepping, even when indirect regulation operates, without objection, to control the same behaviors for the same end.

Justice Douglas suggested two possibilities for why mandates on individual behaviors present special concerns: first, the means necessary to enforce mandates on individuals may independently impose or exacerbate liberty deprivations; and second, individuals, unlike "business and commercial dealings," do not have a "long history with the police power of the States."[229] With respect to the first possibility, the means—a prohibition on use—may create problems by requiring enforcement through "governmental snooping" that includes "intolerably intrusive modes of data-gathering."[230] Such enforcement might even require, as discussed in Section C, encroachment on the most readily recognized sphere of private conduct: the home.[231] Indeed, those aspects of the First, Fourth, and Fifth Amendments that establish the penumbra that shelters privacy rights "all limit the ways in which, and the circumstances under which, the government can go about gathering information about a person he would rather it did not have."[232]

The latter point—distinguishing between businesses and individuals—could be understood as part of the effort to index

228. *Poe*, 367 U.S. at 519 (Douglas, J., dissenting); *see also Griswold*, 381 U.S. at 485 ("Would we allow the police to search the sacred precincts of marital bedrooms for telltale signs of the use of contraceptives?"). Moreover, this analysis should not be read to make a representation about whether, under current doctrine, a prohibition on the sale or manufacture of contraceptives would give rise to a substantive due process violation. Indeed, the undue-burden approach employed in *Carey v. Population Services International*, 431 U.S. 678 (1977), and *Planned Parenthood of Southeastern Pennsylvania v. Casey*, 505 U.S. 833 (1992), indicates that it would.

229. *Poe*, 367 U.S. at 519 (Douglas, J., dissenting).

230. Ely, *supra* note 219, at 930.

231. For a discussion of the objections to using RFID chips to monitor recycling rates and enforce recycling ordinances, see *supra* notes 71–72 and accompanying text.

232. Ely, *supra* note 219, at 929.

substantive due process doctrine to national tradition and custom. Thus, if government control over a particular type of individual behavior is not usual or customary, it is more vulnerable under substantive due process review. Another related explanation is suggested by Professor Lawrence Lessig's observation that "[o]ur constitution was written with direct regulation in mind—not because the framers did not understand indirect regulation, but rather because its significance was not great enough systematically to account."[233] Notably, Professor Lessig goes on to suggest that in light of the ubiquity of indirect regulation, more attention should be given to weighing the constitutionality of indirect regulation.[234]

Additionally, mandates on individual behaviors make more explicit—and hence uncomfortable—the balancing of government interests against personal autonomy. Personal autonomy is often identified as the basis for recognizing a right to privacy and, as Professor Richard Fallon notes, is an "interest[ ] that rights serve in our constitutional culture":

> As beings who are capable of self-direction, we have an interest in being able to make decisions for ourselves and to act on those decisions that is sometimes independent of the interest in having the decision made that will be best for us in the sense of producing the greatest after-the-fact well-being.[235]

With respect to the energy-efficiency product mandate discussed previously in this Section, personal autonomy is arguably constrained in much the same substantive way as it would be by a direct prohibition. Whether the regulation is imposed by constraining consumer choice through a product mandate or by a prohibition on the use of inefficient appliances, both measures effectively restrict individual freedom to use energy-inefficient appliances.[236] In the context of the product mandate, however, the government constraint

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233. Lessig, *supra* note 10, at 688.

234. *Id.*

235. Richard H. Fallon, Jr., *Individual Rights and the Powers of Government*, 27 GA. L. REV. 343, 354 (1993).

236. Although perhaps more palatable because the constraints on choice are hidden, product mandates, norm management, and other forms of indirect regulation that do not allow individuals the opportunity to weigh a law before obeying it arguably impose greater or more troubling constraints on freedom. *See* Posner, *supra* note 164, at 367 (arguing that internalized norms deprive individuals of the opportunity to weigh obedience to the law and thereby limit freedom).

is enforced against the manufacturer and is less apparent to the individual.

The early privacy cases thus articulate and defend a distinction between the direct and indirect regulation of individuals that is relevant in evaluating the extent or nature of the liberty deprivation. Regardless of its explanation, the proposition that direct restraints on individuals can give rise to greater—or at least more uncomfortable—restrictions on freedom than measures that constrain the same behaviors indirectly proves useful for thinking about mandates as a policy tool in the context of the environment.[237] That a host of laws may already indirectly control environmentally significant individual behaviors should not be taken as evidence that a direct mandate on the same behaviors would be accepted. More fundamentally, the early privacy cases suggest that direct regulation may be perceived as more intrusive, and thus may occasion more frequent or more strident intrusion objections, than the more familiar and more common mode of indirect regulation. In short, the early privacy cases suggest that intrusion objections may be a more salient consideration when evaluating direct, as opposed to indirect, mandates on environmentally significant individual behaviors.

C. The Significance of Home

One of the explanations offered in the early privacy cases as to why direct mandates on individual behaviors present special concerns is that their enforcement can be intrusive, particularly when the regulated behaviors occur in the home.[238] And the home has long

237. It perhaps confirms the obvious to state that a prohibition is more intrusive than discouragement or encouragement, both of which preserve some element of choice. *See generally* Sunstein, *Social Norms*, *supra* note 27, at 952 (identifying tools available to the government to change norms and observing that "[t]he most intrusive kind of government action is of course straightforward coercion," such as seatbelt laws (emphasis omitted)). The distinction between direct and indirect government action does, however, shed light on the less readily explained difference in reactions to direct mandates on behavior and indirect product mandates that impose the same substantive constraints on choice.

238. Poe v. Ullman, 367 U.S. 497, 519 (1961) (Douglas, J., dissenting); *see also* Ely, *supra* note 219, at 930 (arguing that the distinction in *Griswold* between the regulation of use on the one hand and the regulation of the manufacture, sale, or distribution on the other was indexed to the required means of enforcement, which in the former case "would have been virtually impossible without the most outrageous sort of governmental prying into the privacy of the home" (emphasis omitted)).

been afforded special status in a variety of legal contexts.[239] Similarly, one of the chief explanations for the intrusion objection is that environmentally significant individual behaviors "usually occur at home or in the immediately surrounding area" and that efforts to detect or enforce against those behaviors will necessarily intrude into the home, thereby triggering privacy and liberty objections.[240]

Discussions of the significance of the home in substantive due process cases suggest both a thin and a thick account of how the home affects the apparent or actual intrusiveness of government conduct. Under a thin account, grounded in traditional, Fourth Amendment-derived concepts of informational privacy, the physical space within and around the home is uniquely private and requires special protection from government snooping. Any regulation that requires for its enforcement real or potential government investigation into the home thus poses heightened concerns. Under a thick account, grounded in substantive conceptions of privacy, the fact that conduct occurs at least mostly in the home—"life which characteristically has its place in the home"[241]—signals that the conduct itself may warrant heightened privacy protection. Even absent any government entry into the home, government interference with the details of certain spheres of private or home-centered behaviors may thus give rise to valid claims of government overreaching. In his opinion for the Court in *Lawrence v. Texas*,[242] Justice Kennedy drew a similar distinction:

> Liberty protects the person from unwarranted government intrusions into a dwelling or other private places. In our tradition the State is not omnipresent in the home. And there are other spheres of our lives and existence, outside the home, where the State should not be a dominant presence. Freedom extends beyond spatial bounds. Liberty presumes an autonomy of self that includes freedom of thought, belief, expression, and certain intimate conduct. The instant case involves liberty of the person both in its spatial and in its more transcendent dimensions.[243]

239. McDonald v. City of Chicago, 130 S. Ct. 3020, 3105 (2010) (Stevens, J., dissenting) (listing cases and observing that "our law has long recognized that the home provides a kind of special sanctuary in modern life").

240. Babcock, *supra* note 4, at 123.

241. *Poe*, 367 U.S. at 551 (Harlan, J., dissenting).

242. Lawrence v. Texas, 539 U.S. 558 (2003).

243. *Id.* at 562.

First, as to the thin account of the significance of the home, substantive due process cases recognize the home as a private space warranting special protection from government invasion.[244] The home is considered "the most private of places,"[245] and laws that would require "police invasion"[246] of the home for their enforcement are deemed particularly suspect.[247] Although even private behavior that occurs within the home can sometimes be regulated, the cases make clear that "public behavior" is more amenable to regulation than "that which is purely consensual or solitary."[248] Even in the absence of actual enforcement, the prospect of possible enforcement in the home can be used to illustrate a law's offensiveness. As explained by Justice Douglas, discussing a ban on the use of contraceptives that had not been enforced against individuals, "If we imagine a regime of full enforcement of the law . . . , we would reach the point where search warrants issued and officers appeared in bedrooms to find out what went on. . . . If [the State] can make this law, it can enforce it."[249]

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244. The concept of the sanctity of the home generally is not limited to or even rooted in substantive due process. *See, e.g.*, D. Benjamin Barros, *Home as Legal Concept*, 46 SANTA CLARA L. REV. 255, 259–76 (2006) (reviewing treatment of the home in a variety of legal contexts, including in the context of the Fourth Amendment and the protection of privacy interests). Express constitutional provisions—most notably the Fourth Amendment—and a number of related doctrines similarly afford the home special protection. *See* U.S. CONST. amend. III ("No Soldier shall, in time of peace be quartered in any house, without the consent of the Owner, nor in time of war, but in a manner to be prescribed by law."); U.S. CONST. amend. IV ("The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized."); *see also* Stanley v. Georgia, 394 U.S. 557, 564 (1969) (invalidating a law barring possession of obscene materials and observing that in the "privacy of a person's own home—[the First Amendment] right takes on an added dimension"). For a discussion of how the concept of the sanctity of the home has influenced understandings of the scope of Fourth Amendment protections, see Margaret Jane Radin, *Property and Personhood*, 34 STAN. L. REV. 957, 996–1002 (1982). From a property perspective, Professor Margaret Radin explains that the home is property that can be understood as "personal," or important for personhood, and therefore "worthier of protection" than other types of property. *Id.* at 987.

245. *Lawrence*, 539 U.S. at 567.

246. *Poe*, 367 U.S. at 521 (Douglas, J., dissenting) (quoting MURRAY, *supra* note 223, at 158).

247. *See id.* at 547–48 (Harlan, J., dissenting) ("This enactment involves what, by common understanding throughout the English-speaking world, must be granted to be a most fundamental aspect of 'liberty,' the privacy of the home in its most basic sense . . . .").

248. *Id.* at 546 (emphasizing the sanctity of the home but identifying exceptions, including the government's regulation of marriage and adultery).

249. *Id.* at 520–21 (Douglas, J., dissenting) (emphasis added); *see also id.* at 554 (Harlan, J., dissenting) ("To me the very circumstance that Connecticut has not chosen to press the

If this thin account indeed defines the significance of the home for purposes of assessing the intrusiveness of government conduct, then it has important implications. It suggests the possibility that when environmentally significant behaviors—even those that occur within the home—can be regulated, detected, and enforced against without encroaching upon the home, regulation may avoid or dampen intrusion objections. As noted, a number of environmentally significant behaviors are either external to the home or have an external aspect.[250] A thin account of the significance of the home suggests that these behaviors may be amenable to regulation without triggering intrusion objections.

If, however, the home has a more substantive, thicker significance that affords special status to conduct that occurs within the home, the conclusions with respect to the intrusion objection may be quite different. That conduct occurs primarily in a physical space within and around the home is sometimes offered as a justification for why the conduct itself falls within the scope of substantive privacy protections. In his dissent in *Poe*, Justice Harlan explained that what was relevant to him was not whether there had been an "intrusion into the home," but whether there had been an intrusion "on the life which characteristically has its place in the home," because "if the physical curtilage of the home is protected, it is surely as a result of solicitude to protect the privacies of the life within."[251]

Similarly, in *Stanley v. Georgia*,[252] a decision that struck down a law prohibiting the possession of obscene materials, the Court reasoned that First Amendment rights are strengthened by due process privacy considerations when the regulated conduct occurs in the home. The Court referenced a "fundamental . . . right to be free, except in very limited circumstances, from unwanted governmental

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enforcement of this statute against individual users, while it nevertheless persists in asserting its right to do so at any time—in effect a right to hold this statute as an imminent threat to the privacy of the households of the State—conduces to the inference either that it does not consider the policy of the statute a very important one, or that it does not regard the means it has chosen for its effectuation as appropriate or necessary."). A study that asked people to rank the intrusiveness of government searches similarly revealed that searches of the home are viewed as more intrusive than many other types of searches. Slobogin & Schumacher, *supra* note 21, at 738.

250. For example, commuter and household-waste-disposal choices are two environmentally significant behaviors with external aspects. *See supra* notes 37–42 and accompanying text.

251. *Poe*, 367 U.S. at 551 (Harlan, J., dissenting).

252. Stanley v. Georgia, 394 U.S. 557 (1969).

intrusions into one's privacy";[253] posited that the protected sphere of individual privacy includes, most importantly, individual "beliefs, . . . thoughts, . . . emotions and . . . sensations";[254] observed that "[o]ur whole constitutional heritage rebels at the thought of giving government the power to control men's minds";[255] and set forth the home as a space particularly important to the flourishing of private thoughts.[256]

Professor Margaret Radin offers another thick conception of the significance of the home from a property perspective. With respect to "reason[s] the government should not prescribe what one may do in one's home," she recognizes the familiar need to protect liberty by protecting a "realm shut off from the interference of others," but she also adds the idea that the home is important for personhood because it is where "one embodies or constitutes oneself."[257] The location of conduct in the home thus supports identification of the conduct itself as private and as outside the scope of government intervention.[258]

To illustrate the significance of this thicker notion of the significance of the home, consider the following example. Recall the San Francisco ordinance described in Part I that mandates the composting of degradable trash and that is enforced by random checks of household waste for degradable material.[259] Under a thin conception of the significance of the home, indexed to informational privacy and the Fourth Amendment, there should be limited room for

253. Stanley v. Georgia, 394 U.S. 557, 564 (1969).

254. *Id.* (quoting Olmstead v. United States, 277 U.S. 438, 478 (1928) (Brandeis, J., dissenting), *overruled on other grounds by* Katz v. United States, 389 U.S. 347 (1967), *and* Berger v. New York, 388 U.S. 41 (1967)).

255. *Id.* at 565.

256. *Id.* at 566. The Court went on to reference a person's "right to satisfy . . . intellectual and emotional needs in the privacy of his own home" and to endorse the proposition "that a State has no business telling a man, sitting alone in his own house, what books he may read or what films he may watch." *Id.* at 565.

257. Radin, *supra* note 244, at 992.

258. So, for example, if autonomy is viewed as the principle underlying the right to privacy, then perhaps the fact that conduct occurs in the privacy of the home makes it more likely to be important to personhood. If antitotalitarianism is identified as the principle underlying the right to privacy, then perhaps the fact that conduct occurs in the privacy of the home creates a greater imperative to protect that conduct from government intervention to avoid "mind control."

259. S.F., CAL., ENVIR. CODE § 1908 (2011) (authorizing fines of up to $100 for households that fail to properly sort their recyclables and compostables and authorizing inspection of trash receptacles).

individuals to complain.[260] Under a thicker conception of the home, the same regulation may provide ground for objection and may require special justification, not necessarily or solely because of the method or means of government "snooping," but on a more substantive level—discomfort about government regulation of the details of individuals' food choices and preparation.

In short, even when the government is able to enforce mandates directed at small, day-to-day behaviors that occur within the home via some information external to the home, those mandates may encounter privacy and liberty objections, although not of a constitutional nature. Whether the constitutionally recognized privacy interest is grounded in personal autonomy or antitotalitarianism, one can easily see the source of the objections. The imperative to conform small, mundane home-life decisions and behaviors—do I throw the carrot peels in the trash or a compost bin?—to government regulations raises the specter of weighing down one's home life with worries about legal compliance. These worries are particularly problematic when the law is viewed as infringing upon personal autonomy,[261] either by preventing the home from providing a space for unfettered thinking, reflection, and the development of personhood or by threatening a kind of totalitarian standardization and "mind control."[262]

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260. California v. Greenwood, 486 U.S. 35, 35 (1988) (allowing warrantless searches of garbage).

261. Indeed, one of the critiques of grounding the constitutionally protected right to privacy in personal autonomy is the lack of a limiting principle because even the smallest decisions help define personhood. *See* Rubenfeld, *supra* note 217, at 754–55 ("The personhood thesis is this: where our identity or self-definition is at stake, there the state may not interfere. . . . Where is our self-definition not at stake? Virtually every action a person takes could arguably be said to be an element of his self-definition." (emphasis omitted)).

262. Stanley v. Georgia, 394 U.S. 557, 565 (1969). In arguing that the right to privacy is best grounded in antitotalitarian rationales, Professor Jed Rubenfeld posits that, properly understood, the right to privacy prevents the state from dictating conduct that has significant, ongoing affirmative consequences for individuals—bearing a child, for example. Rubenfeld, *supra* note 217, at 784. Small day-to-day behaviors would not warrant constitutional protection from government interference under this standard. *Id.* But Professor Rubenfeld's description of the antitotalitarian rationale suggests that the concerns potentially raised by government control over such mundane day-to-day behaviors, if not cognizable as a constitutional matter, may well inform public reaction:

> The danger, then, is a particular kind of creeping totalitarianism, an unarmed occupation of individuals' lives. That is the danger of which Foucault as well as the right to privacy is warning us: a society standardized and normalized, in which lives are too substantially or too rigidly directed. That is the threat posed by state power in our century.

This thicker account of the significance of the home raises the possibility that direct government involvement in a certain sphere of day-to-day behavior understood as private will therefore be subject to intrusion objections even if the government is able to detect and enforce against these behaviors in ways that are external to the home and its environs. As the Court cautioned in *Washington v. Glucksberg*,[263] "That many of the rights and liberties protected by the Due Process Clause sound in personal autonomy does not warrant the sweeping conclusion that any and all important, intimate, and personal decisions are so protected."[264] But, of course, for present purposes, the question is not whether an activity falls within the scope of constitutional protection, but rather whether its regulation is interpreted as government overreaching and, thus, as intrusion. Substantive due process cases do not merely reveal that a certain class of particularly important personal decisions is protected from government interference. They also reflect the view—also expressed in the context of the Fourth Amendment—that a sphere of freedom from government interference within the home is an important and recognized element of individual liberty and privacy. Individual behaviors within the home—even unimportant, day-to-day actions—may fall within a sphere in which government interference is not welcome. Accordingly, policymakers should be cautious about presuming that simply identifying an external way to detect and enforce against environmentally significant individual behaviors will entirely deflect intrusion objections.

III. DISCERNING PRINCIPLES

The analysis in Parts I and II suggests a few principles for clarifying the significance of the intrusion objection with respect to mandates and considering possibilities for successfully designing and applying mandates governing environmentally significant individual behaviors. Existing regulations demonstrate that indirect regulation is the predominant mechanism through which the government seeks to influence environmentally significant individual behaviors. The reasoning employed in the early privacy cases similarly suggests that

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Id. See generally Fallon, *supra* note 235, at 355 (identifying "'systemic' interests in avoiding abuse of government power or the collection of excessive power in the hands of government" as one of four primary interests underlying constitutional rights).

263. Washington v. Glucksberg, 521 U.S. 702 (1997).

264. *Id.* at 727.

with respect to controlling individual behaviors, direct regulation of behaviors may be perceived as, or may in fact occasion, a greater liberty concern than indirect regulation of the same behaviors. Direct regulation of individuals may present liberty concerns because the means used to enforce the regulation may invade privacy. These concerns are likely to be particularly pronounced when the activity being regulated occurs primarily in the home or when government enforcement necessarily crosses the boundaries of the home. These observations confirm a core precept underlying the intrusion objection: namely, that even when indirect and direct regulation seek to change the same behaviors, direct controls on environmentally significant individual behaviors may, because of their means of enforcement, be particularly vulnerable to claims of government intrusion, particularly when the behaviors in question are household behaviors.

This analysis also, however, suggests that the obstacle that the intrusion objection poses to the use of mandates on environmentally significant individual behaviors is both narrower and broader than presently understood. A review of existing regulations reveals a broad spectrum of grounds for public opposition to direct controls on environmentally significant individual behaviors: unfairness in allocating the burdens of environmental protection; interference with property rights; or straightforward balancing, which reveals that the measure is too inconvenient or costly to justify the desired result. This review provides evidence of a more general phenomenon: namely, that direct regulation of environmentally significant individual behaviors is more likely than indirect regulation to spur public objection because it makes the costs borne by individuals clearer to those individuals. Viewed in this way, intrusion—either in its narrower sense grounded in privacy concerns, or understood more loosely as government overreaching—can be understood as simply one cost of regulation.

Direct regulation may often render the costs imposed on individuals more transparent than many methods of indirect regulation. For example, indirect measures to reduce car use, such as zoning limitations on parking, higher gas prices, or commuter lanes, may cause an individual to submit to the inconvenience of carpooling. The individual may not, however, connect this inconvenience cost to the government measures that are indirectly causing the individual to bear it. But a direct mandate requiring the individual to carpool would impose clear convenience costs. Similarly, a product mandate

requiring, for example, that paper towels contain *X* percent recycled paper may effectively extinguish consumer choice—a cost imposed on individuals—by rendering certain goods unavailable. Yet unless the mandate attracts unusual public debate and attention, as was the case with product mandates applicable to incandescent light bulbs, individuals might never be aware that their choice has been so limited. A direct ban on the use of paper towels containing less than *X* percent recycled paper, however, would make the limitation on individual choice, and hence the cost imposed on individuals, clear. And indirect regulation aimed at upstream producers and manufacturers—such as effluent limits applied to factories or restrictions on pesticides used to grow cotton—in an attempt to reduce the environmental impacts occasioned when an individual purchases a shirt, for example, likely raises the cost to the individual, but the individual may well be unaware of how environmental regulation is driving that additional cost.

Direct regulation thus invites greater public objection by not, in the manner of some common methods of indirect regulation, obscuring the tradeoffs and costs imposed on individuals. Notably, when the costs imposed on individuals are clear, even indirect regulation of individuals can encounter insurmountable political resistance, as sometimes occurs with taxes or as occurred with the well-publicized product mandates dictating changes in the incandescent light bulb. Thus, the intrusion objection might be viewed more broadly as a recognition that direct regulation of environmentally significant individual behaviors may be expected to spur more pronounced public opposition simply because it invites the public to evaluate the propriety of government action by balancing the benefits of that action against the unobscured costs to individuals, including the intrusion cost of the action.[265]

The intrusion objection also appears to present a narrower, or less complete, obstacle to the use of mandates than presently understood. A survey of existing regulations suggests that the vulnerability of direct mandates to public opposition on the intrusion ground should not be viewed as a fatal Achilles' heel of mandates as a policy tool. A review of existing regulation reveals that direct regulation of environmentally significant individual behaviors is not an area per se off-limits to government. Direct regulation of

265. It is fair to emphasize the particular salience of intrusion objections in contexts in which the behavior regulated occurs within, or enforcement requires access to, the home.

environmentally significant individual behaviors, although less common than indirect regulation, occurs daily in a variety of forms in different communities, from recycling laws to burn limitations to vehicle inspections. Moreover, my analysis suggests strategies for designing and applying mandates to minimize or overcome public objections. Mandates are more likely to succeed when they do not impose disproportionate burdens on a select few, when they do not unduly transgress the home, when they are designed to minimize inconvenience and other costs to the public, and when they are effectively "sold" to the public through communication and demonstration of the measure's benefits.[266] Finally, the American experience with mandates governing environmentally significant individual behaviors suggests that objections may soften over time. Ideas and programs initially greeted with deep skepticism, such as the vehicle I/M program, may ultimately become routine.

My analysis also suggests a few points about the narrower, privacy-based intrusion objection. First, all modes of regulation—both direct and indirect—are susceptible to this privacy-based intrusion objection. Even smart meters, which indirectly regulate individuals by collecting information to educate them about their energy use, to encourage voluntary conservation, and to support peak pricing, can trigger privacy concerns. Second, although the intrusion objection is deemed particularly important with respect to direct regulation of environmentally significant individual behaviors because of the assumption that those behaviors must be detected using methods likely to trigger intrusion objections—such as monitoring within the home—experience to date suggests that this problem is not as pervasive as perhaps assumed. Many behaviors are regulated without triggering insurmountable intrusion objections, and even some approaches that do occasion concerns about informational privacy, such as RFID tracking of garbage, are ultimately accepted in some communities.[267] In other words, some environmentally significant behaviors can be directly regulated without using the privacy-invading means hypothesized in the literature and in the early privacy cases.

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266. For an argument that local development and enforcement of mandates may facilitate their implementation, see Kuh, *supra* note 12, at 165–96.

267. Ultimately, the question will revert to one of balancing: Do the measure's benefits outweigh its costs—including any privacy costs imposed to detect behavior and enforce the measure? This question is salient even in the context of the Fourth Amendment, an area in which the permissibility of intrusion is also ascertained by balancing.

Avoiding public opposition to the environmental regulation of individuals, whether direct or indirect, may be particularly difficult for a variety of reasons. The benefits of regulation may, for example, accrue to future generations or may not be immediate, tangible, or obvious.[268] Some strategies that could increase the chances that a measure will pass public balancing might include (1) maximizing the benefits achieved by a measure and effectively educating the public about those benefits, (2) obscuring the costs imposed on the public, or (3) minimizing the costs imposed on the public. Intrusion—whether viewed in terms of invading privacy or in terms of government overreaching more generally—is simply a cost that regulation imposes on individuals. Direct mandates on environmentally significant behaviors may sometimes impose intrusion costs that indirect methods of regulation do not and may also render more transparent the costs—intrusion and others—being imposed on individuals. But indirect methods of regulating individuals can also impose intrusion costs and visible costs, and such methods are likewise sometimes politically unacceptable. And any measure, whether its regulation of environmentally significant individual behaviors is direct or indirect, may be vulnerable to opposition if its costs cannot be justified by its benefits.

The intrusion objection is thus perhaps better viewed simply as a commonsense, shorthand statement of this accounting. Direct mandates on environmentally significant individual behaviors may be a less promising policy tool because they can, in some cases, impose an intrusion cost that indirect regulation of the same behaviors might not impose, or because they might make the myriad costs of regulation more visible to individuals in ways that make it harder for those measures to muster support. To the extent that direct mandates are costlier to administer and enforce, that reality would also affect this accounting. Importantly, restated in this way, the intrusion objection emerges as a rough guide for assessing when mandates can successfully be applied to environmentally significant individual behaviors, as opposed to an explanation for why mandates are not generally suitable for that purpose.

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268. *See* Biber, *supra* note 108, at 1317–28 (explaining the difficulty of maintaining political support for regulation when there is a delay between human activity and the environmental harms imposed by that activity because individuals tend to have high discount rates and experience the endowment effect, especially when such regulation constrains longstanding activities).

So what would a mandate on such behaviors that respects these principles and that has a greater potential to survive public balancing look like? Imagine a local ordinance prohibiting energy waste. The ordinance might include a catchall prohibition on energy waste and could provide a list of examples of prohibited conduct, all externally detectible. The list might include excessive idling, driving with tires that are not property inflated, failing to change a vehicle's air filter at recommended intervals, leaving porch lights burning during daytime hours, using incandescent bulbs for outdoor lighting, failing to sort recyclables, and other energy-wasting behaviors that offer the possibility for detection outside the home.[269] The ordinance might also include a disclaimer that it does not authorize in-home inspections. Individuals cited for a violation of the ordinance would be ticketed and would have the option of either paying a fine, submitting a receipt showing the purchase of an approved energy-saving device of equivalent value, or submitting a signed certification that the individual had implemented an approved energy-saving measure at home.[270] The benefits of the ordinance—the projected energy savings from changes in these types of behaviors, as well as the most locally salient rationale in favor of conserving energy, whether it be thrift, national security, or avoidance of environmental harms—should be clearly stated upon its enactment, reiterated in the literature accompanying tickets, and incorporated into any associated public-information campaign.[271]

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269. Many of these examples are taken from Michael Vandenbergh's article, *Individual Carbon Emissions: The Low-Hanging Fruit*, *supra* note 12, which identifies ways individuals and households can reduce energy consumption, *id.* at 1718–19.

270. Some work suggests that fines may actually increase undesirable behavior, perhaps by communicating that individuals may engage in a behavior as long as they pay a "price," displacing altruistic or intrinsic motivations. *See* Bruno S. Frey & Reto Jegen, *Motivation Crowding Theory*, 15 J. ECON. SURVS. 589, 602–03 (2001) (reviewing empirical data demonstrating the crowding theory, including data showing that the initiation of fines for late pickups at a daycare center increased instances of lateness); Uri Gneezy & Aldo Rustichini, *A Fine Is a Price*, 29 J. LEGAL STUD. 1, 14 (2000). For present purposes, I leave open the possibility that the structure of fines could escalate to better approximate a penalty, as opposed to a price, or that a mandate coupled with a public-education campaign could mitigate this problem if necessary. Vandenbergh et al., *supra* note 13, at 755 ("Studies suggest a synergistic effect when incentives or fines are paired with a public education campaign to reinforce the moral case for engaging in a behavior." (citing LURA CONSULTING, THE CARROT, THE STICK, AND THE COMBO: A RECIPE FOR REDUCING VEHICLE IDLING IN CANADIAN COMMUNITIES 6–7 (2005))).

271. Communication about the ordinance should take guidance from social-science literature, which provides insights about how best to communicate information to support behavioral change. *See* Vandenbergh et al., *supra* note 13, at 741–66 (using behavioral research

Structuring the ordinance in this manner would avoid some of the attributes of direct mandates that are likely to engender significant public opposition. The imagined ordinance is a local ordinance. As I have argued elsewhere, local information may prove helpful in designing and enforcing mandates that will avoid undue objection.[272] Thus, the examples of prohibited conduct should be decided on a community-by-community basis, and communities should adopt community-appropriate exemptions. Although the ordinance would unquestionably prohibit energy-wasting conduct that occurs in the home, such as the use of standby power, the express prohibition on home entry for enforcement, combined with the fact that specific examples of prohibited conduct are limited to those that are externally visible, may help to defuse intrusion objections. Yet the ordinance has the potential to reach in-home conduct by allowing individuals to satisfy ticket penalties by modifying their in-home behaviors. Clear communication of the benefits of the ordinance, in addition to local tailoring to avoid forcing changes that might prove highly inconvenient or costly in a given community, could help blunt balancing opposition. Explanations of the benefits of the ordinance should also hew to local attitudes and values. And the evenhanded and wide application of the ordinance should avoid fairness objections.

This account should not be taken to suggest that this type of mandate would prove acceptable in all communities. But it does seem likely to avoid some common objections to direct mandates and perhaps, therefore, to expand the number of communities in which it could prove successful.

CONCLUSION

The conclusion of this Article is modest. The intrusion objection, frequently held up as a key reason that mandates cannot be relied upon to change environmentally significant individual behaviors, does not in fact pose an insurmountable obstacle. Indeed, mandates on

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to provide a framework that accounts for both rational and extrarational responses when attempting to change behavior).

272. *See* Kuh, *supra* note 12, at 165–96. Professor Jason Czarnezki similarly emphasizes the importance of local tailoring for influencing individual behaviors and recommends that policymakers "[e]valuate what level of government or private action, if any, is best suited to change specific individual behaviors, recognizing that often much more can be done at the local and community level." CZARNEZKI, *supra* note 3, at 3.

environmentally significant behaviors may be more feasible than the present literature suggests.

The intrusion objection does, however, capture two challenges to the use of mandates. First, to the extent that the enforcement of direct mandates more frequently requires the collection of information about individuals, mandates may more frequently occasion informational-privacy objections than may indirect regulation. As noted, however, it appears that many opportunities exist to impose mandates without collecting this type of information, and this objection might thus be overcome. Second, direct regulation, unlike some forms of indirect regulation, will often make clear to individuals the costs—including inconvenience, economic costs, and limitations on choice—that the government is requiring them to incur in the name of environmental protection. Again, the obstacle posed by this transparency of costs is not insurmountable. Moreover, from a normative perspective, the correct response to the problem would hardly seem to be that of shunting controls on individuals into forms of indirect regulation that obscure the costs to individuals precisely to *avoid* democratic debate. Instead, a combination of strategies—local tailoring, use of social-science research, communication of the benefits and rationales for environmental-protection laws, and recognition that time can soften public objection—can be employed to speak directly to public questions about balancing.