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Money That Costs Too Much: Regulating Financial Incentives

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MONEY THAT COSTS TOO MUCH: REGULATING FINANCIAL INCENTIVES

KRISTEN UNDERHILL*

Money may not corrupt. But should we worry if it corrodes? Legal scholars in a range of fields have expressed concern about “motivational crowding-out,” a process by which offering financial rewards for good behavior may undermine laudable social motivations, like professionalism or civic duty. Disquiet about the motivational impacts of incentives has now extended to health law, employment law, tax, torts, contracts, criminal law, property, and beyond. In some cases, the fear of crowding-out has inspired concrete opposition to innovative policies that marshal incentives to change individual behavior. But to date, our fears about crowding-out have been unfocused and amorphous; our field lacks the language we need to speak precisely about these behavioral phenomena, and we have not examined when and why motivational crowding-out should prompt us to discontinue or temper incentive-based schemes. Without a clear and nuanced picture of the processes, harms, and benefits of crowding-out, we may well be missing the mark.

This Article canvasses the range of legal areas where crowding-out concerns arise, and it newly illuminates the specific harms that may be attributable to crowding-out effects. These hazards include reduced autonomy in the presence of incentives, a distinct set of behavioral inefficiencies, and the potential degradation of individual or social values. But this Article also challenges the view of crowding-out as uniformly harmful, offering an alternative vision of potential crowding-out benefits, such as crowding out invidious motivations, increasing the predictability of agent activity, and bolstering the efficiency of future incentives. These benefits suggest that the precautionary principle, which would counsel against using incentives where crowding-out is possible—is inappropriate for this field.

The Article also proposes a novel taxonomy to help guide regulatory responses to incentives that cause crowding-out. Different categories of incentives present different justifications for regulatory intervention and redesign, including autonomy concerns, efficiency concerns, and negative externalities imposed on third parties. By organizing incentives based on the relationship between the principal and agent, we can identify opportunities for regulators and incentive architects to redesign or limit incentive programs, to leave incentives in place, or to consider discontinuing incentive-based policies when money indeed “costs too much” in motivation.

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INTRODUCTION.....	1111
I. CROWDING-OUT CONCERNS IN LAW AND POLICY DESIGN.....	1114
A. MOTIVATIONAL CROWDING-OUT DEFINED.....	1115
B. JUDICIAL DECISIONS.....	1115
C. LEGISLATION AND REGULATION.....	1117
D. LEGAL SCHOLARSHIP.....	1118
1. HEALTH LAW AND POLICY.....	1118
2. ENVIRONMENTAL LAW.....	1120
3. EMPLOYMENT LAW AND EXECUTIVE COMPENSATION.....	1121
4. TORTS.....	1123
5. CONTRACTS.....	1124
6. CHARITABLE ACTIVITY AND PUBLIC GOODS.....	1125
7. TAX LAW.....	1125
8. INTELLECTUAL PROPERTY AND INNOVATION.....	1126
9. CRIMINAL LAW.....	1127
10. EDUCATION.....	1128
11. PROPERTY LAW, TRUSTS, AND ESTATES.....	1128
12. OTHER INCENTIVES IN U.S. LAW AND POLICY.....	1129
II. HAZARDS OF MOTIVATIONAL CROWDING-OUT.....	1129
A. BEHAVIORAL IMPACTS.....	1130
1. TEMPORARILY REDUCED ENGAGEMENT AND PLAYING HARD-TO-GET.....	1130
2. SUSTAINABILITY AND FUTURE ENGAGEMENT.....	1131
3. REDUCED QUALITY OF PERFORMANCE: CHOKING, DISTRACTION, PERFORMANCE ORIENTATION, AND GAMING....	1134
4. AGENT SELECTION EFFECTS.....	1137
5. INEFFICIENT COMPETITION AMONG PRINCIPALS AND AGENTS.....	1138
6. SPILLOVERS AND HORIZONTAL CREEP.....	1139
B. AUTONOMY IMPACTS.....	1140
1. UNDUE INDUCEMENT, COERCION, AND “DISABLING CHOICE”.....	1141
2. INTRUSIVENESS.....	1143
C. ATTITUDINAL AND MORAL IMPACTS.....	1143
1. SOCIETAL VALUES.....	1143
2. INDIVIDUAL VALUES AND SELF-RESPECT.....	1144
III. POTENTIAL BENEFITS OF CROWDING-OUT.....	1145
A. MOTIVATION CONSERVATION.....	1145
B. DISPLACEMENT OF INVIDIOUS MOTIVATIONS.....	1146
C. PREDICTABILITY.....	1147
D. INCREASED PRINCIPAL CONFIDENCE AND INVESTMENT IN AGENTS...	1147
E. MARGINAL BENEFITS OF INCENTIVES.....	1148
F. EFFICACY OF FUTURE INCENTIVES.....	1148
G. THE INFORMATIONAL VALUE OF INCENTIVE FAILURES.....	1148
IV. INCENTIVE ARCHITECTURE AND A FRAMEWORK FOR INTERVENTION.....	1149
A. INCENTIVE ARCHITECTURE FAILURES.....	1150

B. AGAINST THE PRECAUTIONARY PRINCIPLE IN REGULATING INCENTIVE SCHEMES	1152
C. WHEN TO INTERVENE: A CLASSIFICATION OF INCENTIVE SCHEMES ..	1153
1. GOVERNMENTAL PRINCIPALS	1154
2. PRIVATE PRINCIPALS.....	1155
3. AGENTS AS PRINCIPALS	1159
D. REGULATING INCENTIVE-BASED POLICIES.....	1161
CONCLUSION.....	1161

INTRODUCTION

Motivations matter in the law. To cite a few examples, motivations have long been crucial elements of tests in employment law, criminal law, legislative interpretation, disparate treatment law, and other areas. Now, in a theme cutting across disciplines, many legal scholars have expressed concern about “intrinsic” and “extrinsic” motivations, their relative balance, and the potential for extrinsic carrots and sticks to disrupt laudable values.¹ Echoing empirical research in psychology and economics, this thread of scholarship most frequently uses the term “motivational crowding-out” to describe a central problem: when an individual encounters an extrinsic incentive (e.g., a payment or fine) to encourage good behavior, the incentive may displace or erode her *intrinsic* motivation for good choices.² This hidden “cost of price”³ can cause incentives to be inefficient or even backfire entirely—indeed, under these conditions, money may “cost too much.”⁴ The law relies heavily on incentives; to take just a few examples, we depend on financial motivations in workplace wellness programs, incentives for recycling or public transit use, rewards or fines to motivate voting, and even entire common-law systems such as tort liability for negligent behavior. If money corrodes motivations such as self-care, environmental morale, civic duty, professionalism, or altruism, scholars are right to question whether such programs have reckoned sufficiently with their motivational impacts.

1. See, e.g., David Freeman Engstrom, *Whither Whistleblowing? Bounty Regimes, Regulatory Context, and the Challenge of Optimal Design*, 15 THEORETICAL INQUIRIES L. 605, 616–24 (2014); Yuval Feldman & Orly Lobel, *The Incentives Matrix: The Comparative Effectiveness of Rewards, Liabilities, Duties, and Protections for Reporting Illegality*, 88 TEX. L. REV. 1151, 1178–79 (2010); William M. Landes & Richard A. Posner, *Salvors, Finders, Good Samaritans, and Other Rescuers: An Economic Study of Law and Altruism*, 7 J. LEGAL STUD. 83, 98–100 (1978); Yair Listokin & David M. Schizer, *I Like To Pay Taxes: Taxpayer Support for Government Spending and the Efficiency of the Tax System*, 66 TAX L. REV. 179, 203–04 (2013); Lynn A. Stout, *Killing Conscience: The Unintended Behavioral Consequences of “Pay for Performance,”* 39 J. CORP. L. 525, 552–53 (2014).

2. See Samuel Bowles & Sandra Polanía-Reyes, *Economic Incentives and Social Preferences: Substitutes or Complements?*, 50 J. ECON. LITERATURE 368 (2012) (surveying the literature on crowding-out).

3. Bruno S. Frey & Felix Oberholzer-Gee, *The Cost of Price Incentives: An Empirical Analysis of Motivation Crowding-Out*, 87 AM. ECON. REV. 746 (1997).

4. Ralph Waldo Emerson, *Wealth*, in THE CONDUCT OF LIFE (1860).

Given the pervasive uses of incentives throughout the law, commentators have voiced concerns about crowding-out in a range of domains, including health law, environmental law, employment law, torts, contracts, property, tax, and criminal law. These concerns are most frequently speculative, given the paucity of field studies investigating crowding-out in connection with specific legal policies. But there is a robust body of crowding-out scholarship outside the law, and our field's engagement with crowding-out is often superficial. To evaluate claims about crowding-out, we need a more complete accounting of how this phenomenon may manifest in the law, and a framework for bringing the field's many claims into dialogue. I begin this Article by offering the first attempt to consolidate the many areas in which crowding-out has aroused concern in the law, canvassing judicial decisions, legislative history, and legal scholarship.

My second goal in this Article is to move beyond the jumble of legal scholars' crowding-out concerns to offer a precise overview of the harms and benefits that may flow from motivational crowding-out. I have previously evaluated the complex and heterogeneous *causes* of crowding-out.⁵ This paper will shift its focus to the heterogeneous *effects* that crowding-out may generate. To date, discussions about the harms attributable to crowding-out have been confused. Legal scholars tend to define crowding-out as occasions when incentive programs backfire entirely, crowding out intrinsic motivation so completely that good behavior *declines* compared to baseline levels.⁶ But crowding-out can have many other, more subtle effects that legal scholars have overlooked. Incentive programs may improve behavior even when crowding-out occurs, but they may also affect performance quality, sustainability of performance over time, distribution of tasks across a population, and engagement in nonincentivized behaviors that rely on similar motivations.

This Article is the first to offer a cross-cutting view of the diverse impacts of crowding-out in response to incentive-based policies, illuminating not only the immediate effects of incentives on behavioral engagement, but also considering performance quality, choking, distraction, gaming, agent selection effects (i.e., changes in the population of agents who engage in a desirable behavior), effects on competition among agents, and spillovers to other behaviors. I then expand this discussion beyond instrumental effects to consider impacts on autonomy and individual or societal values. Understanding the full range of crowding-out effects is essential for measuring the occurrence and magnitude of this behavior as a response to incentives in the law; current scholarship has acknowledged only a few of these effects, which impoverishes our efforts to evaluate, endorse, or dismiss crowding-out theory.

In addition to my review of the harms caused by crowding-out, I take the novel step of proposing that crowding-out may also confer *benefits*. Incentives may, for

5. See Kristen Underhill, *Extrinsic Incentives, Intrinsic Motivation, and Motivational Crowding-Out in Health Law and Policy*, in NUDGING HEALTH: HEALTH LAW AND BEHAVIORAL ECONOMICS (I. Glenn Cohen, Holly Lynch & Christopher Robertson eds., 2016) [hereinafter Underhill, *Extrinsic Incentives*]; Kristen Underhill, *When Extrinsic Incentives Displace Intrinsic Motivation: Designing Legal Carrots and Sticks To Confront the Challenge of Motivational Crowding-Out*, 33 YALE J. ON REG. 215 (2016) [hereinafter Underhill, *When Extrinsic*].

6. See, e.g., Feldman & Lobel, *supra* note 1, at 1180; Stout, *supra* note 1, at 552.

example, displace or erode invidious motivations, such as interpersonal biases that animate race-based or gender-based discrimination. Incentives that cause crowding-out may make agent activity more predictable, thereby encouraging greater investment by principals. Crowding-out that reflects changed *preferences* for material gain may also make agents more sensitive to future incentives, thereby improving the efficacy of other incentive-based policies. I will consider these and other benefits in this Article, considering for the first time in legal scholarship that these effects may be desirable.

Beyond offering a careful catalog of crowding-out effects, this Article has a third goal: to consider the normative question of *when* and *why* crowding-out should prompt the regulation, redesign, or discontinuation of incentive plans. There are many areas of law where federal statutes or regulations already structure the use of incentive plans by private principals, such as workplace wellness programs,⁷ pay-for-performance in executive compensation,⁸ and payment for blood and organ donation.⁹ But it is unclear why motivational crowding-out would provide a persuasive normative basis for regulating the use of incentives. To answer this question, I first discuss failures in incentive architecture (the design of incentive plans), identifying several reasons why governmental and private principals may fail to design incentive plans optimally. I further move to reject the precautionary principle, which would bar all incentives with crowding-out effects, based in part on my suggestion that crowding-out may also confer benefits.

Instead of calling for the proscription of incentives that cause crowding-out, I offer methods for determining when and why regulation may be justified. To guide efforts to intervene in incentive schemes, this Article proposes a new taxonomy of incentive plans based on the relationships between principals who offer incentives (governmental principals, private principals, and agents who self-incentivize), agents who are incentivized, and intended beneficiaries who receive the benefits of agents' behavior (i.e., principals, agents themselves, or third parties). Organizing incentive plans in this way exposes different normative justifications for regulatory intervention in each category of incentive programs. I suggest, for example, that when incentives are offered by governments, regulation to redesign or eliminate these incentive programs would be justified to correct autonomy-related harms, behavioral inefficiencies, or negative externalities imposed on third-party beneficiaries. But when incentives are offered by private parties (e.g., pay-for-performance for employees), regulation is only justified to correct autonomy-related harms or negative externalities; private principals may wish to redesign incentive schemes independently to correct behavioral inefficiencies, but this justification does not support regulatory intervention. When agents self-incentivize, such as through

7. *E.g.*, Incentives for Nondiscriminatory Wellness Programs in Group Health Plans, 78 Fed. Reg. 33,157 (June 3, 2013); Nondiscrimination and Wellness Programs in Health Coverage in the Group Market: Final Rules, 71 Fed. Reg. 75,014 (2006).

8. *See* 26 U.S.C.A. § 162(m) (West 2017) (disallowing public corporations from deducting annual compensation above \$1 million for the CEO or top four highest compensated officers, if that compensation is not tied to performance goals); *see also* Stout, *supra* note 1, at 533.

9. National Organ Transplant Act, 42 U.S.C.A. § 274e (West 2017).

commitment contracting, even autonomy-related harms and negative externalities disappear as viable justifications for intervention.

To defend these claims, this Article proceeds in several Parts. Part I defines crowding-out and shows how crowding-out concerns arise in judicial decisions, legislation and regulation, and legal scholarship. Part II catalogues the large set of behavioral, autonomy-related, and moral harms attributable to motivational crowding-out, each of which inspires opposition to incentive arrangements. In Part III, I offer theoretically appealing benefits of crowding-out, as distinct from the harms that typically dominate commentary on incentives. Part IV begins by discussing failures in incentive architecture, detailing why incentive architects may persist in using incentives that are inefficient, counterproductive, or burdensome for third parties. I then present my framework for classifying incentive programs, along with the normative bases for intervention in each category of incentives. This taxonomy clarifies which incentive programs may be permissible subjects of regulatory intervention and redesign due to impacts on autonomy, efficiency, and third parties. I conclude by considering options for modifying incentive-based policies that give rise to crowding-out harms.

I. CROWDING-OUT CONCERNS IN LAW AND POLICY DESIGN

Motivational crowding-out matters wherever there are efforts to control agents by external intervention.¹⁰ As rewards and punishments are inescapably “the traditional tools of legal regimes,”¹¹ concerns about crowding-out are similarly inevitable in the law. Many areas of law deal intimately with principal-agent or fiduciary relationships, including employment law, torts, health law, family law, education law, and self-regulation of the professions, all of which seek to align the interests of agents and principals (loosely defined). Private principals such as employers or charitable organizations have long used financial and other incentives to motivate agent behavior, and these programs are coming under increasing scrutiny for potential crowding-out effects. Recent scholarship has also noted the tendency of modern regulatory regimes to favor carrots over sticks for the population as a whole, including areas such as environmental, criminal, and tax law.¹² Incentive-based policies such as subsidies, tax credits, and other inducements are often more appealing than conscription, prohibition, and command-and-control regulation.¹³

Concerns about motivational crowding-out are recurring, but no one has yet canvassed this literature to understand how crowding-out is invoked. This Part will consider how judicial decisions, legislative and regulatory activity, and legal scholarship have engaged with the concept of motivational crowding-out.

10. Bruno S. Frey, *On the Relationship Between Intrinsic and Extrinsic Work Motivation*, 15 INT'L J. INDUS. ORG. 427, 430 (1997).

11. Eric Fleisig-Greene, *Law's War with Conscience: The Psychological Limits of Enforcement*, 2007 BYU L. REV. 1203, 1217 (2007).

12. Brian Galle, *The Tragedy of the Carrots: Economics and Politics in the Choice of Price Instruments*, 64 STAN. L. REV. 797, 797 (2012).

13. Gerrit De Geest & Giuseppe Dari-Mattiacci, *The Rise of Carrots and the Decline of Sticks*, 80 U. CHI. L. REV. 341, 343 (2013).

A. Motivational Crowding-Out Defined

Before detailing the relevance of motivational crowding-out in the law, however, a foundational description of crowding-out will be useful. Crowding-out theory divides motivations into extrinsic and intrinsic; extrinsic motivation is the desire to obtain a reward or avoid a penalty associated with a task, while intrinsic motivations encompass most other reasons for behavior, including but not limited to altruism, civic duty, professionalism, and morality.¹⁴ Crowding-out occurs when the introduction of an extrinsic incentive (either a reward or penalty, including non-financial incentives) displaces or erodes an intrinsic motivation for decisions. Research from behavioral economics and psychology has illuminated a number of different processes that cause crowding-out. I have elsewhere reviewed these in detail as signaling processes (i.e., incentives transmit negative information to the agent, or they impair the agent's ability to signal good information to outside observers or themselves); impairment of self-determination; changes in preferences for money compared to other values over time; and "learned helplessness" effects.¹⁵

I distinguish between two forms of crowding-out. *Absolute* crowding-out occurs when the use of incentives leads to an absolute reduction in the level of intrinsic motivation, compared to intrinsic motivation in the absence of an incentive.¹⁶ This reduction may be temporary or permanent, but it persists at least as long as the incentive is in place. *Relative* crowding-out occurs when the use of incentives makes extrinsic motivation the primary reason for behavior, such that agents will engage in the task regardless of whether intrinsic motivation is present. The two forms of crowding-out may co-occur; to use a classic example, offering incentives for organ donation might diminish altruism among potential living donors, but these agents may nonetheless donate out of a desire to obtain the incentive. Alternately, each form of crowding-out may occur separately; for example, incentives may not lead to an absolute reduction in altruistic reasons for donating, but large incentives may mean that donors are now acting primarily to obtain the rewards, rather than primarily out of the desire to help others.¹⁷ Concerns about crowding-out in the law are primarily focused on *absolute* crowding-out, where incentives may potentially impoverish other motives for good behavior.

B. Judicial Decisions

Judicial decisions have grappled with the problem of motivational crowding-out in several contexts, including Good Samaritan activity, payment for criminal informants, and legislation criminalizing payment for blood marrow donation. For example, a Seventh Circuit decision in 2003 considered the absence of a common-law obligation to assist strangers as a Good Samaritan; the court reviewed several justifications for this gap, including the idea that "liability might actually reduce the

14. Underhill, *When Intrinsic*, *supra* note 5, at 222–23.

15. *Id.* at 235–54.

16. I previously introduced this distinction in Underhill, *When Extrinsic*, *supra* note 5.

17. This distinction will be most useful in Part II.

number of altruistic rescues by depriving people of credit for altruism (how would they prove they hadn't acted under threat of legal liability?).¹⁸

A long series of judicial decisions has also discussed the practice of offering informants benefits, typically consisting of sentence reductions or dropped charges, in exchange for information about criminal activity.¹⁹ Defendants in these cases often challenge incentivized informants' motivations, on the assumption that information provided in anticipation of a benefit is less credible than information provided for altruistic reasons.²⁰ The testimony of incentivized informants, however, is typically permissible with disclosure of the incentive arrangement,²¹ and courts have warned that the reliance on altruism alone is infeasible in this context.²²

One Ninth Circuit case, *Flynn v. Holder*, has dealt more intensively with motivational crowding-out and its sequelae as a proffered rational basis for legislation.²³ This case concerned the 1984 National Organ Transplant Act (NOTA), part of which specified criminal penalties including fines and imprisonment for "acquir[ing], receiv[ing], or otherwise transfer[ring] any human organ for valuable consideration for use in human transplantation" in interstate commerce; "organs" were defined in such a way as to exclude blood, sperm, and eggs.²⁴ The *Flynn* plaintiffs were individuals alleging present or future unmet needs for bone marrow transplants, as well as a nonprofit corporation that intended to operate a scholarship program that would award individual donors \$3000 for bone marrow donations. The plaintiffs sought to permit payment for blood marrow donations provided through apheresis, a low-risk procedure requiring a course of medication followed by a blood withdrawal. The Ninth Circuit concluded that this process did not differ meaningfully from blood donation, thereby exempting it from NOTA's prohibition on compensating donors.²⁵

18. *Stockberger v. United States*, 332 F.2d 479, 481 (7th Cir. 2003).

19. *See, e.g., United States v. Hullaby*, 736 F.3d 1260, 1263 (9th Cir. 2013) ("[I]t is 'common practice for the government to reduce or drop charges against persons who cooperate with law enforcement officials in the prosecution of others'. We do not require the government to recruit solely informants who will work in a spirit of altruism for the good of mankind.") (quoting *United States v. Simpson*, 813 F.2d 1462, 1469 (9th Cir. 1987)); *United States v. Pomales-Lebron*, 513 F.3d 262 (1st Cir. 2008); *United States v. Cervantes-Pacheco*, 826 F.2d 310, 315 (5th Cir. 1987); *United States v. Reid*, 19 F. Supp. 2d 534 (E.D. Va. 1998).

20. *See, e.g., Cervantes-Pacheco*, 826 F.2d at 315 ("It is difficult to imagine a greater motivation to lie than the inducement of a reduced sentence . . .").

21. *See, e.g., id.* at 315–16; *United States v. Richardson*, 764 F.2d 1514 (11th Cir. 1985); *United States v. Pope*, 330 F. Supp. 2d 948, 954–55 (M.D. Tenn. 2004) ("[C]riminals are regularly the best source for information about criminal activity, and the test for probable cause is not the informant's altruism but the reliability of his information.").

22. *See, e.g., Reid*, 19 F. Supp. 2d at 537 ("To prohibit prosecutors from making promises in exchange for testimony works an 'absurd' result where crimes go unresolved because of worries about testimony that may be questionable, even though the system already has built-in safeguards concerning questionable testimony by interested witnesses.").

23. 684 F.3d 852, 858 (9th Cir. 2012).

24. 42 U.S.C.A. § 274e (West 2011).

25. *Flynn*, 684 F.3d at 862–65 (finding that a "blood marrow donation" through peripheral blood stem cell apheresis is simply a blood donation, and that NOTA clearly exempted the common practice of payment for blood donation).

Of greater interest for crowding-out, however, is the court's analysis of NOTA's ban on bone marrow donation through aspiration, a more invasive procedure that requires anesthesia and the withdrawal of marrow from donors' hip bone cavities. This process is not exempt from NOTA, and the Ninth Circuit found that, due in part to crowding-out fears, NOTA's bar on compensation survived rational basis review.²⁶ The government raised several crowding-out worries, including that "providing financial incentives would decrease the willingness of people to voluntarily donate their organs and undermine the voluntary donor system"²⁷ On the theory that incentives would replace altruism as the driving reason for donation, the government's briefing further warned of downstream consequences, including undue inducements for poor people to donate, motivations for ineligible donors to provide inaccurate medical histories, and ultimately a degradation of the donation supply.²⁸ The Ninth Circuit panel cited some of these concerns, suggesting a persuasive role for motivational crowding-out in rational basis review.²⁹

C. Legislation and Regulation

As before, the most notable area in which both legislators and regulators have engaged with motivational crowding-out is again the case of organ and blood donation. The salience of motivational crowding-out in this context may be amplified due to early research on crowding-out related to blood donation in the 1970s; it is therefore unsurprising that lawmakers and administrators cite motivational crowding-out concerns directly as a basis for imposing legal rules. As described above, the 1984 NOTA firmly criminalized compensation for organ donation. This formalized a longstanding interpretation of the Uniform Anatomical Gift Act, the NOTA's predecessor previously adopted in all fifty states, to render the commercial transfer of organs illegal.³⁰ Now in the wake of the *Flynn* decision, the exemption of blood marrow donation by apheresis may be short-lived. In October 2013, the Department of Health and Human Services published a notice of proposed rulemaking to include blood marrow donation by apheresis in its ban on compensating donors, noting the Congressional intent to "ban the commodification

26. *Id.* at 859–62.

27. Notice of Motion and Motion to Dismiss at 17, *Flynn v. Holder*, 684 F.3d 852 (9th Cir. 2012) (No. 2:09-cv-07772-VBF-AJW); *accord* Brief for Appellee at 12, *Flynn v. Holder*, 684 F.3d 852 (9th Cir. 2012) (No. 10-55643).

28. *See* Notice of Motion and Motion to Dismiss at 25, *Flynn v. Holder*, 684 F.3d 852 (9th Cir. 2012) (No. 2:09-cv-07772-VBF-AJW).

29. *Flynn*, 684 F.3d at 859–62. For a fuller description of this case, see John A. Robertson, *Paid Organ Donations and the Constitutionality of the National Organ Transplant Act*, 40 HASTINGS CONST. L.Q. 221 (2013); Recent Cases, *Health Law—Organ Compensation—Ninth Circuit Holds that Compensation for Blood Stem Cell Transplant Procedure Does Not Violate National Organ Transplant Act—Flynn v. Holder*, No. 10-55643, 2012 WL 1001300 (9th Cir. Mar. 27 2012), 125 HARV. L. REV. 2201 (2012).

30. Notice of Motion and Motion to Dismiss at 11, *Flynn v. Holder*, 684 F.3d 852 (9th Cir. 2012) (No. 2:09-cv-07772-VBF-AJW); *accord* Sara Krieger Kahan, Note, *Incentivizing Organ Donation: A Proposal to End the Organ Shortage*, 38 HOFSTRA L. REV. 757, 763 (2009).

of [blood marrow cells] . . . , curb opportunities for coercion and exploitation, encourage altruistic donations, and decrease the likelihood of disease transmission resulting from paid donations.”³¹ Motivational crowding-out, along with its downstream effects, remains a primary concern animating this regulatory regime.

Also in health law, concern about motivational crowding-out has influenced policy discussions over the structure of Medicare payments for physicians, including paying physicians based on quality of care.³² Such value-based payment (VBP) programs have drawn criticism based on their potential to crowd out providers’ intrinsic motivations to provide high-quality care, including professional norms and dedication to public service.³³ Medicare had previously implemented an incentive-based approach in its payments to hospitals under the Affordable Care Act, including Accountable Care Organization (ACO) demonstration projects and the Hospital Value-Based Purchasing Program.³⁴ Despite the fear of crowding-out, value-based payment is now coming to individual physician payments as well as hospital payments under Medicare. The Medicare Access and CHIP Reauthorization Act of 2015 provided for incentive-based payment for eligible health care providers, including rewards based on quality, resource use, improvements in practice, and use of electronic health records.³⁵ Motivational crowding-out is a familiar objection to innovations in incentive pay, and evaluation of these new payment models will be instructive.

D. Legal Scholarship

Concerns about crowding-out effects are thriving in legal scholarship. Although a comprehensive review is not the purpose of this Article, a selection of legal areas that have considered crowding-out will illustrate the relevance of the phenomenon across the field.

1. Health Law and Policy

As the prior discussions of *Flynn v. Holder* and pay-for-performance may suggest, health law has been at the center of scholarship on motivational crowding-out effects. Compensation for blood and organ donation has long been a lightning rod.³⁶

31. Change to the Definition of “Human Organ” under Section 301 of the National Organ Transplant Act of 1984, 78 Fed. Reg. 60,810, 60,812 (proposed Oct. 2, 2013) (codified in 42 C.F.R. pt. 121).

32. *SGR: Date, Measures, and Models; Building a Future Medicare Physician Payment System: Hearing Before the Subcomm. for Health of the Comm. on House Energy and Commerce*, 113th Cong. (2013) (statement of Robert A. Berenson, Institute Fellow, Urban Institute).

33. *See id.* at 124.

34. *See* JULIA JAMES, CTRS. FOR MEDICARE & MEDICAID SERVS., HEALTH POLICY BRIEF: PAY-FOR-PERFORMANCE (2012), https://www.healthaffairs.org/healthpolicybriefs/brief.php?brief_id=78 [<https://perma.cc/2Q2Z-SFX7>].

35. Medicare Access and CHIP Reauthorization Act of 2015 § 101, 42 U.S.C. § 1305 (2012).

36. *See, e.g.*, DEBRA SATZ, WHY SOME THINGS SHOULD NOT BE FOR SALE: THE MORAL

Similarly, the issue of paying healthcare providers based on performance metrics has dogged health systems in a range of countries,³⁷ and some have suggested that payment systems can “demoralize” individual physicians and healthcare institutions.³⁸ These programs include incentives for overall performance quality as well as specific care practices such as medication prescription.³⁹

Recent years have also seen a rise in incentive programs managed by health insurers, by employers (i.e., wellness programs),⁴⁰ and sometimes by individuals themselves (i.e., commitment contracts),⁴¹ which arrange financial incentives based on the achievement of health status goals or behaviors such as medication compliance.⁴² The use of extrinsic incentives to improve individual health behaviors has been particularly attractive in the United States, and current efforts often include financial rewards for health behaviors ranging from keeping doctors’ appointments to drug addiction treatment.⁴³ One illustration of these programs with a governmental principal appears in Iowa’s Section 1115 demonstration waiver, which has organized its expansion of Medicaid under the Affordable Care Act.⁴⁴ Under this waiver, enrollees with income above fifty percent of the federal poverty level must pay

LIMITS OF MARKETS 192–95 (2010); WHEN ALTRUISM ISN’T ENOUGH: THE CASE FOR COMPENSATING KIDNEY DONORS (Sally Satel ed., 2009); David Horton, *Indescendibility*, 102 CALIF. L. REV. 543, 574–75 (2014) (describing crowding-out theory as applied to organ donation).

37. See Frank Eijkenaar, Martin Emmert, Manfred Scheppach & Oliver Schöffski, *Effects of Pay for Performance in Health Care: A Systematic Review of Systematic Reviews*, 110 HEALTH POL’Y 115, 116 (2013); see also Adam Oliver & Lawrence D. Brown, *Incentivizing Professionals and Patients: A Consideration in the Context of the United Kingdom and the United States*, 36 J. HEALTH POL., POL’Y & L. 59 (2011). For additional empirical evidence on the effectiveness of pay-for-performance programs on improving healthcare quality, see Meredith B. Rosenthal & Richard G. Frank, *What Is the Empirical Basis for Paying for Quality in Health Care?*, 63 MED. CARE RES. & REV. 135 (2006) (finding mixed results).

38. BARRY SCHWARTZ & KENNETH SHARPE, *PRACTICAL WISDOM: THE RIGHT WAY TO DO THE RIGHT THING* 182–84, 199–211 (2010). This is of particular concern when the provider’s definition of “quality” care differs from the performance metric. Eijkenaar et al., *supra* note 37, at 116.

39. Pam Belluck, *For Forgetful, Cash Helps the Medicine Go Down*, N.Y. TIMES (June 13, 2010), <http://www.nytimes.com/2010/06/14/health/14meds.html> [<https://perma.cc/3TCU-6JV2>] (noting that “93,000 doctors are in Aetna’s ‘pay for performance’ program; bonuses average three percent to five percent of a practice’s base income.”).

40. Michelle M. Mello & Meredith B. Rosenthal, *Wellness Programs and Lifestyle Discrimination—The Legal Limits*, 359 NEW ENG. J. MED. 192, 198 (2008); Harald Schmidt, David A. Asch & Scott D. Halpern, *Fairness and Wellness Incentives: What Is the Relevance of Process-Outcome Distinction?*, 55 PREVENTIVE MED. S118 (2012).

41. See, e.g., IAN AYRES, *THE \$500 DIET* 17–35 (2010) [hereinafter, AYRES, *THE \$500 DIET*] (describing the use of a commitment contract to lose weight in order to avoid forfeiting \$500).

42. Belluck, *supra* note 39.

43. Oliver & Brown, *supra* note 37, at 78.

44. Letter from Brian Neale, Dir., Ctrs. for Medicare & Medicaid Servs., to Mikki Stier, Medicaid Dir., Iowa Dep’t of Health & Human Servs. 16–19 (Oct. 27, 2017), <http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/ia/ia-wellness-plan-ca.pdf> [<https://perma.cc/LML9-EGR4>].

premiums for Medicaid coverage and dental care, but these premiums will be waived based on the completion of annual risk assessments and preventive exam visits.⁴⁵ Wellness programs of this nature, however, have inspired concern on the basis that they may crowd out individuals' self-care motivations, leading to worse health behaviors after they are withdrawn.

Crowding has also been a concern for governmental programs that provide publicly funded incentives—also called conditional cash transfer programs—for families to engage in welfare-promoting activities such as sending children to school, receiving vaccinations, or utilizing other health interventions.⁴⁶ The use of conditional cash transfer programs is comparatively rare in the United States, but efforts have included New York's Opportunity NYC-Family Rewards program to incentivize behaviors linked to improved health and reduced poverty, such as uptake and maintenance of health insurance and receipt of preventive dental care.⁴⁷ Such programs have seen beneficial effects on behaviors such as education and clinic visits in other nations.⁴⁸

Financial incentives for the conduct of human subjects research have also attracted attention in health law, including incentives for human subjects,⁴⁹ and financial penalties for medical researchers who engage in unethical research activities.⁵⁰

2. Environmental Law

Like health law, environmental law has witnessed an increase in experimentation with financial incentives to motivate improvements in individual behavior. In

45. *Id.* at 6.

46. For a description, see Uri Gneezy, Stephan Meier & Pedro Rey-Biel, *When and Why Incentives (Don't) Work To Modify Behavior*, 25 J. ECON. PERSP. 191, 193 (2011) (citing Jere R. Behrman, Piyali Sengupta & Petra Todd, *Progressing through PROGRESA: An Impact Assessment of a School Subsidy Experiment in Rural Mexico*, 54 ECON. DEV. & CULTURAL CHANGE 237 (2005)); see also Julio Frenk, *Bridging the Divide: Global Lessons from Evidence-Based Health Policy in Mexico*, 368 LANCET 954 (2006).

47. JAMES A. RICCIO, NADINE DECHAUSAY, DAVID GREENBERG, CYNTHIA MILLER, ZAWADI RUCKS & NANDITA VERMA, TOWARD REDUCED POVERTY ACROSS GENERATIONS: EARLY FINDINGS FROM NEW YORK CITY'S CONDITIONAL CASH TRANSFER PROGRAM (2010), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1786981 [<https://perma.cc/6GYF-LS4Y>].

48. See Mylene Lagarde, Andy Haines & Natasha Palmer, *Conditional Cash Transfers for Improving Uptake of Health Interventions in Low- and Middle-Income Countries: A Systematic Review*, 298 JAMA 1900 (2007); Oliver & Brown, *supra* note 37, at 79 (citing Saul S. Morris, Rafael Flores, Pedro Olinto & Juan Manuel Medina, *Monetary Incentives in Primary Health Care and Effects on Use and Coverage of Preventive Healthcare Interventions in Rural Honduras: Cluster Randomised Trial*, 364 LANCET 2030 (2004)); see also Gary Charness & Uri Gneezy, *Incentives To Exercise*, 77 ECONOMETRICA 909 (2009).

49. See RUTH W. GRANT, STRINGS ATTACHED: UNTANGLING THE ETHICS OF INCENTIVES 113 (2012); ALFIE KOHN, PUNISHED BY REWARDS: THE TROUBLE WITH GOLD STARS, INCENTIVE PLANS, A'S, PRAISE, AND OTHER BRIBES 86 (1999).

50. See Yuval Feldman, Rebecca Gauthier & Troy Schuler, *Curbing Misconduct in the Pharmaceutical Industry: Insights from Behavioral Ethics and the Behavioral Approach to Law*, 41 J.L. MED. & ETHICS 620, 624 (2013).

environmental policy, crowding-out of environmentalist motivations has been predicted for tradeable emission rights, environmental taxes or emission charges, governmental subsidies, and restrictive regulations.⁵¹ Stephanie Stern has noted that motivational crowding-out may undermine governmental incentives for private landowners to engage in conservation activity.⁵² Some evidence suggests that social sanctions are more potent in this field than economic incentives; for example, people who are paid a small rebate for recycling bottles may be less willing to do so, compared to people in jurisdictions that do not pay rebates but where nonrecycling is a social error.⁵³ Another environmental initiative that raised crowding-out concerns was the Spare the Air program in San Francisco, which provided free transit fares on days with poor air quality to reduce car pollution by commuters.⁵⁴ An empirical evaluation of this program found that the free fares actually led to an *increase* in car trips, paradoxically transforming it into a “pay-for-pollution” incentive.⁵⁵ Even when incentives are voluntary, such as when consumers voluntarily pay to offset their environmentally harmful behavior, the introduction of market pricing may nonetheless undermine intrinsic motivations to behave in an environmentally responsible way.⁵⁶

3. Employment Law and Executive Compensation

Given the principal-agent problems that saturate employment law and the regulation of professions, discussion about motivational crowding-out is well developed in the field. Compensation for executive performance is among the most

51. See, e.g., Bruno S. Frey & Alois Stutzer, *Environmental Morale and Motivation*, in THE CAMBRIDGE HANDBOOK OF PSYCHOLOGY AND ECONOMIC BEHAVIOUR 412–22 (Alan Lewis ed., 2008); see also Katrina Fischer Kuh, *When Government Intrudes: Regulating Individual Behaviors That Harm the Environment*, 61 DUKE L.J. 1111, 1114–26 (2012); Jason F. Shogren, *WAEA Keynote Address Behavioral Environmental Economics: Money Pumps & Nudges*, 37 J. AGRIC. & RESOURCE ECON. 349, 350–57 (2012).

52. See Stephanie Stern, *Encouraging Conservation on Private Lands: A Behavioral Analysis of Financial Incentives*, 48 ARIZ. L. REV. 541, 566–67, 567 n.156 (2006).

53. Uri Gneezy & Aldo Rustichini, *Pay Enough or Don't Pay at All*, 115 Q.J. ECON. 791, 805 (2000); see also Samuel Bowles, *Policies Designed for Self-Interested Citizens May Undermine “The Moral Sentiments”*: Evidence from Economic Experiments, 320 SCI. 1605, 1609 (2008); Sung-Ha Hwang & Samuel Bowles, *Are Incentives Overused in Cases Where They Crowd Out Pro-social Motivations?* 21 (Nov. 24, 2010) (unpublished manuscript), <http://www.hec.unil.ch/documents/seminars/deep/358.pdf> [<https://perma.cc/436M-G2Y6>] (citing Elisabeth Rosenthal, *Motivated by a Tax, Irish Spurn Plastic Bags*, N.Y. TIMES (Feb. 2, 2008), <http://www.nytimes.com/2008/02/02/world/europe/02bags.html> [<https://perma.cc/78J2-A7DBJ>]).

54. See Steven E. Sexton, *Paying for Pollution? How General Equilibrium Effects Undermine the “Spare the Air” Program*, 53 ENVTL. & RESOURCE ECON. 553, 554 (2012).

55. *Id.* at 573. The program also found large increases in discretionary (noncommuting) trips on free-transit days, and newspapers reported increases in passengers going to shopping and leisure destinations on these days. *Id.* This is consistent with crowding-out concerns about agent selection effects. See *infra* Section II.A.4.

56. See Note, *Uncommon Goods: On Environmental Virtues and Voluntary Carbon Offsets*, 123 HARV. L. REV. 2065, 2073–75 (2010).

visible and studied categories of incentive, and many authors have considered whether incentive-based pay may impair employees' moral preferences⁵⁷ and other motivations to serve the firm.⁵⁸ Other scholarship has considered the impact of performance-based pay for government agency administrators (including merit pay under the Civil Service Reform Act of 1978),⁵⁹ incentives for other public-sector employees,⁶⁰ incentives for whistle-blowing behavior (including incentives under the Dodd-Frank Act),⁶¹ and penalties for self-interested behavior by governmental officials⁶²—all on the theory that these extrinsic incentives and constraints may undermine other motivations for good behavior. Given empirical research suggesting that employees' protection of trade secrets is largely motivated by concerns of morality and fairness, rather than penalties for trade secret disclosure,⁶³ crowding-out effects may be productively investigated in this area as well. Another intriguing focus of this scholarship has included whether financial incentives for firms to maintain ethics and compliance programs (as provided by the U.S. Sentencing Commission's Organizational Guidelines) may crowd out moral and social motivations for developing ethical firm cultures, and whether ethics programs

57. See Stout, *supra* note 1; Barry Schwartz, *The Dark Side of Incentives*, BLOOMBERG BUSINESSWEEK (Nov. 12, 2009, 5:00 PM), <https://www.bloomberg.com/news/articles/2009-11-12/the-dark-side-of-incentives> [<https://perma.cc/5Y3P-LMHS>] (arguing that incentives may “strip the moral dimension away from the people making big decisions”).

58. See Kelli A. Alces & Brian D. Galle, *The False Promise of Risk-Reducing Incentive Pay: Evidence from Executive Pensions and Deferred Compensation*, 38 J. CORP. L. 53, 79 (2012); Nina Walton, *Crowding Theory and Executive Compensation*, 13 THEORETICAL INQUIRIES L. 429, 442 (2012); Cynthia A. Williams & John M. Conley, *The Social Reform of Banking*, 39 J. CORP. L. 459, 474 (2014).

59. See David A. Weisbach, *Tax Expenditures, Principal-Agent Problems, and Redundancy*, 84 WASH. U. L. REV. 1823, 1847–49 (2006); see also KOHN, *supra* note 49, at 125–26 (noting performance incentives for civil servants in federal agencies under the Civil Service Reform Act of 1978; evaluations found that the pay may not have affected organizational performance, and most managers surveyed believed that the financial incentives would not lead to increased effort).

60. See Kirsten Bregm, *Detrimental Effects of Performance-Related Pay in the Public Sector? On the Need for a Broader Theoretical Perspective*, 13 PUB. ORG. REV. 21, 21–22 (2013).

61. See, e.g., David Freeman Engstrom, *Whither Whistleblowing? Bounty Regimes, Regulatory Context, and the Challenge of Optimal Design*, 15 THEORETICAL INQUIRIES L. 605, 616 (2014); Yuval Feldman & Oren Perez, *Motivating Environmental Action in a Pluralistic Regulatory Environment: An Experimental Study of Framing, Crowding Out, and Institutional Effects in the Context of Recycling Policies*, 46 LAW & SOC'Y REV. 405, 411 (2012) (citing Yuval Feldman & Orly Lobel, *The Incentives Matrix: The Comparative Effectiveness of Rewards, Liabilities, Duties, and Protections for Reporting Illegality*, 88 TEX. L. REV. 1151 (2010)); Amanda M. Rose, *Better Bounty Hunting: How the SEC's New Whistleblower Program Changes the Securities Fraud Class Action Debate*, 108 NW. U. L. REV. 1235, 1275–78 (2014); Emad H. Atiq, Note, *Why Motives Matter: Reframing the Crowding Out Effect of Legal Incentives*, 123 YALE L.J. 1070, 1097–98 (2014).

62. See Adrian Vermeule, *Precautionary Principles in Constitutional Law*, 4 J. LEGAL ANALYSIS 181, 207 (2012).

63. See Yuval Feldman, *The Expressive Function of Trade Secret Law: Legality, Cost, Intrinsic Motivation, and Consensus*, 6 J. EMPIRICAL LEGAL STUD. 177, 202–03 (2009).

themselves crowd out employees' moral and social motivations for ethical behavior.⁶⁴

Also writing in employment law and corporations, Nina Walton has identified crowding-out as an explanation for rising executive compensation in the United States; if financial incentives crowd out an executive's desire to act in the corporation's benefit (e.g., preferences for reciprocity or fairness), the firm must increase the incentive to obtain a desirable level of executive effort.⁶⁵ In subsequent years, "[p]rincipals will be willing to grant large incentive because they understand that the previous use of incentives has severely dampened feelings such as loyalty, fairness, and reciprocity."⁶⁶ The crowding-out effects of incentive pay are amplified, she suggests, by professional education that teaches future executives that "managers cannot be trusted unless they are given the appropriate incentives."⁶⁷ Walton has applied this reasoning to the special case of incentive pay in retention contracts for firms that were bailed out by the U.S. government during the financial crash, such as American International Group, Inc. (AIG); prior bonuses had already crowded out intrinsic concern for the firm, while retention bonuses implicitly acknowledged that crowding-out had already occurred and further undermined employees' "sense of obligation to come to work without being paid a bonus."⁶⁸ Voluntary efforts to recover some bonus funds from employees were unsuccessful, leading to the suggestion that it may be impossible to recover intrinsic motivations that predated incentives.⁶⁹

4. Torts

The most salient discussion of crowding-out law in torts scholarship has centered on the worry that compensation, market rewards,⁷⁰ or mandates⁷¹ for Good Samaritan behavior and salvage activities may crowd out altruism. The imprint of these crowding-out concerns may be seen in state Good Samaritan laws. Private citizens acting as Good Samaritans often receive immunity or benefit from a lower standard of care while attempting to rescue others (compared to the ordinary standard of care under the tort system);⁷² in some states, however, the acts of rescue must be demonstrably "gratuitous and without expectation of compensation" to qualify for

64. See Maurice E. Stucke, *In Search of Effective Ethics & Compliance Programs*, 39 J. CORP. L. 769, 822–25 (2014).

65. Walton, *supra* note 58, at 430–31.

66. *Id.* at 431.

67. *Id.* at 448.

68. *Id.* at 350–51.

69. *Id.* at 454–55.

70. See William M. Landes & Richard A. Posner, *Salvors, Finders, Good Samaritans, and Other Rescuers: An Economic Study of Law and Altruism*, 7 J. LEGAL STUD. 83, 98–100 (1978).

71. See Dan M. Kahan, *The Logic of Reciprocity: Trust, Collective Action, and Law*, 102 MICH. L. REV. 71, 79 (2003).

72. Victoria Sutton, *Is There a Doctor (and a Lawyer) in the House? Why Our Good Samaritans Laws Are Doing More Harm Than Good for a National Public Health Security Strategy: A Fifty-State Survey*, 6 J. HEALTH & BIOMEDICAL L. 261, 282–88 (2010).

this immunity.⁷³ Torts scholars have also suggested that the entire torts system for deterring harm to strangers may displace moral obligations to protect others.⁷⁴

5. Contracts

In contract law, one modeling study has examined whether the specification of “complete” contracts and enforcement of contractual agreements may crowd out reciprocity motivations⁷⁵ or trust in the marketplace.⁷⁶ This has been echoed in literature arguing that contract structures may crowd out trust generally (including perhaps in noncontractual as well as contractual relationships)⁷⁷, because agents acting under legal constraints cannot reliably signal that they are personally trustworthy.⁷⁸ In the case of coauthored creative works, one scholar has suggested that the existence of a contractual arrangement between coauthors may either crowd out or crowd in the motivation to collaborate, depending on how the parties view the contract.⁷⁹ Another has specifically discussed whether the use of contracts in marital relationships may crowd out trustworthiness between spouses.⁸⁰ A recent modeling study has also noted that the presence of courts can encourage parties to continue

73. *Id.* at 277.

74. See Rebecca Hollander-Blumoff, *Intrinsic and Extrinsic Compliance Motivations: Comment on Feldman*, 35 WASH. U. J.L. & POL’Y 53, 61–63 (2011) (suggesting that civil penalties provided by tort law crowded out Ford’s moral imperative to correct malfunctioning gas caps on the Pinto model); see also Bruno Deffains & Claude Fluet, *Legal Liability When Individuals Have Moral Concerns*, 29 J.L. ECON. & ORG. 930, 930 (2012); Joseph C. Storch, *3-D Printing Your Way Down the Garden Path: 3-D Printers, the Copyrightization of Patents, and a Method for Manufacturers To Avoid the Entertainment Industry’s Fate*, 3 N.Y.U. J. INTELL. PROP. & ENT. L. 249, 271 (2014) (suggesting that lawsuits against students sharing music sharing crowded out moral motivations to pay for content).

75. See Armin Falk & Michael Kosfeld, *The Hidden Costs of Control*, 96 AM. ECON. REV. 1611, 1613 (2006); Florian Herold, *Contractual Incompleteness as a Signal of Trust*, 68 GAMES & ECON. BEHAV. 180, 188 (2010).

76. Iris Bohnet, Bruno S. Frey & Steffen Huck, *More Order with Less Law: On Contract Enforcement, Trust, and Crowding*, 95 AM. POL. SCI. REV. 131, 131 (2001); Alessandra Cassar, Giovanna d’Adda & Pauline Grosjean, *Institutional Quality, Culture, and Norms of Cooperation: Evidence from Behavioral Field Experiments*, 57 J.L. & ECON. 821, 821–22 (2014).

77. See Brent Simpson & Kimmo Eriksson, *The Dynamics of Contracts and Generalized Trustworthiness*, 21 RATIONALITY & SOC’Y 59, 74 (2009) (also cited by M. Neil Browne & Katherine S. Fister, *The Intriguing Potential of Postnuptial Contract Modifications*, 23 HASTINGS WOMEN’S L.J. 187, 196 n.49 (2012)).

78. See Frank B. Cross, *Law and Trust*, 93 GEO. L.J. 1457, 1491–92 (2005) (citing studies demonstrating that extrinsic incentives, including legal environments, can undermine trust and reciprocity).

79. Shyamkrishna Balganes, *Unplanned Coauthorship*, 100 VA. L. REV. 1683, 1747–48 (2014).

80. See Browne & Fister, *supra* note 77, at 196–200 (noting this concern but nonetheless arguing that trustworthiness is often insufficient, and that marital contracts may have a stabilizing effect).

dealing with individuals who have breached prior agreements, thereby crowding out reputational enforcement mechanisms for cooperative agreements.⁸¹

6. Charitable Activity and Public Goods

Because crowding-out concerns often focus on the erosion of altruism, scholarship has raised crowding-out questions in connection with tax breaks for charitable contributions,⁸² pro bono requirements for attorneys,⁸³ mandatory rules for charitable conduct,⁸⁴ and community service requirements for high school students.⁸⁵ This category also includes the potential that giving for-profit firms subsidies to engage in charitable work will crowd out intrinsic motivation for employees to work for charitable organizations instead of for-profit firms.⁸⁶ An analogous area is individual contributions to public goods. Research on motivational crowding-out has examined the use of financial incentives or penalties to motivate contributions, such as whether financial incentives influence citizens' willingness to accept a NIMBY project—such as a nuclear waste repository—in their community for the greater good.⁸⁷ Motivational crowding-out research has also examined the effect of *mandated* contributions, with similar concerns.⁸⁸

7. Tax Law

Tax compliance is another area subject to motivational crowding-out effects. On the theory that individual citizens may pay taxes due to intrinsic motivations, such as civic duty or a preference for following the rule of law, “distrusting” systems of

81. Scott E. Masten & Jens Prüfer, *On the Evolution of Collective Enforcement Institutions: Communities and Courts*, 43 J. LEGAL STUD. 359, 361–62 (2014).

82. See Wendy C. Gerzog, *Alms to the Rich: The Façade Easement Deduction*, 34 VA. TAX REV. 229, 234 n.14 (2014); Atiq, *supra* note 61, at 1097–98. These concerns may also apply to the reduction in death duties to allow for gifts made to charity. See 26 U.S.C. § 2055 (2012); see also *YMCA v. Davis*, 264 U.S. 47, 50 (1924) (explaining § 2055 as a “deal” made with testators before death, offering reduced death duties in exchange for altruistic gifts).

83. See Reed Elizabeth Loder, *Tending the Generous Heart: Mandatory Pro Bono and Moral Development*, 14 GEO. J. LEGAL ETHICS 459, 460–61 (2001).

84. See Brian Sheppard & Fiery Cushman, *Evaluating Norms: An Empirical Analysis of the Relationship Between Norm-Content, Operator, and Charitable Behavior*, 63 VAND. L. REV. 55, 79–80 (2010).

85. See Mark S. Sobus, *Mandating Community Service: Psychological Implications of Requiring Prosocial Behavior*, 19 L. & PSYCHOL. REV. 153, 153–54 (1995).

86. See Brian Galle, *Keep Charity Charitable*, 88 TEX. L. REV. 1213, 1222–25 (2010) (concluding that the inability to rely on image and self-image motivations will require firms to pay higher wages and monitor employees more intensively for self-dealing, compared to the costs of current nonprofit firms carrying out charity work).

87. See Frey & Oberholzer-Gee, *supra* note 3, at 746–47; Bruno S. Frey, Felix Oberholzer-Gee & Reiner Eichenberger, *The Old Lady Visits Your Backyard: A Tale of Morals and Markets*, 104 J. POL. ECON. 1297, 1297–98 (1996); Kahan, *supra* note 71, at 85–89.

88. See Andrew F. Reeson & John G. Tisdell, *Institutions, Motivations and Public Goods: An Experimental Test of Motivational Crowding*, 68 J. ECON. BEHAV. & ORG. 273, 273–74 (2008).

tax enforcement that include penalties and increased surveillance may produce motivational crowding-out. For example, several scholars have suggested that tax evasion may increase in response to penalties for nonpayment⁸⁹ or publicized audits.⁹⁰ Tax credits, such as credits for entrepreneurs,⁹¹ also provide countless opportunities for understanding how such incentives affect intrinsic motivations.

8. Intellectual Property and Innovation

The intrinsic motivations driving creative activity may also be vulnerable to crowding-out effects, and many legal scholars have expressed concern about the use of market-based incentives, financial rewards, tax-exempt status, and intellectual property rights for individuals and organizations engaged in innovation.⁹² Several articles have included particular concerns about motivational crowding-out in response to state support for the arts through grants and subsidies,⁹³ financial incentives and property rights relating to the development of shared goods, such as open-source software or distributed computing projects,⁹⁴ entitlements for open

89. See Yair Listokin & David M. Schizer, *I Like To Pay Taxes: Taxpayer Support for Government Spending and the Efficiency of the Tax System*, 66 TAX L. REV. 179, 203–04 (2013).

90. See, e.g., Feldman & Perez, *supra* note 61 (citing Michael Wenzel, *Motivation or Rationalisation? Causal Relations Between Ethics, Norms and Tax Compliance*, 26 J. ECON. PSYCHOL. 491 (2005)); Fleisig-Greene, *supra* note 11, at 1238–39; Kahan, *supra* note 71, at 83–85; Eric A. Posner, *Law and Social Norms: The Case of Tax Compliance*, 86 VA. L. REV. 1781, 1807–08, 1813 (2000). *But see* Stephen W. Mazza, *Taxpayer Privacy and Tax Compliance*, 51 U. KAN. L. REV. 1065, 1079–80, 1080 n.63 (2003) (rejecting the theory as applied to publicized audits and criminal penalties for tax evasion).

91. See Bruce J. Winick, *Harnessing the Power of the Bet: Wagering with the Government as a Mechanism for Social and Individual Change*, 45 U. MIAMI L. REV. 737, 810 (1991).

92. See, e.g., Christopher Buccafusco, Zachary C. Burns, Jeanne C. Fromer & Christopher Jon Sprigman, *Experimental Tests of Intellectual Property Laws' Creativity Thresholds*, 92 TEX. L. REV. 1921, 1943–44 (2014) (summarizing arguments); Wendy J. Gordon, *Render Copyright unto Caesar: On Taking Incentives Seriously*, 71 U. CHI. L. REV. 75, 90–91 (2004) (noting “skepticism about claims that any monetization will trigger the collapse of entire fields of emotional connection into cash calculation,” but also suggesting that awarding monetary remedies for copyright cases “affected by the public interest” may “undermine authors’ emotional conception of their task”); Daniel J. Hemel & Lisa Larrimore Ouellette, *Beyond the Patents–Prizes Debate*, 92 TEX. L. REV. 303, 352–55 (2013) (noting that crowding-out is not “inevitable,” but that the design incentives for innovation should be mindful of this possibility and seek to complement, not displace, “nonmonetary motivations”).

93. See Bruno S. Frey, *State Support and Creativity in the Arts: Some New Considerations*, 23 J. CULTURAL ECON. 71, 81–82 (1999).

94. See YOCHAI BENKLER, *THE WEALTH OF NETWORKS: HOW SOCIAL PRODUCTION TRANSFORMS MARKETS AND FREEDOM* 99–127 (2006); Yochai Benkler, *Sharing Nicely: On Shareable Goods and the Emergence of Sharing as a Modality of Economic Production*, 114 YALE L.J. 273, 278, 357 (2004) (noting that uncompensated social sharing arrangements may outperform price-based and government-funded systems with equal functionality); Kahan, *supra* note 71, at 93–95.

science,⁹⁵ incentives for the production of shared cultural or knowledge commons,⁹⁶ and the use of market mechanisms in the music industry.⁹⁷

9. Criminal Law

The use of incentives in criminal law and jury trials has also provoked crowding-out concerns. For example, Tom Tyler has suggested that the use of surveillance to monitor and punish crime begets more surveillance, because punishment shifts agents' attention to "instrumental factors" that crowd out prosocial motivations like morality and peer opinion.⁹⁸ This concern recalls prior scholarship noting the potential for criminal penalties to strengthen motivations to engage in criminal acts⁹⁹ such as fraud,¹⁰⁰ or that increased penalties and street-level policing may inadvertently increase crime.¹⁰¹ More generally, others have argued that the compensation of jurors may undermine their perceived significance of their role as a civic responsibility¹⁰² or that civic virtue generally is crowded out by the availability of adversary institutions for resolving disputes.¹⁰³

Tracy Meares has suggested a system of financial incentives for prosecutors, providing case-by-case rewards in order to shape charging decisions and to motivate adherence to ethical rules.¹⁰⁴ This proposal is intended to harness prosecutors' preferences not necessarily for money, but for victory and status.¹⁰⁵ Meares has highlighted a number of other areas where financial incentives play a role in the criminal justice system, including rewards offered by the Secret Service¹⁰⁶ and local communities for information leading to arrest or convictions, or the *qui tam* action under the federal False Claims Act.¹⁰⁷ The literature on motivational crowding-out was relatively small at the time of Meares's proposal, but these incentive practices

95. See Liza S. Vertinsky, *Making Room for Cooperative Innovation*, 41 FLA. ST. U. L. REV. 1067, 1085–86 (2014).

96. See Wendy J. Gordon, *Discipline and Nourish: On Constructing Commons*, 95 CORNELL L. REV. 733, 748–49 (2010); Amy Kapczynski, *The Cost of Price: Why and How To Get Beyond Intellectual Property Internalism*, 59 UCLA L. REV. 970, 1024–25 (2012).

97. See Benkler, *supra* note 94, at 342.

98. Tom R. Tyler, *Reducing Corporate Criminality: The Role of Values*, 51 AM. CRIM. L. REV. 267, 286 (2014).

99. See Sherry F. Colb, *Oil and Water: Why Retribution and Repentance Do Not Mix*, 22 QUINNIPIAC L. REV. 59, 83 (2003).

100. Kahan, *supra* note 71, at 99, 101.

101. *Id.* at 101.

102. Evan R. Seamone, *A Refreshing Jury Cola: Fulfilling the Duty To Compensate Jurors Adequately*, 5 N.Y.U. J. LEGIS. & PUB. POL'Y 289, 379 (2002).

103. See Bruno S. Frey & Reto Jegen, *Motivation Crowding Theory*, 5 J. ECON. SURVEYS 589, 599 (2001) (citing studies).

104. Tracy L. Meares, *Rewards for Good Behavior: Influencing Prosecutorial Discretion and Conduct with Financial Incentives*, 64 FORDHAM L. REV. 851 (1995); see also Miriam H. Baer, *Timing Brady*, 115 COLUM. L. REV. 1, 48 (2015) (arguing that excessive oversight of prosecutors "may . . . crowd out and undermine intrinsic motivations to comply with law").

105. Meares, *supra* note 104.

106. *Id.* at 856 (citing 18 U.S.C. § 3056(c)(1)(D) (1994)).

107. *Id.* at 858 (citing 31 U.S.C. §§ 3729–3731 (1988 & Supp. V 1993)).

may now be revisited with motivational crowding-out in mind. Crowding-out effects might also be considered in relation to the Violent Crime Control and Law Enforcement Act of 1994, which permits up to a one-year sentence reduction for a defendant's successful completion of a drug rehabilitation program;¹⁰⁸ Senate debate on this provision considered the relevance of motivation to the effectiveness of drug rehabilitation, with the concern that prisoners motivated by a mandate or sentence reduction may derive less benefit from rehabilitation services.¹⁰⁹ Incentives for guilty pleas, good behavior in prison,¹¹⁰ or for providing information or assistance¹¹¹ may also be usefully considered through the lens of motivational crowding-out.

10. Education

Researchers in education policy and law are also attuned to motivational crowding-out effects. Concerns in this field include the worry that an emphasis on “extrinsic motivations” such as grades, test scores, and job prospects may crowd out intrinsic motivations for learning, such as curiosity,¹¹² as well as intrinsic motivations for teaching, such as genuine concern for pupils' development.¹¹³ These concerns have prompted objections to New York City's efforts to offer cash rewards for school attendance,¹¹⁴ and other “dollars for scholars” programs that have taken place in the U.S. and elsewhere.¹¹⁵

11. Property Law, Trusts, and Estates

Legal scholarship has considered motivational crowding-out in several areas of property law. For example, federal and state governments offer financial incentives to encourage private landowners to grant public access to their lands, but these have drawn scrutiny on the basis that they may crowd out altruistic motives for providing public access.¹¹⁶ One scholar has also expressed concern that “incentive trusts”—trust funds that impose conditions on beneficiaries' behavior with little leeway for

108. 18 U.S.C. § 3621(e)(2)(B) (2012 & Supp. V); *see also* *Bellis v. Davis*, 186 F.3d 1092 (8th Cir. 1999); Winick, *supra* note 91, at 810.

109. *See* 140 CONG. REC. S12,356 (daily ed. Aug. 23, 1994) (statement of Sen. Biden) (“[T]he success rate for, if you will, forced drug treatment, that is, going to prison and taking drug treatment, and voluntary drug treatment when the person raises their hand and says, ‘Please help me. I want treatment,’ is essentially the same.”).

110. *See, e.g.*, Winick, *supra* note 91, at 810.

111. FED. R. CRIM. P. 35(b); *see also supra* notes 19–22 and accompanying text discussing incentives for informants.

112. *See* KOHN, *supra* note 49; SCHWARTZ & SHARPE, *supra* note 38, at 177–81, 187; Peter H. Huang, *Tiger Cub Strikes Back: Memoirs of an Ex-Child Prodigy about Legal Education and Parenting*, 1 BRIT. J. AM. LEGAL STUD. 297, 301 (2012).

113. SCHWARTZ & SHARPE, *supra* note 38, at 177–81, 187.

114. Barry Schwartz, *Money for Nothing*, N.Y. TIMES (July 2, 2007), <http://www.nytimes.com/2007/07/02/opinion/02schwartz.html> [<https://perma.cc/EH6J-G6GP>].

115. For an overview of some of these programs, *see* IAN AYRES, CARROTS AND STICKS 26–27 (2011) [hereinafter AYRES, CARROTS AND STICKS].

116. *See* Richard M. Hynes, *Posted: Notice and the Right To Exclude*, 45 ARIZ. ST. L.J. 949, 980 (2013).

exceptions—may train beneficiaries’ attention on money while undermining intrinsic motivations for achievement.¹¹⁷

12. Other Incentives in U.S. Law and Policy

Concerns about motivational crowding-out have also influenced scholarship on the law of democracy (discussing whether compulsory voting may crowd out civic motivations to vote),¹¹⁸ international law (discussing whether formal systems for international dispute resolution may facilitate breach by crowding out reputational motivations to fulfill commitments),¹¹⁹ and communications law (considering whether paying television broadcasters to produce more public interest broadcasting may lead them to reduce their voluntary public interest programming activity).¹²⁰ Beyond these examples of scholarly discussion about motivational crowding-out effects, there are also many areas where crowding-out concerns may not have been raised directly, but where further discussion in this area may be useful. Gerrit De Geest and Giuseppe Dari-Mattiacci have provided a cross-disciplinary overview of incentives used to motivate individual behavior under U.S. law, particularly in settings characterized by complexity, specialization, and divisions of labor.¹²¹ In addition to many of the incentives already discussed above, they have also highlighted incentives for military recruitment,¹²² bonuses for contract performance,¹²³ privately offered awards for recovering lost property,¹²⁴ and incentives for submitting to regulatory takings.¹²⁵

II. HAZARDS OF MOTIVATIONAL CROWDING-OUT

As the prior section suggests, concerns about crowding-out attach to many different proposed harms. But to date discussions of these harms have been imprecise, not only in legal scholarship, but throughout the many fields of academic work on this phenomenon. Scholars typically express concern about one effect (most frequently overall disengagement), but the effects of crowding-out are far more complex, and different consequences may be salient in different contexts. To address

117. Joshua C. Tate, *Conditional Love: Incentive Trusts and the Inflexibility Problem*, 41 REAL PROP., PROB. & TR. J. 445, 489–91 (2006).

118. Fleisig-Greene, *supra* note 11.

119. Rachel Brewster, *Pricing Compliance: When Formal Remedies Displace Reputational Sanctions*, 54 HARV. INT’L L.J. 259 (2013).

120. See Cass R. Sunstein, *Television and the Public Interest*, 88 CALIF. L. REV. 499, 546–47 (2000) (paying broadcasters to provide public interest programming “may provide broadcasters with an incentive to produce less public interest broadcasting on their own than they otherwise would, or at least to understate the amount that they would voluntarily provide. . . . This is a pervasive problem with paying people to do good or not to do bad; the payment may induce less of the good or more of the bad.”).

121. De Geest & Dari-Mattiacci, *supra* note 13, at 347, 392.

122. *Id.* at 386.

123. *Id.* at 343–44, 384–85.

124. *Id.* at 377–78; see also Winick, *supra* note 91, at 820–21.

125. De Geest & Dari-Mattiacci, *supra* note 13, at 379–81.

these concerns systematically and cogently, either through incentive design or the regulation of incentive-based policies, a full accounting of crowding-out harms is needed.

To complement my previous work on the *causes* of crowding-out,¹²⁶ this Part will analyze the heterogeneous *impacts* of motivational crowding-out, including attitudinal or moral effects, impacts on autonomy, and behavioral harms. This Part focuses only on purported harms; the following Part will propose a novel raft of benefits.

A. Behavioral Impacts

Apart from the effects of incentives on autonomy, much of the literature on motivational crowding out focuses on its instrumental impacts. I will now consider each of these in turn.

1. Temporarily Reduced Engagement and Playing Hard-to-Get

Reduced agent effort or engagement, including active behavior in the opposite direction from what is incentivized, is the most obvious and frequently discussed crowding-out effect. For example, increasing the penalties for tax evasion may result in more tax evasion, while paying people to exercise may reduce their trips to the gym. We might call this the “classic” crowding-out effect, and I have elsewhere described nine mechanisms by which agents might lower their effort levels due to an *absolute* reduction in intrinsic motivation.¹²⁷ Following a distinction proposed by Samuel Bowles, some scholars separate “categorical effects,” in which crowding-out occurs regardless of how large the incentive is, from “marginal effects,” in which the magnitude of crowding-out depends on the incentive size.¹²⁸

Temporarily reduced effort, however, can also result from a *relative* loss of intrinsic motivation compared to extrinsic motivation. When extrinsic motivation becomes the primary reason for acting, agents may be more inclined to engage in “gaming” behavior to maximize their rewards, such as “playing hard to get.”¹²⁹ A principal who offers an incentive signals that the agent’s behavior has value in a market.¹³⁰ A sophisticated agent may interpret the incentive as a first offer, inferring the principal is privately willing to pay more. In response, the agent may temporarily reduce his efforts to create an artificial scarcity, thereby driving up the price of his performance.¹³¹ Galle has called this “anticipatory and strategic crowd-out.”¹³² The agent may also obscure his (privately known) intrinsic motivation, ability, or the

126. Underhill, *When Extrinsic*, *supra* note 5.

127. Underhill, *Extrinsic Incentives*, *supra* note 5.

128. *See, e.g.*, Walton, *supra* note 58, at 440 (adopting this distinction). The two effects may also occur simultaneously. *Id.*

129. Wendelin Schnedler & Christoph Vanberg, *Playing ‘Hard To Get’: An Economic Rationale for Crowding Out of Intrinsically Motivated Behavior 1*, (Forschungsinstitut zur Zukunft der Arbeit (IZA), Discussion Paper No. 8108, 2014).

130. *Id.* at 5.

131. *Id.* at 7–11.

132. Galle, *supra* note 12, at 835.

costs of his activity to convince the principal that higher incentives are needed.¹³³ Concerns about temporary or individual gaming behavior to bid up prices have occurred elsewhere in the crowding-out literature, such as discussions about payment for organ donation; one of the rational bases for the NOTA's prohibition, as cited in the *Flynn* decision, was that a pay-for-donation system would allow "every last cent [to] be extracted from sick patients needful of transplants, by well-matched potential donors making 'your money or your life' offers."¹³⁴ Similarly, offering rewards to induce tax evaders to begin paying may cause previously compliant agents to begin evading taxes so that they might subsequently claim a reward for good behavior.¹³⁵ In another intriguing example, Galle notes that during the financial crisis, the Treasury Department considered offering financial incentives to banks to encourage lending; public commentators warned that if they did not implement or reject the policy immediately, banks seeking to maximize their income and ensure adoption of the policy would refuse to lend until the subsidies were in place, which would compound the temporary hardship.¹³⁶

To date, there has been little empirical investigation of the playing-hard-to-get theory. One test of this phenomenon is the aforementioned Swiss study of siting a nuclear waste repository, in which the offer of payment reduced by half the proportion of residents who were willing to accept the facility in their town.¹³⁷ The authors considered whether the residents were simply holding out in hopes that the government would increase its offer of compensation. They dismissed this possibility, however, when a follow-up question found that only five percent of respondents believed the amount was insufficient; moreover, respondents who declined initial amounts were offered higher amounts in hypothetical scenarios, and almost none agreed to accept more.¹³⁸

2. Sustainability and Future Engagement

Throughout the literature on crowding, a common concern is that although external incentives may motivate behavior or produce "temporary compliance"¹³⁹ in the short term, they may backfire in the long term, becoming "negative reinforcers

133. See Schnedler & Vanberg, *supra* note 129, at 8; see also Galle, *supra* note 12, at 813 (noting that "if carrots are on the table, producers [potential agents] should want to . . . demonstrate[] how costly and difficult it is for them to move in the direction the government wants").

134. *Flynn v. Holder*, 684 F.3d 852, 860 (9th Cir. 2012); see also Sunstein, *supra* note 120, at 546–47.

135. Lars P. Feld & Bruno S. Frey, *Tax Compliance as the Result of a Psychological Tax Contract: The Role of Incentives and Responsive Regulation*, 29 L. & POL'Y 102, 109 (2007).

136. Galle, *supra* note 12, at 835; see also *id.* at 820–21 (noting a similar dynamic that may temporarily reduce voluntary emission reductions among businesses who know that the government is considering tax incentives for this behavior).

137. Frey & Oberholzer-Gee, *supra* note 3.

138. *Id.* at 750.

139. Alfie Kohn, *Why Incentive Plans Cannot Work*, HARV. BUS. REV., Sept.–Oct. 1993, at 2.

once they are withdrawn.”¹⁴⁰ That is, “once a reward is offered, it will be required—and ‘expected’—every time the task has to be performed again—perhaps even in increasing amounts. . . . [R]ewards have a ‘ratchet effect.’”¹⁴¹ Detrimental effects on future effort may follow if extrinsic incentives cause a permanent and absolute reduction in intrinsic motivation.¹⁴² This may, for example, be due to endogenous preference changes, a changed view of the task as a transaction, or changes in the agent’s perceptions.¹⁴³ It may also arise from a desire to avoid being taken advantage of; for example, incentivized agents may view uncompensated behavior as a waste of time.¹⁴⁴

Long-term crowding-out is particularly problematic for incentives that are intended to induce habit formation,¹⁴⁵ although it is not problematic for incentives intended to have only a temporary effect.¹⁴⁶ One example of the former is financial incentives to motivate behavior among children, including reading books, obtaining good grades, and contributing to household chores. If a child is paid to read books, the theory goes, she indeed may read more books while the incentive is offered.¹⁴⁷ But once the child is an adult, she will no longer be paid to read, and she may decide to stop reading because it is no longer financially beneficial; the incentive permanently eroded her motivation to read. If the child had never been paid, she might have developed a love for reading for other reasons, and she may have continued to read in adulthood without pay. Some evidence suggests that if undergraduate students who already visit the gym regularly are offered financial incentives for making repeat visits, they may attend the gym less after those incentives are removed; experimenters observed the reverse effect, however, among nonattenders who began visiting the gym when incentivized and then continued to do so (perhaps out of habit) after the incentives were removed.¹⁴⁸ The experimenters concluded that incentives “should be targeted at people who currently do not exercise and must mandate enough practice hours for the habit to develop.”¹⁴⁹ Subsequent research found that the lasting impact of incentives was stronger among participants

140. Roland Bénabou & Jean Tirole, *Intrinsic and Extrinsic Motivation*, 70 REV. ECON. STUD. 489, 492 (2003) [hereinafter Bénabou & Tirole, *Motivation*] (emphasis added); see also GRANT, *supra* note 49, at 115, 118; Antoine Beretti, Charles Figuières & Gilles Grolleau, *Using Money To Motivate Both “Saints” and “Sinners”*: A Field Experiment on Motivational Crowding-Out, 66 KYKLOS 63 (2013); Friedel Bolle & Philipp E. Otto, *A Price Is a Signal: On Intrinsic Motivation, Crowding-Out, and Crowding-In*, 63 KYKLOS 9, 9 (2010); Charness & Gneezy, *supra* note 48, at 21.

141. Bénabou & Tirole, *Motivation*, *supra* note 140, at 503.

142. See, e.g., STEPHAN MEIER, THE ECONOMICS OF NON-SELFISH BEHAVIOUR: DECISIONS TO CONTRIBUTE MONEY TO PUBLIC GOODS 37 (2006).

143. See, e.g., Gneezy et al., *supra* note 46, at 193–94.

144. Stern, *supra* note 52, at 564.

145. For a description of two views of how incentives induce or inhibit habit formation, see Charness & Gneezy, *supra* note 48, at 3–4.

146. See AYRES, CARROTS AND STICKS, *supra* note 115, at 47.

147. See, e.g., SCHWARTZ & SHARPE, *supra* note 38, at 180.

148. Charness & Gneezy, *supra* note 48.

149. *Id.* at 23; see also Gneezy et al., *supra* note 46, at 205–06 (citing replications of the Charness and Gneezy study).

whose friends had *also* been assigned to the incentivized condition, suggesting that social network effects may play a role in the long-term effect of incentives.¹⁵⁰

Another theory of future performance suggests that individuals may eventually forget their intrinsic interest in a given task; they may remember only that they engaged in the task and obtained the reward.¹⁵¹ When the decision recurs, the agent may not recall her intrinsic motivation, and she may therefore decline to engage in the task again without an incentive. If no incentive had been offered the first time, however, the *ex post* individual may rationalize her prior behavior by assuming that she had a personally meaningful rationale, and she may be more likely to undertake the action again.

When the incentive is a penalty, evidence from at least one well-known study suggests that the counterproductive effects of penalizing bad behavior may be permanent. In this experiment, a day care levied a new fine on parents who picked up their children late; contrary to expectations, the frequency of late pickups increased, perhaps because the fine served as a cheap “price” that crowded out parents’ intrinsic motivations to arrive on time.¹⁵² Although the fine was removed several weeks later, the higher frequency of late pickups remained.¹⁵³ Similarly, a modeling study of financial incentives for prosocial activity found that after an incentive has decreased contributions to a public good, withdrawing the incentives may not restore prior contribution levels; rather, withdrawing incentives altogether at that point may even further reduce contributions because even the selfish contributors are no longer interested.¹⁵⁴ Taken together, these studies suggest a concerning norm: “Once a commodity, always a commodity.”¹⁵⁵ Or in other words, a change in reference point is difficult to reverse.¹⁵⁶ Interestingly, however, Fehr and Falk have noted that current research may conflate long-term crowding-out of intrinsic motivation with a more fleeting “disappointment effect,” which triggers loss aversion and negative reciprocity when a previously anticipated reward is removed.¹⁵⁷ Support for this idea may be found in a study of a manufacturing company that removed a long-standing incentive plan intended to boost production among its welders. Although production initially declined, rates of production

150. See Gneezy et al., *supra* note 46, at 205–06 (citing Philip Babcock & John Hartman, Exercising in Herds: Treatment Size and Status Specific Peer Effects in a Randomized Exercise Intervention (Aug. 2010) (unpublished research paper), http://www.econ.ucsb.edu/~hartman/Research_papers_files/ExerciseHerd_2010_08.pdf [<https://perma.cc/3S2C-H7ME>]).

151. Bénabou & Tirole, *Motivation*, *supra* note 140, at 506.

152. Uri Gneezy & Aldo Rustichini, *A Fine Is a Price*, 29 J. LEGAL STUD. 1, 14 (2000) [hereinafter Gneezy & Rushtichini, *A Fine Is a Price*].

153. *Id.*

154. Maarten C.W. Janssen & Ewa Mendys-Kamphorst, *The Price of a Price: On the Crowding Out and In of Social Norms*, 55 J. ECON. BEHAV. & ORG. 377, 392 (2004) (also suggesting that crowding-out of social norms may not be permanent, but that the regeneration of a social norm may take a long time).

155. Gneezy & Rustichini, *A Fine Is a Price*, *supra* note 152, at 14.

156. Gneezy & Rustichini, *Pay Enough or Don't Pay at All*, *supra* note 53.

157. Ernst Fehr & Armin Falk, *Psychological Foundations of Incentives*, 46 EUR. ECON. REV. 687, 717 (2002).

recovered over the ensuing months and ultimately matched earlier rates of productivity.¹⁵⁸ Studies are needed to evaluate this possibility.

3. Reduced Quality of Performance: Choking, Distraction, Performance Orientation, and Gaming

Another concern is whether the reduction in intrinsic motivation will change or degrade the nature of individuals' activity.¹⁵⁹ Empirical research has shown that intrinsic motivation is positively correlated with learning,¹⁶⁰ curiosity,¹⁶¹ satisfaction,¹⁶² sustainable behavior change,¹⁶³ performance quality, and (to a lesser degree) performance quantity for tasks that have a quantity component.¹⁶⁴ Concerns about detrimental impacts of incentives on performance quality are more likely to arise when crowding represents a *relative* loss of intrinsic motivation compared to extrinsic motivation; that is, where people previously engaged in an activity primarily because of some intrinsic reason, an extrinsic reward or penalty may change their balance of motivations, such that the extrinsic motivations play a larger role than intrinsic motivation in driving behavior.¹⁶⁵ The comprehensive meta-analysis of crowding effects across 183 primary studies found that "intrinsic motivation mattered more for *quality* than extrinsic incentives[,] and extrinsic incentives explained more of the variance in *quantity* performance criteria than did intrinsic motivation."¹⁶⁶ This may be because quality requires more complex and skillful tasks, which require high engagement and even personal investment; tasks measured primarily by quantity are often less cognitively demanding.¹⁶⁷ The three explanations most frequently given for reduced quality of performance in the presence of rewards are choking, distraction, and a change in focus from "progress" to "performance" orientation.

Reduced quality of performance in the presence of high-stakes incentives can be explained as "choking":¹⁶⁸ that is, when individuals are highly motivated by large

158. Kohn, *supra* note 139, at 3–4.

159. *See, e.g., id.* at 3; *see also* KOHN, *supra* note 59, at 124.

160. Frey, *supra* note 10, at 435–36.

161. *Id.*

162. *Id.*

163. Marianne Promberger & Theresa M. Marteau, *When Do Financial Incentives Reduce Intrinsic Motivation? Comparing Behaviors Studies in Psychological and Economic Literatures*, 32 HEALTH PSYCHOL. 950, 950 (2013) (citing Marie Johnston & Falko F. Sniehotta, *Financial Incentives To Change Patient Behavior*, 15 J. HEALTH SERV. RES. & POL'Y 131–32 (2010)); Winick, *supra* note 91, at 769.

164. Christopher P. Cerasoli, Jessica M. Nicklin & Michael T. Ford, *Intrinsic Motivation and Extrinsic Incentives Jointly Predict Performance: A 40-Year Meta-Analysis*, PSYCHOL. BULL. 1, 8 (2014).

165. Even if intrinsic motivation does not diminish or disappear, it may simply have a weaker link to performance. *Id.* at 3.

166. *Id.* at 17 (documenting these effects both with and without the presence of explicit incentives).

167. *Id.* at 3.

168. For an overview of choking behavior, see SIAN BEILOCK, CHOKER: WHAT THE SECRETS OF THE BRAIN REVEAL ABOUT GETTING IT RIGHT WHEN YOU HAVE TO (2010) (also cited by

incentives, they may exhibit worse performance on skill-based tasks (particularly those involving cognitive skills), although perhaps not on tasks that involve effort alone.¹⁶⁹ Mechanisms proposed for this effect include suggestions that large incentives prompt greater self-consciousness, an excessively narrow focus of attention, or an excess of arousal.¹⁷⁰ On its face, choking will look indistinguishable from an absolute loss of intrinsic motivation: in both cases, the introduction of a financial incentive may result in comparatively worse performance. But choking behavior is actually an effect of a *relative* reduction in intrinsic motivation. Here, the incentive becomes the primary driver of behavior, and individuals are *too* motivated in response¹⁷¹: their desire to obtain the large prize hampers the exercise of cognitive skill required to perform the task. Choking effects cannot be remedied by increasing the size of the incentive; the problem in choking is precisely that the incentive is already too high.

A second problem is that rewards may be distracting—they divert the agent’s attention away from the task and toward the reward or penalty.¹⁷² Even if the incentive does not interfere with motivation, it may interfere with the agent’s ability to perform well. Indeed, to incentivize creative tasks, it may be preferable to use small rewards, or large rewards that are less salient, such as rewards that are placed out of sight during the performance of the task.¹⁷³ Kelli Alces and Brian Galle have discussed this in the context of availability bias, in which agents become so focused on one item (reward) that cognitive performance on other tasks suffers; they further note that agents, such as executives, may focus so much on their largest or most salient incentive that manipulating other incentives may not influence performance.¹⁷⁴ One example of this may be the extent to which command-and-control regulations divert agents’ attention to compliance requirements and avoiding penalties, thereby undermining risk-taking and resources for innovation or quality improvement; writing in the area of health care management, Robert Gatter suggests that this effect may be seen as an instance of crowding-out.¹⁷⁵

A third mechanism by which extrinsic incentives can reduce performance quality is that they change agents’ focus from “progress” (or “mastery”) to “performance.”¹⁷⁶

Emir Kamenica, *Behavioral Economics and Psychology of Incentives*, 4 ANN. REV. ECON. 427, 432 (2012)); see also Buccafusco et al., *supra* note 92, at 1922.

169. Dan Ariely, Uri Gneezy, George Loewenstein & Nina Mazar, *Large Stakes and Big Mistakes* 19 (Fed. Reserve Bank of Bos., Working Paper No. 05-11, 2005); see also Gneezy et al., *supra* note 46, at 193.

170. Ariely et al., *supra* note 169, at 3–4; see also Kamenica, *supra* note 168 (citing examples of choking behavior for a range of tasks).

171. Ariely et al., *supra* note 169, at 1–2.

172. Bénabou & Tirole, *Motivation*, *supra* note 140, at 495 (citing research by John Condry & James Chambers, *Intrinsic Motivation and the Process of Learning*, in THE HIDDEN COST OF REWARD: NEW PERSPECTIVES ON THE PSYCHOLOGY OF HUMAN MOTIVATION 66 (Mark R. Lepper & David Greene eds., 1978)); Robert Eisenberger & Judy Cameron, *Detrimental Effects of Reward: Reality or Myth?*, 51 AM. PSYCHOLOGIST 1153, 1161–62 (1996).

173. Eisenberger & Cameron, *supra* note 172, at 1162.

174. Alces & Galle, *supra* note 58, at 79.

175. Robert Gatter, *Faith, Confidence, and Health Care: Fostering Trust in Medicine Through Law*, 39 WAKE FOREST L. REV. 395, 443 (2004).

176. SCHWARTZ & SHARPE, *supra* note 38, at 184–88; Bénabou & Tirole, *Motivation*, *supra*

Performance orientation may lead to excessive emphasis on immediate rewards at the expense of long-run benefits.¹⁷⁷ For example, people paid to solve problems may select easier problems, and people paid to read books may select those that are shorter and easier.¹⁷⁸ In education, some have argued that merit scholarships incentivize higher grades, but also lead students to select easier courses to safeguard their grades.¹⁷⁹ A randomized trial of an incentive scheme found that once children had obtained the maximum annual reward for reading achievement, their subsequent reading performance declined compared to those who had never been incentivized.¹⁸⁰ Where intellectual property protection is available for academic science, some have suggested that financial incentives may lead academics to move their research programs toward commercially marketable lines of inquiry.¹⁸¹ These may each be viewed as an example of “gaming” behavior, however innocuous—in every case, “people whose livelihoods are based on an index will figure out how to manipulate it.”¹⁸² A complementary concern is that reward-focused individuals may fear revealing signs of weakness or incompetence, making them less likely to seek help from the principal; without help, their progress may suffer.¹⁸³ This poses problems for both short- and long-term performance quality and skill development.

When agents are providing services to third parties, loss of performance quality can lead to negative externalities. In health care, for example, pay-for-performance strategies condition some percentage of provider compensation based on indicators of quality, resource use, and patient-reported outcomes; one common concern about such programs is that they induce healthcare providers to select against high-risk, severely ill, or noncompliant patients that could count against performance metrics.¹⁸⁴ Theorists have also expressed worry that these pay-for-performance programs lead providers to “focus disproportionately on aspects of care that are incentivized and possibly neglect other important aspects that are not,” and rewarding providers based on metrics may also create unintended incentives for manipulating data or gaming systems to maximize rewards.¹⁸⁵ Over the long term,

note 140, at 495; *see also* Bregm, *supra* note 60, at 22; Charness & Gneezy, *supra* note 48, at 21.

177. Kohn, *supra* note 139, at 6.

178. *See* SCHWARTZ & SHARPE, *supra* note 38, at 180; Frey & Jegen, *supra* note 103, at 596.

179. Gneezy et al., *supra* note 46, at 198 (citing Christopher Cornwell, David B. Mustard & Deepa J. Sridhar, *The Enrollment Effects of Merit-Based Financial Aid: Evidence from Georgia’s HOPE Program*, 24 J. LAB. ECON. 761 (2006)).

180. Eric P. Bettinger, *Paying To Learn: The Effect of Financial Incentives on Elementary School Test Scores* (Nat’l Bureau of Econ. Research Working Paper No. 16333, 2008), <http://www.nber.org/papers/w16333.pdf> [<https://perma.cc/GK4R-CH6M>].

181. *See, e.g.*, Kapczynski, *supra* note 96, at 1025 n.198 (citing Pierre Azoulay, Wavery Ding & Toby Stuart, *The Impact of Academic Patenting on the Rate, Quality and Direction of (Public) Research Output*, 57 J. INDUS. ECON. 637 (2009)).

182. Schwartz, *supra* note 57.

183. Kohn, *supra* note 139, at 6.

184. SCHWARTZ & SHARPE, *supra* note 38, at 182–83; Eijkenaar et al., *supra* note 37, at 115–16.

185. Eijkenaar et al., *supra* note 37, at 116; *see also* Priscilla Magrath & Mark Nichter, *Paying for Performance and the Social Relations of Health Care Provision: An Anthropological Perspective*, 75 SOC. SCI. & MED. 1778, 1780 (2012); Oliver & Brown, *supra*

these effects of relative crowding-out may exacerbate healthcare inequalities.¹⁸⁶ Empirical evidence for each of these concerns (selecting against high-risk patients, neglecting unincentivized care, and gaming) is mixed.¹⁸⁷ Similar dynamics may occur when teachers or schools are incentivized on the basis of their pupils' standardized test results, leading them to focus only on marginal students capable of improving their performance to a passing standard, rather than highly talented or highly challenged students.¹⁸⁸

4. Agent Selection Effects

A fourth concern about crowding is that introducing a financial incentive will change the distribution of individuals who engage in the behavior of interest. For example, when incentives increase for a given behavior, particularly a prosocial behavior, they may repel “more public-spirited agents” while attracting “greedy” people who may care less about the underlying cause.¹⁸⁹ This cumulative impact can occur only when an incentive is available to all comers—or at least to a population of individuals not already engaged in the behavior at baseline. Even if the absolute number of individuals engaging in the behavior does not change (i.e., enough selfish people join in to counteract the loss of generous people), the rebalancing may have several downstream impacts. These include shifting the burden of the activity, lowering the quality of performance, and impairing the group's image.¹⁹⁰ Incentives may also lead to gaming behavior that changes the identity of incentive recipients. For example, some have argued that when subsidies are offered to people with income below a certain threshold (e.g., as in the Affordable Care Act), it encourages people to underreport or purposely lower their income to that threshold.¹⁹¹ Several legal scholars have also noted that when incentives are offered to stop bad behavior, they may attract new entrants to engage in bad behavior in order to obtain payment for stopping.¹⁹²

When an incentive changes the population of agents who participate in a particular activity, group differences may in fact shift the burden or benefits of a given activity to a new demographic. For example, evaluations of incentives for school achievement have found that incentives increased certification and college attendance for girls but not boys, and increased academic performance for high-ability but not low-ability students.¹⁹³ Another important example is once again blood donation. I have already noted the finding that offering payment may lead to

note 37, at 80–83.

186. Eijkenaar et al., *supra* note 37, at 116.

187. *Id.* at 124–25, 127.

188. See SCHWARTZ & SHARPE, *supra* note 38, at 177–79.

189. MEIER, *supra* note 142, at 37; Roland Bénabou & Jean Tirole, *Incentives and Prosocial Behavior*, 96 AM. ECON. REV. 1652, 1659–60 (2006) [hereinafter Bénabou & Tirole, *Prosocial Behavior*].

190. *Id.*

191. Galle, *supra* note 12, at 831.

192. *Id.* at 812, 820 (citing research by Coase and others).

193. Gneezy et al., *supra* note 46, at 198.

reduced blood donation by women, without influencing donation rates for men;¹⁹⁴ survey studies also note a greater propensity for crowding-out among older and more experienced blood donors.¹⁹⁵ This dynamic across an entire population would reallocate the burdens and benefits of blood donation, and some express concern that donors motivated by incentives may be less honest about their health histories.¹⁹⁶ Response to monetary incentives may also depend on the setting; one survey study suggested that Austrian blood donors may increase donation in response to nonmonetary rewards, but Italian and Swedish donors may not.¹⁹⁷ Concerns about the balance of activity benefits and harms also extend to organ donation. A simulation study of organ donation incentives found that market incentives may “induce the relatively poor to donate [organs] while not having a significant effect on the choices of wealthy donors.”¹⁹⁸ Some have suggested that paying low wages for military service can be a way to avoid recruits with mercenary motivations.¹⁹⁹ Others have worried that paying for medical research participation can affect the sample of human subjects, and therefore influence the generalizability of findings.²⁰⁰

5. Inefficient Competition among Principals and Agents

When principals compete for agents’ time and resources, particularly when they are seeking agents to engage in prosocial activities, this competition can also drive up incentives,²⁰¹ exacerbating crowding-out concerns about the quality of participation and identity of agents. This competition may produce also excessive participation by less public-spirited or less qualified agents.²⁰² These concerns may be illustrated by the payment of incentives for human subjects to participate in research. At least one study suggests that paid research subjects view their participation as a type of employment, extending even to sharing information about

194. Carl Mellström & Magnus Johannesson, *Crowding Out in Blood Donation: Was Titmuss Right?*, 6 J. EUR. ECON. ASS’N 845 (2008).

195. See surveyed literature in Joan Costa-Font, Mireia Jofre-Bonet & Steven T. Yen, *Not All Incentives Wash Out the Warm Glow: The Case of Blood Donation Revisited* (Ctr. for Econ. Performance, Discussion Paper No. 1157, 2012), http://eprints.lse.ac.uk/47679/1/_libfile_REPOSITORY_Content_Centre_for_Economic_Performance_Discussion_papers_dp1157.pdf [<https://perma.cc/24Y3-87KX>].

196. Danielle Chmielewski, Liliana L. Bove, Jing Lei, Ben Neville & Anish Nagpal, *A New Perspective on the Incentive-Blood Donation Relationship: Partnership, Congruency, and Affirmation of Competence*, 52 TRANSFUSION 1889, 1894 (2012).

197. Costa-Font et al., *supra* note 195, at 16.

198. Cary Deck & Erik O. Kimbrough, *Do Market Incentives Crowd Out Charitable Giving?*, 47 J. SOCIO-ECON. 16, 21 (2013).

199. Bénabou & Tirole, *Prosocial Behavior*, *supra* note 189, at 1671.

200. For example, many studies have the investigated effect of adding incentives for completing a survey. One study found that when incentives were offered for the completion of an environmental behavior, respondents differed significantly by age and education. Beretti et al., *supra* note 140, at 74–75.

201. Bénabou & Tirole, *Prosocial Behavior*, *supra* note 189, at 1672 n.41.

202. *Id.*

different studies' "conditions of employment."²⁰³ This worries some researchers, who fear that competition for subjects will ultimately increase the cost of research and price out low-cost studies.²⁰⁴ Reliance on research participation income (enabled by access to many paying studies) may also encourage potential participants to lie about eligibility for high-paying studies, thereby interfering with the validity of study results.

Some have also suggested that the availability of individual rewards may harm relationships among agents who are expected to collaborate. When rewards are in limited supply or based on performance relative to one's peers, agents must not only compete for the incentive, but also continue working alongside their peers who have won or lost.²⁰⁵ The negative impact on collective effort and cooperation may outweigh benefits of the incentive in these scenarios.²⁰⁶ One vignette study has examined the potential impact of awards for cooperation on research teams at a technology institution; the study suggested that although the receipt of an award may increase motivation to collaborate, nonreceipt of the award may also deter disappointed losers, who reported lower subsequent motivation to cooperate with colleagues.²⁰⁷

6. Spillovers and Horizontal Creep

Some have expressed concern that motivational crowding-out may affect multiple behaviors.²⁰⁸ Bruno Frey and Matthias Benz refer to this as the "motivation transfer" or "motivational spill-over" effect, by which incentives can depress motivation in new, unincentivized areas, often by altering the nature of the relationship between the principal and the agent.²⁰⁹ Horizontal creep may also be the anxiety behind concerns about "self-regulation"; for example, Deci, Ryan, and Koestner suggest that "the primary negative of effects of rewards is that they tend to . . . undermine people's taking responsibility for motivating or regulating themselves."²¹⁰ As a result,

203. Peter Davidson & Kimberly Page, *Research Participation as Work: Comparing the Perspectives of Researchers and Economically Marginalized Populations*, 102 AM. J. PUB. HEALTH 1254 (2012).

204. See Martin Wilkinson & Andrew Moore, *Inducements Revisited*, 13 BIOETHICS 114, 119 (1999) (rejecting this argument).

205. Kohn, *supra* note 139, at 5.

206. *Id.*

207. Susanne Neckermann & Bruno S. Frey, *Awards as Incentives* 22–23 (Inst. for Empirical Research in Econ., Working Paper No. 334, 2008), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1021208 [<https://perma.cc/SZD2-G9P6>].

208. MEIER, *supra* note 142, at 37; Beretti et al., *supra* note 140, at 65; Bruno S. Frey, *A Constitution for Knave's Crowds Out Civic Virtues*, 443 ECON. J. 1043, 1046 (1997) (warning of "an indirect 'motivational spill-over effect'" extending to areas beyond the focus of the external intervention).

209. See Bruno Frey & Matthias Benz, *Motivation Transfer Effect*, (Inst. For Empirical Research in Econ., Univ. of Zürich 2001, Working Paper) (using the term "motivation transfer"); see also BRUNO S. FREY, NOT JUST FOR THE MONEY 35 (1997) (using "motivational spill-over").

210. Edward L. Deci, Richard M. Ryan & Richard Koestner, *A Meta-Analytic Review of Experiments Examining the Effects of Extrinsic Rewards on Intrinsic Motivation*, 125

institutions' short-term efforts to control agents' behavior through incentives may cause long-term or generalized harm.²¹¹

Frey illustrates spillovers with an example from environmental policy, where “[i]nstruments such as effluent charges or tradable permits work efficiently where they are applied, but the induced substitute of environmental ethics by monetary incentives leads people to protect the environment less in those areas where the instruments are not applied.”²¹² Stern has also discussed how incentives may crowd out intrinsic motivation for environmental conservation across the board, suggesting that incentivized agents begin to view uncompensated activity as unattractive. This loss of motivation may undermine other environmentally responsible activities or voting decisions.²¹³ Similar effects may obtain when extrinsic incentives are punitive, causing undesirable behavior in unpunished areas to escalate. In other spillover applications, Frey suggests that distrustful legal rules may undermine good behavior by citizens, that paying for siting NIMBY projects may undermine civic virtue for other public activities, and that incentives for employees may undermine motivations to engage in unincentivized activity.²¹⁴ Horizontal creep of motivational crowding-out is particularly worrisome when multiple activities stem from the same type of motivation, when they involve the same “material content” such as environmentalism, when they activate similar cultural norms, or when they take place in the same principal-agent relationship (such as the relationship between a government and citizens).²¹⁵ For example, one analysis suggests that changes over time in civic norms are simultaneously linked to changes in voter participation, charitable contributions, and social cooperation activities.²¹⁶

In addition to horizontal creep across activities, some evidence may also suggest horizontal creep of motivational crowding-out across groups of people in geography and time.²¹⁷ This is consistent with the endogenous preferences theory of motivational crowding-out, and it finds some support in empirical evidence.²¹⁸

B. *Autonomy Impacts*

In the case of negative incentives (penalties) and mandates, the autonomy problems posed by extrinsic incentives are obvious: agents lose choice options, or

PSYCHOL. BULL. 627, 659 (1999).

211. *Id.*

212. Frey, *supra* note 10, at 436 (extending the insight to “tax morale”); *see also* Frey & Stutzer, *supra* note 51, at 412–22.

213. Stern, *supra* note 52, at 564–65.

214. *See* Frey & Benz, *supra* note 209, at 14–16.

215. FREY, *supra* note 209, at 36–37; Frey, *supra* note 208, at 1047; Frey & Benz, *supra* note 209, at 17.

216. Frey, *supra* note 208, at 1047; *see also* Frey & Benz, *supra* note 209, at 17.

217. *See* FREY, *supra* note 209, at 36 (“The spill-over effect may not only relate to areas but also to people and over time.”).

218. For example, after the residents of one Swiss community rejected an offer of compensation for hosting nuclear waste facility, citizens of the nearby towns were *also* more likely to reject the project, compared to citizens of towns further away. Frey, *supra* note 208, at 1048.

certain choices will now put them in a worse position *ex post*. But autonomy concerns may also arise from positive incentives—prizes and rewards. Motivational crowding-out, as I have described it, is an absolute or relative reduction in intrinsic motivation due to an extrinsic incentive. But this raises the somewhat semantic question of whether crowding out *is itself* the loss of autonomy (in this case, a displacement of one's own motivations by a principal's extrinsic incentive), or whether crowding out is *evidence of* a loss of autonomy. For the purposes of this Article, I believe it may be unnecessary to parse this distinction; it is sufficient to note that motivational crowding-out is bound up with ways in which incentives, both positive and negative, may impair autonomous decision making.

1. Undue Inducement, Coercion, and “Disabling Choice”

As Ruth Grant has noted, incentives are not only a form of trade, but also a form of exerting power over the agent, somewhere between exerting force and persuading the agent to act.²¹⁹ Moreover, “when incentives are in fact deliberate tools of policy, the equality of the parties involved ought not to be assumed.”²²⁰ Others have worried that incentives can stifle discussion about alternatives.²²¹ Large incentives can indeed limit autonomous choices; when an incentive is so attractive as to be irresistible, it may carry disproportionate weight in the agent's decision. Concerns about agent autonomy in the face of positive incentives generally occur when an agent is incentivized to do something risky or to his detriment, such as participating in medical research²²² or donating an organ,²²³ although other scholars have regarded these claims with skepticism.²²⁴ Concerns of undue influence, however, have also been raised in relation to workplace wellness programs²²⁵ and other incentive programs such as conditional International Monetary Fund and World Bank loans to low-income countries.²²⁶

In his book on commitment contracting, Ian Ayres discusses the potential of financial incentives to be “disabling” when they are large enough. When an agent tries to bind *himself* to a choice, for example, setting a high price for bad behavior

219. GRANT, *supra* note 49, at 41.

220. *Id.*

221. See MICHAEL J. SANDEL, WHAT MONEY CAN'T BUY 120 (2012).

222. See, e.g., Ezekiel J. Emanuel, *Ending Concerns about Undue Inducement*, 32 J.L. MED. & ETHICS 100 (2004); Ari VanderWalde & Seth Kurzban, *Paying Human Subjects in Research: Where Are We, How Did We Get Here, and Now What?*, 39 J.L. MED. & ETHICS 543 (2011).

223. See, e.g., I. Glenn Cohen, *Transplant Tourism: The Ethics and Regulation of International Markets for Organs*, 41 J.L. MED. & ETHICS 269 (2013).

224. See, e.g., William M. Sage, *Paying Research Subjects: The US Example*, in ESSAIS CLINIQUES, QUELS RISQUES? 137 (Anne Laude & Didier Tabuteau eds., 2007); Emanuel, *supra* note 222.

225. See, e.g., Matt Lamkin, *Health Care Reform, Wellness Programs and the Erosion of Informed Consent*, 101 KY. L.J. 435 (2012); Kristin M. Madison, Kevin G. Volpp & Scott D. Halpern, *The Law, Policy, and Ethics of Employers' Use of Financial Incentives To Improve Health*, 39 J.L. MED. & ETHICS 450 (2011).

226. See, e.g., GRANT, *supra* note 49, at 71, 101–11.

can effectively put choices out of reach.²²⁷ Although most incentives set prices for behaviors that force the agent to internalize the full costs and benefits of his activity, commitment contracts use super-incentives to make choices easy.²²⁸ That is, “no rational future self” would choose to forgo the reward or incurred the penalty in lieu of performance.²²⁹ Ayres offers many examples of these self-imposed incentives, including a fine of \$5000 for smoking one cigarette,²³⁰ a “kosher” telephone that imposes more than a \$2-per-minute surcharge for Sabbath calls,²³¹ and medications that induce vomiting upon ingestion of alcohol.²³² Ayres’s work focuses on situations where agents set their own incentives (i.e., the agent and principal are the same), which do not raise autonomy concerns.²³³ But it is easy to imagine these types of incentives set by a separate principal.

The Supreme Court has recognized the possibility of coercive incentives in its jurisprudence regarding the Taxing and Spending Clause,²³⁴ finding that the conditions imposed on federal funds rendered “coercive” taxing and spending programs such as the Agricultural Adjustment Act of 1933²³⁵ and the penalty for Medicaid expansion in the Affordable Care Act.²³⁶ This line of cases underscores that although the point at which financial incentives become “coercion” may be difficult to discern, Congress may indeed undermine state autonomy by offering incentives that are too large. Many cases have noted the difficulty of line-drawing in such cases; as Justice Cardozo noted in 1937, “the location of the point at which pressure turns into compulsion, and ceases to be inducement, would be a question of degree,—at times, perhaps, of fact.”²³⁷ When the Court revisited this question in *South Dakota v. Dole* in 1987, Chief Justice Rehnquist’s majority opinion again noted that “in some circumstances the financial inducement offered by Congress might be so coercive as to pass the point at which ‘pressure turns into compulsion,’ but that the penalty of losing five percent of highway funds in exchange for failing to raise the drinking age did not cross the line.”²³⁸ In the most recent formulation of this rule, Chief Justice Roberts has held that although the Court has not “‘fix[ed] the outermost line’ where persuasion gives way to coercion,” the Affordable Care Act reached beyond this line by requiring states to expand Medicaid as a condition of

227. AYRES, CARROTS AND STICKS, *supra* note 115, at 30.

228. *Id.*

229. *Id.* at 35.

230. *Id.* at 30.

231. *Id.* at 31.

232. *Id.* at 29.

233. *See infra* Section IV.A.

234. U.S. CONST. art. I, § 8, cl. 1.

235. *United States v. Butler*, 297 U.S. 1, 71 (1936).

236. *Nat’l Fed’n of Indep. Bus. v. Sebelius*, 567 U.S. 519 (2012); *see also* *South Dakota v. Dole*, 483 U.S. 203 (1987).

237. *Charles C. Steward Mach. Co. v. Davis*, 301 U.S. 548, 590 (1937).

238. 483 U.S. at 204 (quoting *Steward Mach. Co.*, 301 U.S. at 590).

accepting any Medicaid funds.²³⁹ Concerns about undue influence have also arisen in connection with the conditions under the No Child Left Behind Act.²⁴⁰

2. Intrusiveness

In order to administer an incentive plan, the principal must also impose some mechanism for behavior monitoring and measurement: in a word, carrots and sticks demand surveillance. Whether the incentive is negative or positive, as Kohn has noted, “what is essentially taking place in both approaches is that a lot of people are getting caught.”²⁴¹ Climates of “greater surveillance, evaluation, and competition” have been independently suggested to negatively impact intrinsic motivation²⁴² and limit exploration and learning.²⁴³ This has been discussed in environmental law as “the intrusion objection,” which argues that individual behaviors that lead to environmental harm often occur at home, and efforts to monitor and incentivize or penalize such behavior are too invasive.²⁴⁴ As Adrian Vermeule has noted, monitoring imposes costs on intrinsically motivated agents, and these costs can exacerbate bad behavior by selecting for “knaves.”²⁴⁵ Intrusiveness can thus exacerbate crowding-out effects through the mechanisms of impaired self-determination and perceptions of principal hostility or agent trust, and it can increase agent selection effects.

C. Attitudinal and Moral Impacts

Crowding-out has motivated concern not only due to its effects on short- and long-term behavior, but also for its effects on societal and individual values as an end in themselves.

1. Societal Values

The specters of spillovers, endogenous preference adaptation, and “motivation atrophy” have shaped the large-scale worry, expressed by scholars such as Grant, Schwarz, Sharpe, Bowles, and Sandel, that the crowding-out of intrinsic motivation

239. *Sebelius*, 567 U.S. at 584 (2012) (quoting *Steward Mach. Co.*, 301 U.S. at 591). For further discussion of the role of coercion in the *Sebelius* decision, see Nicole Huberfeld, Elizabeth Weeks Leonard & Kevin Outterson, *Plunging into Endless Difficulties: Medicaid and Coercion in National Federation of Independent Business v. Sebelius*, 93 B.U. L. REV. 1 (2013).

240. See, e.g., GRANT, *supra* note 49, at 72.

241. Kohn, *supra* note 139, at 7.

242. Deci et al., *supra* note 210, at 659; see also KOHN, *supra* note 59, at 79–81.

243. Kohn, *supra* note 139, at 5.

244. Kuh, *supra* note 51, at 1123 n.28 (quoting Hope M. Babcock, *Assuming Personal Responsibility for Improving the Environment: Moving Toward a New Environmental Norm*, 33 HARV. ENVTL. L. REV. 117, 123 (2009)).

245. Adrian Vermeule, *Precautionary Principles in Constitutional Law*, 4 J. LEGAL ANALYSIS 181, 207–08 (2012); Adrian Vermeule, *Hume’s Second-Best Constitutionalism*, 70 U. CHI. L. REV. 421, 425–26 (2003).

is destructive in the long term for values that should normatively shape modern societies, such as altruism and civic duty.²⁴⁶ For example, Michael Sandel has written that market mechanisms easily become “market norms” that limit the influence of nonmarket (moral) norms.²⁴⁷ Indeed, crowding-out is the cornerstone of Sandel’s “corruption objection” to allowing incentives and transactions into areas of life previously guided by social and moral norms.²⁴⁸ Grant likewise expresses concern that incentives limit debate over moral choices, noting that “once incentives are introduced in certain areas and people become habituated to their use, the important questions simply no longer arise,” citing the increased acceptability of plea bargaining as an example.²⁴⁹

Scholars concerned about the erosion of societal values are often skeptical of economic efforts to make incentives “smarter” in order to avoid and eliminate perverse effects.²⁵⁰ Even if incentives have their desired behavioral effects, the displacement of motivations such as altruism, professional duty, public service, and civic duty may be harmful to the social fabric and to the process by which individuals internalize democratic values.²⁵¹ To cure this harm, Sandel argues that the only remedy is a more comprehensive and inclusive social discussion about where market incentives should and should not be deployed, and which moral values should be preserved free of extrinsic influence.²⁵²

2. Individual Values and Self-Respect

When crowding-out produces an absolute decline in a (noble) intrinsic motivation, the decline in that motivation may well be viewed as an attitudinal or moral cost to the agent analogous to the change in societal values described above. For the individual, a second potential harm lurks in the possibility of reduced self-respect for incentivized actions. That is, the agent’s perception of undue inducement may also reduce his or her own sense of personal achievement when an incentive has its intended effect. In his work on commitment contracting, Ayres tells the story of a colleague who wanted to lose weight *without* resorting to a commitment contract: “What does it say about me as a person in terms of maturity, my self-control, if I

246. SANDEL, *supra* note 221; SCHWARTZ & SHARPE, *supra* note 38; Bowles, *supra* note 53. This argument is shared by Emad Atiq’s discussion of the crowding-out effects of legal incentives. Atiq, *supra* note 61, at 1073; *see also* GRANT, *supra* note 49, at 4 (noting the difference between the “moralistic attitude” that guides concern over the quality of individuals’ character, and the “Mandevillian attitude” that prompts concern over individual choices in aggregate rather than the moral values driving behaviors).

247. This is the central argument from SANDEL, *supra* note 221.

248. SANDEL, *supra* note 221, at 110; *see also* Michael Sandel, *Why We Shouldn’t Trust Markets with Our Civic Life*, TED (June 2013), http://www.ted.com/talks/michael_sandel_why_we_shouldn_t_trust_markets_with_our_civic_life [<https://perma.cc/H37R-N7AE>].

249. GRANT, *supra* note 49, at 8, 76–86.

250. SCHWARTZ & SHARPE, *supra* note 39.

251. SAMUEL BOWLES, *THE MORAL ECONOMY: WHY GOOD INCENTIVES ARE NO SUBSTITUTE FOR GOOD CITIZENS* 44 (2010); *see also* Bowles, *supra* note 53 (making a similar argument).

252. SANDEL, *supra* note 221, at 14–15.

need to be nagged[?] . . . I'd like to think that if this is a goal that's important to me, I can accomplish it straight out."²⁵³

Although Ayres encourages us to “resist the urge to think that all accomplishments achieved through extrinsic motivation are somehow less worthy than those achieved solely with intrinsic desire,” many individuals may nevertheless find their incentivized achievements to be less meaningful and even indicative of poor self-control.²⁵⁴ Sandel has echoed this view. In an exposition of incentives for health behaviors, such as weight loss and smoking, he expresses the concern that “bribe[s] may become habit forming,” undermining the self-respect that should motivate behavior change instead.²⁵⁵ Apart from the concern about whether incentivized behavior changes are sustainable, this prompts the question of whether individual preference changes in response to incentives may be an independent, moral harm to the agent.

III. POTENTIAL BENEFITS OF CROWDING-OUT

The previous Part considered the harms that scholars have attributed to crowding-out. In this Part, I depart from the conventional view of crowding-out harms to offer several potential *benefits* of displacing intrinsic motivation, including my own theories alongside benefits hypothesized by others. These proposed benefits are in need of empirical testing, but they provide a theoretically appealing set of ideas that may rehabilitate motivational crowding-out in some settings.

A. Motivation Conservation

Making choices is burdensome, and this burden takes a toll on our cognitive and physical capacities.²⁵⁶ For example, although willpower may indeed be strengthened in some ways, evidence also shows that it can be depleted, particularly in moments of decision fatigue.²⁵⁷ To the extent that incentives can clarify or simplify our choices—particularly those incentives that are irresistible—we may reap benefits by saving our energy for other and potentially more important or personal choices. In this way, crowding-out may help conserve motivation for situations where incentives are unavailable.

Sandel has noted several cases where economic thinkers have made this argument, including in lectures and written work by Sir Dennis H. Robertson, Kenneth Arrow, and Lawrence Summers.²⁵⁸ In an elegant (though critical) restatement of this theory,

253. AYRES, *THE \$500 DIET*, *supra* note 41, at 41.

254. *Id.* at 38–43.

255. SANDEL, *supra* note 221, at 59.

256. See, e.g., Cass R. Sunstein, *Choosing Not to Choose*, 64 DUKE L.J. 1 (2014); Kathleen D. Vohls, Brandon J. Schmeichel, Noelle M. Nelson, Roy F. Baumeister, Jean M. Twenge & Dianne M. Tice, *Making Choices Impairs Subsequent Self-Control: A Limited-Resource Account of Decision Making, Self-Regulation, and Active Initiative*, 94 J. PERSONALITY & SOC. PSYCHOL. 883 (2008).

257. ROY F. BAUMEISTER & JOHN M. TIERNEY, *WILLPOWER: WHY SELF-CONTROL IS THE SECRET OF SUCCESS* 88–107 (2012).

258. See SANDEL, *supra* note 221, at 126–30.

Sandel writes, “By promoting policies that rely, whenever possible, on self-interest rather than altruism or moral considerations, the economist saves society from squandering its scarce supply of virtue.”²⁵⁹ Where incentives reduce the need for intrinsic motivation, they may help us to conserve our energy for other situations. In a more nuanced argument, Ayres has distinguished the importance of intrinsic motivation for tasks that form part of one’s identity, compared to tasks that do not:

Using extrinsic motivation on [a] less important task might mean that I have a greater capacity to marshal my intrinsic motivation to attend to the things that I really care about It’s because other things are more important in our lives that we should be open to using commitments to help on everything else.²⁶⁰

But the idea of conserving motivation has drawn fire from those who believe that continual exertion of motivation is instead self-reinforcing. Sandel, for example, argues that “altruism, generosity, solidarity, and civic spirit . . . are more like muscles that develop and grow stronger with exercise. One of the defects of a market-driven society is that it lets these virtues languish.”²⁶¹

Empirical research is needed to understand whether increased engagement in intrinsically motivated activities, such as altruistic community service, strengthens or atrophies our moral muscles. But if incentives do indeed conserve valuable motivation for other causes, this may be an important benefit of crowding-out.

B. Displacement of Invidious Motivations

When concerns about motivational crowding-out arise in legal scholarship, they reflect a rosy view of human nature, with concerns about laudable intrinsic motivations such as altruism, civic duty, public service, and reciprocity. But some motivations may not be worth preserving,²⁶² and at times the crowding-out of invidious motivations may be beneficial. Such motivations may include socially harmful interpersonal biases—including biases on the basis of race, gender, sexual orientation, or disability—which are well-documented and pernicious influences on opportunity and equal treatment. Debiasing strategies typically include attempts to insulate individuals from harm, efforts to intervene directly in biased behavior, and more subtle efforts to debias indirectly.²⁶³ But if incentives can crowd out invidious motivations such as bias, I have hypothesized that they may prove to be an unexpected debiasing tool. My preliminary test of this hypothesis has yielded unexpected contrary findings with respect to racial bias.²⁶⁴ But research in this area

259. *Id.* at 128.

260. AYRES, *THE \$500 DIET*, *supra* note 41, at 43.

261. SANDEL, *supra* note 221, at 130.

262. Frey, *supra* note 10, at 436.

263. Christine Jolls & Cass R. Sunstein, *The Law of Implicit Bias*, 94 CALIF. L. REV. 969 (2006).

264. I have conducted an empirical test of this phenomenon with the surprising result that incentives may *increase* susceptibility to implicit bias. My hypothesis may therefore be wrong, and the crowding-*in* of invidious bias may be another unexpected hazard of incentives. Kristen

is young, and further study is needed to evaluate this claim as applied to a range of potential motivations. The crowding out of invidious motivations is theoretically appealing where incentives are used to promote choices that affect third parties (e.g., pay-for-performance arrangements, incentives for hiring employees).²⁶⁵

C. Predictability

High levels of intrinsic motivation may at times be undesirable.²⁶⁶ Agents with high intrinsic motivation may be idiosyncratic and difficult to predict, which has been suggested as a particular problem for guiding agents in the workplace.²⁶⁷ Once incentives are high enough, the disciplining or relative price effect of incentives can override any absolute reductions in intrinsic motivation.²⁶⁸ This increase in the predictability of agent behavior may be desirable in some contexts.

The surveillance and administration of incentives schemes also require metrics for assessment. That is, incentive programs create more complete contracts between principals and agents, which “promise uniformity, fairness, and objectivity.”²⁶⁹ These clearer expectations may benefit agents as well as principals, and the uniform administration of incentive programs can promote equality goals. Although not all incentive schemes are highly specific—and although transparent metrics may inadvertently encourage gaming behaviors in some contexts²⁷⁰—incentives may do much to promote measurable and predictable outcomes.²⁷¹

D. Increased Principal Confidence and Investment in Agents

When motivational crowding-out increases the predictability of agents’ behavior, it may also increase principals’ comfort in working with agents. For example, one economic study found that when principals knew they could punish agents at a high cost for misbehavior, thereby displacing intrinsic motivations with an incentive-based strategy, they were comfortable investing more, which generated gains in efficiency.²⁷² The increase in principal investment may be a net benefit for agents, even when motivational crowding-out has some detrimental effects.

Underhill, *Price and Prejudice*, in submission (on file with author).

265. See *infra* Section IV.B for examples of incentives for actions that benefit third parties. Invidious motivations may be less relevant for some choices, such as recycling or grade-contingent scholarships.

266. Frey, *supra* note 10, at 431.

267. *Id.* at 436.

268. See Frey & Jegen, *supra* note 103, at 593.

269. SCHWARTZ & SHARPE, *supra* note 38, at 189.

270. See, e.g., Maurice E. Stucke, *In Search of Effective Ethics & Compliance Programs*, 39 J. CORP. L. 669, 823 (2014) (noting that a firm’s compliance program may “provide[] employees innovative ways to avoid detection” of unethical behavior).

271. See SCHWARTZ & SHARPE, *supra* note 38, at 189 (arguing that although incentives may make performance and evaluation more predictable, they are nonetheless too toxic to intrinsic motivations to make them wise).

272. Mary Rigdon, *Trust and Reciprocity in Incentive Contracting*, 70 J. ECON. BEHAV. & ORG. 93, 98 (2009) (noting that principals failed to invest more when they knew they had the opportunity to reward agents at a high rate for good performance).

E. Marginal Benefits of Incentives

Another unexpected benefit of motivational crowding-out may be an increase in the marginal benefit of agents' actions. Hwang and Bowles have pointed out that when crowding-out depresses agent activity, as in when incentives lower agents' level of contribution to a public good, each contribution by an individual agent accounts for a larger share of the total.²⁷³ Thus, even though the incentive is marginally less effective due to crowding-out, the benefits it does purchase are a comparatively larger slice of agent activity. When this dynamic occurs, it may sometimes be most efficient for a sophisticated planner to maintain or even increase the incentive when crowding-out occurs.²⁷⁴

F. Efficacy of Future Incentives

Theories of endogenous preference adaptation suggest that we can develop a taste or intrinsic preference for incentives. This has been expressed as concern about spillovers, whereby motivation to undertake other unincentivized activities decreases. But interestingly, spillovers may make future incentives, or incentives in other domains, more potent if they represent preference changes in favor of extrinsic rewards. For example, once you incentivize a town to accept a waste facility, perhaps their new preference for incentives will allow more leeway to incentivize the construction of a power plant or a freeway. Over time, this may arouse concern on the basis of autonomy and the attitudinal or moral impacts of incentive schemes, but from a pure efficiency perspective, it may be beneficial for the achievement of future behavioral goals.

G. The Informational Value of Incentive Failures

Motivational crowding-out is not the only concern about incentives; many have argued that they distract from the underlying causes of suboptimal behavior and low motivation. But when incentives backfire, they refocus attention on the underlying context that made intrinsic motivation inadequate in the first place. Focusing on financial incentives alone may cause us to neglect the nonfinancial motivations that shape behavior.²⁷⁵ For example, the failure of the Spare the Air program in San Francisco prompted an investigation to explain why commuters took more car trips on smoggy days when public transit was free;²⁷⁶ this revealed that free transit days produced large increases in the numbers of people using public transit for shopping and leisure purposes, causing commuters to flee both public transit (to avoid crowded trips) and walking or cycling (to avoid the well-publicized smog that triggered the free transit day).²⁷⁷ The failure of this incentive plan identified two important reasons

273. See Hwang & Bowles, *supra* note 53, at 20.

274. *Id.*

275. See, e.g., Richard M. Ryan & Edward L. Deci, *Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions*, 25 CONTEMP. EDUC. PSYCHOL. 54, 56 (2000).

276. Sexton, *supra* note 54, at 573.

277. *Id.*

why commuters may avoid alternatives to car travel, presenting both the need and the opportunity to address these issues.²⁷⁸

IV. INCENTIVE ARCHITECTURE AND A FRAMEWORK FOR INTERVENTION

The prior Parts have described evidence for motivational crowding-out and its relevance to law, the mechanisms by which motivational crowding-out occurs, and its downstream harms with respect to autonomy, behavioral outcomes, and attitudinal outcomes. A key lesson from the empirical evidence on crowding-out is its heterogeneity: the extent to which crowding-out effects are problematic, and the remedy for these problems, will depend on the context and the mechanism by which crowding-out occurs. To date, legal scholars have tended to treat motivational crowding-out as uniformly detrimental, raising the fear that crowding-out will undermine law and policy initiatives across a range of domains. At times, these fears have prompted lawmakers to make incentives entirely unavailable, as with compensation for organ donation, or they have led to arguments against the design of public and private incentive arrangements, as with the design of executive compensation, workplace wellness programs, or the offer of compensation for siting noxious facilities. The precautionary principle—bar incentives that may displace other motivations—is alive and well here. As of yet, however, there has been no effort to delineate when crowding-out effects *should* prompt a legal remedy or modification of an incentive scheme, and when they should not. No scholar has yet clarified what forms of incentives should arouse our concern, on what basis, and what downstream crowding-out effects we should redress.

In this Part, I offer a new taxonomy of incentive schemes that will identify scenarios where crowding-out effects should demand the attention of legislators and regulators, and on what grounds intervention may be needed, including the protection of autonomy and concern for behavioral effects. I argue that incentives fall into definable categories based on the identity of the principal, the identity of the agent, and the beneficiary of the agent's activity, and each category raises a different combination of autonomy- and outcome-related concerns. These categories can help us to decide when and how to redesign incentive programs in light of crowding-out effects. In describing this taxonomy, I will discuss ways which motivational crowding-out can produce negative externalities for third-party beneficiaries of agents' behavior. Finally, I will discuss options for modifying public and private incentive schemes to intervene in crowding-out effects where they threaten behavior or autonomy. I argue that these changes to incentive architecture can and should be tailored to the specific mechanisms by which crowding-out occurs, as well as the specific crowding-out outcome that is of concern.

Before embarking on ways to classify and intervene in incentive schemes, I note that motivational crowding-out effects should be of concern only when the agent may be an individual person, not where the agent is a corporate person or firm. As Galle has noted, "business[es] and other organizations do not have preferences as such"²⁷⁹ that are analogous to the intrinsic motivations of individuals; we would expect (and

278. *Id.* at 574.

279. Galle, *supra* note 12, at 810.

indeed, our laws require) a corporation to behave as a *homo economicus*, acting always and only out of self-interest (i.e., the interest of the shareholders).²⁸⁰ Some incentives are open to *both* individual persons and firms, such as patent rights, and these should be considered vulnerable to crowding-out effects to the extent they intend to encourage individual behavior.

Second, I note that although this taxonomy can identify programs of concern on the basis of motivational crowding-out, it may only be possible to remedy these effects where the principal is the government (e.g., penalties for tax evasion), where the principal is subject to regulation on some basis (e.g., a firm), or where the incentivized activity is itself subject to oversight (e.g., incentives for donating blood). It is of little use, for example, to advocate restrictions on the ability of parents to incentivize their children to do household chores, even if there are negative externalities or concerns about children's autonomy to consent to an incentive scheme.

A. Incentive Architecture Failures

Before identifying opportunities for intervention in motivational crowding-out effects, it is first necessary to understand why incentive architects, both governmental and nongovernmental, have not already produced optimal incentive schemes. If incentives crowd out motivation in a way that is counterproductive, why have public and private incentivizers not already discarded them or, alternatively, tweaked them in such a way to maximize effectiveness?

First, it may be difficult for principals to resist using extrinsic incentives to motivate agent behavior. Incentives are an appealing solution for those who are uncomfortable or unable to control behavior through request, command, or force. This may be due particularly to "extrinsic incentive bias," by which we believe that others act primarily in their own self-interest and in response to external incentives and constraints, regardless of what we may think of our own motivations.²⁸¹ Several legal scholars have noted, for example, that when we view the actions of people who are subject to legal penalties, we attribute their good behavior to a desire to avoid penalties, rather than any intrinsic motivation.²⁸² Participants in a study of incentives

280. To be sure, firms may engage in some of the gaming behaviors described above, such as "playing hard to get" because they believe an incentive will be forthcoming. Firms may also be subject to "distraction" when the demands of an incentive divert attention from performance goals. *See supra* Section II.A. These effects may not be remedied by intervening in any of the motivational crowding-out mechanisms described above, which operate on individual perceptions and decision-making. This Article is more concerned with crowding-out as it applies to individual behavioral decisions.

281. Ernst Fehr & John A. List, *The Hidden Costs and Returns of Incentives—Trust and Trustworthiness Among CEOs*, 2 J. EUR. ECON. ASS'N 743, 760 (2004) (using the "extrinsic incentive bias" terminology); *see also* Feldman & Lobel, *supra* note 61, at 1191; Jon Hanson & David Yosifon, *The Situational Character: A Critical Realist Perspective on the Human Animal*, 93 GEO. L.J. 1, 111 (2004); Dale T. Miller, Penny S. Visser & Brian D. Staub, *How Surveillance Begets Perceptions of Dishonesty: The Case of the Counterfactual Sinner*, 89 J. PERS. & SOC. PSYCHOL. 117 (2005).

282. *See, e.g.*, Fleisig-Greene, *supra* note 11, at 1214.

for whistleblowing reported that they would personally respond best to rewards along with a reporting duty, while they reported that *others* would simply respond best when rewards were high.²⁸³ In another study where individuals assigned to be principals had the option to impose fines for shirking, a large majority (between sixty and eighty percent depending on the sample) chose to do so,²⁸⁴ despite the fact that the highest surplus arose in conditions where the principal had the opportunity to impose fines, but did not do so.²⁸⁵ Several studies also suggest that principals do not anticipate the crowding-out effect of incentives.²⁸⁶ The detrimental effects of negative incentives (penalties) may be more obvious than the potential for rewards to impair motivation; for example, in the workplace, although many managers may seek to avoid a climate of coercion, they are often less likely to recognize potentially detrimental effects of incentive schemes.²⁸⁷

Second, imposing incentives may be inefficient but still beneficial to a principal. This is the case, for example, when an incentive is high enough such that the relative price effect overwhelms the impact of motivational crowding-out. Crowding-out may diminish the desired effect of an incentive scheme, but incentives may nonetheless net better behavior.²⁸⁸ Another instance may be where the incentive may result in a lower total surplus, but may yield the principal a larger proportion of the gains.²⁸⁹ For example, one economic game study suggested that although incentive contracts that allowed fines for shirking led to a smaller surplus, principals preferred to use them because they were able to obtain a larger share of the small surplus.²⁹⁰ If they are high enough, fines for bad behavior may benefit the principal through reduced wages or income from fines. In some cases, incentives may simply save principals short-term time and resources, even if they may be damaging in the long-term; incentives may indeed be less burdensome than other strategies for improving performance.²⁹¹

Third, the previous Part noted that incentives pose outcome and autonomy concerns. Although we might expect principals to correct the perverse effects of incentives that threaten their interest, it may be unrealistic to expect the market to value and correct for incursions on autonomy or negative externalities. These failures

283. Feldman & Lobel, *supra* note 61, at 1190.

284. See Fehr & List, *supra* note 281, at 760. But see Ernst Fehr & Klaus M. Schmidt, *Fairness, Incentives, and Contractual Choices*, 44 EUR. ECON. REV. 1057, 1058 (2000) (describing their study in which eighty-eight percent of principals chose to use an implicit contract that made a nonbinding promise of a bonus for high but unspecified effort, rather than an explicit contract that set out concrete expectations and clear fines for underperformance).

285. Fehr & List, *supra* note 281, at 765.

286. See Gneezy & Rustichini, *Pay Enough or Don't Pay at All*, *supra* note 53.

287. See Kohn, *supra* note 139, at 5. At least one scholar has noted that managers, however, are wary of motivating employees by financial incentives alone. Gneezy & Rustichini, *Pay Enough or Don't Pay at All*, *supra* note 53, at 792 n.3.

288. Samuel Bowles & Sung-Ha Hwang, *Social Preferences and Public Economics: Mechanism Design When Social Preferences Depend on Incentives*, 92 J. PUB. ECON. 1811 (2008).

289. See, e.g., Bowles, *supra* note 53, at 1608 (citing Ernst Fehr & Simon Gächter, *Fairness and Retaliation: The Economics of Reciprocity*, 14 J. ECON. PERSP. 159 (2000)).

290. Fehr & Gächter, *supra* note 289.

291. Kohn, *supra* note 139, at 6.

justify both regulatory efforts and the need to enumerate options for incentive redesign.

Finally, incentives may be used due to path dependency—when incentives are already ubiquitous or longstanding, their removal may not regenerate intrinsic motivation.²⁹² Moreover, in settings where morale is low or intrinsic motivation is waning due to fatigue, raising incentives may simply be “easier than regenerating social or moral commitment once this is lost.”²⁹³ As described above, these may be scenarios in which nongovernmental principals may actively seek regulation of their incentive options, or where both governmental and nongovernmental principals may need to explore alternate mechanisms for influencing agent culture.

B. Against the Precautionary Principle in Regulating Incentive Schemes

As a preliminary point, I emphasize that we should intervene in incentive programs *only* when there is empirical evidence of reduced autonomy, inefficiency, or harm due to motivational crowding-out, *and* where that harm outweighs any benefits that crowding-out may confer. That is, I would reject the precautionary principle, which stands in this context for a decision to regulate in the face of uncertainty. The research on motivational crowding-out clarifies that this phenomenon is context-specific and may vary across individual agents, behaviors, and time. Many incentives may have beneficial impacts,²⁹⁴ and incentive schemes are often intended to benefit society’s most marginalized communities. For example, government-operated incentive programs for preventive healthcare have been linked to health improvements in disenfranchised communities,²⁹⁵ sentence reductions for drug rehabilitation may indeed increase uptake,²⁹⁶ taxes on alcohol consumption may reduce alcohol-related morbidity and mortality,²⁹⁷ and a preliminary evaluation of New York City’s conditional cash transfer program for poverty reduction has indicated beneficial impacts on education and employment.²⁹⁸ Barring or modifying an incentive scheme based on anticipated harms, without soliciting evidence and

292. See Janssen & Mendys-Kamphorst, *supra* note 154 (describing why withdrawing incentives may not rehabilitate lost prosocial norms); Kohn, *supra* note 139, at 7 (describing widespread incentives as a self-fulfilling prophecy); Walton, *supra* note 58, at 455 (suggesting that intrinsic motivations have been largely or entirely displaced by self-interest in the financial industry).

293. Magrath & Nichter, *supra* note 185, at 1780.

294. Bowles & Hwang, *supra* note 288, at 17.

295. See Lagarde, *supra* note 48.

296. See Bernadett Pelissier, *Gender Differences in Substance Use Treatment Entry and Retention Among Prisoners with Substance Use Histories*, 94 AM. J. PUB. HEALTH 1418, 1418 (2004).

297. Alexander C. Wagenaar, Amy L. Tobler, & Kelli A. Komro, *Effects of Alcohol Tax and Price Policies on Morbidity and Mortality: A Systematic Review*, 100 AM. J. PUB. HEALTH 2270 (2010).

298. James Riccio, Nadine Dechausay, David Greenberg, Cynthia Miller, Zawadi Rucks, & Nandita Verma, TOWARD REDUCED POVERTY ACROSS GENERATIONS: EARLY FINDINGS FROM NEW YORK CITY’S CONDITIONAL CASH TRANSFER PROGRAM (2010), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1786981 [<https://perma.cc/3FHG-MQUK>].

weighing the adverse effects against program benefits, may be counterproductive and wasteful, and it may thwart promising efforts to reduce social disparities.²⁹⁹

Furthermore, the precautionary principle reflects the belief that an uncertain phenomenon is more likely to cause harm than benefit. To date, few scholars—and none in the law—have considered potential benefits of crowding-out. I have here offered several novel advantages of crowding-out, which may offset the harms traditionally attributed to this phenomenon. These advantages are in need of further study, but if these theories hold true, it would be inappropriate to proscribe incentives on the suspicion of crowding-out without comprehensive evaluation. Where crowding-out *may* cause harm, a more desirable first step would be to require or fund demonstration projects to ascertain the behavioral impacts of incentives in a given area, or conversely, to identify the impacts of removing incentives that are well-established.

C. When to Intervene: A Classification of Incentive Schemes

In Table 1, I have classified incentive arrangements according to the identity of the principal (governmental, private, or the agent him- or herself) and the beneficiary of the agent's activity. These beneficiaries may include the principal offering the incentive, the agent engaging in the behavior, or a third party outside the principal-agent dyad. The prior Part explained three groups of motivational crowding-out effects, including effects on attitudes, morality, and long-term preferences; effects on behavior; and reduced autonomy. The first of these impacts—attitudinal and moral effects—is of concern for every incentive scheme, even where an individual agent incentivizes him- or herself. Because attitudinal outcome effects are present for all incentives, they are not included in Table 1.

299. For example, some have suggested that after *Flynn v. Holder*, the DHHS acted too hastily and without empirical basis in its proposed regulations barring compensation for blood marrow donation by apheresis. See, e.g., *supra* note 31 and accompanying text (comments on proposed regulation).

Table 1. Types of Incentives and Corresponding Bases for Regulatory Intervention Based on Motivational Crowding-Out

Principal	Beneficiary	Regulable	Autonomy concerns would support regulation	Efficiency concerns would support regulation	Externalities would support regulation	Example
Government	Principal	Yes	Yes	Yes	None expected	Fines for tax evasion
Government	Agent	Yes	Yes	Yes	None expected	Conditional cash transfers for health behavior
Government	Third party	Yes	Yes	Yes	Yes	Tax advantages for contributions to nonprofit entities
Private principal	Principal	Sometimes	Yes	No	None expected	Employee performance bonuses
Private principal	Agent	Sometimes	Yes	No	None expected	Workplace wellness programs
Private principal	Third party	Sometimes	Yes	No	Yes	Private incentives for bone marrow donation
Agent him- or herself	Principal	No	No	No	No	Commitment contracts for weight loss or smoking cessation
Agent him- or herself	Third party	No	No	No	No	Commitment contracts for recycling

1. Governmental Principals

When the principal is a governmental entity, every incentive scheme is fair game for regulatory intervention and redesign. Here, the legislators and regulators who set these incentives have two separate bases for modifying incentives based on motivational crowding-out concerns. First, concerns about autonomy and the coercive power of incentives arise whenever the principal differs from the agent, whether the incentive is designed as a carrot or a stick. This includes incentives

offered or imposed by any branch of government, which may be enacted without some agents' consent. Second, in the interest of maximizing the effectiveness and efficiency of governmental action, it is justifiable to modify or eliminate incentive schemes on the basis of their outcome effects. This concern applies regardless of whether the beneficiary of the agent's action is the government itself, the agent, a third party not privy to the incentive scheme, or any combination of the three. (The case of a governmental principal is perhaps special in that we could argue that no actions benefit the principal alone; any action benefitting the government may in fact be said to benefit society as a whole, including both the agent and third parties.) Examples of incentives with a governmental principal are innumerable, but may include penalties for tax evasion, grants or intellectual property rights for innovation, fines for nonvoting, incentive payments for governmental contractors, incentives for military recruitment, rebates for recycling bottles, payments for jailhouse informants, sentence reductions for participation in drug rehabilitation programs, and many more. In every case, assuming the incentive has a legitimate governmental purpose, the design of these schemes should be subject to oversight and modification to preserve citizen autonomy and maximize efficiency in behavioral effects.

Where motivational crowding-out is suspected, the governmental principal should proceed by first soliciting empirical evidence of an incentive's effect, identifying the mechanism of crowding-out and specific outcomes of concern, and then turn its attention to modifying or eliminating the incentive scheme where harms outweigh benefits. There may also be public policy reasons for incentivizing that overwhelm concerns about crowding out; for example, courts have noted the public policy reasons in favor of incentivizing informants for their testimony—because testifying can expose informants to danger and retaliation, an incentive is needed to compensate for this risk, and few informants would offer information without a material inducement.³⁰⁰ Even if the incentives fully crowd out altruistic reasons for testifying, the testimony may be worth the impact.

2. Private Principals

When the principal is a nongovernmental entity, there are fewer opportunities for modifying or eliminating incentive schemes through legal intervention. Although many principals and incentive schemes will be beyond the reach of legislation or regulatory action (e.g., incentives offered by parents to their children), some principals or activities are subject to regulation, allowing for some legal oversight of incentive arrangements (e.g., regulation of executive compensation in some contexts). Within regulated spaces, there are several rationales supporting intervention based on motivational crowding-out effects.

Where incentives are offered in agreements between private parties capable of consent, freedom of contract will generally provide a rationale for noninterference. This is often true even when there is a power imbalance between principals and

300. *See, e.g.*, *United States v. Reid*, 19 F. Supp. 2d 534, 537 (E.D. Va. 1998) (“To prohibit prosecutors from making promises in exchange for testimony works an ‘absurd’ result where crimes go unresolved because of worries about testimony that may be questionable, even though the system already has built-in safeguards concerning questionable testimony by interested witnesses.”).

agents. But because the principal is different from the agent, concerns may well arise regarding intrusiveness and agent autonomy when incentives subject agents to undue inducement. Where the principal and subject matter of the incentive scheme are subject to regulation, autonomy concerns can support intervention to modify the incentive scheme, such as by improving disclosures or reducing the incentive size to limit undue inducement. The bar should be high, however, for intervening solely on autonomy grounds. The occurrence of motivational crowding-out *to any extent* may provoke autonomy concerns on the basis that the incentive scheme interferes with individual motivations, but intervening on the basis of autonomy alone may only be justifiable when the incentives induce agents to take actions that expose them to harm. Where the principal is beyond the reach of regulation, contract law rules regarding capacity, duress, misrepresentation, fraud, and unconscionability attempt to safeguard agent autonomy. Although these doctrines may not reach all areas of undue inducement or intrusive surveillance related to incentives, they provide a backstop to prevent the most egregious uses of incentive.

When the principal is a nongovernmental entity and autonomy concerns are minimal, the extent to which undesirable behavioral outcomes should prompt intervention depends on the beneficiary of the agents' action. When the principal is the only beneficiary of the action, such as a company that incentivizes its employees to work longer hours or sell more units, behavioral outcomes should not present a rationale for intervention. This is because if the incentive backfires due to crowding-out effects, the principal has the capacity to modify the incentive scheme. One potential exception to this may be where the use of incentives has led to inefficient competition among principals, in which all principals would prefer to discontinue or modify their use of incentives, but no principal is willing to be the first mover (e.g., reducing incentive-based executive compensation). In these cases, principals may in fact seek regulation of their incentive schemes.

When the agent is the beneficiary of the action (either the only beneficiary or a joint beneficiary with the principal), such as when a university offers merit scholarships contingent on grades, behavioral outcomes are again a slim basis for intervention. Once we are satisfied on the basis of agent autonomy—that is, the incentive scheme does not present an undue inducement—and any legal conditions regulating the activity itself are met, we must respect the agents' autonomous decisions regarding the incentivized behavior. A potential exception to nonintervention may be where principals offer incentives *pursuant to* a governmental policy or demonstration grant; for example, many employers offer workplace wellness programs that vary employees' premiums or copays contingent on participation in healthy activities or health status indicators. These programs were previously supported by the Health Insurance Portability and Accountability Act,³⁰¹ for which the implementing regulations permitted group health plans and insurers to vary insurance premiums by twenty percent through wellness programs.³⁰² Now the Affordable Care Act permits a variance of thirty percent in group plans (increasing

301. Health Insurance Portability and Accountability Act of 1996, Pub. L. No. 104-91, 110 Stat. 1936 (1996).

302. Nondiscrimination and Wellness Programs in Health Coverage in the Group Market, 71 Fed. Reg. 75,014 (Dec. 13, 2006); *see also* Mello & Rosenthal, *supra* note 40, at 193 (2008).

to fifty percent with permission from the Secretary of Health and Human Services), and it has authorized governmental funds and demonstration projects in numerous states to support wellness programs in the individual market.³⁰³ In this scenario, although the wellness incentives are offered and accepted by private parties, agency administrators may seek to modify the governmental regulations that enable such programs if the incentives are found to cause adverse agent behaviors.

The tricky case for intervening in incentives set by nongovernmental principals, however, is where the incentivized activity results in benefits or harms for third parties.³⁰⁴ Where nongovernmental principals are not subject to regulation, contract law doctrines such as unenforceability on the grounds of public policy may limit the most detrimental externalities. But where the nongovernmental principal is subject to regulation, and where incentive schemes result in negative externalities due to motivational crowding-out, regulatory intervention may be justified depending on the extent of harm. Although de minimis externalities may be insufficient to interfere with an incentive program, externalities that are extremely harmful or that affect many people may be a sufficient basis for action. Take, for example, the case of *Flynn v. Holder* discussed above,³⁰⁵ in which a private company sought to incentivize individual blood marrow donors. This activity unequivocally benefits third parties: the recipients of blood marrow transplants. Because the activity of blood marrow donation is subject to oversight by the Department of Health and Human Services, this incentive scheme drew scrutiny on the basis of potential crowding-out effects as well as their downstream consequences, such as changed identity of donors and reduced quality of donations.³⁰⁶ Similarly, the case of pay-for-performance for physicians compensated by private insurance may also be of interest to the Department of Health and Human Services if it reduces patient care quality or leads physicians to abandon patients who depress their performance ratings. Or consider, for example, carbon offset programs; if individuals who purchase carbon offsets escalate their environmentally hazardous activities due to motivational crowding-out effects, the behavioral impacts of carbon offset programs may produce negative externalities for third parties or society as a whole (e.g., more pollution). In some circumstances, a private party may incentivize a governmental agent, such as political campaign contributions in exchange for advocacy by an elected representative; motivational crowding-out effects of these incentives will necessarily impact third parties. Freedom of contract notwithstanding, such programs

303. See Timothy Jost, *Implementing Health Reform: Workplace Wellness Programs*, HEALTH AFF. BLOG (May 30, 2013), <http://healthaffairs.org/blog/2013/05/29/implementing-health-reform-workplace-wellness-programs> [<https://perma.cc/JH5L-Z3XE>].

304. Crowding may in fact be *less* likely in this scenario because the incentive may not trigger the mechanism of signaling the principal's selfishness or perception of the agent's trustworthiness. Bowles notes that "[i]ncentives imposed by peers who do not stand to benefit personally do not compromise social preferences and are often synergistic with them." Bowles, *supra* note 53, at 1608.

305. 684 F.3d 852 (9th Cir. 2012).

306. See Brief of Appellants at 36, *Flynn v. Holder*, 684 F.3d 852 (9th Cir. 2012) (No. 10-55643), 2010 WL 5854339.

may draw the interest of regulators if their adverse effects result in substantial economic harm.

Regulators may also seek to scrutinize or modify incentive regimes when taxpayers are financially liable for incentive failures. For example, Roberta Romano and colleagues have noted that in the era of institutions that are “too big to fail,” including banks, rational CEOs may subject banks to disproportionate risk.³⁰⁷ In this context, the impacts of performance executives that influence CEOs’ activities at these institutions may be of keen interest to regulators.³⁰⁸

My analysis demands a justification of who qualifies as a third-party beneficiary. When the principal is a firm with shareholders, it can be a close call of whether to classify those shareholders as third parties for the purpose of intervening in an incentive with adverse crowding-out effects. I am inclined to believe that they are, but that additional regulation to protect shareholders when incentives lead to crowding-out may be largely unnecessary due to existing fiduciary duties.³⁰⁹ A separate question is whether third parties include *future* agents and principals. For example, consider the cases of systemic crowding-out of intrinsic motivation in the legal and medical professions described by Schwartz and Sharpe,³¹⁰ or Walton’s description of the effects of incentive pay in the financial sector.³¹¹ Future lawyers, doctors, bankers, and their bosses may indeed experience negative outcomes due to these cultural shifts (e.g., agent selection effects, inefficient competition, reduced effort, and reduced quality of performance), which they had no part in creating. These effects alone should not qualify as negative externalities that demand legal intervention to modify the use of financial incentives. Unlike third parties to the incentive scheme, future agents and principals retain the ability to refuse or modify incentive arrangements. Of course, individual agents in these professions do have an impact on the health and well-being of third parties such as their clients, patients, and investors. But where third-party effects are not present, remedial actions may be better left to collective action by agents, professional societies, and market activity.

As discussed above, I would also reject intervention based on the precautionary principle when incentives are offered by private parties. Intervention should require empirical evidence of reduced autonomy or negative externalities, because the selected remedy should depend on the mechanism of crowding out and the specific harms of concern.

307. Sanjai Bhagat & Roberta Romano, *Reforming Executive Compensation: Focusing and Committing to the Long-Term*, 26 YALE J. REG. 359 (2009); Sanjai Bhagat, Brian Bolton & Roberta Romano, *Getting Incentives Right: Is Deferred Bank Executive Compensation Sufficient?* (European Corp. Governance Inst., Working Paper No. 241, 2014), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2395982 [<https://perma.cc/MT4K-CXET>].

308. Bhagat & Romano, *supra* note 307; Bhagat et al., *supra* note 307.

309. Of course, the business judgment rule would protect corporate directors in any shareholder litigation regarding the potentially counterproductive effects of firm incentives (e.g., compensation schemes).

310. See SCHWARTZ & SHARPE, *supra* note 38.

311. See Walton, *supra* note 58.

3. Agents as Principals

When the principal is also the agent, there is little justification for regulatory involvement. These incentive arrangements are variously known as deposit contracts,³¹² commitment contracts, precommitment devices, and now, “StickK contracts” when they are created through the StickK.com website.³¹³ In these arrangements, an individual places his or her own money at risk, then keeps or recovers it contingent on achieving a behavioral goal, such as weight loss, smoking cessation, career achievement, or engagement in charitable activities. Such programs are often effective. Consider an evaluation of a smokers’ fund, which offered smokers a savings account; after six months of deposits, participants who had quit smoking recovered their deposits, while those who had not quit lost their funds to a charity donation.³¹⁴ Those who used the savings accounts were more likely to have quit smoking by the six-month mark, compared to those who had not used the account, and the difference endured after another six months.³¹⁵

Ian Ayres has provided many examples of commitment contracts and “maintenance contracts”—long-term commitments under which an individual agrees to forfeit funds if he or she does not sustain the desired behavior (e.g., keeping weight off or abstaining from smoking).³¹⁶ As a paradigmatic example, Ayres and colleagues have developed stickK.com: a website on which private individuals can publicly announce their behavioral commitments and time horizon, announce the financial stakes of failure (designating an amount of money, the beneficiary, and providing means of payment for the withdrawal), and name a third party to police their efforts. If a stickK participant does not fulfill his or her goals, the website fulfills the agreed-upon financial penalty.³¹⁷ A search of commitments on the stickK website reveals many behaviors intended to benefit agents themselves, including weight loss, exercise, reduced discretionary spending, learning a language, or smoking cessation.³¹⁸ But some agents commit to do activities that benefit third parties, such as volunteering at local charities, doing good deeds, calling elderly relatives, or maintaining social relationships.

When the agent and the principal are the same, there is no justification for intervention on autonomy grounds. Many researchers cite the example of Ulysses binding himself to the mast to avoid being tempted by the Sirens; like Ulysses, agents who incentivize themselves are making autonomous choices. The *ex ante* agent signing the commitment contract may indeed limit the autonomy of the *ex post* agent (who wishes to smoke, to be sedentary, to renege on volunteering plans, or to listen

312. See Oliver & Brown, *supra* note 37, at 78, 80.

313. See AYRES, THE \$500 DIET, *supra* note 41; AYRES, CARROTS AND STICKS, *supra* note 114; STICKK, <http://www.stickk.com> [<https://perma.cc/359B-J9YT>].

314. For a description of this study, see Gneezy et al., *supra* note 46 (citing Xavier Gine, Dean Karlan & Jonathan Zinman, *Put Your Money Where Your Butt Is: A Commitment Savings Account for Smoking Cessation*, 2 AM. ECON. J. 213 (2010)).

315. Gneezy et al., *supra* note 46, at 205.

316. AYRES, CARROTS AND STICKS, *supra* note 115, at 24.

317. See STICKK, *supra* note 313.

318. See *id.* To be sure, some behaviors such as smoking cessation may also benefit third parties, such as family members who would otherwise be exposed to secondhand smoke.

to the Sirens)—there is a reason why Ayres refers to high-stakes commitments as “disabling.”³¹⁹ But the *ex ante* agent chooses to exert this control, and respect for individual choices demands that we stay out. Similarly, the law may not restrict commitment contracts on the basis of their outcome effects for the agent. Let’s say that everyone who signed a StickK contract for weight loss actually gained fifty pounds due to motivational crowding-out. At the most extreme, we may wish to require the StickK service to make disclosures to people contemplating weight loss agreements.³²⁰ This, however, is an objection based on autonomy concerns—if people still choose to sign contracts committing their future activity, there is no legal basis for restricting them. Most commitment contracts, moreover, would be outside the remit of regulation; even if an individual signed a commitment contract, for example, to reward herself for engaging in criminal activity, penalties would likely apply only to her criminal behaviors, rather than to her self-commitment.

In the most unlikely case, commitment contracts may have detrimental effects for third parties due to motivational crowding-out. For example, consider a commitment contract to volunteer at an animal shelter. Although an individual may keep her promise while the commitment is in force, motivational crowd-out may depress her intrinsic interest in volunteering with animals: she may cease volunteering when the commitment ends (compared to a counterfactual scenario in which she had never signed the contract); she may seek out easier tasks that lessen her contribution to the shelter; or she may experience a spillover effect that also reduces her long-term interest in assisting animals or volunteering anywhere without a financial arrangement (including, for instance, in environmental cleanups or soup kitchens).³²¹ These behavioral impacts may well lead to negative externalities for third parties in the form of reduced quantity and quality of her volunteering effort. Currently, the use of commitment contracts may be so rare as to make these effects negligible. But even if such externalities are large, they nonetheless provide little basis for intervention. It would be impossible to police the variety of commitment contracts, as crowding-out effects in this context do not infringe the rights of third parties, and respect for autonomy would trump efforts to interfere with individuals’ financial self-dealing.

One caveat applies here. In some cases, agents may appear to be self-incentivizing (risking their own finances), but their participation in a commitment scheme may be *required* by a separate principal. Such incentive programs may be politically unpopular because they expose agents to financial risk, and on a large scale they may be difficult to tailor for a population that includes both poor and wealthy individuals.³²² But where these arrangements exist, I would consider them in the previous category of incentives where principals and agents differ.

319. AYRES, *CARROTS AND STICKS*, *supra* note 115, at 30.

320. Although, even this is speculative and may be going overboard; it is likely obvious to individuals that if they fail to keep their behavioral commitments, they cannot expect the benefits of the StickK service.

321. Arguably, these behavioral effects can be cured if the agent continues to set commitment contracts and long-term maintenance contracts to sustain her volunteering efforts and to ensure that her contributions are meaningful.

322. Oliver & Brown, *supra* note 37, at 78, 80 (noting, however, that deposit contracts may be attractive because they are budget-neutral for insurers and governments and potentially

D. Regulating Incentive-Based Policies

Thus far, this Article has been most concerned with the normative bases for intervening when an incentive plans lead to crowding-out harms. But this leaves the question of what constitutes an appropriate regulatory response. Although there is not space here for an exhaustive accounting, I offer several potential responses. When the harms attributed to crowding-out are sufficiently severe as to support intervention, a range of incentive architecture options are available.

Most bluntly, incentive programs can be discontinued or barred altogether by statute, such as NOTA's ban on compensating organ donors. Less restrictive alternatives, however, may be preferable, given that financial incentives often do succeed in shaping beneficial behavior. I have elsewhere considered a range of incentive architecture options that may mute or interrupt crowding-out processes.³²³ These may include including agents in incentive design; decentralizing the implementation of incentive-based programs; considering the comparative advantages of fines versus rewards versus mandates; choosing in-kind rather than financial incentives; decreasing incentive size; making incentives less salient or dependent on a wider range of agent behaviors; allowing agents to choose from a menu of incentives or donate incentives to other recipients; packaging incentive programs with messages that signal favorable views of agent ability or social norms; and using publicity strategically in addition to (or perhaps in lieu of) penalties and rewards.³²⁴ Research on these different options is needed, and the design and oversight of incentives will vary across fields. But these options may provide some leeway for preserving the benefits of incentive-based rules and programs, even when some crowding-out occurs. Rather than proscribing incentives, regulatory interventions based on motivational crowding-out could redesign incentive programs in some of these ways (for governmental principals) or set contours for the use of incentive policies adopted by private principals.

Of course, sometimes incentive programs should be left alone. The effects of motivational crowding-out may be minimal; incentives that cause motivational crowding-out may nonetheless work, and they may even be preferable to alternative strategies for shaping behavior. Crowding-out may also have benefits, as I have suggested above, and any decision to reshape or intervene in incentive-based policies or programs will necessarily be complex.

CONCLUSION

This Article has addressed several aims. I began with the first synthesis of motivational crowding-out claims made throughout different areas of the law, including judicial decisions, legislative history, regulatory guidance, and legal scholars that have invoked crowding-out concerns in a range of areas. This survey provides the first look at dialogue on crowding-out, which suggests widespread application but little sustained theoretical engagement. I then incorporated

even profitable for an administrator that keeps participants' forfeitures).

323. See Underhill, *When Extrinsic*, *supra* note 5, at 254–80.

324. *Id.*

scholarship from economics and psychology to canvass the heterogeneous consequences of crowding-out, specifically considering the complex harms that have been attributed to the erosion of intrinsic motivation. This is a counterpart and sequel to my prior scholarship on the heterogeneous causes of crowding-out dynamics.³²⁵ This systematic overview of crowding-out effects can help to identify which effects may matter in a given setting and to inform the design of incentive-based rules that seek to minimize crowding-out harms.

I have also aimed here to identify potential benefits of crowding-out, which have been overlooked in legal scholarship. In Part III, I offer several unique arguments in this field—namely, that incentives may helpfully restrict socially harmful motivations (e.g., interpersonal bias), that incentives may increase principal investment in agents, that crowding-out may increase the efficacy of future incentives, and that incentive failures have informational benefits. I also introduce several ideas that have not yet been applied to motivational crowding-out in legal scholarship, including motivation conservation, an increase in marginal benefit of agent activity, and increased agent predictability. These proposed benefits require evaluation. But if true, they would counsel against the proscription of incentives that cause crowding-out—unless the harms of crowding-out clearly outweigh its potential benefits.

The final goal of this Article was to offer a principled basis for deciding *when* and *why* motivational crowding-out should prompt the regulation or redesign incentive-based policies. Legal efforts to discard or limit incentive-based policies on the grounds of motivational crowding-out may only be normatively defensible in a few circumstances. Intervention to protect *agent autonomy* may be justified when the principal is a governmental entity or when the principal is a nongovernmental entity subject to regulation. Intervention to avoid *adverse behavioral outcomes* may be defensible when the principal is a governmental entity or when the principal is a nongovernmental entity and the incentive leads to adverse effects for third parties. Intervening in incentive plans is not justified on either autonomy or outcome grounds when the agent incentivizes him- or herself, even when crowding-out produces negative externalities. I have also argued against the precautionary principle for regulation in this context, and for less restrictive alternatives to proscribing incentives entirely.

Much of law can be parsed in terms of carrots and sticks. This includes not only entire legal regimes such as tax and tort, but also specific rules that allow, encourage, or deploy specific incentives to change people's behavior. The fear that incentives will weaken or erode valuable motivations is now pervasive in legal scholarship, and these concerns are often confused, imprecise, incomplete, and inattentive to alternative options for incentive design. I have here sought to challenge the uniformly negative view of motivational crowding-out and to offer some structure for productive engagement with crowding-out effects in law and policy. Incentive-based rules can and should be useful tools for shaping behavior, and wise incentive architecture choices can help maximize these benefits when money and morals are a volatile mix.

325. *Id.*