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THE PAIN OF PAYING TAXES

Gary M. Lucas, Jr. *

INTRODUCTION

With a few caveats, standard economic models assume that, from society's perspective, the payment of a tax constitutes a costless transfer from the taxpayer to the government.¹ The financial loss to the taxpayer is exactly offset by the financial gain to the government, which can use the resulting tax revenue for the benefit of its citizens. In other words, paying taxes forces taxpayers to forgo private consumption, but the resulting loss in utility can be counterbalanced by an increase in utility from government spending. In fact, if the government spends wisely on beneficial public goods that are undersupplied by private markets, then the tax-and-transfer system can produce a net gain in utility that increases social welfare.²

The major caveat to this conclusion is that taxpayers sometimes alter their behavior to avoid paying taxes.³ For example, a tax on oranges might cause taxpayers to eat fewer oranges. In that case, taxpayers are worse off than if they ate the oranges, and the government is not better off because it receives no tax revenue. As a consequence, the tax causes a net reduction in utility and is said to produce a deadweight loss or excess burden.⁴ Nonetheless, the fact remains that, to the extent that taxpayers do not alter their behavior and they continue to eat oranges, the payment of the tax does

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1. *E.g.*, N. GREGORY MANKIW, *PRINCIPLES OF MICROECONOMICS* 156–59 (6th ed. 2012).
2. JONATHAN GRUBER, *PUBLIC FINANCE AND PUBLIC POLICY* 177–95 (2d ed. 2007).
3. HARVEY S. ROSEN & TED GAYER, *PUBLIC FINANCE* 331–38 (8th ed. 2008).
4. *Id.*

not itself reduce social welfare, at least not according to standard economic theory.

The theory, however, is wrong. Behavioral economists have shown that the act of paying money causes us to experience psychological discomfort—a phenomenon referred to as the pain of paying.⁵ The pain of paying can transform an otherwise costless transfer into a harmful act.

This Article argues that the pain of paying has significant implications for our tax system that have escaped the attention of legal scholars, economists, and policymakers.⁶ While the pain of paying does not mean that the costs of taxation outweigh the many benefits of government spending, a strong case exists for structuring the tax system to avoid the unnecessary harm that it causes. As it turns out, the pain of paying varies based on situational factors over which the government has some control. This creates an opportunity to reduce the psychological burden of revenue collection. For example, payment is less painful where it is tightly coupled with consumption of a good or service.⁷ The thought of enjoying the good or service buffers the pain of paying for it, which suggests that the government should try to create a psychological link between tax payments and the provision of public goods. Similarly, the government may be able to reduce the pain caused by paying taxes simply by altering the method of payment.⁸ Cash payments, for instance, generally produce more psychological pain than paying by credit card.⁹

In addition, the pain of paying has potentially profound implications for democracy. Because tax payments are usually not tightly coupled with the provision of public goods, the pain of paying taxes often provides arbitrary information to the citizenry. Taxes are perceived as an onerous burden divorced from any benefit. This likely explains why Americans simultaneously prefer both low taxes and high government spending—an inconsistent set of

5. See *infra* Part I.

6. A related literature on “tax aversion” suggests that some people, particularly Republicans and conservatives, dislike taxes more than other financial costs for ideological, cultural, or political reasons. Abigail B. Sussman & Christopher Y. Olivola, *Axe the Tax: Taxes Are Disliked More Than Equivalent Costs*, 48 J. MKTG. RSCH. S91, S91–99 (2011). This Article focuses on the pain of paying rather than tax aversion.

7. See *infra* section II.A.

8. See *infra* section II.E.

9. See *infra* section II.E.

preferences that contributes to the exploding national debt and puts popular programs such as Social Security and Medicare at risk for draconian cuts.¹⁰ A better understanding of the pain caused by paying taxes and the techniques for mitigating it will help policymakers overcome antitax sentiment and raise the revenue needed to support the government programs that voters claim they want.

Despite its fundamental importance, the pain of paying has received scant attention in the legal literature on tax law and policy.¹¹ This Article attempts to rectify that oversight. Part I of the Article describes the pain of paying as a psychological phenomenon. Part II explains the determinants of the pain of paying and evidence that its magnitude varies based on the context within which payment is made. This finding is important because it means that the government can potentially manipulate the pain of paying taxes through its choices about how taxes are designed. Part III explores the implications of the pain of paying for tax theory and policy. In particular, Part III examines the relationship between the pain of paying and tax salience and discusses the relevance of the pain of paying to the debate among economists and legal scholars over whether the government should attempt to

10. See *infra* Part IV; PEW RSCH. CTR., LITTLE SUPPORT FOR REDUCTIONS IN FEDERAL SPENDING 2 (2019); Christopher Faricy & Christopher Ellis, *Public Attitudes Toward Social Spending in the United States: The Difference Between Direct Spending and Tax Expenditures*, 36 POL. BEHAV. 53, 56–57 (2013) (reviewing the extensive literature on public attitudes toward government spending); PEW RSCH. CTR., IF NO DEAL IS STRUCK, FOUR-IN-TEN SAY LET THE SEQUESTER HAPPEN 3 (2013); Leonie Huddy, Jeffrey M. Jones & Richard E. Chard, *Compassionate Politics: Support for Old-Age Programs Among the Non-Elderly*, 22 POL. PSYCH. 443, 448 (2001) (noting that opinion poll data show strong support for maintaining or increasing Social Security and Medicare benefits, but little support for increased taxes to pay for them).

11. There are at least three notable exceptions—all of which discuss the pain of paying in the limited context of the tax withholding system and do not explore the implications of the pain of paying for tax policy generally. See Kathleen DeLaney Thomas, *The Modern Case for Withholding*, 53 U.C. DAVIS L. REV. 81, 107–14 (2019); George Loewenstein & Ted O'Donoghue, “We Can Do This the Easy Way or the Hard Way”: *Negative Emotions, Self-Regulation, and the Law*, 73 U. CHI. L. REV. 183, 199 (2006); Lee Anne Fennell, *Hyperopia in Public Finance*, in BEHAVIORAL PUBLIC FINANCE: TOWARD A NEW AGENDA 141, 150–51 (Edward J. McCaffery & Joel Slemrod eds., 2006); see also Lee Anne Fennell & Kirk J. Stark, *Taxation Over Time*, 59 TAX L. REV. 1, 61 n.236 (2005) (briefly mentioning the pain-of-paying concept in a footnote and noting that taxes may be painful to pay because “they typically are not tied to any specific benefits”); Christopher C. Fennell & Lee Anne Fennell, *Fear and Greed in Tax Policy: A Qualitative Research Agenda*, 13 WASH. U. J.L. & POL'Y 75, 91–128 (2003) (arguing that taxpayers suffer from “tax aversion” because they fear that other citizens are free riders and because a perceived lack of reciprocity in the tax system causes them to feel like they have been “suckered”).

reduce the salience of taxes. It analyzes the profound implications of the pain of paying for the major criteria that economists and legal scholars use to evaluate tax systems—tax efficiency and equity. It also explores the potential for the government to reduce the pain of paying taxes by creating psychological tax-benefit linkages in the minds of taxpayers. Finally, it discusses the pain of paying with respect to different methods of payment and in the context of particular types of taxes and government fees—arguing that the pain of paying provides a rationale for return-filing simplification efforts and for greater reliance on user fees, earmarked taxes, and even lotteries. Part IV examines the political aspects of the pain of paying taxes.

I. WHAT IS THE PAIN OF PAYING?

The standard economic model of decision-making assumes that people act so as to maximize expected utility, which is a function of the anticipated costs and benefits of a consumption experience.¹² In addition, the cost of a good or service is its opportunity cost, which is the utility that could be derived from consuming the highest valued alternative good or service that the consumer forgoes if they spend money one way instead of another.¹³ Since the opportunity cost of a purchase typically is some future purchase that the consumer will have to give up, the cost of a purchase, in standard analysis, takes the form of lost utility from forgone future consumption.¹⁴ In standard analysis, the opportunity cost of a purchase is relevant only until the point at which the consumer decides to buy the item. Once the consumer makes that decision, opportunity cost “melts” away and has no effect on the pleasure of consumption.¹⁵

12. *E.g.*, DAVID A. BESANKO & RONALD R. BRAEUTIGAM, MICROECONOMICS 103–08 (2d ed. 2005).

13. *E.g.*, MANKIW, *supra* note 1, at 6 (“When making any decision, decision makers should be aware of the opportunity costs that accompany each possible action.”); BESANKO & BRAEUTIGAM, *supra* note 12, at 223–27; ARMEN A. ALCHIAN, *Cost*, in INTERNATIONAL ENCYCLOPEDIA OF THE SOCIAL SCIENCES 404, 404–15 (David L. Sills ed., 1968) (“In economics, the cost of an event is the highest-valued opportunity necessarily forsaken.”). *See generally* JAMES M. BUCHANAN, COST AND CHOICE: AN INQUIRY IN ECONOMIC THEORY (1969).

14. Drazen Prelec & George Loewenstein, *The Red and the Black: Mental Accounting of Savings and Debt*, 17 MKTG. SCI. 4, 25 (1998).

15. Loewenstein & O’Donoghue, *supra* note 11, at 195.

The standard model is consequentialist in that it assumes that people decide among options by considering the probable consequences of each option upon utility.¹⁶ The model can accommodate what behavioral economists refer to as “expected” emotions, which are emotions that are expected to occur in the future as the consequence of a decision made in the present.¹⁷ For example, in deciding whether to purchase a milkshake, a person might consider the pleasure that will be derived from drinking it as well as the subsequent guilt from indulgence. At the time of the purchase decision, however, these thoughts are simply cognitions about future emotions and are not emotions experienced at the moment of choice.¹⁸ By contrast, “immediate” emotions are experienced at the time a decision is made.¹⁹ An example would be immediate pangs of guilt experienced while contemplating the purchase of the calorie-laden milkshake. The consequentialist economic model assumes that decision-makers are immune to such immediate emotions, which “are presumably ‘epiphenomenal’ by-products of, but not determinants of, decisions.”²⁰

This tidy depiction of the decision-making process, however, does not accurately describe the real world. Behavioral economists have shown that thinking about opportunity cost is hard work and unnatural, so real people often fail to do it.²¹ For example, several studies have shown that if you remind people of opportunity cost at the time of a buying decision, they become less likely to complete the purchase.²² This suggests that consumers often neglect opportunity cost unless prompted to focus on it.

What then keeps spending in check? In contrast to homo economicus, most people need something more immediate and salient

16. Scott Rick & George Loewenstein, *The Role of Emotion in Economic Behavior*, in HANDBOOK OF EMOTIONS 138, 138 (Michael Lewis et al. eds., 3d ed. 2008).

17. *Id.*

18. Scott I. Rick, Cynthia E. Cryder & George Loewenstein, *Tightwads and Spend-thrifts*, 34 J. CONSUMER RSCH. 767, 767 (2008).

19. Rick & Loewenstein, *supra* note 16, at 138.

20. Rick et al., *supra* note 18, at 767.

21. Stephen A. Spiller, *Opportunity Cost Consideration*, 38 J. CONSUMER RSCH. 595, 598–607 (2011); Shane Frederick, Nathan Novemsky, Jing Wang, Ravi Dhar & Stephen Nowlis, *Opportunity Cost Neglect*, 36 J. CONSUMER RSCH. 553, 553–57 (2009); Steven K. Jones, Deborah Frisch, Tricia J. Yurak & Eric Kim, *Choices and Opportunities: Another Effect of Framing on Decisions*, 11 J. BEHAV. DECISION MAKING 211, 220–22 (1998).

22. *E.g.*, Frederick et al., *supra* note 21, at 554–55; Jones et al., *supra* note 21, at 220–21.

to facilitate self-control than vague thoughts about lost opportunities in the distant future.²³ To that end, spending money causes many people to experience psychological discomfort—an immediate emotion that behavioral economists refer to as the pain of paying. As Ofer Zellermyer first described the concept, “the pain of paying plays an adaptive role. By providing the consumer with an instant emotional signal about the payment’s potential negative ramifications, it impedes excessive immediate indulgence.”²⁴ In other words, this negative emotion “immediatizes” the otherwise delayed costs of spending,²⁵ facilitating self-control by allowing consumers to compare the immediate pleasure of consumption with the immediate pain of paying.²⁶

The most direct evidence for the pain of paying comes from a recent paper by Nina Mazar and her colleagues, who used functional magnetic resonance imaging (“fMRI”) technology to show that “the anticipation of paying with money indeed triggers an affective pain experience, and the magnitude of that pain experience varies with the magnitude of the price one anticipates paying.”²⁷ Mazar used fMRI to scan the brains of study participants while they decided whether to purchase certain food items.²⁸ In some trials, participants could purchase the food in exchange for money, while in others, they could do so in exchange for a low-level electric shock.²⁹ Mazar found that paying money causes activity in the same affective pain-processing areas of the brain that are involved in obtaining food in exchange for electric shocks.³⁰ In other words, payment with cash constitutes “a literal pain experience.”³¹

23. Prelec & Loewenstein, *supra* note 14, at 25.

24. Ofer Zellermyer, *The Pain of Paying 2* (Dec. 1996) (Ph.D. dissertation, Carnegie Mellon University) (on file with author).

25. Loewenstein & O’Donoghue, *supra* note 11, at 195.

26. Rick et al., *supra* note 18, at 768.

27. Nina Mazar, Hilke Plassmann, Nicole Robitaille & Axile Lindner, *Pain of Paying?—A Metaphor Gone Literal: Evidence from Neural and Behavioral Science* 8–9, 18 (INSEAD, Working Paper No. 2017/06/MKT, 2017) (cited with permission), <https://ssrn.com/abstract=2901808> [<https://perma.cc/SHT8-AZ9K>].

28. *Id.* at 11.

29. *Id.* at 12.

30. *Id.* at 17–18.

31. Nina Mazar, Hilke Plassmann, Nicole Robitaille & Axile Lindner, Abstract, *Pain of Paying?—A Metaphor Gone Literal: Evidence from Neural and Behavioral Science* (INSEAD, Working Paper No. 2017/06/MKT, 2017) (cited with permission), <https://ssrn.com/abstract=2901808> [<https://perma.cc/SHT8-AZ9K>].

Mazar's research is broadly consistent with the earlier findings of Brian Knutson and his colleagues.³² Knutson used fMRI to scan the brains of study participants as they made buying decisions.³³ He found that excessive prices activated the insula and that insula activation negatively correlated with the decision to buy.³⁴ The insula is a region of the brain, the activation of which is associated with anticipating physical pain, self-reported negative arousal,³⁵ exposure to disgusting odors,³⁶ unfair ultimatum game offers,³⁷ and social exclusion.³⁸

In terms of its functional role, the pain of paying is an instance of a more general phenomenon whereby people facilitate self-control by "cultivat[ing] a tendency to experience negative emotions—in particular, guilt and fear—when they engage in certain 'undesirable' activities."³⁹ This method of self-regulation is especially common for activities, such as overeating and smoking, for which the benefits are immediate and tangible, whereas the costs are delayed and nebulous.⁴⁰

While negative emotions, such as the pain of paying, can effectively assist in regulating behavior, they are a crude tool for doing so.⁴¹ People generally struggle in limiting negative emotions to only illegitimate activities, particularly when self-control entails a decision not about whether to undertake an activity, but how much of the activity to undertake.⁴² Spending, for example, is not all bad,

32. Brian Knutson, Scott Rick, G. Elliott Wimmer, Drazen Prelec & George Loewenstein, *Neural Predictors of Purchases*, 53 NEURON 147, 147–50 (2007).

33. *Id.* at 147–48.

34. *Id.* at 147–50.

35. Martin P. Paulus, Corianne Rogalsky, Alan Simmons, Justin S. Feinstein & Murray B. Stein, *Increased Activation in the Right Insula During Risk-Taking Decision Making Is Related to Harm Avoidance and Neuroticism*, 19 NEUROIMAGE 1439, 1440–46 (2003); Christian Büchel & Raymond J. Dolan, *Classical Fear Conditioning in Functional Neuroimaging*, 10 CURRENT OP. NEUROBIOLOGY 219, 219–22 (2000).

36. Bruno Wicker, Christian Keysers, Jane Plailly, Jean-Pierre Royet, Vittorio Gallese & Giacomo Rizzolatti, *Both of Us Disgusted in My Insula: The Common Neural Basis of Seeing and Feeling Disgust*, 40 NEURON 655, 655–60 (2003).

37. Alan G. Sanfey, James K. Rilling, Jessica A. Aronson, Leigh E. Nystrom & Jonathan D. Cohen, *The Neural Basis of Economic Decision-Making in the Ultimatum Game*, 300 SCI. 1755, 1755–57 (2003).

38. Naomi I. Eisenberger, Matthew D. Lieberman & Kipling D. Williams, *Does Rejection Hurt? An fMRI Study of Social Exclusion*, 302 SCI. 290, 290–92 (2003).

39. Loewenstein & O'Donoghue, *supra* note 11, at 185–86.

40. *See id.* at 185.

41. *Id.* at 183.

42. *Id.* at 183–84.

but applying negative emotions only to wasteful spending is not easy given that “wasteful” is an ambiguous term. As a result, some negative emotions leach over into legitimate activities that are necessary or desirable, which can lead to a generally neurotic attitude toward these activities.⁴³

II. DETERMINANTS OF THE PAIN OF PAYING

The pain of paying is not simply a function of the amount paid. Substantial evidence suggests that the pain of paying varies based on the context in which payment is made. This finding is important because it means that the government can potentially take steps to manipulate the pain of paying taxes based on choices it makes with respect to tax design. This Part discusses the primary determinants of the pain of paying aside from the magnitude of the payment. These include coupling, feelings of guilt about consumption, perceptions about receiving a good or bad deal, any delay in the payment, and the method of payment. This Part lays the foundation for Part III, which will discuss the pain of paying in the context of particular types of taxes and with respect to different methods of payment.

A. *Coupling*

To understand how the pain of paying influences behavior, we need to consider how people think about economic transactions. In standard economic models, people enter into transactions with an eye toward maximizing the present value of lifetime utility. They think comprehensively about all of the factors relevant to that goal, including existing wealth, expected future earnings, and so on.⁴⁴ The link between the benefits that a good will provide and its cost is important, but only until the point at which the consumer decides to buy the item. Once the consumer makes that decision, the link between payment and consumption is broken, and the consumer’s focus shifts to arranging consumption and payments in a

43. *Id.* at 184.

44. *See, e.g.*, Richard H. Thaler, *Mental Accounting Matters*, 12 J. BEHAV. DECISION MAKING 183, 186 (1999); Daniel Kahneman & Amos Tversky, *Choices, Values, and Frames*, 39 AM. PSYCH. 341, 343–48 (1984).

manner that maximizes their net present value. As a general rule, this means accelerating consumption and delaying payments.

In the real world, however, people often fail to think comprehensively about the problems that they face. Instead of considering problems globally, people succumb to “focusing illusion” or “focusing effects.”⁴⁵ Because of limited cognitive capacity, people frequently think in a piecemeal fashion and fail to take into account all information relevant to a given issue. They instead passively accept the frame or characterization of a problem as they encounter it and confine their thoughts to salient elements, especially information presented explicitly.⁴⁶ Implicit information, even if relevant, often remains “off screen.”

In financial matters, focusing effects manifest in the form of mental accounting, which refers to “the set of cognitive operations used by individuals and households to organize, evaluate, and keep track of financial activities.”⁴⁷ Two related aspects of mental accounting are relevant to this Article. First, people assign income and expenses to separate mental accounts designated for specific purposes such as rent, entertainment, and so on.⁴⁸ The accounts are often topical in nature and connect “the consequences of possible choices to a reference level that is determined by the context within which the decision arises.”⁴⁹ These accounts constrain spending within certain categories of activities and in that way function to facilitate self-control.⁵⁰ For example, by assigning \$200 per month to her entertainment account and \$800 to her rent

45. Some scholars refer to the same phenomenon as “focusing failures,” “focusing bias,” “focusing,” or “isolation effects.” Edward J. McCaffery & Jonathan Baron, *Thinking About Tax*, 12 J. PSYCH. PUB. POL’Y & L. 106, 107 (2006); Lorraine Chen Idson, Dolly Chugh, Yoella Bereby-Meyer, Simone Moran, Brit Grosskopf & Max Bazerman, *Overcoming Focusing Failures in Competitive Environments*, 17 J. BEHAV. DECISION MAKING 159, 160 (2004); Jones et al., *supra* note 21, at 213–14; Daniel Kahneman & Dan Lovallo, *Timid Choices and Bold Forecasts: A Cognitive Perspective on Risk Taking*, 39 MGMT. SCI. 17, 17 (1993); P. Legrenzi, V. Girotto & P.N. Johnson-Laird, *Focusing in Reasoning and Decision Making*, 49 COGNITION 36, 58–64 (1993).

46. For reviews of the relevant literature, see Spiller, *supra* note 21, at 596; Frederick et al., *supra* note 21, at 553–54; Daniel Kahneman, *Maps of Bounded Rationality: Psychology for Behavioral Economics*, 93 AM. ECON. REV. 1449, 1458–60 (2003).

47. Thaler, *supra* note 44, at 183.

48. Richard Thaler, *Mental Accounting and Consumer Choice*, 4 MKTG. SCI. 199, 207–08 (1985).

49. Thaler, *supra* note 44, at 186.

50. *Id.* at 184.

account, a person might exercise discipline and avoid blowing rent money on movies, ball games, and other fun activities.

Second, people often focus narrowly on particular transactions or categories of transactions. When a consumer enters into a transaction (e.g., by making payment), he opens a mental account, and he closes that account when the transaction is complete (e.g., upon consuming the good or service).⁵¹ More specifically, consumers “establish mental accounts that create symbolic linkages between specific acts of consumption and specific payments.”⁵² When a consumer establishes a transaction-specific mental account, he “creates a psychological link between the costs and the benefits of a given transaction.”⁵³ Behavioral economists use the term “coupling” to refer to the degree to which, within mental accounts, payments are linked to consumption and vice versa.⁵⁴ A good example of a transaction in which coupling is tight would be a fee-per-use arrangement in which the consumer pays cash, a single payment pays for a single good or service, and payment and consumption occur simultaneously.⁵⁵ Under these circumstances, payment and consumption are clearly connected in the mind.

As discussed above, in standard economic models, the relationship between payment and consumption ceases to be important once the buying decision has been made. In reality, however, coupling matters because it influences the magnitude of the pain associated with payment.⁵⁶ When the consumer can easily link a specific payment to a specific good or service, the payment will attenuate the pleasure of consumption, and, conversely, consumption will buffer the pain of paying.⁵⁷ If, however, the link between payment and consumption is broken, that may create enough ambiguity for malleable mental accounting—giving “people the flexibility to value things in multiple, fluid, and inconsistent ways while still providing a modicum of discipline and authenticity.”⁵⁸

51. *Id.* at 189–93.

52. Prelec & Loewenstein, *supra* note 14, at 5.

53. Dilip Soman & John T. Gourville, *Transaction Decoupling: How Price Bundling Affects the Decision to Consume*, 38 J. MKTG. RSCH. 30, 31–32 (2001).

54. Prelec & Loewenstein, *supra* note 14, at 11.

55. Soman & Gourville, *supra* note 53, at 32.

56. Prelec & Loewenstein, *supra* note 14, at 10–11.

57. *Id.* at 8, 22–25.

58. Eldar Shafir & Richard H. Thaler, *Invest Now, Drink Later, Spend Never: On the Mental Accounting of Delayed Consumption*, 27 J. ECON. PSYCH. 694, 696 (2006).

In particular, the consumer may feel as if he is paying for nothing—making the payment particularly painful.⁵⁹ Decoupled consumption, on the other hand, may be especially pleasurable because, unburdened by thoughts of payment, the consumer experiences it as if it were free.⁶⁰

1. Separating Payment and Consumption

Behavioral economists have identified several sources of psychological decoupling. Most obviously, decoupling can occur when payment and consumption are not simultaneous. For example, if payment occurs well in advance of consumption, memories of the prior payment will fade so that consumption is unburdened by thoughts of payment and feels as if it is free and, therefore, particularly pleasurable.⁶¹ Conversely, if payment occurs long after consumption, then paying will be particularly painful because the memories of consumption will have faded, leaving the consumer with the feeling that he is paying for nothing.⁶²

When people pay in advance, focusing effects influence how they experience payment and consumption. The payment in advance evokes a global perspective and thoughts of future consumption.⁶³ It feels like an investment rather than a loss. Once the payment is made, on the other hand, the subsequent consumption evokes a more local perspective.⁶⁴ The consumer does not think about the past payment, but instead, the consumption feels free.⁶⁵

In a series of surveys, Eldar Shafir and Richard Thaler confirmed this pattern.⁶⁶ They asked wine drinkers how they would feel if they bought a \$400 case of wine, which they would drink ten years later.⁶⁷ The wine drinkers reported that they would not feel similarly to how they would feel if they just spent \$400 on a

59. Prelec & Loewenstein, *supra* note 14, at 22–25.

60. *Id.*

61. *Id.* at 10, 22–25; John T. Gourville & Dilip Soman, *Payment Depreciation: The Behavioral Effects of Temporally Separating Payments from Consumption*, 25 J. CONSUMER RSCH. 160, 162–63 (1998).

62. Prelec & Loewenstein, *supra* note 14, at 10, 22–25.

63. Shafir & Thaler, *supra* note 58, at 702–04.

64. *Id.*

65. *Id.*

66. *Id.* at 699–700.

67. *Id.*

weekend getaway.⁶⁸ Instead, they would feel as if they had just made a \$400 investment that they would gradually consume over time.⁶⁹

Nonetheless, when Shafir and Thaler asked the wine drinkers how they would feel if they were drinking a \$75 bottle of wine that they had purchased years earlier for \$20, only 20% gave the answer predicted by standard economic theory (i.e., as if they had consumed wine with an opportunity cost of \$75), while 18% reported a perceived cost of only \$20, and 7% a perceived cost of \$20 plus forgone interest.⁷⁰ Amazingly, only 45% of respondents reported feeling like drinking the wine cost them anything at all.⁷¹ The other 55% reported feeling like the bottle cost them nothing or, even better, that they were saving \$55.⁷² Thus, when wine drinkers purchase expensive wine to drink later, they view the purchase as an investment, but, years later, when they drink the wine, they do not perceive a cost.⁷³ Shafir and Thaler summed up their findings with the phrase, "Invest now, drink later, spend never!"⁷⁴

In a related survey, Shafir and Thaler asked participants to imagine that they prepaid for tickets to a series of concerts that would occur over a two-year period.⁷⁵ In exchange for paying in advance, they received a discount.⁷⁶ Shafir and Thaler then asked the participants how they would feel both at the time that they made the purchase and when they were using a ticket to attend one of the concerts.⁷⁷ Seventy-six percent of the participants conformed to a "never-spender" pattern in which they responded that the purchase would feel like an investment or savings, while the use of the ticket would feel like no cost or even a saving.⁷⁸

The work of Shafir and Thaler suggests powerful psychological advantages in favor of prepayment that are ignored in standard economic analysis. According to the standard way of thinking, people will generally prefer to delay payments so as to minimize their

68. *Id.* at 700.

69. *Id.*

70. *Id.* at 697.

71. *Id.*

72. *Id.*

73. *Id.* at 699.

74. *Id.* at 700.

75. *Id.* at 700–01.

76. *Id.* at 700.

77. *Id.* at 700–01.

78. *Id.* at 701.

present value. Conversely, if, as is commonly assumed, people discount future utility, then they will prefer to accelerate consumption. As a result, standard economics predicts that people will prefer to consume now and pay later. As we have seen, however, evidence suggests that the opposite is often the case—people prefer to pay now and consume later. In other words, people may not want to delay payment, and they may in fact be averse to debt.

Indeed, a series of surveys conducted by Drazen Prelec and George Loewenstein found strong evidence for debt aversion. In one survey, Prelec and Loewenstein found that sixty percent of study participants preferred to pay in advance for a vacation or for miscellaneous living expenses for a brief and anticipated period of unemployment.⁷⁹ In another survey, Prelec and Loewenstein asked participants to consider the possibility of purchasing a timeshare for vacation purposes.⁸⁰ The time purchased totaled three weeks, but the vacations could be broken up into shorter stays; the cost totaled \$3,000, but it could be paid in installments.⁸¹ The researchers then presented study participants with sixteen possible schedules of vacation times and payments, including schedules for which vacation time was entirely prepaid or postpaid as well as pay-as-you-go schedules where payments and vacation time were interleaved.⁸² The study found that the majority of participants preferred prepayment or pay-as-you-go, and those that preferred pay-as-you-go generally preferred to make installment payments just before vacationing rather than just after.⁸³ Also, more subjects preferred to accelerate rather than delay payments.⁸⁴ Subsequent research has confirmed the preference for prepayment that Prelec and Loewenstein identified, but found that it is generally limited to “hedonic” goods (e.g., vacations) rather than “utilitarian” goods (e.g., a washer and dryer).⁸⁵ Again, these findings are surprising because they contradict the prediction of standard economics that people will generally prefer to delay payments.

79. Prelec & Loewenstein, *supra* note 14, at 6–7.

80. *Id.* at 15–16.

81. *Id.* at 16.

82. *Id.* at 16.

83. *See id.* at 16–19.

84. *Id.* at 18.

85. Vanessa M. Patrick & C. Whan Park, *Paying Before Consuming: Examining the Robustness of Consumers' Preference for Prepayment*, 82 J. RETAILING 165, 173 (2006).

In exploring the reasons for debt aversion, Prelec and Loewenstein found that study participants believed that paying in advance and avoiding debt often causes people to feel better both when making payments and while consuming the good or service in question.⁸⁶ While paying money is painful, thinking about future consumption buffers the pain. Conversely, thoughts of future payments attenuate the pleasure of consumption—hence the preference for prepayment.⁸⁷ Importantly, Prelec and Loewenstein found evidence for a form of prospective mental accounting.⁸⁸ People link specific acts of consumption with specific payments, but they tend to focus on future payments and consumption episodes, while past ones fade from memory.⁸⁹

For hedonic goods, the psychological benefits of prepayment are so compelling that people often engage in a form of mental prepayment. In fact, one function of mental accounts is to facilitate mental prepayment.⁹⁰ For example, by allocating an amount to their entertainment account, a person can mentally prepay for enjoyable activities. When money is assigned to the mental account, the expectation of future entertainment buffers the pain of paying. Conversely, when the entertainment occurs and payment is actually made, the payment is less painful. It does not feel like a loss because the expense was previously budgeted and, psychologically, the payment occurred in the past.

2. Bundling

In addition to separating the timing of payment and consumption, decoupling can occur when a single payment pays for a bundle of consumption events so that the payment is not clearly linked to each event.⁹¹ A good example is an all-inclusive resort vacation package. One payment covers the room, food, drinks, and entertainment, so that the cost of each item is concealed.

Bundling has three consequences relevant to this Article. First, when a consumer prepays for a bundle of goods, they can impute

86. Prelec & Loewenstein, *supra* note 14, at 7.

87. *Id.* at 8.

88. *Id.* at 10.

89. *Id.* at 10.

90. *Id.* at 19–20.

91. Soman & Gourville, *supra* note 53, at 32.

all of the expected benefits to a single payment, which mitigates the pain of paying.⁹² Second, and conversely, when payment occurs after consumption of a bundle of goods, the challenge of connecting the payment to a specific good or service magnifies the pain of paying and the feeling that the consumer is paying for nothing.⁹³

Finally, when consumption occurs after payment, bundling makes it even more difficult for the consumer to connect a specific consumption event to a particular payment, which reinforces the tendency discussed above for prepaid consumption to feel free. Dilip Soman and John Gourville found evidence from surveys and actual transaction data to support this point.⁹⁴ Soman and Gourville studied the sunk cost effect, which is the tendency to continue an endeavor due to a prior investment of time, effort, and money.⁹⁵ For example, if a person prepays for a lift ticket at a ski resort and then feels compelled to ski despite terrible conditions that make the experience unpleasant, that person has fallen victim to the sunk cost effect.⁹⁶ Economists view this behavior as irrational because, when faced with a decision about what to do going forward, historic, unrecoverable costs are irrelevant and only future costs and benefits should matter.⁹⁷ Nonetheless, abundant research has shown that real people care about sunk costs.⁹⁸ Soman and Gourville found that bundling can help. In the skiing example, people became less likely to use their lift ticket when conditions are poor if the ticket was purchased as part of a bundled pass rather than as a group of unbundled one-day tickets.⁹⁹ By making the cost of each ticket ambiguous, bundling mitigates the sunk cost effect.

Soman and Gourville found evidence for two causes of the decoupling that they observed. The first is complexity. In particular, decoupling is more likely when the price of a bundle of goods is not a round number (e.g., \$52.58) so that the consumer cannot easily allocate it to each item in the bundle.¹⁰⁰ The second is that consumers psychologically decouple payment and consumption when they are

92. Prelec & Loewenstein, *supra* note 14, at 20–21.

93. *Id.* at 22–23.

94. *See generally* Soman & Gourville, *supra* note 53.

95. *Id.* at 31.

96. *See id.*

97. *See id.*

98. For a review of the literature, see *id.*

99. *Id.* at 32–36.

100. *Id.* at 37–39.

motivated to do so because it is convenient. For example, where the consumer wants to skip the last of a series of plays for which he paid in advance so that he can attend a party, he can view the payment as having paid for the entire series, as opposed to allocating a portion of it to each play—thereby making it psychologically more palatable to pass on the play he plans to miss.¹⁰¹

3. Salience

Coupling will be higher when costs are salient. This explains why people often prefer flat-rate payment structures for gym memberships, internet access, and other products even when they would save money with pay-per-use pricing.¹⁰² Marketing researchers refer to the bias against pay-per-use pricing as the “taxi meter effect”: the ticking of the taxi meter makes cost especially salient, reducing the pleasure of the ride.¹⁰³ Flat-rate pricing mitigates the taxi-meter effect. The consumer can pay in advance—when thoughts of future consumption attenuate the pain of paying—and then consume later, free from thoughts of payment.

B. *Guilt About Consumption*

The pain of paying is more intense when people feel guilty about consuming a particular good. Buying hedonic goods, like expensive consumer electronics, which are fun and offer benefits “primarily in the form of experiential enjoyment,” is more painful than buying utilitarian goods, like a washer and dryer, which offer “practical functionality.”¹⁰⁴ Purchasing hedonic goods is hard to justify and

101. *Id.* at 38–39.

102. See Anja Lambrecht & Bernd Skiera, *Paying Too Much and Being Happy About It: Existence, Causes, and Consequences of Tariff-Choice Biases*, 43 J. MKTG. RSCH. 212, 217 (2006); Prelec & Loewenstein, *supra* note 14, at 20–22.

103. Lambrecht & Skiera, *supra* note 102, at 213.

104. Erica Mina Okada, *Justification Effects on Consumer Choice of Hedonic and Utilitarian Goods*, 42 J. MKTG. RSCH. 43, 44–52 (2005); see also Rick et al., *supra* note 18, at 777–78; Ran Kivetz & Itamar Simonson, *Earning the Right to Indulge: Effort as a Determinant of Customer Preferences Toward Frequency Program Rewards*, 39 J. MKTG. RSCH. 155, 167–68 (2002); Darren W. Dahl, Heather Honea & Rajesh V. Manchada, *The Nature of Self-Reported Guilt in Consumer Contexts*, 14 MKTG. LETTERS 159, 165 (2003); Ran Kivetz, *Advances in Research on Mental Accounting and Reason-Based Choice*, 10 MKTG. LETTERS 249, 250 (1999); Michel Strahilevitz & John G. Myers, *Donations to Charity as Purchase Incentives: How Well They Work May Depend on What You Are Trying to Sell*, 24 J. CONSUMER RSCH. 434, 435–43 (1998); Dana-Nicoleta Lascu, *Consumer Guilt: Examining the Potential of a New Marketing Construct*, 18 ADVANCES CONSUMER RSCH. 290, 293 (1991).

causes feelings of guilt.¹⁰⁵ Similarly, there is some evidence that the pain associated with paying for vice goods, like cookies and soda, is greater than that associated with virtue goods, like beans and fat-free yogurt.¹⁰⁶

C. *Good or Bad Deal*

People like a bargain. More specifically, the pain of paying is reduced by the feeling that you got a good deal and exacerbated by the feeling that you overpaid relative to some reference price that you perceive as fair.¹⁰⁷

D. *Delaying Payment*

We have seen that, contrary to standard analysis, there can be psychological benefits to timing payments so that they occur prior to consumption—a fact that argues against delaying payments. Nonetheless, it is important to recognize the limitations of this argument. Delaying payment can also delay the pain of paying, at least in those cases where payment is delayed for a long enough period of time so that the consumer does not currently think about the prospect of having to pay.¹⁰⁸ This is important because, if payment can be postponed long enough, then the psychological advantages of prepayment discussed above may give way to the benefits of deferral, which helps explain why otherwise debt-averse consumers choose to borrow instead of prepaying for all consumption.¹⁰⁹ Of course, the benefits of delaying payment are temporary. Payment will eventually come due, and if it occurs long after consumption, then it may be particularly painful because the associated consumption is long forgotten.¹¹⁰

105. Okada, *supra* note 104, at 44.

106. Scott Rick, *Tightwads and Spendthrifts: An Interdisciplinary Review*, 1 FIN. PLAN. REV. 1, 4 (2018).

107. Loewenstein & O'Donoghue, *supra* note 11, at 195 n.20; Thaler, *supra* note 43, at 188–89; Thaler, *supra* note 47, at 205–06.

108. See Loewenstein & O'Donoghue, *supra* note 11, at 196.

109. See Prelec & Loewenstein, *supra* note 14, at 13–14.

110. Loewenstein & O'Donoghue, *supra* note 11, at 196–97.

E. *Method of Payment*

The pain of paying also varies by method of payment. Paying in cash is more painful than using other payment mechanisms.¹¹¹ Marketing researchers have long understood that people are more likely to buy and to pay more if they use a credit card rather than cash.¹¹² More recent research extends this finding to other forms of noncash payment such as debit cards, scrip, gift certificates, pre-paid laundry cards, and photocopy cards.¹¹³

Noncash forms of payment contain features that result in psychological decoupling of payment from consumption. For example, credit cards temporally separate the payment of cash from consumption.¹¹⁴ Moreover, credit cards bundle many transactions together so that a single payment pays for many goods and services, which makes it difficult to trace a given payment to specific consumption activities.¹¹⁵ In addition, cash transactions, which involve counting and physically parting with money, are more salient and vivid than noncash transactions, such as the use of a credit card, which simply requires a signature, or automatic payments from a bank account, which may go completely unnoticed.¹¹⁶

Noncash transactions also focus attention on different product attributes and affect memory in different ways than do cash transactions. Promothesh Chatterjee and Randall Rose found that the use of cash causes people to focus more on a product's cost while the use of credit cards causes people to focus more on the product's

111. Manoj Thomas, Kalpesh Kaushik Desai & Satheeshkumar Seenivasan, *How Credit Card Payments Increase Unhealthy Food Purchases: Visceral Regulation of Vices*, 38 J. CONSUMER RSCH. 126, 134–35 (2011); Dilip Soman, *The Effect of Payment Transparency on Consumption: Quasi-Experiments from the Field*, 14 MKTG. LETTERS 173, 174–75 (2003).

112. Promothesh Chatterjee & Randall L. Rose, *Do Payment Mechanisms Change the Way Consumers Perceive Products?*, 38 J. CONSUMER RSCH. 1129, 1132–34 (2012); Soman, *supra* note 111, at 181–82; Dilip Soman & Amar Cheema, *The Effect of Credit on Spending Decisions: The Role of the Credit Limit and Credibility*, 21 MKTG. SCI. 32, 33–34 (2002); Richard A. Feinberg, *Credit Cards as Spending Facilitating Stimuli: A Conditioning Interpretation*, 13 J. CONSUMER RSCH. 348, 354–55 (1986); Elizabeth C. Hirschman, *Differences in Consumer Purchase Behavior by Credit Card Payment System*, 6 J. CONSUMER RSCH. 58, 64 (1979).

113. Thomas et al., *supra* note 111, at 130; Priya Raghurir & Joydeep Srivastava, *Monopoly Money: The Effect of Payment Coupling and Form on Spending Behavior*, 14 J. EXPERIMENTAL PSYCH.: APPLIED 213, 219–21 (2008); Soman, *supra* note 111, at 176, 179.

114. Prelec & Loewenstein, *supra* note 14, at 22–23.

115. *Id.*

116. Chatterjee & Rose, *supra* note 112, at 1130; Soman, *supra* note 111, at 174–75.

benefits.¹¹⁷ Similarly, Dilip Soman found that relative to people who use cash or checks, those who use credit cards are less able to accurately recall their expenditures.¹¹⁸ Rufina Gafeeva and his colleagues replicated this finding with respect to multifunctional smart cards that serve both payment and nonpayment functions (e.g., tracking loyalty points).¹¹⁹

As a number of these studies make clear, credit cards in particular possess several features that facilitate spending by reducing the pain of paying. The relief, however, is temporary because the credit card balance must ultimately be paid. Moreover, credit card payments are particularly painful because they relate to consumption that may have already occurred and faded from memory.¹²⁰ Each payment also covers a bundle of goods, which makes tracing the payment to particular consumption activities very difficult. Taken together, these features of credit cards help us understand why people who generally prefer to avoid borrowing end up saddled with credit card debt that they view as especially burdensome.¹²¹

III. IMPLICATIONS FOR TAX THEORY AND POLICY

This Part argues that the pain of paying has significant implications for tax theory and policy. Section A of this Part clarifies the relationship between tax salience, which has received substantial attention from academics in recent years, and the pain of paying. Sections B and C explore the implications of the pain of paying for the major criteria that economists and legal scholars use to evaluate tax systems—tax efficiency and equity. Section D discusses the potential for the government to reduce the pain of paying taxes by creating psychological tax-benefit linkages in the minds of taxpayers.

Sections E through J focus on the details of tax design. I argue that the pain of paying alters the way that policymakers should

117. Chatterjee & Rose, *supra* note 112, at 1136.

118. Dilip Soman, *Effects of Payment Mechanism on Spending Behavior: The Role of Rehearsal and Immediacy of Payments*, 27 J. CONSUMER RSCH. 460, 463–72 (2001).

119. Rufina Gafeeva, Erik Hoelzl & Holger Roschk, *What Else Can Your Payment Card Do? Multifunctionality of Payment Modes Can Reduce Payment Transparency*, 29 MKTG. LETTERS 61, 70 (2018).

120. Prelec & Loewenstein, *supra* note 14, at 23.

121. *Id.* at 15. This problem is compounded for people who engage in hyperbolic discounting of the future. They would like to pay off their credit card debt, but their present bias causes them to repeatedly procrastinate to avoid the pain of doing so. *Id.*

think about various types of taxes, the method of payment, and other details that will influence the psychological burden that the tax system imposes.

Consider, for example, the federal income tax. In many respects, it seems almost to have been designed to inflict maximum pain of paying. The taxpayer has to calculate the tax once each year by filling out a complex and aggravating form, making the amount paid highly salient. Although the federal government provides significant services, they are not clearly connected to income tax payments,¹²² so that the benefits received do not buffer the pain of paying.¹²³ In fact, many of the benefits that the federal government provides—such as workplace safety, environmental protection, and medical research—are virtually invisible from the perspective of the typical taxpayer. Moreover, a single tax defrays the cost of an almost endless array of goods and services, so even if a taxpayer were determined to figure out how much of their income tax is used to pay for particular benefits, they would have a hard time doing so. The problem is exacerbated if many taxpayers are predisposed to hate taxes as a result of ideological or partisan biases. Just as consumers can psychologically decouple payment from consumption when motivated to do so,¹²⁴ antitax ideologues and partisans likely find it easy to ignore the connection between the income tax and the complex web of benefits that it makes possible given the lack of an identifiable exchange of money for goods. Finally, the media often highlights instances of government waste, as well as tax avoidance measures taken by the wealthy,¹²⁵ which creates the

122. Cf. Alison Kopicki, *Most Americans Expect to Give More Than They Receive, Poll Finds*, N.Y. TIMES (Feb. 11, 2012), <https://www.nytimes.com/2012/02/12/us/most-expect-to-give-more-than-they-receive-poll-finds.html> [<https://perma.cc/65EL-HQPH>] (“A majority of Americans say they expect to pay more in federal taxes over their lifetime than they will ever receive in benefits from the government, according to a recent New York Times poll.”).

123. Although his article predates the literature on the pain of paying and decoupling, Joshua Rosenberg discusses the “dissociation of tax from benefits” as a reason that people do not like paying taxes. Joshua D. Rosenberg, *The Psychology of Taxes: Why They Drive Us Crazy, and How We Can Make Them Sane*, 16 VA. TAX REV. 155, 178–83 (1996).

124. See *supra* section II.A.2.

125. E.g., Tom Coburn, Opinion, *Tracking Government Waste—There’s an App for That*, WALL ST. J. (Oct. 6, 2015, 6:11 PM), <https://www.wsj.com/articles/tracking-government-wastetheres-an-app-for-that-1444169479> [<https://perma.cc/Z68D-F8M8>]; Christopher Conkey, *Federal Workers Accused of Abusing Business Class*, WALL ST. J. (Oct. 3, 2007, 12:01 AM), <https://www.wsj.com/articles/SB119136054325946827> [<https://perma.cc/98R9-TL95>]; Dan Morgan, Gilbert M. Gaul & Sarah Cohen, *Farm Program Pays \$1.3 Billion to People Who Don’t Farm*, WASH. POST (July 2, 2006), https://www.washingtonpost.com/wp-dyn/content/article/2006/07/01/AR2006070100962_pf.html [<https://perma.cc/KNR6-5E9N>].

impression that honest taxpayers are suckers receiving a bad deal.¹²⁶ In fact, the decoupling of income tax payments from government benefits and the resulting pain that those payments cause likely helps explain an enduring mystery of American politics: Americans strongly support nearly every major government program, but they also strongly oppose the tax increases needed to pay for them.¹²⁷

Perhaps the one saving grace of the federal income tax is that most taxpayers make payments through the wage withholding system, under which the employer automatically deducts tax from an employee's pay, and the employee does not have to pay cash or write a check unless they owe additional tax when they file their return. Wage withholding likely reduces the pain of paying the income tax.¹²⁸ Nonetheless, other elements of the tax make it especially painful with serious adverse political and fiscal ramifications.

By understanding the aspects of the tax system, including the income tax, which make it painful to pay taxes, policymakers can identify ways to provide relief to taxpayers. For example, knowing that the current complex and aggravating income tax filing process likely makes the tax more salient and painful suggests a rationale for return-filing simplification efforts, such as prefiled tax returns, whereby the IRS would simplify tax filing by providing taxpayers with returns that are prepopulated with information that the IRS has on file.¹²⁹ Similarly, because the decoupling of government services from income tax payments almost certainly makes the income

126. Americans' perception of the amount of money wasted by government is staggering. Rebecca Rifkin, *Americans Say Federal Gov't Wastes 51 Cents on the Dollar: Consider State and Local Governments a Bit Less Wasteful*, GALLUP (Sept. 17, 2014), <https://news.gallup.com/poll/176102/americans-say-federal-gov-wastes-cents-dollar.aspx> [<https://perma.cc/9UYM-BF8B>].

127. See sources cited *supra* note 10.

128. See DeLaney Thomas, *supra* note 11, at 107–14.

129. Elizabeth Warren has proposed legislation that would allow taxpayers to elect to receive pre-filled income tax returns from the IRS. Tax Filing Simplification Act of 2017, S. 912, 115th Cong. (2017). For the results of a state-level pilot program involving prefiled tax returns, see Joseph Bankman, *Simple Filing for Average Citizens: The California ReadyReturn*, 107 TAX NOTES, 1431, 1432–33 (2005), https://taxprof.typepad.com/taxprof_blog/files/2005-11952-1.pdf [<https://perma.cc/9HB8-AKLP>]. But see Dennis J. Ventry, Jr., *Americans Don't Hate Taxes, They Hate Paying Taxes*, 44 U.B.C. L. REV. 835, 852–82 (2011) (criticizing prefiled tax returns on various grounds and arguing instead for a data retrieval system that “would allow taxpayers and their tax professionals to view, access, and download tax account information from a secure database maintained by the federal government”).

tax more painful, an argument exists for government marketing efforts that highlight the linkage between the two.¹³⁰

A. *Tax Salience vs. the Pain of Paying*

In the past fifteen years, a spate of articles in the economics and legal literatures have explored the concept of tax salience,¹³¹ which is the idea that cognitive limitations affect the extent to which taxpayers account for the costs of taxation when making decisions or judgments.¹³² This literature has shown that the way in which a tax is framed or presented affects how people respond to it. For example, one study showed that consumers reduce purchases more in response to a sales tax that is incorporated into the shelf price of an item than to one that is added at the register.¹³³ Apparently, when the shelf price does not include the tax, many consumers fail to add it mentally.¹³⁴ As a result, scholars sometimes refer to low-salience taxes, such as sales taxes added at the register, as “shrouded” or “hidden,” based upon the notion that people fail to account for them when deciding how to behave.¹³⁵

Perhaps because they are not psychologists, the economists and legal scholars who have written about tax salience are not always clear on the psychological processes underlying the phenomenon. That said, tax salience effects appear to be a specific instance of focusing effects discussed above in section II.A. Taxpayers may not account for low-salience taxes because the manner in which the taxes are presented or paid does not draw attention to them or causes them to be difficult to calculate.¹³⁶

130. See *infra* section III.D.

131. E.g., Eric S. Smith, *Exploiting the Charitable Contribution Deduction's Hypersalience*, 2020 UTAH L. REV. 419, 425–30; Hayes R. Holderness, *The Unexpected Role of Tax Salience in State Competition for Businesses*, 84 U. CHI. L. REV. 1091, 1118–29 (2017); David Gamage & Darien Shanske, *Three Essays on Tax Salience: Market Salience and Political Salience*, 65 TAX L. REV. 19, 23 (2011); Deborah H. Schenk, *Exploiting the Salience Bias in Designing Taxes*, 28 YALE J. ON REGUL. 253, 254 (2011); Brian Galle, *Hidden Taxes*, 87 WASH. U.L. REV. 59, 64–65 (2009); Raj Chetty, Adam Looney & Kory Kroft, *Salience and Taxation: Theory and Evidence*, 99 AM. ECON. REV. 1145, 1145–46 (2009).

132. Gamage & Shanske, *supra* note 131, at 23.

133. Chetty et al., *supra* note 131, at 1146.

134. *Id.*

135. *Id.*; Galle, *supra* note 131, at 60–65, 70–72.

136. See Gamage & Shanske, *supra* note 131, at 26 (“Tax instruments generally should only have reduced market salience when tax prices are complicated or obscured in some fashion, such that it becomes more difficult to calculate the aggregate price of engaging in

The concepts of tax salience and the pain of paying are related in that the salience of a tax can influence the pain of paying it. At the extreme, if taxes were completely hidden so that taxpayers never realized they were paying them, then the pain of paying would not exist. Nonetheless, tax salience differs from the pain of paying in that the former is a cognitive phenomenon resulting from limited attention¹³⁷ and the latter is an emotional response. Due to cognitive limitations, a taxpayer may fail to notice a low-salience tax and account for it in their decision making.¹³⁸ If, however, the tax is salient, then the taxpayer pays attention to it.¹³⁹ In traditional economic analysis, this means that, in the presence of salient taxes, the taxpayer will rationally base decisions on the after-tax price of goods and on after-tax income. Although not included in traditional analysis, this also means that the taxpayer will anticipate and experience the pain of paying, which is an emotional response to the tax.

Importantly, a tax can have low salience, but high pain of paying. Imagine, for example, a large car registration tax that is imposed long after a car is purchased. David Gamage and Darien Shanske posit such a tax as one that potentially has low salience because the taxpayer purchasing the car may be unaware of the tax at the time of purchase, so they may not factor it into the decision of whether to buy.¹⁴⁰ Yet, when the taxpayer subsequently learns of and pays the tax, they will experience the pain of paying. In fact, the pain of paying will likely be especially acute under these circumstances. The tax is a surprise expense not previously budgeted for in the taxpayer's mental accounting system, and the payment occurs after the purchase was made so that the pain of making it is not buffered by thoughts of future consumption. This example illustrates that the techniques for reducing the salience of a tax—in this instance, delaying the tax until after the decision to

a market decision.”).

137. *See id.* at 23 (“Our concept of tax salience would be meaningless in a world of complete information in which taxpayers had unlimited time and resources and were not subject to any cognitive biases.”).

138. *Id.* at 64 (“[T]he concept of market salience refers to the extent to which taxpayers factor tax prices into their market decisions.”).

139. *Id.* at 26 (“When taxpayers can easily understand the aggregate price of engaging in a market transaction, taxes should typically be fully market salient.”).

140. *Id.* at 66–67.

purchase the car—can, counterintuitively, increase the pain of paying it.¹⁴¹

Conversely, a tax can be highly salient, but relatively painless to pay. Consider state-run lotteries. Economists view these lotteries as imposing an implicit tax because state governments use a portion of ticket sales to fund public schools and other programs rather than to fund prizes.¹⁴² Unlike a hidden car registration tax, however, the price of a lottery ticket is highly salient; it is readily apparent at the time of purchase. Yet, unlike many taxes that some people risk prison to evade, many people will voluntarily wait in line to purchase lottery tickets, so paying for them is apparently not very painful.

B. *Tax Efficiency*

With a few caveats,¹⁴³ standard economic analysis assumes that, from society's perspective, the payment of a tax constitutes a costless transfer from the taxpayer to the government.¹⁴⁴ The financial loss to the taxpayer is exactly offset by the financial gain to the government, which can use the resulting tax revenue for the benefit of its citizens. In other words, paying taxes forces taxpayers to forgo private consumption, but, as long as the government spends wisely, the resulting loss in utility to the taxpayer can be counterbalanced by an increase in utility from government spending. In fact, the tax-and-transfer system can produce a net increase in social welfare if the government provides beneficial public goods that are undersupplied by private markets or if the government reallocates money from wealthy taxpayers, for whom the marginal utility of an additional dollar is low, to poor taxpayers, for whom it is high.

141. Cf. Richard M. Bird, *Policy Forum: Visibility and Accountability—Is Tax-Inclusive Pricing a Good Thing?*, 58 CAN. TAX J. 63, 72 (2010) (discussing a survey that found that seventy-five percent of Canadians prefer to have the goods-and-services tax included in the display price as opposed to added at the register); HIROMITSU ISHI, *THE JAPANESE TAX SYSTEM* 291 (3d ed. 2001) (arguing that Japanese consumers prefer tax-inclusive pricing because they want “to pay the tax without noticing the tax burden”).

142. CHARLES T. CLOTFELTER & PHILIP J. COOK, *SELLING HOPE: STATE LOTTERIES IN AMERICA* 216 (1989).

143. The major caveat relates to the substitution effects of taxation. See *infra* section III.B.1. Another caveat relates to the cost of administering the tax system.

144. E.g., MANKIW, *supra* note 1, at 156–59; GRUBER, *supra* note 2, at 177–95.

The pain of paying complicates this simple story. Contrary to standard analysis, paying taxes does not constitute a costless transfer because the act of paying imposes a real psychological cost. This fact is important not only because it modifies the prevailing theory about the welfare cost of taxation, but also because it has implications for tax design. Subsection III.B.1 argues that a strong *prima facie* case exists for designing taxes in a way that minimizes the pain of paying. Subsections III.B.2 and III.B.3 discuss several caveats to this argument.

1. The *Prima Facie* Case for Minimizing the Pain of Paying

There are three reasons that the government might want to reduce the pain of paying taxes. The first relates to what economists refer to as the “substitution effects” of taxation.¹⁴⁵ Although standard economic analysis treats the payment of a tax as a costless transfer, it does not conclude that taxation is harmless. In standard analysis, the problem is not the harm caused by paying taxes, but is instead the fact that taxpayers sometimes alter their behavior to avoid taxes. More precisely, taxes distort behavior by causing taxpayers to substitute untaxed activities for taxed ones. For example, an excise tax on oranges might cause taxpayers to eat fewer oranges and more apples. In that case, taxpayers are worse off because, in the absence of taxes, they would rather eat oranges than apples, whereas the government is no better off because it receives no tax revenue. As a consequence, the tax reduces social welfare and is said to produce a deadweight loss or excess burden. Excise taxes are not the only taxes that induce substitution effects. Income taxes may cause taxpayers to substitute leisure for work, capital gains taxes may produce less saving and more spending, and corporate taxes may cause taxpayers to invest in partnerships rather than corporations. In fact, any tax that taxpayers can avoid by altering their behavior will likely produce harmful substitution effects. Because they reduce social welfare, economists generally argue that, other things equal, a major goal of tax policy should be to minimize substitution effects.¹⁴⁶

One reason that the government might want to reduce the pain of paying taxes is that the pain of paying exacerbates distortionary

145. For a textbook discussion of substitution effects, see ROSEN & GAYER, *supra* note 3, at 331–38.

146. *Id.* at 348.

substitution effects. In standard analysis, taxes cause substitution effects by increasing the opportunity cost of purchasing taxed goods or engaging in taxed activities. As we have seen, however, real people often fail to consider opportunity cost and instead rely on the pain of paying as a proxy to control their spending.¹⁴⁷ Empirical evidence indicates that increasing the pain of paying for a product reduces purchases of it.¹⁴⁸ As a result, the greater the pain of paying taxes, the more likely people are to substitute untaxed goods and activities for taxed ones. This means that, to the extent that the government can minimize or eliminate the pain of paying taxes, it can achieve the broadly accepted goal of imposing taxes with minimal deadweight loss from substitution effects.

The second reason that the government might want to reduce the pain of paying taxes is that, to the extent that taxpayers cannot or do not avoid paying them, the pain of paying constitutes pure deadweight loss. Stated differently, when a taxpayer pays taxes, they effectively pay twice—once in terms of money spent and a second time in terms of the psychological pain from paying.¹⁴⁹ In the consumer context, the pain of paying serves the useful purpose of keeping spending in check, but once the decision to spend has been made, any feelings of guilt simply detract from the enjoyment of consumption.¹⁵⁰ Similarly, for taxpayers, to the extent that they must pay taxes, the resulting psychological pain from doing so serves no useful purpose.¹⁵¹ The government, therefore, arguably should minimize it.

The third reason that the government might want to reduce the pain of paying relates to one of the exceptions to the general rule that the payment of a tax constitutes a costless transfer from the taxpayer to the government. This rule does not hold to the extent that the tax system involves administration costs—which consist of costs incurred by the government in enforcing the tax laws and

147. See *supra* Part I.

148. Knutson et al., *supra* note 32, at 147–50; see *supra* section II.E.

149. Loewenstein & O'Donoghue, *supra* note 11, at 195–96.

150. Cf. *id.* at 187 (arguing that some wasteful spending is probably inevitable for most people, so they experience harmful feelings of guilt from giving in to spending that was irresistible in any event).

151. My focus here is on people acting in their capacity as workers, investors, and consumers, not as voters. Conservatives might argue that the pain of paying taxes is useful politically because it reduces support among voters for tax increases and government spending. I address this argument below in Part IV.

by taxpayers in complying with them. Reducing the pain of paying taxes will almost certainly reduce administration costs by increasing voluntary compliance with the tax laws and even reducing behavior that, though legal, is undertaken solely to avoid taxes.¹⁵² Voluntary compliance means less tax evasion and lower enforcement costs. Similarly, if taxpayers are less tempted to engage in legal tax avoidance strategies, such as paying a tax professional to assist with a tax shelter investment, then the cost of administering the tax system will decrease.

In sum, the prima facie case for minimizing the pain of paying taxes is quite strong. Social welfare is reduced to the extent that the pain of paying causes taxpayers to avoid taxes by substituting untaxed goods and activities for taxed ones. Moreover, when taxpayers cannot avoid paying taxes, the pain of paying is simply superfluous and adds to deadweight loss. Finally, taxes that are painful to pay likely encourage evasion and wasteful tax avoidance behavior that increases tax administration costs.

Despite these compelling points, the argument for reducing the pain of paying taxes comes with two caveats. I now turn to those.

2. Income Effects

In addition to substitution effects, taxes alter behavior because they reduce the after-tax income of taxpayers—a response that economists refer to as the “income effects” of taxation.¹⁵³ For example, if the government imposed an unavoidable lump-sum tax on all of its citizens, the tax would not produce substitution effects because it would not alter the prices of goods and services. Nonetheless, the tax might produce income effects. In particular,

152. Cf. Cait Lambertson, Jan-Emmanuel De Neve & Michael I. Norton, *The Power of Voice in Stimulating Morality: Eliciting Taxpayer Preferences Increases Tax Compliance*, 28 J. CONSUMER PSYCH. 310, 323 (2018) (finding in a laboratory setting that allowing subjects to express a nonbinding preference for how their tax dollars would be allocated reduced their willingness to take advantage of a questionable tax loophole); 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, 182–84 (2013) (arguing that voluntary compliance will increase if taxpayers support how their tax dollars are spent); Dan M. Kahan, *The Logic of Reciprocity: Trust, Collective Action, and Law*, 102 MICH. L. REV. 71, 81 (2003) (arguing that tax compliance increases when taxpayers view paying taxes as part of a reciprocal arrangement).

153. For a textbook discussion of income effects, see ROSEN & GAYER, *supra* note 3, at 337.

taxpayers might purchase fewer luxury items due to their smaller after-tax budgets.

Whether a tax in fact produces income effects depends on how the government spends the resulting revenue. In theory, the government could avoid income effects altogether by returning tax revenue to taxpayers and restoring their pretax budgets. In practice, the government does not do this, so real-world taxes produce income effects. Because income effects depend on how the government uses its revenue, tax policy analysts generally ignore them in evaluating the efficiency of tax systems.¹⁵⁴ This allows the analyst to isolate and draw conclusions about tax policy without the need to consider spending policy.

The efficacy of this approach, however, depends on a key assumption, which is that, after paying their taxes, taxpayers optimally reallocate their spending in light of their smaller after-tax budgets, such as by spending less on luxury goods to pay for necessities.¹⁵⁵ A potential problem arises, however, if, by designing taxes to minimize the pain of paying, the government distorts taxpayers' perceptions of their after-tax incomes. Scholars have recognized an analogous problem in the context of low-salience taxes.¹⁵⁶ Consider again the hidden car registration tax discussed above.¹⁵⁷ If, at the time they purchase a car, a taxpayer is unaware that the government will subsequently impose a large tax, they may spend more on the car than they otherwise would and then, after paying the unanticipated tax, have no money left over to pay for food and rent. In this way, low-salience taxes can reduce social welfare.

While distortionary income effects are a significant concern with respect to low-salience taxes, they are not as problematic with respect to decisions about whether to reduce the pain of paying. For starters, reducing the salience of a tax is not the only way to reduce the pain of paying it. For example, as discussed below, funding a state park through user fees rather than an income tax will likely reduce the pain of paying for the park because, unlike an income tax, a user fee is clearly connected to a specific benefit, and the expectation of that benefit buffers the pain of paying the fee. Moreover, while user fees have the potential to reduce the pain of paying

154. *See id.* at 337–38.

155. *See* Chetty et al., *supra* note 131, at 1145–46, 1173–74.

156. *See id.*

157. *See supra* notes 140–41 and accompanying text.

taxes, there is no reason to believe that they will distort taxpayers' perceptions of their after-tax incomes. The same holds true for other techniques for reducing the pain of paying, such as allowing noncash methods of payment.

In addition, even where the government reduces the pain of paying taxes by reducing their salience, distortionary income effects may not always be important. David Gamage and Darien Shanske have argued that, in the presence of low-salience taxes, taxpayers can learn through experience and “develop a rough sense of how decisions affect their expected future tax liabilities, even without understanding the tax law mechanics of how these liabilities are calculated.”¹⁵⁸ In particular, taxpayers will “learn from experience that allocating one’s pretax budget based on pretax prices will produce budget shortfalls”¹⁵⁹ The idea is that, in any given tax environment, taxpayers will, through repeated experience, come to associate certain levels of income with certain levels of consumption even if they do not always accurately perceive how much they pay in taxes. Put differently, taxpayers will learn to approximate their after-tax budgets even if they do not understand the effect of each individual tax.

If Gamage and Shanske are correct, then reducing the pain of paying by manipulating tax salience should not produce distortionary income effects for taxes assessed on routine expenditures and activities. Instead, distortionary income effects will only be a problem where taxpayers do not have the opportunity to learn from experience, such as when large taxes are assessed on irregular purchases or when there is a long time delay between market choices and tax assessments.¹⁶⁰

In addition, it is not obvious what degree of pain of paying—either for taxes or for payments made in private markets—will lead people to choose optimally across goods. In private markets, firms frequently take steps to reduce the pain of paying.¹⁶¹ In fact, our understanding of the concept comes primarily from the marketing literature in which researchers have studied ways that firms can reduce the pain of paying for their products. As a result, it is far from clear that people will make better choices across goods if the

158. Gamage & Shanske, *supra* note 131, at 68.

159. *Id.*

160. *Id.* at 69–70.

161. *E.g.*, Prelec & Loewenstein, *supra* note 14, at 19–21.

government makes tax payments more painful. On the contrary, if private firms take steps to reduce the pain of paying, choices will likely be suboptimal if the government does not do the same.

3. Tightwads and Spendthrifts

Up to this point, my analysis of the efficiency effects of pain-of-paying manipulations has taken for granted that, in the absence of taxes, people make choices that maximize their utility. This assumption is standard in the public finance literature, and it provides the foundation for the argument that the government should design taxes to minimize the distortions caused by substitution effects.¹⁶² Nonetheless, substantial evidence from behavioral economics and psychology suggests that people often make bad decisions even when judged by their own preferences.¹⁶³ For example, smokers may want to quit smoking and the overweight may want to eat healthier. They repeatedly make plans to give up cigarettes or to diet, but ultimately find that they are unable to follow through due to insufficient willpower.¹⁶⁴

When, in the absence of taxes, people make poor consumption decisions, the tax policy goal of leaving pretax choices undisturbed becomes harder to defend. In fact, prominent economists and legal scholars have argued for imposing “sin taxes” on cigarettes, unhealthy food, and other vices that some people overconsume (as judged by themselves).¹⁶⁵ The idea is that, by reducing purchases of these goods, taxes will cause actual consumption to align more closely with desired consumption.

162. ROSEN & GAYER, *supra* note 3, at 331–38.

163. *See, e.g.*, sources cited *infra* notes 164–65.

164. Over 40% of smokers attempt to quit annually, but only 4–7% of those attempts are successful. U.S. DEP’T HEALTH & HUM. SERVS., TREATING TOBACCO USE AND DEPENDENCE: 2008 UPDATE 15 (2008), https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/clinicians-providers/guidelines-recommendations/tobacco/clinicians/update/treating_tobacco_use08.pdf [<https://perma.cc/JEX5-E6ZJ>]. Similarly, diets generally do not lead to long-term weight loss, and many people ultimately regain more weight than they lost while dieting. *See generally* Traci Mann, A. Janet Tomiyama, Erika Westling, Ann-Marie Lew, Barbra Samuels & Jason Chatman, *Medicare’s Search for Effective Obesity Treatments: Diets Are Not the Answer*, 62 AM. PSYCH. 220 (2007).

165. *E.g.*, Hunt Allcott, Benjamin B. Lockwood & Dmitry Taubinsky, *Should We Tax Sugar-Sweetened Beverages? An Overview of Theory and Evidence*, 33 J. ECON. PERSPECTIVES 202, 202–03 (2019); Jonathan Gruber & Botond Köszegi, *Is Addiction “Rational”? Theory and Evidence*, 116 Q.J. ECON. 1261, 1263 (2001).

To understand why the literature on sin taxes is relevant to this Article, we need some background on the concept of tightwads and spendthrifts as developed by Scott Rick and his colleagues. Rick has shown that some people experience greater or lesser pain of paying than others, and he developed the tightwad-spendthrift scale to measure individual differences in the pain of paying.¹⁶⁶ A person's placement on the scale depends on responses to a series of questions designed to capture whether the person's actual spending matches their preferred level of spending.¹⁶⁷ A tightwad is someone who experiences great pain when parting with money and, therefore, spends less than they would ideally like to spend.¹⁶⁸ A spendthrift, on the other hand, experiences little pain of paying, has trouble controlling spending, and spends more than they would prefer.¹⁶⁹ Rick administered the tightwad-spendthrift scale to over 13,000 people from various walks of life and found that about 24% were tightwads, 15% were spendthrifts, and the rest were "unconflicted consumers."¹⁷⁰ Whereas unconflicted consumers are generally happy with how they spend money, both tightwads and spendthrifts are unsatisfied with and distressed by their spending habits and would like to change them.¹⁷¹

Rick and subsequent researchers have subjected tightwads and spendthrifts to various experiments in which the researchers manipulated the magnitude of the pain of paying.¹⁷² These experiments suggest that decreasing the pain of paying causes tightwads to behave more like spendthrifts.¹⁷³ In one experiment, for example, Rick asked participants whether they would be willing to pay a \$5 fee for overnight shipping of a DVD box set.¹⁷⁴ For some participants, Rick framed the fee simply as a "\$5 fee," while for others, he framed it as a "small \$5 fee."¹⁷⁵ Rick chose the latter framing to reduce the pain of paying.¹⁷⁶ He found that spendthrifts'

166. Rick et al., *supra* note 18, at 769–75.

167. *Id.* at 780.

168. *Id.* at 768.

169. *Id.*

170. *Id.* at 769–70.

171. Scott I. Rick, Deborah A. Small & Eli J. Finkel, *Fatal (Fiscal) Attraction: Spendthrifts and Tightwads in Marriage*, 48 J. MKTG. RSCH. 228, 230, 233 (2011).

172. For a review of the literature, see Rick, *supra* note 106, at 4–5.

173. *Id.* at 5.

174. Rick et al., *supra* note 18, at 776.

175. *Id.*

176. *See id.*

willingness to pay for shipping did not vary significantly by frame, but tightwads were substantially more willing to pay the fee when it was framed as small—in fact, they became almost as willing to do so as spendthrifts.¹⁷⁷

Conversely, increasing the pain of paying causes spendthrifts to behave more like tightwads.¹⁷⁸ For example, Shane Frederick and his colleagues asked subjects to choose between a \$700 stereo and a better \$1,000 stereo.¹⁷⁹ For some (but not all) subjects, Frederick explicitly stated that buying the cheaper stereo would leave them with \$300 in cash.¹⁸⁰ Frederick adopted this framing to make salient the opportunity cost of the more expensive stereo, thereby increasing the pain of paying for it.¹⁸¹ Frederick found that making the opportunity cost salient did not significantly affect the decisions of tightwads, but it made spendthrifts significantly less likely to select the expensive stereo.¹⁸²

Frederick's findings suggest that a key difference between tightwads and spendthrifts is that tightwads are more likely to consider opportunity costs spontaneously.¹⁸³ Similarly, Jonathan Berman and his colleagues found that spendthrifts are more likely than tightwads to suffer from expense neglect, or the tendency to underweight the extent to which anticipated expenses will cut into future spare money.¹⁸⁴ As a result, spendthrifts may find spending relatively painless because they do not appreciate that any debt incurred today will reduce their ability to spend in the future.¹⁸⁵

The literature on tightwads and spendthrifts shows that, as judged by themselves, some people generally have difficulty aligning actual consumption with desired consumption. Just as the government might use sin taxes to reduce overconsumption of cigarettes and unhealthy food, it might also use tax policy to help tightwads and spendthrifts. In this case, however, rather than imposing new taxes, the government could simply manipulate the

177. *Id.* at 776–77.

178. Rick, *supra* note 106, at 5.

179. Frederick et al., *supra* note 21, at 553.

180. *Id.* at 558.

181. *Id.*

182. *Id.*

183. *Id.*

184. Jonathan Z. Berman, An T.K. Tran, John G. Lynch Jr. & Gal Zauberman, *Expense Neglect in Forecasting Personal Finances*, 53 J. MKTG. RSCH. 535, 544–45 (2016).

185. *See* Rick, *supra* note 106, at 5.

pain of paying existing taxes. For example, imagine that a state government reduces the pain of paying its general sales tax by making it less salient. This action would not only reduce the harm from ordinary substitution effects; it might also benefit tightwads by reducing a psychological barrier to spending that is responsible for their miserly condition.

There is, however, a major obstacle to this sort of policy. Unfortunately, the government cannot easily tailor its pain-of-paying manipulations to particular people or groups. While reducing the pain of paying might help tightwads, it could harm spendthrifts by further encouraging their profligacy. Ideally, perhaps, the government could eliminate the pain of paying for tightwads, but increase it for spendthrifts, but that is impossible in practice.

Moreover, even if the government could apply different policies to tightwads and spendthrifts, the correct policy for spendthrifts is unclear. On the one hand, increasing the pain of paying consumption taxes might benefit spendthrifts by discouraging spending and increasing saving.¹⁸⁶ On the other hand, to the extent that the policy fails and spendthrifts wastefully spend their money, then they suffer two harms—the financial hardship produced by excessive spending and the guilt and psychological cost that characterize the pain of paying.¹⁸⁷ In theory, the government could optimally balance these conflicting outcomes. In practice, we do not have enough information about spendthrifts to make that approach feasible.

To summarize, distortionary income effects do not provide a compelling rationale for rejecting the efficiency case in favor of minimizing the pain of paying taxes. The potentially negative effects on spendthrifts, however, are a concern. But even with

186. *But see* Linda Thunström, Ben Gilbert & Chian Jones Ritten, *Nudges that Hurt Those Already Hurting—Distributional and Unintended Effects of Salience Nudges*, 153 *J. ECON. BEHAV. & ORG.* 267, 269 (2018) (finding that a nudge designed to remind experimental subjects of opportunity costs reduced spending among tightwads, but not spendthrifts, which suggests that such nudges may exacerbate the biases of tightwads without correcting the biases of spendthrifts).

187. *See* Loewenstein & O'Donoghue, *supra* note 11, at 190 (making a similar argument with respect to educational campaigns that attempt to deter people from engaging in various vices by using vivid descriptions and images of bad consequences to produce guilt and fear); Jeff Strnad, *Conceptualizing the "Fat Tax": The Role of Food Taxes in Developed Economies*, 78 *S. CAL. L. REV.* 1221, 1254–55 (2005) (arguing the same with respect to taxes on unhealthy foods).

respect to spendthrifts, increasing the pain of paying may do more harm than reducing it.

C. *Tax Equity*

In the economics and legal literatures, the predominant approach to tax equity is based on optimal tax theory, which is grounded in welfarism.¹⁸⁸ This literature assumes that the government's goal should be to maximize social welfare, which is a function of individual utilities that are aggregated in some fashion according to society's preferences.¹⁸⁹ At one end of the spectrum, a utilitarian social welfare function gives equal weight to the utility of all individuals, whether rich or poor.¹⁹⁰ At the other end, a Rawlsian social welfare function gives weight only to the worst-off individual.¹⁹¹ Weightings in between are also possible depending on how averse society is to inequality.¹⁹²

Using this framework, economists draw conclusions about how the government should reallocate resources through taxes and transfers. For example, a utilitarian wants to maximize utility in the aggregate, so they will approve of the government transferring a dollar from one person to another if doing so increases total utility. The extent to which a person is made better off by such a transfer depends on their marginal utility of consumption. A utilitarian would tax those with low marginal utility of consumption and transfer funds to those with high marginal utility.¹⁹³ A utilitarian cares only about marginal utility, not absolute levels of utility. A Rawlsian, on the other hand, cares only about the absolute level of utility of the worst-off individual, so they would transfer money to that person even if that person has a low marginal utility of consumption.¹⁹⁴

Optimal tax theorists generally make the simplifying assumption that people vary based only on their ability to produce

188. Daniel Shaviro, *Beyond the Pro-Consumption Tax Consensus*, 60 STAN. L. REV. 745, 751–53 (2007).

189. David A. Weisbach, *Toward a New Approach to Disability Law*, 2009 U. CHI. LEGAL F. 47, 71–72.

190. *Id.* at 72.

191. *Id.*

192. *Id.*

193. *Id.* at 73.

194. *Id.*

income.¹⁹⁵ Those with higher ability to earn have higher utility. A person with high ability to earn may in fact have a low or moderate income, but that is only because they receive substantial utility from leisure, so they choose not to work as long or as hard as they otherwise might. Because of this simplifying assumption, the optimal tax literature generally concludes that the government's goal should be to tax those with high ability to earn and transfer money to those with low ability.¹⁹⁶ For example, a utilitarian might support this policy based on the idea that the marginal utility of consumption diminishes as overall consumption increases, and those with higher ability to earn have higher overall consumption (either in the form of goods or leisure). As a result, transferring funds from those with high ability to those with low ability will increase social welfare.

The assumption that people vary based only on their ability to earn is obviously false.¹⁹⁷ The primary defense for it is that it makes the mathematical models of optimal tax theory more tractable.¹⁹⁸ In fact, separate and apart from the ability to earn, people differ in their ability as consumers to convert money into utility.

In particular, we have seen that, as judged by themselves, both tightwads and spendthrifts have problematic spending patterns that make them unhappy. Due to their poor ability as consumers, tightwads and spendthrifts may have lower absolute levels of utility than unconflicted consumers who have similar ability to earn.¹⁹⁹ In that case, the government arguably should redistribute income to tightwads and spendthrifts for the same reasons that

195. *Id.* at 82; Shaviro, *supra* note 188, at 752.

196. Weisbach, *supra* note 189, at 74.

197. Shaviro, *supra* note 188, at 752 (stating that “[e]ven ability, however, remains at least a turtle shy of the bottom layer” and noting that, in welfarism, “ability matters not for its own sake, but as evidence, in turn, of something else—people’s total utility and marginal utility”).

198. Weisbach, *supra* note 189, at 82 n.78 (“One of the problems the economics literature has . . . is that if people vary in more than one dimension, the math becomes intractable.”); Shaviro, *supra* note 188, at 758 (“[A]bility as a consumer—that is, the capacity to derive utility from resources—matters distinctly from earning ability,” but is “usually ignored, however, reflecting the difficulty of observing them along with the analytical advantages of using a simpler framework.”).

199. *Cf.* Travis J. Carter, *The Psychological Science of Spending Money*, in *THE PSYCHOLOGICAL SCIENCE OF MONEY* 213, 218–19 (Erik Bijleveld & Henk Aarts eds., 2014) (finding that, after controlling for income and other demographic variables, tightwads report lower subjective happiness, but spendthrifts and unconflicted consumers are equally happy).

conventional optimal tax analysis concludes that government should redistribute income to those with low ability to earn.²⁰⁰

Nonetheless, precisely because of their poor ability as consumers, tightwads and spendthrifts may not make good use of any government transfers that they receive. In other words, not only are their absolute levels of utility low, but the marginal utility that they receive from government transfers may be low as well.²⁰¹ For this reason, tightwads and spendthrifts may be similar to a person who suffers from a disability that both reduces their overall well-being and makes it difficult for government assistance to improve their lot in life.²⁰²

The analysis for spendthrifts is further complicated by the fact that their spending habits tend to produce problematic financial outcomes.²⁰³ In his sample of 13,000 people, Scott Rick found that, among those who use credit cards, spendthrifts were three times more likely than tightwads to carry debt, and among those in debt, spendthrifts were 44% more likely to carry large balances of over \$20,000.²⁰⁴ Similarly, spendthrifts were more than twice as likely as tightwads to have saved less than \$10,000 and were half as likely to have saved more than \$250,000.²⁰⁵ Moreover, these large differences in financial outcomes are a function of spending habits and not differences in income. The differences in income distribution for tightwads and spendthrifts are small, and for credit card users, the likelihood of carrying debt is significantly greater for spendthrifts than tightwads at every income level, including those earning over \$250,000.²⁰⁶

Because spendthrifts are more likely to be in debt, well-timed infusions of cash could generate significant utility. In other words, while the marginal utility of an additional dollar may generally be low for spendthrifts (due to their wasteful spending), there are times (e.g., when they need to pay off a crushing debt) that it may

200. Cf. Shaviro, *supra* note 188, at 785 (making a similar argument with respect to myopes who save money suboptimally).

201. Cf. *id.* (making a similar argument with respect to myopes).

202. See Weisbach, *supra* note 189, at 73.

203. For a discussion of the financial condition of spendthrifts, see Rick et al., *supra* note 18, at 774–76.

204. *Id.* at 774–75. Over 90% of both tightwads and spendthrifts reported that they use credit cards. *Id.* at 774.

205. *Id.* at 775.

206. *Id.* at 775–76.

in fact be quite high, which would support government transfers in their favor.²⁰⁷ The risk, however, is that if the government takes steps to mitigate the negative effects of wasteful spending, that action will produce more spendthrifts by removing the opportunity to learn from experience.²⁰⁸ Moreover, it may cause people who are not spendthrifts to imitate their behavior in the hope of receiving a handout.²⁰⁹

In sum, the existence of tightwads and spendthrifts complicates tax equity analysis. Contrary to a standard assumption of optimal tax theory, ability to earn is not the only relevant dimension; ability to convert money into utility matters as well. Unfortunately, both tightwads and spendthrifts suffer from a deficiency in that respect. For that reason, the government arguably should redistribute income to tightwads and spendthrifts. Yet they may not make good use of any government transfers that they receive precisely because they have trouble converting money into utility.

D. (*Psychological*) Tax-Benefit Linkages

We have seen that taxes generally impose an efficiency cost: they create a deadweight loss because they distort behavior through substitution effects. The government can, however, reduce the deadweight loss of a tax by creating a “tax-benefit linkage,” which exists when there is a direct tie between the tax paid and some benefit received.²¹⁰ Consider a payroll tax levied on employers and used to fund a workers’ compensation program.²¹¹ The tax increases the cost of production to employers, reducing their demand for labor, and causing wages to fall. In isolation, the tax would cause a deadweight loss. As wages fall, some workers would substitute leisure for labor, choosing to reduce their hours worked even though they would happily work those hours in exchange for the higher wage that employers would be willing to pay in the

207. Cf. Lee Anne Fennell, *Willpower Taxes*, 99 GEO. L.J. 1371, 1395 n.128 (2011) (citing Shaviro, *supra* note 188, at 785) (making a similar argument with respect to myopes).

208. Cf. *id.* at 1395–96 (making a similar argument against compensating people who have low willpower, which impairs their ability to save).

209. Cf. Weisbach, *supra* note 189, at 85–87 (discussing this problem in the context of tax provisions designed to favor the disabled).

210. GRUBER, *supra* note 2, at 600–02; see Lawrence H. Summers, *Some Simple Economics of Mandated Benefits*, 79 AM. ECON. REV. 177, 179–81 (1989).

211. Jonathan Gruber uses this example. GRUBER, *supra* note 2, at 600–02.

absence of the tax. Nonetheless, the government uses the tax revenue to fund a benefit that workers value and that they will receive only if they work. Because workers value workers' compensation insurance, their total compensation includes not only their wages, but also the value that they place on the insurance benefit.²¹² As a result, the government's provision of workers' compensation insurance will increase the supply of labor, at least partially counteracting the effects of the payroll tax. More precisely, the effective tax on labor will be the difference between the payroll tax and the value of the insurance to workers.²¹³ In fact, if the value that workers place on the insurance equals the tax, then the linkage between the two would cancel the substitution effects of the tax and completely eliminate the deadweight loss.²¹⁴ In this case, the employer, through the payroll tax, is effectively buying workers' compensation insurance for its workers, substituting for wages with a benefit of equal value.

What do tax-benefit linkages have to do with the pain of paying? Recall that a tight psychological coupling of payments with benefits received reduces the pain of making those payments.²¹⁵ Coupling creates the potential for psychological tax-benefit linkages that reduce harmful substitution effects even in cases in which no direct tie actually exists between taxes paid and benefits received. For example, income tax payments generally are not directly linked to government benefits received. A person could eliminate income tax payments by giving up work entirely and with little to no reduction in government benefits. This means that the positive efficiency effects of tax-benefit linkages are mostly absent with respect to the income tax.

The government might, however, enhance the efficiency of the income tax if it can create a psychological tax-benefit linkage by tightly coupling the payment of income taxes with the provision of benefits in the minds of taxpayers. Based on experimental evidence

212. *Id.*

213. *Id.*

214. *Id.* at 602. Empirical evidence confirms that tax-benefit linkages can significantly reduce or eliminate the effects of payroll taxes on employment. See Patricia M. Anderson & Bruce D. Meyer, *The Effects of the Unemployment Insurance Payroll Tax on Wages, Employment, Claims and Denials*, 78 J. PUB. ECON. 81, 102-03 (2000); Jonathan Gruber & Alan B. Krueger, *The Incidence of Mandated Employer-Provided Insurance: Lessons from Workers' Compensation Insurance*, 5 TAX POL'Y & ECON. 111, 139 (1991).

215. See *supra* section II.A.

suggesting that taxpayers are more willing to pay taxes if they support how their tax dollars are used, Yair Listokin and David Schizer have argued that the government could reduce distortionary substitution effects by publicizing popular uses of tax revenue and even allowing taxpayers to allocate a portion of their tax bill to programs that they value.²¹⁶ Listokin and Schizer do not frame their argument in terms of the pain of paying. Rather, they argue that the steps they recommend would encourage “pro-social behavior” through a combination of pure altruism and the “warm glow” effects that accrue from being responsible for helping others.²¹⁷ Nonetheless, the pain-of-paying literature adds further support to Listokin and Schizer’s proposals. Their proposals would increase the psychological coupling of tax payments with government benefits—whether those benefits are personal to the taxpayer in question or accrue to the public generally—and would therefore likely reduce the pain of paying taxes, which would in turn reduce substitution effects. This is likely to be especially true where the government can connect tax payments to utilitarian goods, like roads, and virtue goods, like healthcare for children, because paying for those types of goods generally causes less pain than paying for hedonic goods.²¹⁸

In fact, coupling presents a potentially significant opportunity for the government due to bundling. Recall that when one payment pays for a bundle of goods and the connection between the payment and the bundle is clear, then the person making the payment will generally impute the benefits of the entire bundle to the payment, significantly reducing the pain of paying.²¹⁹ Many taxes, such as the income tax, pay for a variety of programs. Currently, this is a problem because the many benefits of these programs are not tightly bundled together into a single product, so it is not clear which, if any, of the benefits that the tax makes possible. But if the government can, through marketing and other measures, present

216. Listokin & Schizer, *supra* note 152, at 180–84. *But see* Michael Chirico, Robert Inman, Charles Loeffler, John MacDonald & Holger Sieg, *Deterring Property Tax Delinquency in Philadelphia: An Experimental Evaluation of Nudge Strategies*, 72 NAT’L TAX J. 479, 490–91 (2019) (finding that sending tardy taxpayers a reminder to pay their property taxes was equally effective at obtaining compliance whether the reminder included language that informed the taxpayers that they receive services in exchange for their tax payments or it did not).

217. Listokin & Schizer, *supra* note 152, at 185–90.

218. *See supra* section II.B.

219. *See supra* section II.A.2.

its programs as a bundle of goods and services and clearly connect the bundle with taxes, then that could dramatically reduce the pain that people feel in paying the latter. Oliver Wendell Holmes famously said that “[t]axes are what we pay for civilized society.”²²⁰ Justice Holmes did not mind paying taxes because he imputed to them all of the benefits of civilization. While it is unlikely that most taxpayers will adopt a similar mindset, government efforts to connect taxes with benefits could substantially reduce the psychological burden imposed by revenue collection.

Importantly, connecting a general-revenue tax like the income tax to a bundle of benefits will likely reduce the pain of paying the tax, but without also reducing the utility derived from government services. Payment of the income tax, for example, could be viewed as prepayment for a bundle of services. Recall that a significant advantage of prepaying for a bundle of goods is that, after payment is made, it is difficult to trace consumption of any individual good to the payment, which increases the feeling that consumption is free. As a result, taxpayers can have their cake and eat it too, assuming that, at the time they make a tax payment, they focus on the benefits they will receive in the future, and then, after the tax is paid, the memory of payment gradually fades.

E. *User Fees*

The pain of paying has implications not only for tax theory, efficiency, and equity, but also for tax design—including the types of taxes that policymakers may wish to impose and the details of how those taxes are structured. Take user fees as an example. A user fee is a fee that the government charges directly to the beneficiary of a particular government service.²²¹ Economists sometimes advocate for user fees on efficiency grounds because these fees provide information to the government about how much people are willing to pay for certain services, and, under certain circumstances, they ensure that the beneficiaries of those services value them at or above marginal cost.²²² In general, the efficiency rationale for user

220. *Compania General De Tabacos De Filipinas v. Collector*, 275 U.S. 87, 100 (1927) (Holmes, J., dissenting).

221. Clayton P. Gillette & Thomas D. Hopkins, *Federal User Fees: A Legal and Economic Analysis*, 67 B.U. L. REV. 795, 800 (1987).

222. David G. Duff, *Benefit Taxes and User Fees in Theory and Practice*, 54 TORONTO L.J. 391, 396–400 (2004); Richard M. Bird & Thomas Tsiopoulos, *User Charges for Public*

fees is strongest where the good or service in question resembles a private good rather than a public good in that the government can restrict consumption of it to those who pay (excludability) and that one person's use impacts use by others (rivalness).²²³ In addition, the marginal cost of the service needs to be easy to estimate, the demand for the service must respond to price changes, and the benefit of the service should accrue primarily to the consumer and not others.²²⁴ Some examples of real or proposed user fees include fees charged for the use of parks and waste management, tolls charged for the use of roads, and fees charged for police and fire protection based on incidence of crime or risk of fire.²²⁵

Whatever their other merits, user fees have a potentially important advantage relevant to this Article. As we saw with the income tax example, tax payments generally are not tightly coupled with the receipt of government services that they make possible. This decoupling means that the benefits of government do not buffer the pain of paying taxes. User fees overcome this problem by connecting payments to benefits. A person who complains bitterly about the income tax might voluntarily pay a fee to enter a national park or to use a toll road simply because the connection between the payment and the benefit is clear. Consistent with this hypothesis, Denvil Duncan and his colleagues found that people are 150% more likely to support using tolls rather than an income tax to fund road maintenance, repairs, and construction.²²⁶

One drawback of user fees, however, is that coupling works both ways. Connecting a government service with a payment buffers the pain of paying, but it also attenuates the pleasure of consuming the service.²²⁷ Using tolls and entrance fees rather than increasing

Services: Potentials and Problems, 45 CAN. TAX J. 25, 36 (1997).

223. Bird & Tsiopoulos, *supra* note 222, at 40; Gillette & Hopkins, *supra* note 221, at 810–12.

224. Bird & Tsiopoulos, *supra* note 222, at 49; Donald N. Dewees, *Pricing Municipal Services: The Economics of User Fees*, 50 CAN. TAX J. 586, 587–88 (2002); Gillette & Hopkins, *supra* note 221, at 805–12.

225. Bird & Tsiopoulos, *supra* note 222, at 80–82; Dewees, *supra* note 224, at 590–91.

226. Denvil Duncan, Venkata Nadella, Ashley Clark, Stacey Giroux & John Graham, *Searching for a Tolerable Tax: Public Attitudes Toward Roadway Financing Alternatives*, 45 PUB. FIN. REV. 678, 695 (2017); see also Johanna Zmud, *The Public Supports Pricing If . . . A Synthesis of Public Opinion Studies on Tolling and Road Pricing*, [Winter 2008] TOLLWAYS 29, 37–38 (reviewing public opinion evidence that people generally prefer to finance road construction and maintenance using tolls instead of taxes).

227. See Loewenstein and O'Donoghue, *supra* note 11, at 199–200 (arguing against user fees for this reason).

the income tax may reduce the pain of paying for roads and parks, but it also makes driving and visiting parks less enjoyable.

One way to address this problem is to encourage people to pay user fees in advance. When a person pays a toll or park entrance fee in advance, the expectation of the future benefit buffers the pain of paying. Conversely, when the person later drives on the toll road or visits the park, the memory of payment will likely have faded and consumption of the service may feel free. The idea is that advance payment of fees takes advantage of the mindset identified by Shafir and Thaler—invest now, consume later, pay never.²²⁸

F. *Earmarked Taxes*

Earmarked taxes are those for which the government has a specific purpose when they are collected.²²⁹ Examples include the Social Security tax, which is earmarked to pay Social Security benefits; the federal gas tax, which is earmarked for highway construction and maintenance;²³⁰ and the excise tax on sport fishing equipment, which is earmarked for management and conservation of fishery resources.²³¹ While earmarking can reduce the government's budgetary flexibility, scholars have identified a number of reasons that earmarked taxes may be attractive. Earmarking can essentially lock in specific expenditures by creating a dedicated funding source, which makes annual appropriations unnecessary and protects revenue from the regular legislative budget process.²³² Earmarking can also effectively bind future generations to earmarked taxes and the programs that they support by creating a "symbolic precommitment" to their long-term continuance and by firmly establishing interest group support.²³³ Finally,

228. See *supra* section II.A.1.

229. Susannah Camic, *Earmarking: The Potential Benefits*, 4 PITT. TAX REV. 55, 56 (2006).

230. U.S. DEP'T TRANSP., *Federal Gas Tax: Household Expenditures from 1965 to 1995*, TRANSP. STAT. NEWSL., Aug. 1997, at 1, https://www.bts.gov/sites/bts.dot.gov/files/legacy/publications/transportation_statistics_newsletter/issue_02/pdf/entire.pdf [<https://perma.cc/E62T-52Z8>].

231. U.S. FISH & WILDLIFE SERV., *ITEMS TAXED TO SUPPORT WILDLIFE AND SPORT FISH RESTORATION IN AMERICA* 5 (2018), <https://www.fws.gov/wsfrprograms/Subpages/AboutUs/ItemsTaxedJan2018.pdf> [<https://perma.cc/5W5B-V2NQ>].

232. ERIC M. PATASHNIK, *PUTTING TRUST IN THE US BUDGET: FEDERAL TRUST FUNDS AND THE POLITICS OF COMMITMENT* 31–32 (2000).

233. Camic, *supra* note 229, at 63–77.

earmarking gives information to taxpayers about how the government will spend their tax dollars.²³⁴

In addition to these recognized benefits, earmarking also has the potential to reduce the pain of paying taxes. This potential is strongest for what Susannah Camic refers to as “contributory” taxes, which are earmarked taxes that fund a program that, at least ostensibly, benefits the person paying the tax.²³⁵ The Social Security tax and federal gas tax are good examples. For contributory taxes, the arrangement loosely resembles a private market transaction or payment of a government user fee. The taxpayer makes a payment and receives a benefit in exchange. The primary differences are that the payment is compulsory and receipt of the benefit is less direct. Although the tie between the tax paid and benefit received may not be direct enough to create an actual tax-benefit linkage, it may be strong enough to create a psychological one.²³⁶ In that case, the potential exists that the expectation of the future benefit will buffer the pain of paying the tax, particularly if government marketing efforts highlight the connection between the tax and the benefit. Again, the opportunity is particularly great where the government pays for utilitarian or virtue goods rather than for hedonic goods.²³⁷

Some earmarked taxes are noncontributory, rather than contributory, meaning that the tax supports a program that does not benefit the people who pay it. An example is the federal excise tax on certain firearms and ammunition, which is earmarked to pay for wildlife restoration.²³⁸ Even for noncontributory taxes, the pain of paying the tax may be buffered by the expectation of a benefit, at least where the taxpayer supports the program that is funded by the tax. Here, the benefit is indirect and akin to the positive feelings accompanying a charitable donation.

The notion that earmarking reduces the pain of paying taxes finds empirical support in the fact that, historically, earmarked taxes have often enjoyed more popular support than general-revenue taxes and that revenue from earmarked taxes has increased

234. *Id.* at 58–59.

235. *Id.* at 60.

236. *See supra* section III.D.

237. *See supra* section II.B.

238. CONG. RSCH. SERV., R45667, PITTMAN-ROBERTSON WILDLIFE RESTORATION ACT: UNDERSTANDING APPORTIONMENTS FOR STATES AND TERRITORIES 1–3 (2019).

even at times when revenues from other taxes declined.²³⁹ In particular, substantially more people view the federal income tax, which is the most prominent general-revenue tax, as less fair than the Social Security tax, which is the most prominent earmarked tax.²⁴⁰ Similarly, the public is more likely to support a carbon tax and higher gasoline taxes if the government earmarks the revenue for clean technology research and adoption.²⁴¹ At a point in history when the national debt and federal deficit are at potentially damaging levels, policymakers may want to consider earmarking as a way to overcome opposition to tax increases.

G. *Taxation by Regulation*

Several decades ago, Richard Posner pointed out that regulation often substitutes for taxation.²⁴² What Posner referred to as “taxation by regulation” occurs when the government mandates that a regulated firm provide a service to someone at less than its cost.²⁴³ The firm generally responds by passing on the resulting loss to its other customers through higher prices for the products they purchase—creating “internal subsidization,” which can “be viewed as an exertion of state power whose purpose, like that of other taxes, is to compel members of the public to support a service that the market would provide at a reduced level, or not at all.”²⁴⁴

The Affordable Care Act provides a prominent, recent example.²⁴⁵ The Act requires health insurers to insure everyone who

239. See Camic, *supra* note 229, at 56–57 (reviewing the evidence).

240. *Taxes*, GALLUP, <https://news.gallup.com/poll/1714/taxes.aspx> [<https://perma.cc/8W64-KMXK>]; AM. ENTER. INST., *PUBLIC OPINION ON TAXES: 1937 TO TODAY* 19–21 (2016); ERIC LAURSEN, *THE PEOPLE'S PENSION: THE STRUGGLE TO DEFEND SOCIAL SECURITY SINCE RONALD REAGAN* 414–15 (2012); SUSAN B. HANSEN, *THE POLITICS OF TAXATION: REVENUE WITHOUT REPRESENTATION* 183 (1983).

241. Andrea Baranzini & Stefano Carattini, *Effectiveness, Earmarking, and Labeling: Testing the Acceptability of Carbon Taxes with Survey Data*, 19 *ENV'T ECON. & POL'Y STUD.* 197, 211–13 (2017); Shi-Ling Hsu, *The Politics and Psychology of Gasoline Taxes: An Empirical Study*, 15 *WIDENER L. REV.* 363, 383 (2010); Steffen Kallbekken & Marianne Aasen, *The Demand for Earmarking: Results from a Focus Group Study*, 69 *ECOLOGICAL ECON.* 2183, 2187 (2010); Simon Dresner, Louise Dunne, Peter Clinch & Christiane Beuermann, *Social and Political Responses to Ecological Tax Reform in Europe: An Introduction to the Special Issue*, 34 *ENERGY POL'Y* 895, 901 (2006).

242. Richard A. Posner, *Taxation by Regulation*, 2 *BELL J. ECON. & MGMT. SCI.* 22, 43 (1971).

243. *Id.* at 22, 29.

244. *Id.* at 29.

245. John Brooks, Brian Galle & Brendan Maher, *Cross-Subsidies: Government's Hidden*

applies no matter how much it will cost and, in general, to charge everyone in a particular plan the same premium regardless of the risk presented by particular individuals.²⁴⁶ The result of this mandate is that people with relatively low healthcare costs (e.g., single men and women not of childbearing age) pay higher premiums to subsidize those with relatively high healthcare costs (e.g., young women and families).²⁴⁷ In theory, Congress could have achieved the same result by allowing insurers to charge an actuarially fair price to women and others who impose high costs and then having the Treasury write checks to compensate those people for their elevated premiums.²⁴⁸ Yet Congress chose taxation by regulation instead.

Posner and others have proffered a number of theories to explain why the government might sometimes prefer taxation by regulation to the conventional tax-and-spend approach,²⁴⁹ but the pervasiveness of the phenomenon remains something of a mystery. Although overlooked up to this point, one straightforward rationale is that, relative to the alternative, taxation by regulation minimizes the pain of paying. When the government requires a regulated firm to provide services at a loss and the firm responds by increasing the price of its other products, the customers who purchase those products will still receive what they view as a valuable good or service, which will buffer the pain of paying.²⁵⁰ In fact, the firm's customers will likely have no idea that a portion of the price that they pay will effectively subsidize a government mandate. If, on the other hand, the government paid for the mandate by increasing the income tax, then the pain of paying the increased tax would not be buffered by the receipt of a valued product. In lieu of an income tax increase, the government might impose an excise tax on products related to the mandated activity. Even then, however, the pain of

Pocketbook, 106 GEO. L.J. 1229, 1231–33 (2018).

246. Tom Baker, *Health Insurance, Risk, and Responsibility After the Patient Protection and Affordable Care Act*, 159 U. PA. L. REV. 1577, 1588–90 (2011) (citing 42 U.S.C. § 300gg-1(a) to (b)(1)).

247. Brooks et al., *supra* note 245, at 1232.

248. *Id.* at 1233.

249. Posner, *supra* note 242, at 41–46; Brooks et al. *supra* note 245, at 1249–74.

250. *Cf.* Rosenberg, *supra* note 123, at 181 (arguing that people do not object to paying for the costs of laws regulating the workplace because those costs are paid “incrementally as part of the purchase price of some particular good or service we are acquiring” so that “[w]e associate our payment primarily with the acquisition of goods and services” and “the connection between our payment and laws regulating the workplace and production typically never enters our minds”).

paying the excise tax would be buffered only to the extent that taxpayers do not notice the tax and they believe that the additional cost is simply part of the price of the taxed product.

H. Lotteries

Americans spend about \$90 billion annually on state-run lotteries, resulting in over \$25 billion in government revenue.²⁵¹ Because states profit off lotteries—paying out substantially less in prize money than they receive from ticket sales—economists view lotteries as imposing an “implicit tax.”²⁵² What is fascinating about lotteries, however, is that, whereas taxpayers often feel as if they are paying something for nothing, lottery players frequently wait in line for the opportunity to give money to the state. By creating the hope of winning, the lottery effectively becomes a “painless tax’ . . . paid only by the willing.”²⁵³ While the pain of paying usually adds to the deadweight loss of taxation, lotteries can transform taxpaying into a welfare-enhancing event, not only for the lucky few who win, but also for the many millions of players who find the lottery entertaining or experience “anticipatory utility” from contemplating how their lives might change if they win.²⁵⁴

Despite the promise of raising revenue without pain, lotteries have a potentially significant downside. Early studies of the tax incidence of lotteries often found that they were regressive in that the implicit tax was paid disproportionately by the poor.²⁵⁵ Nonetheless, more recent research indicates that lotteries may not be as

251. *North American Lotteries*, N. AM. ASS'N OF STATE & PROVINCIAL LOTTERIES, <https://www.naspl.org/nasplmembers/> [<https://perma.cc/9SSX-QJAF>].

252. CLOTFELTER & COOK, *supra* note 142, at 216.

253. *Id.* at 215; see also William M. Rodgers & Charles Stuart, *The Efficiency of a Lottery as a Source of Public Revenue*, 23 PUB. FIN. Q. 242, 243 (1995) (finding that the introduction of a taxed lottery significantly improves social welfare because people enjoy playing).

254. See Hunt Allcott, Benjamin B. Lockwood, Dmitry Taubinsky, *The Optimal Taxation of Lotteries: Who Plays and Who Wins?* 2, 5–29 (Feb. 6, 2020) (unpublished manuscript) (cited with permission), <https://www2.nber.org/conferences/2020/PEs20/Allcott.pdf> [<https://perma.cc/6XE6-PSHQ>] (examining motivations for playing the lottery and concluding that, even taking into account behavioral biases that distort lottery purchases, the lottery is “a ‘win-win’ that generates both consumer surplus and government revenues”).

255. See Anthony D. Miyazaki, Ann Hansen & David E. Sprott, *A Longitudinal Analysis of Income-Based Tax Regressivity of State-Sponsored Lotteries*, 17 J. PUB. POL'Y & MKTG. 161, 164 (1998) (reviewing the early studies and finding that twenty concluded that lotteries are regressive while five found that they were proportional and one found that they were progressive).

regressive as the early studies suggested.²⁵⁶ In particular, there are ways to make lotteries less regressive and possibly even progressive. Lotto games, such as Powerball and Mega Millions, are much less regressive than instant scratch-off games.²⁵⁷ Likewise, lotto games with large jackpots and instant scratch-off games with high price points and large payouts attract higher-income players than those with small jackpots or payouts and are, therefore, less regressive.²⁵⁸ Moreover, the availability of anonymous playing mechanisms (e.g., ticket vending machines) that eliminate face-to-face purchases also reduces regressivity.²⁵⁹ In any event, economists are split on the question of whether state-run lotteries increase social welfare, with many remaining uncertain.²⁶⁰ The only point that I want to stress here is the significant but often overlooked fact that the lottery has the power to transform the painful act of paying taxes into a sought-after entertainment option.

Another idea is to tie tax payments to a lottery. Since 1951, Taiwan has had a receipt-lottery scheme whereby retailers issue receipts with a code printed on them that converts the receipt into a ticket for a government-run lottery with large cash prizes.²⁶¹ More

256. E.g., Allcott et al., *supra* note 165, at 16; Linda S. Ghent & Alan P. Grant, *The Demand for Lottery Products and Their Distributional Consequences*, 63 NAT'L TAX J. 253, 254 (2010).

257. Ki C. Han, Sukhun Lee, David Y. Suk & Hyun Mo Sung, *Jackpot Rollover and Lottery Regressivity*, 11 J. GAMBLING BUS. & ECON. 7, 15 (2017); Ghent & Grant, *supra* note 256, at 262; Donald I. Price & E. Shawn Novak, *The Income Distribution Effects of Texas State Lottery Games*, 28 PUB. FIN. REV. 82, 87–88 (2000); Donald I. Price & E. Shawn Novak, *The Tax Incidence of Three Texas Lottery Games: Regressivity, Race, and Education*, 52 NAT'L TAX J. 741, 744–46 (1999); Harriet A. Stranahan & Mary O. Borg, *Separating the Decisions of Lottery Expenditures and Participation: A Truncated Tobit Approach*, 26 PUB. FIN. REV. 99, 115–16 (1998).

258. Han et al., *supra* note 257, at 24; Thomas A. Garrett, *The Distributional Burden of Instant Lottery Ticket Expenditures: An Analysis by Price Point*, 40 PUB. FIN. REV. 767, 779–80 (2012); Emily Oster, *Are All Lotteries Regressive? Evidence from the Powerball*, 57 NAT'L TAX J. 179, 182 (2004). *But see* Ki C. Han, Sukhun Lee, David Y. Suk & Hyun Mo Sung, *The Powerball Regressivity: An Evidence from the World's Largest Lottery Prize*, 12 J. GAMBLING BUS. & ECON. 49, 63 (2018) (examining the drawings leading up to the \$1.5 billion Powerball jackpot in 2016 and finding that regressivity declined markedly up to a point and then increased as the jackpot approached \$1 billion).

259. Miyazaki et al., *supra* note 255, at 168.

260. *State-Run Lotteries*, CHI. BOOTH: IGM FORUM (Nov. 6, 2019), <https://www.igmchicago.org/surveys/state-run-lotteries/> [<https://perma.cc/56ZF-ADUY>] (surveying leading economists and finding that 23% agree that lotteries increase social welfare, 30% disagree, and 45% are either uncertain or have no opinion). For a review of the relevant economics literature, see Kent Grote & Victor A. Matheson, *The Economics of Lotteries: A Survey of the Literature*, in *THE OXFORD HANDBOOK OF THE ECONOMICS OF GAMBLING* 670, 670–91 (Leighton Vaughan Williams & Donald S. Siegel eds., 2013).

261. *Governments Use Receipt Lotteries to Boost Tax Compliance*, ECONOMIST (Feb. 28,

recently, a number of other countries have followed suit.²⁶² The purpose of these lotteries is to increase compliance with the value-added or retail sales tax by giving the customer an incentive to ask the retailer for a receipt. Issuance of a receipt makes it difficult for retailers to evade the tax, and the evidence suggests that receipt lotteries can be effective in improving compliance.²⁶³ Relevant to this Article, receipt lotteries can also function to buffer the pain of paying the value-added or retail sales tax by transforming an otherwise unpleasant experience into a form of entertainment.

Similarly, lottery bonds allow governments to borrow money relatively cheaply by capitalizing on the entertainment value of lotteries. Since 1956, the United Kingdom has offered lottery bonds, which instead of paying interest, offer the opportunity for bondholders to win cash prizes.²⁶⁴ The evidence suggests that the people who buy lottery bonds do so because they want both to save and gamble.²⁶⁵ Because the bonds provide entertainment value to bondholders, the United Kingdom government is able to borrow money at a lower cost than if it issued conventional bonds.²⁶⁶ As an added benefit, the bonds are broadly popular and encourage saving among households that typically do not save, particularly low-income households.²⁶⁷

I. *Method and Timing of Payment*

The tax system already incorporates a number of elements that relate to the method and timing of payment and that likely reduce the pain of paying. The most prominent of these is income tax

2019), <https://www.economist.com/finance-and-economics/2019/02/28/governments-use-receipt-lotteries-to-boost-tax-compliance> [<https://perma.cc/JM9W-J7QC>].

262. *Id.*

263. Junmin Wan, *The Incentive to Declare Taxes and Tax Revenue: The Lottery Receipt Experiment in China*, 14 *REV. DEV. ECON.* 611, 617 (2010).

264. Peter Tufano, *Saving Whilst Gambling: An Empirical Analysis of UK Premium Bonds*, 98 *AM. ECON. REV.* 321, 321 (2008); Sebastian Lobe & Alexander Hölzl, *Why Are British Premium Bonds So Successful? The Effect of Saving with a Thrill 1–3* (Apr. 2007) (unpublished manuscript), <https://ssrn.com/abstract=992794> [<https://perma.cc/Q8TA-PK9N>].

265. Tufano, *supra* note 264, at 325.

266. *Id.* at 323; *cf.* LEE ANNE FENNELL, *SLICES AND LUMPS: DIVISION AND AGGREGATION IN LAW AND LIFE* 114–15 (2019) (arguing that prize-linked savings accounts might encourage saving more than traditional interest payments because people may place inflated value on “the chance at a significant, perhaps life-changing, lump of cash”).

267. Tufano, *supra* note 264, at 324–26.

withholding. When employers withhold taxes from employees' pay, the employee never receives the money and does not have to pay it to the government directly. Withholding almost certainly makes paying taxes less salient and painful.²⁶⁸ Similarly, the IRS currently allows taxpayers to pay taxes in ways that have been shown to reduce the pain of paying—including through direct pay from a bank account or by credit card or digital wallet.²⁶⁹

Nonetheless, many taxes and fees are still assessed in ways that make payment unnecessarily painful. One example is tolls. Electronic tolls are less salient and painful than old-fashioned toll booths, and they, therefore, increase toll road usage.²⁷⁰ Nevertheless, in many states and localities, the amount charged for tolls is displayed prominently and frequently alongside the roadway, which likely triggers something akin to the taxi-meter effect discussed above in Part II. In that case, there is a tradeoff between the desire to make tolls transparent so that drivers can make informed decisions and the goal of avoiding the unnecessary pain caused when a driver takes a toll road and regularly encounters conspicuous reminders of the cost of the trip.

J. Pigouvian Taxes

Certain activities impose a cost, or negative externality, on society. The market prices of these activities do not reflect the negative externality, so consumers engage in them more than they would if prices reflected all social costs.²⁷¹ This means that people sometimes engage in activities even though their benefits are less than their social costs, a condition that is economically inefficient.²⁷² A prominent example is driving. The cost of global warming is not reflected in the price of gasoline, so people drive excessively. The

268. Delaney Thomas, *supra* note 11, at 107 (arguing that the factors that reduce the pain of paying are “far more likely to be present in the context of withholding as opposed to direct remittance”).

269. *Tax Time Guide: Payment Options Available for Those Who Owe*, IRS (Mar. 5, 2020), <https://www.irs.gov/newsroom/tax-time-guide-payment-options-available-for-those-who-owe> [<https://perma.cc/2KDW-AE43>].

270. See Amy Finkelstein, *E-ZTax: Tax Salience and Tax Rates*, 124 Q.J. ECON. 969, 986–90 (2009).

271. MANKIW, *supra* note 1, at 197–99.

272. *Id.* This condition is economically inefficient because the quantity of the activity produced is greater than the quantity that would be produced if all social costs were considered. *Id.*

textbook remedy for negative externalities is to impose what economists refer to as a Pigouvian tax (named after the economist Arthur Pigou).²⁷³ Taxing activities that produce negative externalities increases their price to reflect their full cost to society. In the case of global warming, the government could impose a tax on gasoline and other carbon-intensive goods, which would force people to internalize the cost of climate change, thereby reducing the production and consumption of carbon-intensive goods to the economically efficient level. In theory, the optimal Pigouvian tax equals the marginal social cost of emitting carbon.²⁷⁴

As with other standard economic analyses, the conventional argument for Pigouvian taxes does not account for the pain of paying them. At first glance, it may seem that, since the goal of a Pigouvian tax is to reduce the quantity of the taxed activity, the government should make paying the tax as painful as possible, such as by making it highly salient, choosing a painful method of payment, and decoupling the tax from any government benefits that it makes possible. In reality, however, the analysis is more nuanced than this superficial logic suggests.

Focusing on efficiency and setting aside distributional concerns, a strong case exists for minimizing the pain of paying Pigouvian taxes. First, to the extent that people continue to engage in taxed activities, the pain of paying the taxes serves no useful purpose and constitutes a deadweight loss that the government should minimize. This is yet another instance of a basic point that I have emphasized throughout this Article.

Second, in theory, the government could take steps to reduce the pain of paying a Pigouvian tax while still reducing the taxed activity to its optimal level simply by grossing up the tax, which would also generate additional revenue.²⁷⁵ The government could then use the additional revenue to reduce the income tax or other distortionary taxes, making the tax system more efficient overall. More specifically, the government can potentially reduce the pain of paying a Pigouvian tax by reducing its salience, allowing for less painful methods of payment, and explicitly connecting the tax with benefits that taxpayers value. It could then increase the magnitude

273. *Id.* at 203.

274. *Id.*

275. *Cf.* Gamage & Shanske, *supra* note 131, at 72–74 (arguing that the government could promote efficiency by reducing the salience of Pigouvian taxes while increasing the tax rate to ensure the optimal amount of the taxed activity).

of the tax, which would increase the pain of paying it. These two actions would offset each other, so that the net effect is that the government raises more revenue while still ensuring the optimal amount of the taxed activity.

The primary problem with this approach is that grossing up the tax creates equity concerns. The poor are likely to bear the burden of Pigouvian taxes disproportionately because the taxes are usually imposed on spending, and the poor spend a higher percentage of their incomes than the rich. In theory, the government could address this problem through offsetting adjustments to income tax rates.²⁷⁶ Specifically, it could increase income tax rates on the rich and lower them on the poor. In practice, the necessary income tax rate adjustments may not be politically feasible.

Even if income tax rate adjustments were possible, grossing up Pigouvian taxes would still be problematic because of the existence of spendthrifts. Recall from section III.B that spendthrifts spend more than they would like to spend, and this appears to stem from insufficient pain associated with paying. Reducing the pain of paying Pigouvian taxes and then grossing up the taxes will very likely cause spendthrifts to spend even more, which creates an equity concern because, as we have seen, spendthrifts tend to carry more debt and have less savings. Addressing this concern through the income tax would potentially require significant rate adjustments designed to benefit spendthrifts. Unfortunately, policymakers cannot easily identify this group of taxpayers. Moreover, even if doing so were possible, providing spendthrifts with favorable tax rates would mitigate the negative effects of their wasteful spending and would likely produce more spendthrifts by removing the opportunity to learn from experience. At the very least, it would cause people who are not spendthrifts to imitate their behavior so as to receive preferential income tax treatment.

IV. POLITICAL IMPLICATIONS OF THE PAIN OF PAYING

In addition to affecting market decisions, the pain of paying taxes might also influence voters and, more specifically, which politicians and policies that they support. Advocates of small

276. See LOUIS KAPLOW, *THE THEORY OF TAXATION AND PUBLIC ECONOMICS* 21 (2008) (arguing generally that when a government policy has negative distributional consequences, the best way to address that problem is by adjusting income tax rates).

government have long argued that the use of low-salience taxes causes voters to systematically underestimate the cost of government.²⁷⁷ They claim that politicians use complex tax structures, indirect taxes, and other deceptive techniques to conceal the cost of government and make it larger than voters would prefer if they were fully informed. A similar critique could be lodged against techniques that reduce the pain of paying taxes (including those that do not involve salience manipulations).²⁷⁸ If taxes are not sufficiently painful, then perhaps taxpayers will be too quick to accept tax increases and government will grow beyond the true preferences of its citizens. In fact, advocates of prefilled tax returns have accused their conservative opponents of opposing attempts to simplify income tax filing on the ground that the conservatives' antitax agenda will receive more support if paying taxes is complex and painful.²⁷⁹

The conservative critique is subject to at least two objections. First, no widely accepted criteria exist to determine when taxes are sufficiently painful to cause people to vote in accordance with their true preferences. In the absence of such criteria, we do not have any basis beyond conservative dogma for concluding that our democracy will better deliver the policies that voters really want only if we maximize the pain caused by paying taxes.

Second, the claim that the government should, for political reasons, make paying taxes more painful rests on the assumption that government is currently too big relative to what it would be if voters were fully informed. The academic literature, however, does not

277. For reviews of the literature, see Gamage & Shanske, *supra* note 131, at 33–54; DENNIS C. MUELLER, *PUBLIC CHOICE III* 527–29 (2003); Brian E. Dollery & Andrew C. Worthington, *The Empirical Analysis of Fiscal Illusion*, 10 J. ECON. SURVS. 261, 290–93 (1996).

278. Cf. Ventry, *supra* note 129, at 861–63 (discussing the claim by conservatives that “easing the [tax] filing burden leads inexorably to more taxes and more government”).

279. See Dylan Matthews, *A Bipartisan Group in Congress Wants to Make It Harder for You to Do Taxes*, VOX (Apr. 9, 2019, 10:40 AM), <https://www.vox.com/2019/4/9/18301943/last-minute-tax-preparation-h-r-block-turbotax> [<https://perma.cc/E2AK-HHV4>]; Joseph Bankman, Daniel Hemel & Dennis Ventry, *Why Filing Taxes Isn't Easy*, POLITICO (July 18, 2018, 3:01 PM), <https://www.politico.com/agenda/story/2018/07/18/tax-filing-congress-irs-000683/> [<https://perma.cc/36SB-Q2NM>]; Matthew Yglesias, *Who Wants Taxes to Be More Complicated? An Unholy Alliance of Tax Prep Firms and Conservative Activists, That's Who*, SLATE (Apr. 16, 2012, 4:50 PM), <https://slate.com/business/2012/04/grover-norquist-and-h-r-block-the-unholy-alliance-of-tax-prep-firms-and-conservative-activists-to-make-your-tax-s-even-more-complicated.html> [<https://perma.cc/VEX6-238E>]; Bankman, *supra* note 129, at 1433–34.

support this assumption. Economists have tested the claim that techniques for “hiding” taxes lead to bigger government. While they have found some evidence consistent with the hypothesis, the studies generally cannot rule out alternative explanations.²⁸⁰ For example, consistent with the hypothesis, some studies show that communities with complex (and presumably less transparent) tax systems tend to have larger public budgets. Nonetheless, this finding is also consistent with the notion that voters who prefer a large government also prefer a more complicated and diversified revenue system.²⁸¹ Moreover, there are reasons to believe that voters may underestimate the benefits of government because they are often distant in time, indirect, and otherwise nonobvious, or simply because voters are generally ignorant of government policy.²⁸² If so, then government may in fact be too small. In any event, the current evidence is not definitive one way or the other.

Related to this second point, it is not clear how much, if any, normative weight should be given in political decision making to the pain of paying taxes. The pain of paying is a feeling or emotional reaction, and feelings and emotions can provide information germane to decision-making.²⁸³ Nonetheless, we have seen that the pain of paying varies based upon seemingly arbitrary factors such as the method of payment, which calls into question its relevance for public policy.

In particular, because tax payments are not tightly coupled with the receipt of government benefits, the pain that they cause is almost certainly exaggerated. At least when they are considering which policies to support, people should consider both the costs and

280. Dollery & Worthington, *supra* note 277, at 293–94. The conservative argument that easing the tax-filing burden leads to bigger government also has little empirical support. See, e.g., Libor Dušek, Do Governments Grow When They Become More Efficient? Evidence from Tax Withholding 18–19 (Feb. 12, 2002) (Ph.D. dissertation, University of Chicago) (on file with author).

281. See Dollery & Worthington, *supra* note 277, at 270–71.

282. E.g., Gamage & Shanske, *supra* note 131, at 91–93; John G. Cullis & Philip R. Jones, *Fiscal Illusion and “Excessive” Budgets: Some Indirect Evidence*, 15 PUB. FIN. Q. 219, 224–26 (1987); Anthony Downs, *Why the Government Budget is Too Small in a Democracy*, 12 WORLD POL. 541, 541, 544, 551 (1960).

283. See e.g., Gerald L. Clore, Karen Gasper & Erika Garvin, *Affect as Information*, in HANDBOOK OF AFFECT AND SOCIAL COGNITION 121, 122, 124, 126 (Joseph P. Forgas ed., 2001); Gerald L. Clore, *Cognitive Phenomenology: Feelings and the Construction of Judgment*, in THE CONSTRUCTION OF SOCIAL JUDGMENTS 133, 135–40 (Leonard L. Martin & Abraham Tesser eds., 1992).

benefits of government programs, not just one or the other.²⁸⁴ Decoupling, however, interferes with that process and likely distorts voters' perceptions of public policy. In fact, public opinion evidence consistently shows strong support for nearly all major government spending programs, but strong opposition to the tax increases needed to pay for them.²⁸⁵

This paradox of public opinion is more than just an academic curiosity. It has contributed to increasingly large budget deficits and substantial government debt.²⁸⁶ Moreover, popular government programs such as Social Security and Medicare face the prospect of substantial cuts if the government cannot increase taxes to support them.²⁸⁷ Finally, many experts believe that the lack of funding for infrastructure investment is harming the American economy.²⁸⁸

So why does the public support government programs, but hate paying taxes? This seeming anomaly makes perfect sense in light of decoupling. In effect, the public considers both spending and taxes in isolation, focusing on one or the other, but not both simultaneously. Indeed, experiments and surveys designed to force

284. Cf. Ventry, *supra* note 129, at 848 (arguing that the government must “strik[e] a balance between making taxpaying too easy and too hard” to achieve appropriate “tax consciousness”).

285. See sources cited *supra* note 10 and *infra* note 287.

286. Federal debt as a percentage of gross domestic product has increased from 57% in January of 2000 to 127% in July of 2021. *Federal Debt: Total Public Debt as Percent of Gross Domestic Product*, FED. RSRV. BANK OF SAINT LOUIS, <https://fred.stlouisfed.org/series/GFDEGDQ188S> [<https://perma.cc/8G5C-GTUH>] (Sept. 30, 2021). The annual federal budget deficit as a percentage of gross domestic product averaged 2.1% in the 1990s, but has averaged 3.5% since then, and was 4.6% in 2019. *Federal Surplus or Deficit as Percent of Gross Domestic Product*, FED. RSRV. BANK OF SAINT LOUIS, <https://fred.stlouisfed.org/series/FYFSGDA188S> [<https://perma.cc/S4P7-XF84>] (Oct. 25, 2021).

287. See CONG. BUDGET OFF., *THE BUDGET AND ECONOMIC OUTLOOK: 2019 TO 2029* 140–45 (2019) (projecting increasingly large deficits for the Social Security and Medicare trust funds for the foreseeable future); *Taxes and Mandatory Spending*, CHI. BOOTH: IGM FORUM (Oct. 25, 2016), <https://www.igmchicago.org/surveys/taxes-and-mandatory-spending/> [<https://perma.cc/H8EW-33KG>] (poll of leading economists finding that a majority agree that “[l]ong run fiscal sustainability in the US will require some combination of cuts in currently promised Medicare, Medicaid and Social Security benefits and/or tax increases that include higher taxes on households with incomes below \$250,000”).

288. AM. SOC'Y OF CIV. ENG'RS, *FAILURE TO ACT: ECONOMIC IMPACTS OF STATUS QUO INVESTMENT ACROSS INFRASTRUCTURE SYSTEMS 4* (2021); *Infrastructure*, CHI. BOOTH: IGM FORUM (May 23, 2013), <https://www.igmchicago.org/surveys/infrastructure/> [<https://perma.cc/SA4X-8A3H>] (poll of leading economists finding that eighty-nine percent agree that “[b]ecause the US has underspent on new projects, maintenance, or both, the federal government has an opportunity to increase average incomes by spending more on roads, railways, bridges and airports”).

people to consider both spending and taxes at the same time generally elicit very different responses from those that ask only about one or the other; specifically, people become more likely to approve of a combination of both tax increases and targeted spending cuts.²⁸⁹

More generally, I have argued elsewhere that voters' opposition to tax increases has not achieved the goal of conservatives to keep government small.²⁹⁰ Instead, it has simply led to a proliferation of policies that substitute for traditional tax-and-spend programs and that conceal the cost of government, including increased reliance on government borrowing, taxation by regulation, and tax expenditures.²⁹¹

The point here is that increasing the pain of paying taxes is not likely to further the goal of delivering policies that accord with the true preferences of the American citizenry. On the one hand, if government is too small because voters underestimate its benefits, then making taxes painful may exacerbate the problem by starving the Treasury of needed revenue. On the other hand, if government is too large because voters underestimate its cost, making taxes painful is not the silver-bullet solution that antitax conservatives imagine. Decades of antitax rhetoric have not curbed the robust appetite of the American voter for government programs,²⁹² but have instead encouraged a variety of substitutes for taxation.

289. For a discussion and review of the literature, see Gary M. Lucas, Jr., *Out of Sight, Out of Mind: How Opportunity Cost Neglect Undermines Democracy*, 9 N.Y.U. J.L. & LIBERTY 249, 291–97, 301–04 (2015).

290. See Gary M. Lucas, Jr. & Slavisa Tasic, *Behavioral Public Choice and the Law*, 118 W. VA. L. REV. 199, 264–65 (2015).

291. See *id.* at 265.

292. For example, over several decades, the Pew Research Center has periodically surveyed the public's preferences for spending on thirteen major government programs, ranging from education to national defense to infrastructure spending. For the typical program, the surveys find that fewer than a quarter of respondents support decreasing spending. Pew has never found majority support for decreasing spending on *any* program. PEW RSCH. CTR., LITTLE SUPPORT FOR REDUCTIONS IN FEDERAL SPENDING 23–36 (2019). Moreover, support for government spending is not limited to Democrats. In its 2013 poll, for example, Pew found that even among Republicans, a majority supported cutting spending in only two of nineteen areas—aid to the world's needy and unemployment assistance—both of which constitute a small portion of the federal government's budget. PEW RSCH. CTR., AS SEQUESTER DEADLINE LOOMS, LITTLE SUPPORT FOR CUTTING MOST SPENDING 10 (2013).

CONCLUSION

This Article has shown that the pain of paying has significant implications for the tax system. Contrary to the standard view that the payment of a tax involves a costless transfer, revenue collection imposes a psychological burden on taxpayers, and a strong case exists for designing taxes in a way that minimizes it. Fortunately, the government likely has some control over the pain of paying because it varies in predictable ways with situational factors such as the method of payment. This Article has argued that the pain of paying supports a variety of tax reforms, including return-filing simplification and greater reliance on user fees, earmarked taxes, and even lotteries. In addition, the pain of paying helps explain why Americans strongly support virtually all government programs, but they oppose the taxes necessary to pay for them. Better understanding the pain caused by paying taxes and the techniques for mitigating it will help policymakers overcome antitax sentiment and raise the revenue needed to fund the programs that voters claim they want.

A major goal of this Article is to encourage tax scholars to think seriously about the pain of paying. In particular, further research on the pain of paying could lead to substantial improvements in tax policy. For example, we need empirical evidence of whether efforts to reduce the pain of paying similar to those suggested in this Article will have the intended effect of either allowing the government to raise more tax revenue with less resistance or the same amount of revenue at a lower psychological cost. In addition, a major open question relates to the relative impact of pain-of-paying manipulations on tightwads and spendthrifts. In particular, reducing the pain of paying taxes has the potential to benefit tightwads tremendously, but will it harm spendthrifts by encouraging their profligacy? Another open question is how much harm spendthrifts will sustain if the government reduces the pain of paying Pigouvian taxes and compensates by increasing their magnitude.