

BETTER BETTORS: REGULATORY PROPOSALS TO REDUCE  
SOCIETAL COSTS ASSOCIATED WITH GAMBLING DISORDER IN  
STATES THAT PERMIT LEGAL SPORTS BETTING

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## INTRODUCTION

Leigh was happily married with two children.<sup>1</sup> As finance manager for the city of Melbourne, Australia, Leigh supervised twenty employees and managed the city's accounts payable.<sup>2</sup> For fun, he enjoyed betting on horse and dog racing.<sup>3</sup> However, this hobby evolved into an obsession after Leigh got his first iPhone.<sup>4</sup> Because of the convenience of mobile betting, Leigh watched races constantly, often neglecting his children<sup>5</sup> and sleeping just one or two hours per night.<sup>6</sup> When he turned forty, a birthday card from his wife included divorce papers.<sup>7</sup> Once Leigh's wife left with his children, his life became a "free-for-all"<sup>8</sup> in which he often bet as much as \$15,000 per day.<sup>9</sup> When Leigh maxed out his credit cards, he went to a loan shark.<sup>10</sup> After he failed to repay a loan, two men threatened him with a baseball bat.<sup>11</sup> In response, Leigh stole \$130,000<sup>12</sup> from the City of Melbourne.<sup>13</sup> Leigh was convicted of fraud, and he received a one-year prison sentence.<sup>14</sup> Before he was sentenced, Leigh unsuccessfully attempted suicide by overdosing on prescription pills.<sup>15</sup> He served his prison sentence, which included a vicious beating by a guard,<sup>16</sup> but eighteen months after his release, Leigh could not

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<sup>1</sup> *The Full Cost of Fraud* at 3:45, ABC (Sep. 4, 2017), <https://www.abc.net.au/radionational/programs/earshot/the-full-cost-of-fraud/8805412>.

<sup>2</sup> *Id.* at 9:00.

<sup>3</sup> *See id.* at 1:20.

<sup>4</sup> *Id.*

<sup>5</sup> *See id.* at 2:52 ("[E]ven when I was bathing the kids, I could have the app on the phone, gambling and watching.").

<sup>6</sup> *Id.* at 1:50.

<sup>7</sup> *The Full Cost of Fraud*, *supra* note 1, at 4:00.

<sup>8</sup> *Id.* at 4:50.

<sup>9</sup> *Id.* at 5:25. This figure is in Australian dollars (AUD). These events occurred in 2010 when one U.S. dollar (USD) equaled between 1.0 and 1.2 AUD. *See U.S. Dollar to Australian Dollar Spot Exchange Rates for 2010 from the Bank of England*, POUND STERLING LIVE, <https://www.poundsterlinglive.com/bank-of-england-spot/historical-spot-exchange-rates/usd/USD-to-AUD-2010> (last visited Jan. 12, 2020).

<sup>10</sup> *See id.* at 8:30.

<sup>11</sup> *Id.* at 8:40.

<sup>12</sup> Amount is in AUD. For conversion to USD, see *supra* note 9 and accompanying text.

<sup>13</sup> *The Full Cost of Fraud*, *supra* note 1, at 21:15.

<sup>14</sup> *Id.* at 14:10.

<sup>15</sup> *Id.* at 16:20.

<sup>16</sup> *See id.* at 18:55.

find full-time employment,<sup>17</sup> he rarely saw his kids, and he struggled to pay rent.<sup>18</sup>

Leigh's story is extreme but not anomalous. In the United States, as many as 15 million people may have gambling problems, costing society approximately \$5 billion per year.<sup>19</sup> Easy access to gambling is associated with widespread gambling problems, and as Leigh's story illustrates, smartphones facilitate convenient mobile betting.<sup>20</sup> In addition, many Americans may now have greater access to sports betting due to the outcome of *Murphy v. National Collegiate Athletic Ass'n*, a 2018 case in which the Supreme Court struck down a federal anti-gambling law, paving the way for individual states to legalize sports betting.<sup>21</sup> Meanwhile, the psychology community has become increasingly aware of the dangers and mechanisms associated with Gambling Disorder (GD). For instance, in 2013, the *Diagnostic and Statistical Manual of Mental Disorders* reclassified pathological gambling from an impulse control disorder to an addiction.<sup>22</sup> States that legalize sports betting should utilize psychological insights to create regulations to mitigate societal costs. This paper recommends several such regulations.

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<sup>17</sup> *Id.* at 19:50.

<sup>18</sup> *Id.* at 1:00.

<sup>19</sup> Frank J. Domino et al., *Overview of Gambling Disorder*, WOLTERS KLUWER, <https://www.uptodate.com/contents/overview-of-gambling-disorder> (last updated Oct. 10, 2018). Although this article was published in 2018, the provided literature review is current through December 2019. Societal costs were calculated using "productivity reductions, social services, and creditor losses." *Id.*

<sup>20</sup> The prevalence of casinos illustrates the link between betting availability and gambling problems. *See id.* ("The availability of a casino within 50 miles (compared with 50 to 250 miles) is associated with approximately double the prevalence of problem and pathological gamblers.").

<sup>21</sup> *See* *Murphy v. Nat'l Collegiate Athletic Ass'n*, 138 S. Ct. 1461, 1484–85 (2018) ("The legalization of sports gambling requires an important policy choice, but the choice is not ours to make. Congress can regulate sports gambling directly, but if it elects not to do so, each State is free to act on its own.").

<sup>22</sup> *See* Christine Reilly and Nathan Smith, *The Evolving Definition of Pathological Gambling in the DSM-5*, NATIONAL CENTER FOR RESPONSIBLE GAMING, [http://www.ncrg.org/sites/default/files/uploads/docs/white\\_papers/internetgambling\\_final.pdf](http://www.ncrg.org/sites/default/files/uploads/docs/white_papers/internetgambling_final.pdf) (last visited Jan. 11, 2020) ("The rationale for this change is that the growing scientific literature on [pathological gambling] reveals common elements with substance use disorders.").

In Part I, I first explain the state of the law by outlining *Murphy* and the factors to be considered when states propose legal sports betting. I go on to explain the psychological mechanisms underlying GD, with an emphasis on neuroimaging research. In Part II, I provide potential solutions to mitigate the harmful effects of GD. I propose three regulatory proposals: (1) Guidelines for Responsible Sports Betting, (2) periodic feedback reports, and (3) bans on live betting. In Part III, I address potential counterarguments to my proposals.

## I. SPORTS BETTING AND THE LAW

### A. *State of the Law*

In 2018, the *Murphy* Court struck down the Professional and Amateur Sports Protection Act (PASPA),<sup>23</sup> a 1992 law prohibiting sports betting.<sup>24</sup> This decision allowed states to legalize sports betting.<sup>25</sup> As of October 2019, seventeen states and the District of Columbia had some form of legal sports betting, while twenty-five other states had introduced bills to legalize it.<sup>26</sup> The decision to legalize sports betting depends upon considerations of financial incentives weighed against societal costs and concerns about morality.

The predominant financial incentive of legalized sports betting involves the potential to raise tens of billions of dollars in tax revenue.<sup>27</sup>

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<sup>23</sup> *Murphy*, 138 S. Ct. at 1461. PASPA did not make sports betting a federal crime. Rather, it gave the U.S. Attorney General and various sports organizations the ability to bring civil actions to enjoin states from legalizing sports betting. In a 6–3 decision, the Court held that such actions violate the Tenth Amendment’s anticommandeering rule, which prohibits the federal government from requiring states to enforce federal law. *Id.* at 1478 (“It is as if federal officers were installed in state legislative chambers and were armed with the authority to stop legislators from voting on any offending proposals. A more direct affront to state sovereignty is not easy to imagine.”).

<sup>24</sup> *See id.* at 1465.

<sup>25</sup> *See id.* at 1484–85.

<sup>26</sup> *Legal Sports Betting in the United States*, DRAFT KINGS SPORTS BOOK, <https://sportsbook.draftkings.com/help/sports-betting/where-is-sports-betting-legal> (last visited Oct. 14, 2019).

<sup>27</sup> Charles P. Ciaccio, Jr., *Internet Gambling: Recent Developments and State of the Law*, 25 BERKELEY TECH. L.J. 529, 530 (2010) (“[B]y not legalizing and regulating internet

Americans spend more money on gambling than “concerts, plays, all movie theaters, all spectator sports, and all forms of recorded music—combined.”<sup>28</sup> Sports betting makes up 30%–40% of gambling expenditures.<sup>29</sup> In the year following the *Murphy* decision, gamblers legally wagered \$8 billion on sports in the United States.<sup>30</sup>

While sports betting could be a boon to tax revenue, gambling has historically produced large societal costs, such as crime, lost productivity at work, bankruptcy, illness, child neglect, and domestic violence.<sup>31</sup> According to leading gambling critic John W. Kindt, society incurs between three and seven dollars in costs for every dollar of tax revenue raised from gambling.<sup>32</sup> The vast majority of these societal costs result from afflictions of gambling disorder (GD), which the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) defines as “[p]ersistent and recurrent problematic gambling behavior leading to clinically significant impairment or distress.”<sup>33</sup> These “pathological gamblers”<sup>34</sup> suffer from the only disorder that the DSM-

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gambling, the federal government may forego up to \$62.7 billion in taxes over the next decade.”).

<sup>28</sup> I. Nelson Rose, *Gambling and the Law: The Third Wave of Legal Gambling*, 17 VILL. SPORTS & ENT. L.J. 361, 362 (2019). Since 1994, “adults in America spent more money on gambling than they did on toys for their children.” *Id.* at 363.

<sup>29</sup> Christina Gough, *Sports Betting and Gambling Market/Industry – Statistics & Facts*, STATISTICA (Mar. 29, 2019), <https://www.statista.com/topics/1740/sports-betting/>.

<sup>30</sup> David Purdum, *One Year into Legal U.S. Sports Betting: What Have We Learned?*, ESPN (May 13, 2019), [https://www.espn.com/chalk/story/\\_/id/26740441/one-year-legal-us-sports-betting-learned](https://www.espn.com/chalk/story/_/id/26740441/one-year-legal-us-sports-betting-learned).

<sup>31</sup> Earl L. Grinols, *Gambling Economics: Summary Facts* (Apr. 29, 2011), <http://freedomfoundation.publishpath.com/Websites/freedomfoundation/Images/Gambling%20Economics-%20Summary%20Facts%20by%20Professor%20Earl%20Grinols,%204.29.11.pdf>. Professor Grinols produced this report using independent research funded by neither gambling nor anti-gambling organizations. *Id.*

<sup>32</sup> Phil Cicioria, *Expert: Legal Sports Gambling Will Have a Destabilizing Effect on Economy, Sports*, ILL. NEWS BUREAU (May 15, 2018), <https://news.illinois.edu/view/6367/650811>.

<sup>33</sup> AM. PSYCHIATRIC ASS'N, DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS 585 (5th ed. 2013) [hereinafter DSM-5].

<sup>34</sup> See generally Jakob Linnet et al., *Dopamine Release in Ventral Striatum of Pathological Gamblers Losing Money*, ACTA PSYCHIATRICA SCANDINAVICA (Aug. 15, 2010), <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1600-0447.2010.01591.x>. Although “Pathological Gambler” does not appear in the DSM-5, it is widely used to describe people with GD, as seen in this paper. *Id.*

5 includes in its “Substance-Related and Addictive Disorders” section that does not involve the ingestion of a substance.<sup>35</sup>

Many cases of GD emerge from a thriving online black market.<sup>36</sup> Experts estimate that Americans bet as much as \$150 billion annually online through foreign companies.<sup>37</sup> Barring domestic legalization, this industry is expected to grow for the foreseeable future.<sup>38</sup> The presence of this black market could influence lawmakers to legalize sports betting because they might as well tax what is already happening on a large scale. In addition, states could feel pressure to legalize sports betting if neighboring states permit it. This is because people could cross state lines to spend money via betting and then return home—where many societal costs are borne.

There will probably always be some degree of moral disapproval of gambling, but American society has progressively grown less morally opposed to it.<sup>39</sup> Research indicates that Americans increasingly evaluate policies using cost/benefit—rather than moral—analysis.<sup>40</sup> Professor I. Nelson Rose explains, “[G]ambling opponents lost their main moral spokesmen, once churches started running bingo games and government began selling lottery tickets. . . . With no one to say what is right or wrong, everything has become a cost/benefit analysis.”<sup>41</sup> State lotteries illustrate this moral shift; by the end of the nineteenth century, every state had outlawed lotteries.<sup>42</sup> But as of December 1, 2019, forty-five states and the District of Columbia had lotteries.<sup>43</sup>

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<sup>35</sup> See DSM-5, *supra* note 33, at 481.

<sup>36</sup> Todd Shriber, *US Sports Betting Market Will Be 90 Percent Online and Mobile Within a Decade, Industry Experts Assert*, CASINO.ORG (June 14, 2019), <https://www.casino.org/news/us-sports-betting-market-will-be-90-percent-online-or-mobile-within-a-decade>.

<sup>37</sup> *Id.* This data was released at the 2019 East Coast Gaming Congress, a conference for gambling-industry insiders. *Id.*

<sup>38</sup> See Purdum, *supra* note 30.

<sup>39</sup> See, e.g., Mark Curriden, *Power of 12*, A.B.A. J., Aug. 2001, at 36, 39 (“[J]urors in Atlanta in the mid-1990s started acquitting sports bookmaking defendants on a regular basis, even though such cases were usually slam dunks. In post-trial interviews, jurors said they saw no moral difference between sports betting and playing the Georgia lottery.”).

<sup>40</sup> See Rose, *supra* note 28, at 385.

<sup>41</sup> *Id.*

<sup>42</sup> *Id.* at 373–74.

<sup>43</sup> Ken Silver, *Here’s All the USA States That Don’t Have a Single Lottery, But That’s All About to Change End of 2019*, LOTTO LIFE (May 27, 2019), <https://www.thelottolife>.

Just as states have increasingly permitted lotteries, more states will likely legalize sports betting going forward. The consulting firm Gambling Compliance estimates that as many as forty states will legalize sports betting by 2024 and half of Americans will live in states with legal sports betting by the end of 2020.<sup>44</sup> As this trend spreads, it would be advisable for states to consider regulations to mitigate societal costs associated with gambling.

### B. *Understanding Gambling Disorder*

To understand how gambling regulations might be successful, it is important to understand GD, which can be studied through behavioral observation as well as neuroimaging.<sup>45</sup> According to the DSM-5, pathological gamblers “evidence a pattern of gambling that gradually increases in both frequency and amount of wagering . . . . [M]ilder forms [of GD] can develop into more severe cases.”<sup>46</sup> Neuroimaging reveals that in these “severe cases,” pathological gamblers differ from healthy control groups in how their brains regulate dopamine.<sup>47</sup> Also, certain factors may aggravate the addictive properties of betting and hasten the development of GD. These factors include short feedback loops between stimulus and reward,<sup>48</sup> near misses,<sup>49</sup> and cognitive biases.<sup>50</sup>

While some people carry a higher-than-average genetic predisposition to pathological gambling,<sup>51</sup> GD results from a systematic,

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com/blog/heres-all-the-usa-states-that-dont-have-a-single-lottery-but-thats-about-to-change-end-of-2019.

<sup>44</sup> Bob Woods, *Making a Wager? Half of Americans Live in States Soon to Offer Sports Gambling*, CNBC (July 10, 2019) <https://www.cnbc.com/2019/07/10/half-of-americans-live-in-states-soon-to-offer-sports-gambling.html>.

<sup>45</sup> See, e.g., Linnet et al., *supra* note 34. This study used neuroimaging to compare and contrast the dopaminergic reward systems between people with GD and people with other substance use disorders such as drug dependency. See *AU in the World Rankings*, AARHUS U., <https://international.au.dk/about/profile/rankings/> (last updated Nov. 13, 2019).

<sup>46</sup> DSM-5, *supra* note 33, at 587.

<sup>47</sup> Dopamine is a neurotransmitter that “plays a role in how we feel pleasure. . . . Too much or too little of it can lead to a vast range of health issues.” *What is Dopamine?*, WEBMD, <https://www.webmd.com/mental-health/what-is-dopamine#1> (last visited Nov. 20, 2019).

<sup>48</sup> See *infra* note 73 and accompanying text.

<sup>49</sup> See *infra* note 76 and accompanying text.

<sup>50</sup> See *infra* note 79 and accompanying text.

<sup>51</sup> DSM-5, *supra* note 33, at 588 (“Gambling disorder can aggregate in families, and this effect appears to relate to both environmental and genetic factors.”).

predictable pattern involving increased betting activity over time.<sup>52</sup> The DSM-5 notes that a gambling disorder generally “develops over the course of years,”<sup>53</sup> and one study found that gambling disorders from sports betting take an average of 3.5 years to form.<sup>54</sup> A comprehensive review of GD research concluded that GD “is essentially a learning (rather than a substance) disorder, which manifests as an inflexible bias to seek a specific class of reinforcers.”<sup>55</sup> The research also concluded GD “only arises after chronic exposure to the reinforcer.”<sup>56</sup> Some researchers suggest that the brain learns GD through the neural pathways responsible for motor skill acquisition.<sup>57</sup>

Following the release of the DSM-5, neuroimaging researchers have studied the similarities and differences between GD and drug-related substance use disorders (SUDs).<sup>58</sup> These studies show that GD and SUDs share many behavioral characteristics: “escalation in use, persistence despite adverse consequences, cravings or urges to use, repeated failures to reduce use, and frequent relapse following a period of abstinence.”<sup>59</sup> But key differences exist between GD brains and the brains of those afflicted with SUDs.<sup>60</sup> Notably, GD brains do not experience the reduction in grey matter associated with drug-related SUDs.<sup>61</sup> However, GD brains and other SUD brains have similar white matter abnormalities; for GD brains, this similarity is attributable to the “progressive neuroadaptation induced by gambling.”<sup>62</sup> Neuroscientists speculate that grey matter deterioration may be caused by

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<sup>52</sup> *Id.* at 587 (“Most individuals who develop a gambling disorder evidence a pattern of gambling that gradually increases in both frequency and amount of wagering.”).

<sup>53</sup> *Id.*

<sup>54</sup> Grinols, *supra* note 31.

<sup>55</sup> Luke Clark et al., *Neuroimaging of Reward Mechanisms in Gambling Disorder: An Integrative Review*, 24 *MOLECULAR PSYCHIATRY* 647, 686 (2019).

<sup>56</sup> *Id.*

<sup>57</sup> *See id.*

<sup>58</sup> *Id.* at 647. This article integrates research on reward-related brain activity (functional MRI) and neurotransmitter function (PET) in GD alongside the consideration of structural MRI data. The article analyzes whether these signals are more likely to reflect pre-existing vulnerability or neuroadaptive change. Where possible, the authors point to qualitative similarities and differences with established markers for SUDs. *Id.*

<sup>59</sup> *Id.* at 675.

<sup>60</sup> *See id.* at 687.

<sup>61</sup> *See* Clark et al., *supra* note 55, at 687.

<sup>62</sup> *Id.* at 677.

drug neurotoxicity, but further research is needed to better understand these results.<sup>63</sup>

Neuroimaging studies also show important differences between GD and healthy control groups.<sup>64</sup> For instance, pathological gamblers exhibit a dopaminergic dysfunction in which they experience similar dopamine release during both wins and losses.<sup>65</sup> This contrasts with the neurology observed in healthy control groups, in which people experience significant dopamine release from wins but not losses.<sup>66</sup> Dopamine release during losses helps explain one of the most common characteristics of GD: loss-chasing.<sup>67</sup> Loss-chasing is described by researchers as “persistent gambling despite mounting losses, which may constitute a form of compulsivity as an expression of negative reinforcement.”<sup>68</sup> In addition, pathological gamblers and healthy control groups experience dopamine in different parts of their brains.<sup>69</sup> Pathological gamblers experience greater dopamine release in a brain region associated with immediate rewards; whereas, healthy control groups experienced greater dopamine release in a brain region associated with long-term rewards.<sup>70</sup> Specifically, pathological gamblers experience greater dopamine in the ventral striatum, which has been described as an “emotional generator” and becomes activated “when participants view photographs of people for whom they have strong feelings of love and connection.”<sup>71</sup> Healthy control groups, however, experienced greater dopamine in the lateral prefrontal cortex, which “plays important roles in higher-order cognitive control, such as planning, behavioral inhibition, set shifting, and decision-making.”<sup>72</sup> Interestingly, researchers were able to induce healthy control groups to experience greater dopamine release in the ventral striatum by shortening the feedback loop between stimulus and

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<sup>63</sup> *See id.* at 658 (“[D]rug-induced neurotoxicity may not fully account for differences in PET profiles between SUD and GD.”).

<sup>64</sup> *See* Linnet et al., *supra* note 34, at 330.

<sup>65</sup> *Id.*

<sup>66</sup> *See id.* (“[D]opamine release in [healthy control groups] appears specifically associated with monetary gains.”).

<sup>67</sup> DSM-5, *supra* note 33, at 586.

<sup>68</sup> Clark et al., *supra* note 55, at 675.

<sup>69</sup> *See id.*

<sup>70</sup> *See id.*

<sup>71</sup> VIRGINIA E. STURM ET AL., GENOMICS, CIRCUITS, AND PATHWAYS IN CLINICAL NEUROPSYCHIATRY 352 (2016).

<sup>72</sup> MASATAKA WATANABE, HANDBOOK OF REWARD AND DECISION MAKING 79 (2009).

reward.<sup>73</sup> In other words, the shorter the interval between stimulus and reward, the more a healthy brain will perform like a brain with GD.<sup>74</sup>

The notion that short feedback loops aggravate GD is supported by research on slot machines. After reviewing the literature on GD, Professor Earl L. Grinols concluded that slot machines are the “[m]ost damaging and quickly addicting form of gambling,” inducing “shorter times to addiction for those who ‘got hooked’” than other forms of gambling.<sup>75</sup> Another aggravating factor exploited by slot machines is the “near miss,” a situation in which a gambler loses but feels like he barely missed on winning.<sup>76</sup> Near misses enhance the addictive properties of gambling because they trigger reward circuitry during losses, making the losses feel like wins.<sup>77</sup> This, in effect, may condition the brain to chase losses. As such, it is not a surprise that near misses are intentionally built into slot machines.<sup>78</sup>

Cognitive biases also likely aggravate GD by driving irresponsible betting behavior. Because humans have limited decision-making abilities (described as “bounded rationality” and “bounded willpower”<sup>79</sup>), the brain uses mental shortcuts known as “heuristics,” which help people find acceptable, but often imperfect, answers to complex questions.<sup>80</sup> Cognitive

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<sup>73</sup> Linnet et al., *supra* note 34, at 327 (explaining that there are “two distinct pathways for immediate and delayed rewards: immediate reward [is] associated with increased activation in the limbic and midbrain dopamine system, particularly in the ventral striatum; delayed reward, in contrast, [is] associated with increased activation in the lateral prefrontal cortex”).

<sup>74</sup> *See id.*

<sup>75</sup> Grinols, *supra* note 31, at 1.

<sup>76</sup> *See* Clark et al., *supra* note 55, at 682 (defining “near misses” as “stimulus configurations that closely approximate winning combinations but yield no reward” and “are widespread in gambling and known to motivate continued play”).

<sup>77</sup> *Id.*

<sup>78</sup> Johan Lehrer, *The Near Miss Effect*, WIRED (Mar. 28, 2011) <https://www.wired.com/2011/03/the-near-miss-effect/> (“[A] slot machine showing two cherries instead of three . . . [is] excruciating. And extremely exciting . . . near-misses on a slot machine are especially intoxicating for compulsive gamblers, leading to a spike in activity in the dopaminergic midbrain.”).

<sup>79</sup> Christine Jolls, Cass Sunstein & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471, 1477 (1998) (“[H]uman cognitive abilities are not infinite. . . . To deal with limited brain power and time[,] we use mental shortcuts and rules of thumb.”).

<sup>80</sup> *See* DANIEL KAHNEMAN, THINKING FAST AND SLOW 98 (2011). This book covers several decades’ worth of work by psychologist Daniel Kahneman, often in collaboration with

biases are predictable mistakes that result from heuristics.<sup>81</sup> For example, sports bettors are particularly susceptible to the overconfidence bias, which causes bettors to overrate their understanding of events while underestimating the role of chance.<sup>82</sup> This is colloquially—and fittingly—known as being a “Monday-morning quarterback.”<sup>83</sup> Fueled “by the illusory certainty of hindsight,” sports bettors can become overconfident when they observe outcomes of games on which they did not bet.<sup>84</sup> These outcomes may seem obvious after the games have been played, and bettors then overestimate their abilities to predict future games.<sup>85</sup> Another cognitive bias relevant to sports betting is the planning fallacy, in which an overly optimistic expectation of winning causes a bettor to wager irresponsible amounts of money.<sup>86</sup> Psychologist Daniel Kahneman describes the planning fallacy as expectations “unrealistically close to best-case scenarios.”<sup>87</sup> The planning fallacy affects endeavors ranging from construction projects to writing books.<sup>88</sup> Fortunately, cognitive biases can be mitigated by regulations that “nudge” people to make better decisions without impairing their freedom.<sup>89</sup> The following regulatory proposals aim to reduce gambling-

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fellow psychologist Amos Tversky. Kahneman received the Nobel Prize in economics in 2002, and as of 2013, Kahneman and Tversky had jointly published the two most-cited papers in the history of behavioral economics. See *Most Cited Papers in Behavioral Economics*, ECON. PSYCHOL. POLICY BLOG (July 2, 2013), <http://economicspsychologypolicy.blogspot.com/2013/07/most-cited-papers-in-behavioral.html>.

<sup>81</sup> See Jolls et al., *supra* note 79, at 1477.

<sup>82</sup> See KAHNEMAN, *supra* note 80, at 14.

<sup>83</sup> *Monday Morning Quarterback*, DICTIONARY.COM, <https://www.dictionary.com/browse/monday-morning-quarterback> (last visited Dec. 2, 2019).

<sup>84</sup> See KAHNEMAN, *supra* note 80, at 14.

<sup>85</sup> *Id.* (explaining that this is due to “our apparent inability to acknowledge the full extent of our ignorance and the uncertainty of the world we live in”).

<sup>86</sup> *Id.* at 259 (“We focus on our goal, anchor on our plan, and neglect relevant base rates, exposing ourselves to the planning fallacy.”).

<sup>87</sup> *Id.* at 250.

<sup>88</sup> See *id.* at 245–50.

<sup>89</sup> See RICHARD H. THALER & CASS R. SUNSTEIN, *NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS* 6 (2008) (“A nudge . . . is any aspect of the choice architecture that alters people’s behavior in a predictable way without forbidding any options or significantly changing their economic incentives.”). A 2008 best seller, *Nudge* made a particularly positive impression on President Barack Obama, who named *Nudge* co-author Cass Sunstein the Administrator of the White House Office of Information and Regulatory Affairs in 2009 and created the White House Social and Behavioral Science Team in 2014, which implemented some of *Nudge*’s concepts. See Danny Vinik, *Obama’s*

related societal costs by nudging sports bettors away from behavior associated with GD.

## II. POTENTIAL SOLUTIONS

This paper contains three regulatory proposals. First, the Guidelines for Responsible Sports Betting (the Guidelines), modeled on FDA food labeling, would discourage behavior that can lead to and reinforce GD. Second, this paper proposes the implementation of feedback reports generated by online betting accounts. These reports would evaluate gambling habits in relation to the Guidelines and could increase adherence to the them. Third, this paper proposes prohibiting bets on fractions of games, including “live betting.” These “fractional” bets likely contribute to the development of GD due to short feedback loops between stimulus and reward. Banning them could save significant societal costs by eliminating some of the most addictive types of sports bets. These proposals would not prevent every case of GD related to sports betting, but they would be cost-effective enhancements to society’s overall welfare, steering bettors away from a devastating disorder.

### A. *Guidelines for Responsible Sports Betting*

#### 1. *Inspiration*

The Guidelines are inspired by FDA food labels, and they would aim to encourage responsible betting just as FDA food labeling has influenced consumers’ dietary habits. A meta-analysis of food labeling concluded that labels reduced consumers’ intake of calories by 6.6%, reduced total fat intake by 10.6%, and reduced generally unhealthy dietary decisions by 13%.<sup>90</sup>

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*Effort to “Nudge” America*, POLITICO (Oct. 15, 2015), <https://www.politico.com/agenda/story/2015/10/obamas-effort-to-nudge-america-000276>.

<sup>90</sup> See Mary Ellen Shoup, *Study: What Kind of Impact Does Food Labeling Have on Consumption?*, WILLIAM REED BUS. MEDIA (Jan. 14, 2019), <https://www.foodnavigator-usa.com/Article/2019/01/14/Study-What-kind-of-impact-does-food-labeling-have-on-consumption#>. The author analyzes a meta-analysis, in which researchers from the Friedman School of Nutrition at Tufts University analyzed sixty dietary studies consisting of two million unique observations. See Siyi Shangquan et al., *A Meta-Analysis of Food Labeling Effects on Consumer Diet Behaviors and Industry Practices*, 56 AM. J. PREVENTATIVE MED. 300 (2019).

Labeling also increased consumers' vegetable consumption by 13.5%.<sup>91</sup> Additionally, labeling affects how manufacturers formulate ingredients. For example, the inclusion of trans fat content on labels led to an industry-wide reduction of trans fat by 64.3%.<sup>92</sup> Meanwhile, sodium content dropped by 8.9% following publication of recommended percent daily values of sodium.<sup>93</sup> Further, in 2016, the FDA incorporated "added sugars" into its labels, which is projected to save \$31 billion in net healthcare costs and \$61.9 billion in societal costs in its first twenty years.<sup>94</sup> This program will cost \$1.7 billion in that same timeframe, and the government will only need to fund 1% of the cost.<sup>95</sup> The Guidelines would seek to emulate this efficiency as a comparatively inexpensive way to mitigate societal costs associated with sports betting.

## 2. *Design and Implementation*

The Guidelines would be clear and informative, much like FDA food labels. They would appear on posters in casinos, and they could be featured prominently on betting apps or websites. In addition, apps, websites, and physical posters would include links to more detailed information about betting psychology, similar to how the FDA contains detailed dietary information on its website.<sup>96</sup> The Guidelines would contain a number of specific recommendations, including budgetary recommendations for money wagered and time spent gambling. These would look similar to percent daily values of macronutrients on food labels. The betting budget would be featured most prominently, and it would be framed as a maximum percentage of disposable income.<sup>97</sup> A budget on time spent betting could be

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<sup>91</sup> *Id.*

<sup>92</sup> *Id.*

<sup>93</sup> *Id.*

<sup>94</sup> Yue Huang et al., *Cost-Effectiveness of the US Food and Drug Administration Added Sugar Labeling Policy for Improving Diet and Health*, CIRCULATION (Apr. 15, 2019), <https://www.ahajournals.org/doi/10.1161/CIRCULATIONAHA.118.036751>.

<sup>95</sup> *See id.*

<sup>96</sup> *See, e.g., Guidance and Regulation*, U.S. FOOD & DRUG ADMIN., <https://www.fda.gov/food/guidance-regulation-food-and-dietary-supplements> (last visited Nov. 19, 2019).

<sup>97</sup> Disposable income could be determined with the formula used in Chapter 13 bankruptcies: "current monthly income received by the debtor" minus "amounts reasonably necessary to be expended." *Hamilton v. Lanning*, 560 U.S. 505 (2010). The percentage of

represented as a recommended percentage of free time or as a total number of hours per week. Total hours would be easier to understand, but a percentage of free time would be more flexible for people with different schedules. Regardless of the chosen approach, the time recommendation would include all aspects of sports betting (research, time spent watching games, etc.). The Guidelines would also include the following general information: a warning that nobody should bet on sports to generate wealth;<sup>98</sup> a recommendation to refrain from betting while under the influence of drugs or alcohol; encouragement to watch games with friends and family; a recommendation to place bets at least forty-eight hours before games start; and a warning that gambling disorders carry hereditary risk.<sup>99</sup> If followed, these recommendations could reduce behavior endemic to GD.

The Guidelines would be integrated into the structure of legal betting apps and websites. Users would be required to review the Guidelines when creating accounts. Further, these apps and sites would be equipped with software to determine a betting budget. When creating accounts, bettors would be asked about their monthly disposable income, and a recommended betting budget would be generated. If bettors have privacy concerns and do not wish to disclose income information, they may select from a number of predetermined betting budgets. Bettors would be encouraged to select a hard cap on their budgets in which bets would be prohibited until the following month once one month's budget is extinguished. While bettors could opt out of such a cap, the default setting when creating an account would include a betting budget. This would likely lead to many people creating betting budgets because people generally retain default settings.<sup>100</sup>

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disposable income for a betting budget is up for debate. This paper suggests 12.5%, which is half the amount subject to wage garnishment under 15 U.S.C. § 1673 (2018).

<sup>98</sup> The Center for Disease Control has a similar warning for alcohol. See *What is Excessive Alcohol Use?*, CENTER FOR DISEASE CONTROL & PREVENTION, <https://www.cdc.gov/alcohol/onlinemedialinfographics/excessive-alcohol-use.html> (last visited Dec. 30, 2019) (“No one should begin drinking or drink more frequently based on potential health benefits.”).

<sup>99</sup> See *supra* note 51 and accompanying text.

<sup>100</sup> See THALER & SUNSTEIN, *supra* note 89, at 7–8. Thaler and Sunstein describe adherence to default settings as the “status quo bias” and the “power of inertia.” *Id.* This is illustrated by organ donation rates, which range from 4% (Denmark) to “close to 100%” (Austria), depending on whether the nation involved has “opt in” or “opt out” as its default setting. KAHNEMAN, *supra* note 80, at 373.

### 3. Goals

The betting budget would aim to prevent the qualitative change of financial ruin. A negligible difference in one's checking account balance is a mere quantitative change; whereas, GD can lead to qualitative changes that drastically alter lifestyle.<sup>101</sup> Bettors risk gambling themselves into poverty, which induces stress, creates a myriad of financial difficulties, and amplifies misfortunes like illness.<sup>102</sup> Following the Guidelines would help prevent financial ruin because the betting budget represents just a fraction of disposable income. Betting apps would make determining a betting budget relatively easy with a budget calculator. The betting budget could help people overcome bounded rationality by presenting a responsible budget, and it could help them overcome bounded willpower by advising them when to stop betting once the budget's funds have been exhausted. This could help prevent catastrophic decision-making.

The betting budget could help bettors stay out of poverty by acting as a premortem and assisting bettors in overcoming the planning fallacy and optimism bias.<sup>103</sup> Consulting relevant statistics can help mitigate the effects of the planning fallacy, but people often neglect to apply applicable base-rates to themselves because they fall prey to an overconfidence bias.<sup>104</sup> This can happen to sports bettors who believe they are clever enough to beat the odds. These bettors wager more money than they can afford to lose, and the consequences can be disastrous. Kahneman wrote that the best way to "tame optimism" is with premortems, which prescribe that decision-makers consider the worst-case scenarios for their plans and only follow through

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<sup>101</sup> See DSM-5, *supra* note 33, at 589 ("Areas of psychosocial, health, and mental health functioning may be adversely affected by gambling disorder. . . . [I]ndividuals with gambling disorder may . . . jeopardize or lose important relationships . . . . Employment or educational activities may likewise be adversely impacted by gambling disorder.").

<sup>102</sup> See KAHNEMAN, *supra* note 80, at 396 ("Severe poverty amplifies the experienced effects of other misfortunes of life. In particular, illness is much worse for the very poor than for those who are more comfortable.").

<sup>103</sup> See *id.* at 264. Kahneman asserts that conducting premortems are the best way to overcome overconfidence. A typical premortem procedure goes as follows: "Imagine that we are a year into the future. We implemented the plan as it now exists. The outcome was a disaster. Please take 5 to 10 minutes to write a brief history of that disaster." *Id.*

<sup>104</sup> The following statistic is an interesting example of both overconfidence and ignorance of relevant base rates: "90% of drivers believe they are better than average." *Id.* at 259.

with the plans if the worst possible consequences are acceptable.<sup>105</sup> The betting budget acts as a premortem because a budget is an amount of money that a person expects to spend. The worst-case scenario is losing a bet, so considering the bet to be part of a budget moderates the betting amounts.

Premortems can also be effective due to the “framing effect,” which describes how the same information can be presented in different ways to achieve different emotional responses.<sup>106</sup> The betting budget could help reduce loss-chasing by framing bets as part of a “budget” rather than as money that a bettor plans to win. Framing bets as part of a “budget” evokes the sort of higher-order planning associated with the lateral prefrontal cortex, the brain region associated with dopamine release in healthy control groups.<sup>107</sup> Many betting slips influence bettors to feel entitled to potential winnings by containing language like “collect”<sup>108</sup> and “return”<sup>109</sup> to describe payouts contingent on winning. The expectation of winning may create a mental reference point where a bettor thinks of himself as having already won. This mental reference point could lead to an endowment effect, which causes people to overvalue what they own.<sup>110</sup> The endowment effect may result in loss-chasing when bettors feel a sense of entitlement to money they irrationally expected to win. When such a bettor loses, the resulting pain could drive him to continue “chasing” the loss to alleviate the pain. The “budgetary” framing in the Guidelines could help bettors keep expectations in check and accept modest losses.

The betting budget would also utilize the psychological process of anchoring, which, according to Kahneman, “occurs when people consider a

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<sup>105</sup> See *supra* note 103 and accompanying text.

<sup>106</sup> See *id.* at 88 (“Different ways of presenting the same information often evoke different emotions. The statement that ‘the odds of survival one month after surgery are 90%’ is more reassuring than the equivalent statement that ‘mortality within one month of surgery is 10%.’”).

<sup>107</sup> See WATANABE, *supra* note 72.

<sup>108</sup> See, e.g., David Sheldon, *A Complete History of Mayweather’s Gambling Escapades*, GAMBLING.ORG, <https://www.casino.org/blog/mayweathers-love-gambling/> (last visited Nov. 29, 2019).

<sup>109</sup> See, e.g., *Bet Slip*, DRIBBBLE, <https://dribbble.com/shots/1563929-Bet-slip> (last updated May 14, 2014).

<sup>110</sup> The endowment effect is due to loss aversion, the concept that people tend to feel more pain from losing possessions than pleasure from receiving them. See KAHNEMAN, *supra* note 80, at 293 (explaining an example of this effect involving a wine collector).

particular value for an unknown quantity before estimating that quantity.”<sup>111</sup> Anchoring is one of the few psychological concepts that can be measured rather than simply demonstrated through experiments.<sup>112</sup> Anchoring can reliably affect how people estimate values such as tree height, ages of famous people, and numbers of countries on different continents.<sup>113</sup> In addition, anchors can alter behavior, affecting how much people donate to charity or spend on groceries.<sup>114</sup> The Guidelines provide anchors for sports bettors. Even if bettors occasionally exceed their betting budgets, these budgets still provide anchors to potentially contain dangerous behavior and prevent the escalation of betting associated with GD.<sup>115</sup> These anchors could be of crucial importance for sports betting because people are currently offered little guidance when they first walk into a casino or download a betting app. Without any direction, it is no wonder that so many people continually increase their bet amounts in the psychological minefield that is gambling. Anchors could help limit betting to levels that do not lead to GD.

Framing sports betting as a hobby, rather than an obsession, could reduce behavior that causes GD. One way the Guidelines would seek to accomplish this goal is by recommending a maximum number of hours to be dedicated to sports betting. This could cut down on one’s preoccupation with gambling, which is one of two criteria (along with loss-chasing) most common in gambling disorders.<sup>116</sup> In addition, the recommendation to watch games with friends and family could help frame betting as merely a hobby. Sports betting is distinct from many other forms of gambling because millions of people enjoy watching sports without involving any type of betting. For instance, 98.2 million people watched Super Bowl LIII in 2019,<sup>117</sup> but there is no demonstrable market for live feeds of slot machines.

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<sup>111</sup> *Id.* at 119.

<sup>112</sup> *See id.* at 123.

<sup>113</sup> *See id.* at 124–25.

<sup>114</sup> *See id.* at 125–27. For example, Kahneman describes a sales promotion on Campbell’s soup at a supermarket. On some days a sign said, “LIMIT OF 12 PER PERSON,” and on other days a sign said, “NO LIMIT PER PERSON.” Shoppers bought an average of seven cans when the limit was in force, more than double the rate of days that allowed unlimited sales. *Id.* at 126.

<sup>115</sup> *See supra* note 52 and accompanying text.

<sup>116</sup> *See DSM-5, supra* note 33, at 586.

<sup>117</sup> *Super Bowl LIII Draws 98.2 Million TV Viewers*, NIELSEN (Feb. 4, 2019), <https://www.nielsen.com/us/en/insights/article/2019/super-bowl-liii-draws-98-2-million-tv-viewers-32-3-million-social-media-interactions/>.

While slot machines and other casino games exist solely for gambling, sports betting is different because the bets enhance a form of entertainment that is already occurring. Also, watching sports can facilitate spending time with friends and family, and as Kahneman says, “It is only a slight exaggeration to say that happiness is the experience of spending time with people you love and who love you.”<sup>118</sup> This camaraderie could add another layer of entertainment value to the viewing experience, thereby reducing the proportion of entertainment value derived from betting. This can be expressed as:

$$\text{Total Entertainment Value} = \text{Camaraderie} + \text{Sports Viewing} + \text{Betting}.$$

Reducing the fraction of total entertainment value caused by betting could reduce the probability that a bettor will obsessively devolve into GD. This is supported by the DSM-5’s description of “social gambling,” which “typically occurs with friends or colleagues and lasts for a limited period of time, with acceptable losses.”<sup>119</sup> Through watching games with friends and family, social gambling potentially mitigates the likelihood that a person will reach the point of having GD.

The Guidelines would recommend that people never gamble while under the influence of drugs or alcohol. This could help reduce impulsive bets that would take bettors outside their betting budgets.<sup>120</sup> Also, gambling disorders tend to aggregate with other SUDs, particularly alcoholism.<sup>121</sup> Alcohol restrictions in casinos could help prevent comorbidity of GD and alcoholism, but casinos would likely push back on this effort. However, sports betting will probably be offered outside of casinos as legalization proliferates. For example, the Chicago Cubs have considered opening a sports book (i.e., a betting area) at Wrigley Field,<sup>122</sup> and prohibiting alcohol

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<sup>118</sup> KAHNEMAN, *supra* note 80, at 395.

<sup>119</sup> DSM-5, *supra* note 33, at 589.

<sup>120</sup> See Nancy Petry, *Substance Abuse, Pathological Gambling, and Impulsiveness*, 63 DRUG & ALCOHOL DEPENDENCE 29 (2001) (“These results provide further evidence of an association among substance abuse, pathological gambling, and impulsivity.”).

<sup>121</sup> See DSM-5, *supra* note 33, at 588 (“Gambling disorder also appears to aggregate with . . . substance use disorders, particularly with alcohol disorders.”).

<sup>122</sup> Scott Glesson, *With New Illinois Gambling Bill, Cubs Consider Opening Sportsbook at Wrigley Field*, USA TODAY (June 17, 2019), <https://www.usatoday.com/story/sports/>

in that particular part of the stadium could help prevent gambling under the influence. More regulations should be directed at this issue, but for the purposes of this paper, it should be understood that the Guidelines vehemently discourage betting while under the influence of drugs or alcohol.

The Guidelines seek to foster a more informed public, and two elements are purely informational. First, the Guidelines would state that betting on sports is a bad way to generate wealth. This is because casinos and sports books generate profits by setting odds so that every bet has a negative expected value. Expected value is calculated as follows:

$$(Probability\ of\ winning) \times (Amount\ won\ per\ bet) - (Probability\ of\ losing) \times (Amount\ lost\ per\ bet).^{123}$$

For example, a standard money-line bet with two evenly matched teams would be -110 for each team, meaning a bettor would have to wager \$110 dollars to receive a payout of \$210 (resulting in a \$100 profit). This bet's expected value would be a \$5 loss:

$$(0.5) \times (\$100) - (0.5) \times (\$110) = -\$5.$$

When betting with friends, no money goes to a third party like a casino, so sports betting may intuitively feel like betting with a neutral expected value. While this illustrates that bettors should prefer to casually bet with friends—rather than casinos—when possible, it also highlights that bets with casinos and websites yield negative expected values. These calculations of expected values are the type of information that could be available on a website link at the bottom of the Guidelines. For the Guidelines themselves, the point would be that betting is not a good way to generate wealth.

Another informative element is the warning that gambling carries hereditary risks.<sup>124</sup> It is unknown how much of GD is attributable to environmental factors and how much is caused by inherent neurologic

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mlb/cubs/2019/06/17/illinois-cubs-consider-opening-sportsbook-wrigley-field/1478044001/.

<sup>123</sup> Alex Altmix, *Expected Value in Sports Betting*, BETTING PROS (Dec. 6, 2018), <https://www.bettingpros.com/articles/expected-value-in-sports-betting/>.

<sup>124</sup> See *supra* note 51 and accompanying text.

vulnerabilities.<sup>125</sup> However, there appears to be a genetic component to GD because it tends to run in families, and it is more common between identical twins than between fraternal twins.<sup>126</sup> A general warning about hereditary risks would caution people that they might be at a higher risk for GD and hopefully discourage them from engaging in dangerous gambling habits.

By highlighting hereditary risks, the Guidelines would help to better inform the public and could nudge some bettors away from the pitfalls of GD-related behavior. Behavior could be further influenced by overcoming cognitive biases, refraining from betting under the influence, framing betting as a hobby, and anchoring bets to a responsible budget. Using FDA labeling as a model, it is possible to create a system that would be relatively inexpensive to implement and would prevent significant societal costs.

### B. *Feedback Reports*

Periodic feedback reports could help reinforce responsible betting practices and nudge bettors away from behavior that leads to GD. First, feedback reports could help bettors adhere more closely to the Guidelines.<sup>127</sup> Second, these reports could help mitigate the effects of near misses on bettors' psyches.<sup>128</sup> Finally, feedback reports could enhance the salience of negative betting behavior, thereby encouraging responsible behavior.<sup>129</sup>

#### 1. *Inspiration*

Feedback and self-reflection can help facilitate beneficial behavioral modification. In their 2009 book, *Nudge* (considered to be the “bible of behavioral economics”<sup>130</sup>), Richard Thaler and Cass Sunstein assert that “[t]he best way to help [h]umans improve their performance is to provide feedback.”<sup>131</sup> For consumer purchases, they advocate a system called

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<sup>125</sup> The DSM-5 lists temperamental, genetic, physiological, cultural, and gender-related factors that affect the prevalence of GD. See DSM-5, *supra* note 33, at 588.

<sup>126</sup> See *id.* (“Gambling problems are more frequent in monozygotic than in dizygotic twins.”).

<sup>127</sup> See THALER & SUNSTEIN, *supra* note 89, at 90.

<sup>128</sup> See *id.*

<sup>129</sup> See *id.*

<sup>130</sup> KAHNEMAN, *supra* note 80, at 412.

<sup>131</sup> THALER & SUNSTEIN, *supra* note 89, at 92.

“RECAP: Record, Evaluate, and Compare Alternative Prices.”<sup>132</sup> An example of a RECAP report is for credit card companies to send annual reports of fees incurred, thereby helping consumers make better decisions on which credit cards to use.<sup>133</sup> Not only do people make wiser financial decisions when they are properly informed, they also adhere to better diets when they record what they eat.<sup>134</sup> A meta-analysis of weight loss studies showed that frequent self-monitoring of food consumed and time spent exercising resulted in greater adherence to diet and exercise programs and led to greater weight loss.<sup>135</sup> While FDA food labeling has shown some positive effects, it could be more effective if people received automated reports on their caloric and macronutrient intake.<sup>136</sup> Technology allows such a solution for sports betting.

## 2. *Design and Implementation*

This paper proposes feedback reports designed to help people make more responsible betting decisions, just as feedback helps people make better financial and dietary choices.<sup>137</sup> Under this proposal, every bettor would have an account, and apps and websites would generate monthly reports detailing the bettor’s statistics. Once a month, this report would appear on-screen for a certain period of time (possibly ten seconds) before the bettor could advance to a new screen to make another bet. Warnings would be generated if a bettor begins increasing bets in the manner associated with GD. The bettor would also be able to view a complete history of his stats at any time. These reports would be inexpensive to generate, and they could

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<sup>132</sup> *Id.* at 93.

<sup>133</sup> *See id.* at 143 (“We suggest that credit card companies should be required to send an annual statement, both hard copy and electronic, that lists and totals all the fees that have been incurred over the course of the year. This report would serve two purposes. First, credit card users could use the electronic version of the report to shop for better deals. . . . Second, the report would make more salient to users just how much they are paying over the course of the year.”).

<sup>134</sup> *See generally* Lora E. Burke et al., *Self-Monitoring in Weight Loss: A Systematic Review of the Literature*, 111 J. AM. DIET ASSOC. 92 (2011).

<sup>135</sup> *See id.* Dr. Burke’s review analyzed twenty-two studies, of which fifteen focused on dietary self-monitoring, one on self-monitoring exercise, and six on self-weighing. Dr. Burke concluded that “significant association between self-monitoring and weight loss was consistently found.” *Id.*

<sup>136</sup> *See id.* at 99.

<sup>137</sup> *See id.* at 92.

empower bettors to adhere to the Guidelines, making responsible decisions with accurate information.

### 3. Goals

Pathological gamblers display distortions in thinking,<sup>138</sup> and these reports could force bettors to look squarely at their behavior. This could help mitigate the effects of near misses because it would show precisely how many times a bettor lost. Although near misses are not programmed into sports betting like they are with slot machines, sports betting can produce this effect. For instance, a basketball game between two evenly matched NBA teams might involve dozens of lead changes,<sup>139</sup> causing even a losing bettor to experience significant reward-circuitry activation.<sup>140</sup> The feedback report would be a stark reminder that the bet was a losing wager. Also, it would be delivered at a later time when the bettor is no longer consumed by the excitement of a close game.

Feedback reports would increase the salience of betting behavior by showing bettors their overall statistics.<sup>141</sup> States could further increase this salience by including images and explicit warnings on reports that show behavior indicative of loss-chasing. For example, in 2012, Australia instituted “plain packaging” for cigarettes, which prohibited brand logos and added images evocative of smoking-related diseases.<sup>142</sup> Smoking declined among adults and teens, and fewer people tried tobacco after plain packaging went into effect.<sup>143</sup> A 2015 paper concluded that “[a] number of studies with adult smokers point to plain packaging fulfilling its core aims of reducing appeal, particularly among young adults, and increasing warning

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<sup>138</sup> See DSM-5, *supra* note 33, at 587.

<sup>139</sup> See, e.g., Blake Murphy, *Blazers-Clippers Slugfest Sets NBA Record with 40 Lead Changes*, SCORE (Feb. 12, 2014) <https://www.thescore.com/nba/news/431082>.

<sup>140</sup> See DSM-5, *supra* note 33, at 481.

<sup>141</sup> Salience increases the effectiveness of nudges. THALER & SUNSTEIN, *supra* note 89, at 68–69.

<sup>142</sup> *Post-Implementation Evidence from Australia*, CAMPAIGN FOR TOBACCO-FREE KIDS, <https://www.tobaccofreekids.org/microsites/plainpackaging/evidence/australia-post-implementation-evidence> (last visited Oct. 11, 2019). Australian cigarette packaging features gruesome images of peripheral vascular disease, emphysema, and various cancers, among other afflictions. See, e.g., *WTO Backs Australia Over Plain Cigarette Packets*, BBC NEWS (June 29, 2018), <https://www.bbc.com/news/world-australia-44652049>.

<sup>143</sup> *Id.*

saliency.”<sup>144</sup> Visual images of a pathological bettor down on his luck or a home foreclosure could remind people that sports betting requires self-restraint and responsibility. Even less drastic images could increase saliency. In a study on energy usage, frowning emoticons were significantly more effective in reducing energy usage than text-based recommendations because they gave “an emotional nudge.”<sup>145</sup> States can decide how salient they want feedback reports, but visual representations of behavior could help mitigate irresponsible betting habits, especially in bettors who chase losses but have not yet developed GD.

Increased saliency would reinforce the consequences of behavior, and feedback reports could provide literal warning signs to bettors exhibiting dangerous behavior. These reports could also help mitigate cognitive distortions caused by near misses and give bettors more control over their actions. This enhanced control could help people adhere better to the Guidelines, similar to how RECAP reports and the recording of diets help people make better decisions.

### C. *Banning Fractional Bets and Live Betting*

Several potential regulations could increase feedback loops between stimulus and response, theoretically reducing the addictive properties of sports betting.<sup>146</sup> First, the Guidelines recommend placing bets at least forty-eight hours before games start. Placing a bet forty-eight hours before a three-hour game would create a fifty-one hour feedback loop between stimulus and reward. Such a betting habit would likely be less addictive than placing bets shortly before games begin. States can further regulate feedback loops by preventing bets that are made a certain number of hours before games begin. However, this could frustrate bettors due to the injury-related uncertainty surrounding athletes. Often, an injured player’s availability is

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<sup>144</sup> Gerard B. Hastings & Crawford Moodie, *Death of a Salesman*, 24 BRIT. MED. J. TOBACCO CONTROL 1, 1 (2015), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4392218/>. This paper was part of a special edition of the *British Medical Journal of Tobacco Control* that featured eighteen research papers evaluating and largely praising Australian cigarette packaging.

<sup>145</sup> THALER & SUNSTEIN, *supra* note 89, at 68–69.

<sup>146</sup> See generally Linnet et al., *supra* note 34, at 330.

dependent on a coach's "game-time decision,"<sup>147</sup> which may be dictated by how the player responds to pregame drills. A star player's availability could inform betting decisions, and many responsible bettors would foreseeably wait to place bets until they know such a player's status. Bettors could understandably be exasperated by arbitrary cutoffs when ambiguity exists around players' availability. That said, this paper encourages states to strictly limit bets to those with game-length feedback loops. Casinos and betting apps commonly offer bets on fractions of games (e.g., a wager on which team will be leading after the first quarter in a game).<sup>148</sup> Prohibiting these "fractional" bets could help reduce the addictive properties of sports betting by restricting bets with short feedback loops. Moreover, this paper strongly advocates banning live betting, a particularly extreme form of "fractional" betting. Also known as "in-game" or "in-play" betting, live bets are placed during games and involve very short feedback loops.<sup>149</sup> Imagine watching a football game, and a betting app suddenly presents odds of whether the offense will make a first down on the next play.<sup>150</sup> As the bettor, you would then have at most forty seconds to decide whether to take that bet.<sup>151</sup> A leading sports betting site, oddsshark.com, touts live betting as "endless fun" involving "split-second decisions."<sup>152</sup> While such black market betting sites promote the excitement of live betting, it is important to realize that live bet feedback loops are much more akin to slot machines than traditional sports bets. States that prohibit slot machines should therefore strongly consider outlawing both live bets and bets on fractions of games.

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<sup>147</sup> See, e.g., Mike Chiari, *Alabama's Nick Saban Says Tua Tagovailoa Remains Game-Time Decision*, BLEACHER REP. (Nov. 8, 2019), <https://bleacherreport.com/articles/2861869-alabamas-nick-saban-says-tua-tagovailoa-remains-game-time-decision-vs-lsu>.

<sup>148</sup> See, e.g., Joe Osborne, *NBA 1st Quarter & 1st Half Betting Report*, ODDS SHARK (Feb. 7, 2020), <https://www.oddsshark.com/nba/1st-quarter-1st-half-betting>.

<sup>149</sup> See Peter Reynolds, *How Does Live Betting Work?*, FOOTY TIPSTER BLOG, <https://thefootytipster.com/how-does-live-betting-work/> (last visited Nov. 27, 2019).

<sup>150</sup> See *Football Live Betting Rules*, BOVADA, <https://www.bovada.lv/help/general/football-live-betting-rules> (last visited Dec. 2, 2019).

<sup>151</sup> The NFL uses a forty-second play clock, which penalizes teams for taking longer than forty seconds to run a play or call a timeout. *Official NFL Playing Rules*, NFL, [http://static.nfl.com/static/content/public/image/rulebook/pdfs/7\\_Rule4\\_Game\\_Timing.pdf](http://static.nfl.com/static/content/public/image/rulebook/pdfs/7_Rule4_Game_Timing.pdf) (last visited Jan. 10, 2020).

<sup>152</sup> *In-Play Wagering: Live Sports Betting Sites*, ODDS SHARK, <https://www.oddsshark.com/sports-betting/live-betting-sites> (last visited Mar. 6, 2020).

### III. OPPOSITION AND PROBLEMS

These proposals are partial solutions to complex problems. Critics could argue that these regulations are too onerous, excessively complicated, an inappropriate normalization of gambling, or simply ineffective. The rest of this paper addresses these concerns and leaves the reader with two final points: (1) the regulations proposed are just a handful of many regulations that could be helpful in mitigating GD; and (2) whatever shortcomings these proposals have, they would likely save far more in societal costs than they would require to implement.

If regulations are too onerous, bettors may opt for black market alternatives.<sup>153</sup> This has been the case with certain legal marijuana markets.<sup>154</sup> Due to high taxes and complex regulations, “California consumers spent \$500 million less on legal marijuana in 2018 than they did in 2017.”<sup>155</sup> Consequently, California fell \$100 million short of its tax revenue target for 2018.<sup>156</sup> “In Massachusetts, 75% of the [marijuana sold in 2019 came from the] black market due to the state’s snail-like pace of licensing cannabis shops.”<sup>157</sup> Similar to legal marijuana markets, legal sports betting will have to contend with an established black market. If bettors feel that regulations are too restrictive, they may opt for this black market. This is why nudges are crucial. Nudges are the hallmark of what Thaler and Sunstein describe as “libertarian paternalism,” which aims to “steer people’s choices in directions that will improve their lives,” while still allowing people to “exercise their freedom.”<sup>158</sup> The Guidelines nudge bettors toward responsible betting habits without infringing on their freedom to bet more if they so choose. Feedback reports would be extremely informative, but bettors could choose not to look at them. As for banning fractional bets, sometimes it is necessary for jurisdictions to enact strict rules to limit potentially hazardous behavior. For example, every state allows the sale of alcohol, but states have restrictions on where and when alcohol can be

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<sup>153</sup> Cf. Nick Kovacevich, *Cannabis Black Market Thriving Despite Legalization*, FORBES (Mar. 13, 2019), <https://www.forbes.com/sites/nickkovacevich/2019/03/13/cannabis-black-market-thriving-despite-legalization/#4e7023ad5ea2>.

<sup>154</sup> *See id.*

<sup>155</sup> *Id.*

<sup>156</sup> *See id.*

<sup>157</sup> *Id.*

<sup>158</sup> THALER & SUNSTEIN, *supra* note 89, at 5.

purchased.<sup>159</sup> Banning fractional bets could be considered similar to banning grain alcohol (e.g., Everclear), which can be as high as 95% alcohol by volume and is prohibited in fourteen states.<sup>160</sup> Thoughtful prohibitions could supplement libertarian paternalism to encourage responsible behavior without driving too many bettors to the black market.

Another potential concern is that the Guidelines are too complicated. One study of FDA food labels found that most people's computational abilities do not permit them to fully comprehend nutritional information, thereby reducing the effectiveness of food labeling.<sup>161</sup> A similar concern could exist with the Guidelines, which might be too confusing for many bettors, causing them to disregard the Guidelines and fall into a pattern associated with GD. However, the Guidelines contain considerably fewer variables than food labels, so this concern is unwarranted.<sup>162</sup> Further,

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<sup>159</sup> For example, as of December 2, 2019, thirty-one states prohibited the sale of alcohol after 2 a.m. See *Liquor Laws by State*, LEGAL BEER BLOG, <https://www.legalbeer.com/liquor-laws-by-state> (last visited Dec. 2, 2019).

<sup>160</sup> See *In Which States Is It Legal to Sell Everclear?*, REFERENCE, <https://www.reference.com/food/states-legal-sell-everclear-63b66f135b176678> (last visited Dec. 2, 2019).

<sup>161</sup> See Omri Ben-Shahar & Carl E. Schneider, *The Failure of Mandated Disclosure*, 159 U. PA. L. REV. 647, 676–77 (2011). The authors provide more detail regarding the study:

[W]hen 200 patients were asked twenty-four questions about actual labels, only 22% of them “could determine the amount of net carbohydrates in two slices of low-carb bread, and only 23% could determine the amount of net carbohydrates in a serving of low-carb spaghetti. There were 970 errors identified on the subjects’ responses to the first 12 items of the [National Label Survey]. Common errors included (1) did not attempt to apply serving size/servings per container information or used it inappropriately (n=325), (2) confused by extraneous or complex information (n=369), and (3) calculation and other errors (n =276). Many patients were confused by the complexity of the nutrition label and could not find the proper information on the label, or incorrectly used the information in the percent daily value column or the 2000-calorie recommended daily allowance (RDA) footnote when this information was not relevant.”

*Id.* (quoting Russell Rothman et al., *Patient Understanding of Food Labels: The Role of Literacy and Numeracy*, 31 AM. J. PREVENTATIVE MED. 391, 393 (2006)).

<sup>162</sup> The proposed Guidelines for Responsible Sports Betting would include as few as six key points: (1) maximum betting budget should not exceed 12.5% of disposable income per month; (2) maximum time budget should not exceed 20% of free time; (3) a gambler should never bet on sports to get rich; (4) watching games with friends and family is encouraged;

gamblers can allow their apps to calculate a betting budget, and they can “opt in” to the feature that cuts them off when their monthly budgets are exhausted. These technology-based solutions help reduce concerns of complexity surrounding the Guidelines.

Another foreseeable objection is that the Guidelines normalize a dangerous activity and could cause more gambling than they prevent. Furthermore, it may seem like “responsible betting” is an oxymoron because gambling is considered by most people to be an irresponsible activity. But sports betting is a growing industry,<sup>163</sup> and it will likely continue to become normalized. This normalization is reflected in sports media: in 2019, ESPN launched its first ever sports betting show, *The Daily Wager*,<sup>164</sup> while Fox Sports launched its own sports betting app, Fox Bet.<sup>165</sup> It is unlikely that the Guidelines would contribute in a meaningful way to this already strong trend. Rather, the Guidelines provide valuable direction as sports betting becomes more widespread. “Responsible betting” is a relative phrase. While it could certainly be considered less responsible than not betting at all, it elucidates the fact that most bettors are social gamblers who do not wind up with GD.<sup>166</sup> Similar to how people are encouraged to drink in moderation,<sup>167</sup> responsible betting may be a more realistic goal than gambling abstinence.

The easiest criticism of the Guidelines is that they will not have a serious impact because gambling is so addictive. This paper does not contend that the Guidelines will suddenly cure all cases of GD, which affects millions

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(5) gamblers should place bets at least forty-eight hours before games start; and (6) gamblers should remember that gambling carries a hereditary risk.

<sup>163</sup> See Todd Shriber, *Morgan Stanley Forecasts \$7 Billion US Sports Betting Market by 2025, 40 Percent Increase Over Prior Projection*, CASINO (Nov. 4, 2019) <https://www.casino.org/news/morgan-stanley-sees-growth-ahead-for-sports-betting/>.

<sup>164</sup> See Andy Hall, *Daily Wager: Four Valuable Lessons Learned From Launching ESPN's First Daily Sports Betting Show*, ESPN (May 7, 2019), <https://www.espnfrontrow.com/2019/05/daily-wager-four-valuable-lessons-learned-from-launching-espns-first-daily-sports-betting-show/>.

<sup>165</sup> See *About Betting*, FOX SPORTS, <https://www.foxbet.com/about> (last visited Nov. 30, 2019).

<sup>166</sup> DSM-5, *supra* note 33, at 589.

<sup>167</sup> See, e.g., *Drink Responsibly*, FOUND. FOR ADVANCING ALCOHOL RESPONSIBILITY, <https://www.responsibility.org/drink-responsibly/> (last visited Jan. 13, 2020) (“We’re here to help you understand what it actually means to drink responsibly and, if you choose to drink, how to know your limits.”).

of Americans.<sup>168</sup> In fact, the Guidelines will probably not prevent the majority of gambling disorders. However, FDA food labels have not eliminated obesity, but they do provide a cost-effective nudge with enough societal benefit to justify their existence.<sup>169</sup> The Guidelines are similar. They would be inexpensive to implement, and they would likely save enough in societal costs to pay for their implementation many times over. When a potential sports bettor enters a casino for the first time or downloads a betting app, he is offered no guidance on how to approach sports betting. The Guidelines would provide direction that could help millions of sports bettors pursue their hobby in a responsible way. In addition, this paper does not contend that the Guidelines are the only regulatory measure that should be implemented. Additional regulations could help mitigate societal costs from sports betting. The Guidelines are an example of one such regulation that would most likely have a net benefit to society if implemented.

#### IV. CONCLUSION

Sports betting will spread across most of the United States over the next several years.<sup>170</sup> This is a cause for concern, but it is also an opportunity for states to implement regulations in an industry that has so far been a Wild West-type black market. While most people can gamble and never develop serious problems, a significant segment of the population develops GD. But GD is fueled by a predictable pattern of bet escalation and loss-chasing. Regulations could have a positive impact if they target this behavior, educate bettors, and curb the effects of aggravating factors. The Guidelines and feedback reports could make serious progress in these areas. Furthermore, eliminating the most dangerous types of bets—live and fractional betting—could help reduce the prevalence of GD. One final note: it has been said that a single death is a tragedy, but a million deaths are a statistic.<sup>171</sup> This paper has included many statistics about GD, and I hope that lawmakers recognize that these statistics describe real people. Each person dealing with GD has a

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<sup>168</sup> See *supra* note 19 and accompanying text.

<sup>169</sup> For example, the government will pay just one percent of the \$1.7 billion in costs to implement sugar labeling, which is expected to save over \$61 billion in societal costs. See Huang et al., *supra* note 94.

<sup>170</sup> See Woods, *supra* note 44.

<sup>171</sup> See *A Single Death Is a Tragedy; A Million Deaths Is a Statistic*, QUOTE INVESTIGATOR (May 21, 2010), <https://quoteinvestigator.com/2010/05/21/death-statistic/>.

human, often heart-breaking story, like Leigh in the Introduction. The opportunity to make better bettors should be embraced, and these regulations could be the first step.

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